IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MICHIGAN

CLAIR REYNOLDS, MONICA MARTIRANO, BRADY LAING, JARED THOMAS PINEDA, WILLIAM MARTIN POWERS, TRINA HANCOCK, MELINDA MARTINEZ, and KEN SCHAFER, on behalf of themselves and all others similarly situated,

Plaintiff,

v.

FCA US, LLC,

Defendant.

Case No. 2:19-cv-11745-AJT-EAS

Hon. Arthur J. Tarnow

Magistrate Judge Elizabeth A. Stafford

PLAINTIFFS' CONSOLIDATED AMENDED CLASS ACTION COMPLAINT AND JURY DEMAND

Plaintiffs Clair Reynolds, Monica Martirano, Brady Laing, Jared Thomas Pineda, William Martin Powers, Trina Hancock, Melinda Martinez, and Ken Schafer bring this action against Defendant FCA US LLC, ("Defendant" or "FCA"), by and through their attorneys, individually and on behalf of all others similarly situated, allege as follows:

INTRODUCTION

1. This is a class action lawsuit brought by Plaintiffs on behalf of themselves and classes of current and former owners of model year 2018–2020 Jeep Wrangler and 2020 Jeep Gladiator vehicles (hereinafter referred to collectively as the "Class Vehicles"). FCA designed, manufactured, marketed and warranted the Class Vehicles.[1]

2. The Class Vehicles contain a defectively designed and/or manufactured solid front axle suspension and damping system that causes the steering wheel to shake violently after encountering common and expected road variations while operating at highway speeds. This phenomenon is referred to as the Jeep "Death Wobble," a term known to FCA and commonly used among Jeep owners to identify this condition.

[1] Plaintiffs reserve the right to amend or add to the vehicle models included in the definition of Class Vehicles after conducting discovery.

3. The "Death Wobble" is the seemingly uncontrollable side-to-side shaking of the Class Vehicles' front-end steering components and – by extension – its steering wheel presenting a serious safety hazard to the driver of the Class Vehicle and surrounding drivers. The "Death Wobble" makes the Jeep unsafe to operate by impairing the operator's ability to steer and control the Class Vehicle while presenting a safety risk to the occupants and others on the road.[2]

4. FCA knowns the "Death Wobble" has plagued its Jeep Wrangler line of vehicles for over a decade. Unable to provide owners an adequate remedy, FCA consistently provides customers inadequate warranty repairs designed to temporarily and repeatedly mask the "Death Wobble" until the warranty coverage expires. FCA does this knowing these temporary remedies do not remediate the defects that manifest as the "Death Wobble." Beginning in the 2018 Jeep Wrangler model year, FCA modified portions of the steering system, but the defects causing the "Death Wobble" remained.

5. After receiving thousands of steering related complaints on the Class Vehicles by 2019, FCA circulated Customer Satisfaction Notification ("CSN") V41 to its captive dealer network in or before June 2019, which internally acknowledged

[2] Exhibit 1, Matt Konkle, *Jeep Death Wobble: How to Properly Handle, Diagnose and Fix*, Quadratec (Mar. 16, 2018), *See* https://www.quadratec.com/c/blog/jeep-death-wobble-how-to-fix (last visited July 26, 2021).

the existence of the defect causing the "Death Wobble," and identified approximately 192,000 Class Vehicles, stating:

> The front suspension steering damper on about 192,000 of the above [2018-2019 Jeep Wrangler] vehicles may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).[3]

6. Pursuant to CSN V41, Defendant requires each vehicle receive the following repair: "Replace the front suspension steering damper on all the above involved vehicles." Figure 1 – Steering Damper from CSN V41 is depicted below:

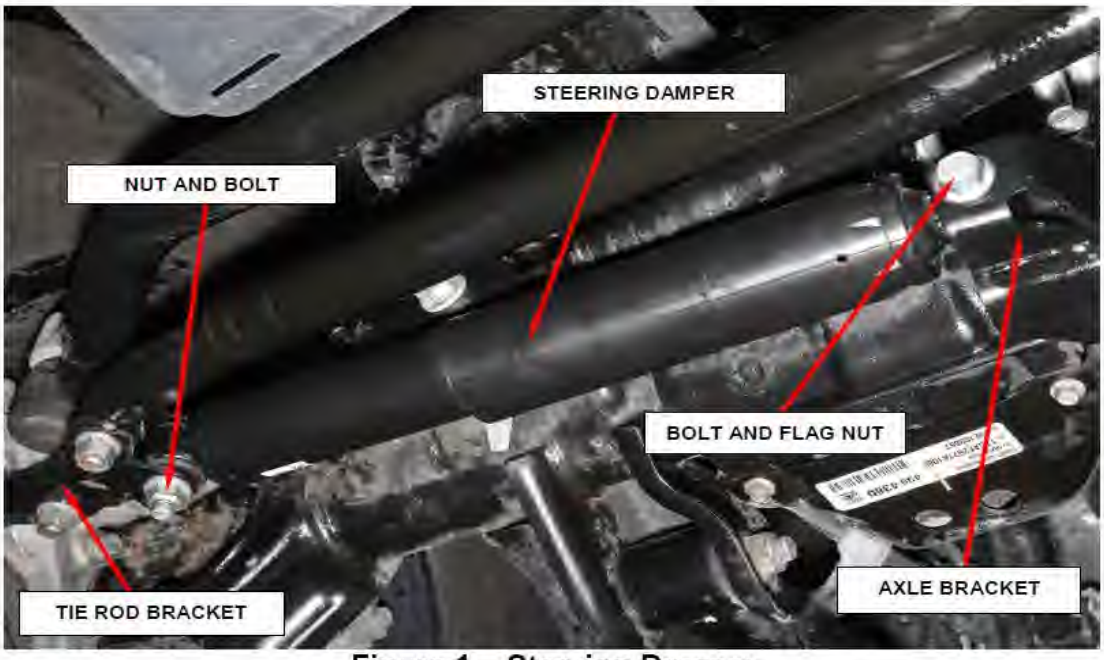


Figure 1 – Steering Damper

[3] Exhibit 2, Customer Satisfaction Notification ("CSN") V41 Steering Damper – Dealer Service Instructions – Rev. 2, June 2019.

7. Although an estimated population of 270,000 MY 2018-2019 Class Vehicles exist, Defendant identified approximately 192,000 owners and their Class Vehicles known to suffer from the defects that manifest as the "Death Wobble." According to CSN V41, FCA began notifying Plaintiffs and other owners of Class Vehicles in Summer 2019 that this Customer Satisfaction Notice required the repair set forth in CSN V41 in an effort to remediate the "Death Wobble."

8. But just as FCA's previous efforts to remediate the "Death Wobble" failed over the past decade, its most recent temporary fix under CSN V41 does not remediate the Class Vehicles' defects to prevent the "Death Wobble." Each of Plaintiffs' Class Vehicles that have undergone the repair set forth in CSN V41 have again suffered the "Death Wobble."

9. At all material times, FCA had knowledge of the defective condition existing in the Class Vehicles that manifest as the "Death Wobble." Rather than address this defective condition – or disclose its possibility and/or warn drivers at the point of sale – FCA claims the "Death Wobble" is ***not*** a "safety issue" and that it "can happen with any vehicle that has a solid front axle (rather than an independent front suspension), such as the Wrangler."[4] This explanation strategically allows

[4] Exhibit 3, Eric Lawrence, *Jeep Wrangler drivers report 'death wobble' on highways*, Detroit Free Press (Nov. 19, 2018), https://www.freep.com/story/money/cars/chrysler/2018/11/19/jeep-wrangler-death-wobble-nhtsa/2028633002 (last visited July 26, 2021).

Defendant to continue with failed repair efforts until the warranty expires, at which point the problem rests exclusively with the owner.

10. The "Death Wobble" problem has become so pervasive that Defendant routinely buys back Class Vehicles when presented with "Death Wobble" claims pursuant to states' Lemon Laws. Upon information and belief, Defendant has embarked upon and adopted a secret recall and warranty program of Class Vehicles subject to CSN V41 that is concealed from governing authorities and the State Sub-Classes.

11. As a direct result of Defendant's wrongful conduct, Plaintiffs and members of the Classes have been harmed and are entitled to actual damages, including damages for the benefit of the bargain they struck when purchasing their vehicles, the diminished value of their vehicles, statutory damages, attorneys' fees, costs, restitution, and injunctive and declaratory relief.

12. Specifically, Plaintiffs seek: buyback of the Class Vehicles; compensation for the loss in value and depreciation of the Class Vehicles due to the "Death Wobble"; reimbursement for parts and labor costs incurred by Class Members who paid third parties to remedy the "Death Wobble" problem, as well as replacement of any components materially damaged by the "Death Wobble"; provision of a temporary replacement vehicle while repair is pending; punitive damages for FCA's knowing fraud that put drivers and members of the public

nationwide at risk; and an order requiring FCA to issue a formal recall and repair of the Class Vehicles, including a notice campaign informing Class Members about the recall.

JURISDICTION AND VENUE

13. This Court has subject matter jurisdiction of this action pursuant to 28 U.S.C. § 1332 of the Class Action Fairness Act of 2005 because: (i) there are 100 or more class members, (ii) there is an aggregate amount in controversy exceeding $5,000,000, exclusive of interest and costs, and (iii) there is minimal diversity because at least one plaintiff and one defendant are citizens of different States. This court has supplemental jurisdiction over the state law claims pursuant to 28 U.S.C. § 1367 and jurisdiction over the Magnuson Moss Warranty Act claim by virtue of diversity jurisdiction being exercised under the Class Action Fairness Act ("CAFA").

14. Venue properly lies in this District and vicinage pursuant to 28 U.S.C. § 1391(a), (b) and (c) because Defendant maintains its principal place of business in this District, because a substantial part of the events or omissions giving rise to Plaintiffs' claims occurred in this District, and because Defendant conducts a substantial amount of business in this District. Accordingly, Defendant has sufficient contacts with this District to subject Defendant to personal jurisdiction in this District and venue is proper.

PARTIES

Plaintiff Clair Reynolds

15. Plaintiff Clair Reynolds is a citizen and resident of the State of New Jersey.

16. Plaintiff Reynolds owns a 2018 Jeep Wrangler Unlimited Sport 4 x 4 for personal use that she purchased new from Johnson Dodge Chrysler Jeep Ram ("Johnson Jeep") in Bud Lake, Morris County, New Jersey on July 14, 2018 for approximately $36,000. The VIN of her Class Vehicle is: 1C4HJXDGJW127339.

17. By December 2018, Plaintiff Reynolds began to experience the "Death Wobble," which was not able to be fixed even after multiple repair attempts by Johnson Jeep.

18. On or about December 27, 2018, Plaintiff Reynolds returned the vehicle to the Johnson Jeep complaining about the "Death Wobble."

19. After being at Johnson Jeep for approximately two weeks, Plaintiff Reynolds' Jeep Wrangler was returned to her on January 10, 2019. Her service records indicate that the cause of the wobble was a leaking and/or weak steering damper. Johnson Jeep replaced the steering damper on Plaintiff Reynolds' vehicle. As expected, the "Death Wobble" returned within only a few days.

20. After several attempts, Plaintiff Reynolds obtained an appointment at Johnson Jeep for February 22, 2019. Johnson Jeep returned the Jeep after six (6)

days, on February 28, 2019, after, again, replacing the steering damper. The technician's notes indicate that he "test drove on highway for 19 miles inspected on lift everything working as designed." Not unsurprisingly, the "Death Wobble" manifested again within days.

21. On March 15, 2019, Plaintiff Reynolds wrote to FCA pursuant to New Jersey's Lemon Law (N.J.S.A. §§ 56:12-29-49) informing FCA of the ongoing problems, notifying FCA that the problem "substantially impair[s] the use, value or safety of [her] vehicle" and that the issue could likely "cause death or serious bodily injury." She gave FCA "one final opportunity to repair the vehicle" or she would demand a refund.

22. FCA responded to Plaintiff Reynolds through its outside counsel Rose & Waldorf, Albany, New York, on April 3, 2019. FCA's lawyers told Plaintiff Reynolds to "drop the subject vehicle off at Johnson Dodge Chrysler Jeep Ram…to utilize its resources to fully repair your vehicle…"

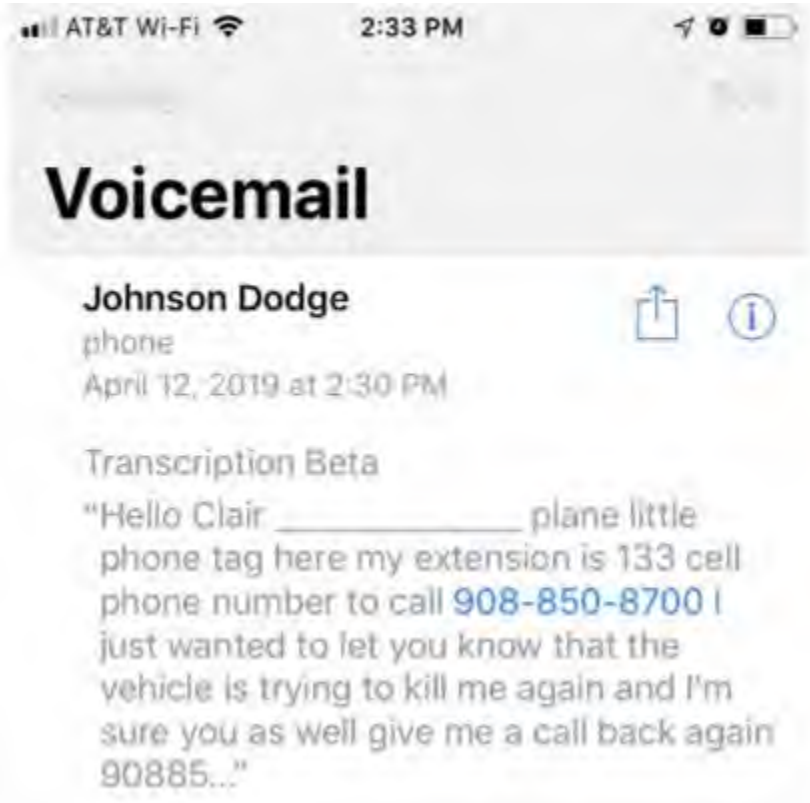
23. Plaintiff Reynolds sought to return the vehicle to Johnson Dodge, but it did not have a loaner vehicle that she could use to transport her infant child. Johnson Jeep placed her on a waiting list for such a loaner.

24. On April 5, 2019, FCA's counsel, Rose & Waldorf, again wrote to Plaintiff Reynolds notifying her that Johnson Jeep informed FCA that the vehicle

"was not dropped off immediately as requested" and that "FCA US LLC's written limited warranty does not provide for loaner or rental vehicles."

25. In response to FCA's threat, Plaintiff returned to Johnson Jeep on April 8, 2019, again, complaining about the "Death Wobble." Again, no loaner car was made available, so Plaintiff Reynolds left her Class Vehicle and rented a car that she paid for out of pocket without reimbursement from FCA or Johnson Jeep.

26. On April 12, 2019, a representative from Johnson Jeep left a voicemail for Plaintiff Reynolds, indicating that she test drove the vehicle and that the Jeep's "Death Wobble" "***is trying to kill [her] again and I'm sure you as well…***" (emphasis added).



27. Yet, on April 15, 2019, Johnson Jeep, again, returned Plaintiff Reynolds' Jeep after replacing the steering damper ***for the third time*** in less than six (6) months. The service record indicates that at the time of the return the "vehicle [was] operating as designed at this time."

28. From late-December 2018 to mid-April 2019, Plaintiff Reynolds was without her 2018 Class Vehicle for approximately one month while unsuccessful repair efforts to remediate the "Death Wobble" occurred.

29. In August 2019, FCA mailed Plaintiff Reynolds Customer Satisfaction Notice for CSN V41, which identified the reason repairs were necessary as follows:

> The frontal suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per Hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

30. After receipt of the CSN above, Plaintiff Reynolds contacted Johnson Dodge to schedule the repair work pursuant to CSN V41. She was advised the work set forth in CSN V41 was completed during her April 2019 service, and no outstanding recall work was necessary for her vehicle.

31. Plaintiff Reynolds' Class Vehicle continues to suffer from the "Death Wobble" since the April 2019 service and replacement of the steering damper pursuant to CSN V41.

32. On April 13, 2021, Plaintiff Reynolds' Class Vehicle was again brought into Johnson Jeep because her Class Vehicle "shakes at highway speeds when hit a bump." Johnson Jeep "confirmed" this complaint during a test drive and inspection, and determined the Class Vehicle again needed the steering dampers replaced.

33. Plaintiff Reynolds no longer enjoys the marketed capabilities of her Class Vehicle to avoid the recurring "Death Wobble." She no longer utilizes her Class Vehicle off-road, avoids traditional highway speeds, ensures any roadway irregularity is avoided or struck at slow speed. The utility of the Class Vehicle for which she paid is greatly diminished if not completely extinguished.

34. A video of the "Death Wobble" in Plaintiff Reynolds' Class Vehicle has been preserved.

35. Had Plaintiff Reynolds known or otherwise been made aware, of the Class Vehicles' "Death Wobble" problem and FCA's inability to repair or cure it, she would not have purchased her Jeep or otherwise would have paid significantly less for it.

36. When Plaintiff purchased her Jeep, she reasonably relied on the reasonable expectation that her Class Vehicle would be equipped with a steering system that was free from defects and safe to operate and/or Jeep could, and would, properly repair and eradicate any such defects.

37. At all times relevant herein, Plaintiff Reynolds operated her 2018 Jeep Wrangler in a reasonably foreseeable manner and as the vehicle was intended to be used, but can no longer do so given the recurring "Death Wobble."

38. Plaintiff Reynolds has suffered an ascertainable loss as a result of Defendant's unfair and deceptive conduct, breach of contractual, common law and statutory duties, and omissions and/or misrepresentations associated with the "Death Wobble" and associated safety risk, including but not limited to, out-of-pocket losses and diminished value of her Class Vehicle.

39. Neither Defendant nor any of its agents, dealers or other representatives informed Plaintiff Reynolds of the "Death Wobble" and associated safety risk prior to the purchase or lease of the Class Vehicles.

Plaintiff Monica Martirano

40. Plaintiff Monica Martirano is a citizen and resident of the State of New Jersey.

41. Plaintiff Martirano leased a 2018 Jeep Wrangler Unlimited 4x4 for personal use from Manahawkin Chrysler in Manahawkin, New Jersey on March 30, 2019 for approximately $42,000. The VIN for Plaintiff Martirano's Class Vehicle is 1C4HJXDN6JW201172.

42. By May 2019, Plaintiff Martirano was experiencing the "Death Wobble" and first brought her Class Vehicle to Manahawkin Chrysler on May 13,

2019 expressing concerns that her Class Vehicle continued to have steering issues, stating that it was very hard to control her Class Vehicle and stay in the lane at higher speeds. In response, Manahawkin Chrysler removed and replaced her Class Vehicle's front track bar and assembly. The Class Vehicle was returned to Plaintiff Martirano on May 15, 2019.

43. Days later, on May 20, 2019, Plaintiff Martirano's Class Vehicle continued to suffer from the "Death Wobble" so she went to Global Automall in Plainfield, New Jersey complaining the when driving over 40 MPH the steering becomes very loose and difficult to control the vehicle. Global Automall concluded after a test drive that the steering damper should be replaced due to loss of stability in the steering column. The Class Vehicle was returned to Plaintiff Martirano on May 22, 2019.

44. Days later, on June 4, 2019, Plaintiff Martirano's Class Vehicle continued to suffer from the "Death Wobble" so she went back to Global Automall expressing the same concern as stated on May 20, 2019. The service technician stated he was unable to reproduce Plaintiff Martirano's concern and performed no repair. Despite CSN V41 having been issued to FCA's dealer network at this time, Plaintiff Martirano's Class Vehicle was returned to her on June 5, 2019 with the "Death Wobble" still present.

45. In August 2019, FCA mailed Plaintiff Martirano a Customer Satisfaction Notice for CSN V41, which identified the reason repairs were necessary as follows:

> The frontal suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per Hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

46. Plaintiff Martirano returned to Global Automall where the recall repair work was performed pursuant to CSN V41 on November 14, 2019. The new steering damper and repair set forth in CSN V41 failed to remedy the defects causing the "Death Wobble," with continues today.

47. A video of the "Death Wobble" in Plaintiff Martirano's Class Vehicle after the recall repair set forth in CSN V-41 has been preserved.

48. Had Plaintiff Martirano known, or otherwise been made aware, of the Class Vehicles' "Death Wobble" problem and FCA's inability to repair or cure it, she would not have purchased her Jeep or otherwise would have paid significantly less for it.

49. When Plaintiff Martirano purchased her Jeep, she reasonably relied on the reasonable expectation that her Class Vehicle would be equipped with a steering system that was free from defects and safe to operate and/or Jeep could, and would, properly repair and eradicate any such defects. Had FCA disclosed that the "Death

Wobble" it knew or should have known would occur in its Class Vehicles without a remedy, Plaintiff Martirano would not have purchased her 2018 Jeep Wrangler, or would have paid substantially less for it.

50. At all times relevant herein, Plaintiff Martirano operated her 2018 Jeep Wrangler in a reasonably foreseeable manner and as it was intended to be used.

51. Plaintiff Martirano has suffered an ascertainable loss as a result of Defendant's unfair and deceptive conduct, breach of contractual, common law and statutory duties, and omissions and/or misrepresentations associated with the "Death Wobble" and associated safety risk, including but not limited to, out-of-pocket losses and diminished value of her Class Vehicle.

52. Neither Defendant nor any of its agents, dealers or other representatives informed Plaintiff Martirano of the "Death Wobble" and associated safety risk prior to the purchase or lease of the Class Vehicles.

53. Plaintiff Martirano provided Defendant and its agent dealerships repeated opportunities to repair and remediate the "Death Wobble," but they were unable to do so. Because the "Death Wobble" continued and Plaintiff Martirano feared for her safety, she traded-in her Class Vehicle and suffered a significant monetary loss.

Plaintiff Brady Laing

54. Plaintiff Brady Laing is a citizen and resident of the State of Minnesota.

55. Plaintiff Laing purchased a 2018 Jeep Wrangler Sahara JLU for personal use from Coon Rapids Jeep in Coon Rapids, MN on approximately October 15, 2018 for approximately $44,400. The VIN for Plaintiff Laing's Class Vehicle is 1C4HJXEG6JW311428.

56. On approximately October 28, 2019, Plaintiff Laing was driving on the interstate at approximately 65 mph when his Class Vehicle began to violently shake. The Death Wobble continued until he slowed his Class Vehicle's speed to approximately 45 mph.

57. In approximately November 2019, Plaintiff Laing received a Customer Satisfaction Notice for CSN V41, which identified the reason repairs were necessary as follows:

> The frontal suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per Hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

58. After receiving this notice, in early December 2019, Plaintiff Laing brought his Class Vehicle to Ryan Chrysler Dodge Jeep Ram of Monticello in Monticello, MN to receive the recall repair.

59. After receiving the recall repair in December 2019, Plaintiff Laing has not experienced the full-blown Death Wobble, but does still feel slight shaking at certain points that he can minimize by slowing his vehicle's speed.

60. Had Plaintiff Laing known or otherwise had been made aware of the Class Vehicles' "Death Wobble" problem and FCA's inability to repair or cure it, he would not have purchased his Jeep or otherwise would have paid significantly less for it. Prior to purchasing his 2018 Jeep, Plaintiff Laing performed research on the vehicle, including its pricing. None of the materials he reviewed contained any disclosure relating to the "Death Wobble," FCA's inability or unwillingness to fix properly repair it, and/or the associated safety risks.

61. When Plaintiff Laing purchased his Jeep, he reasonably relied on the reasonable expectation that his Class Vehicle would be equipped with a steering system that was free from defects and safe to operate and/or Jeep could, and would, properly repair and eradicate any such defects. Had FCA disclosed that the "Death Wobble" it knew or should have known would occur in its Class Vehicles without a remedy, Plaintiff Laing would not have purchased his 2018 Jeep Wrangler, or would have paid substantially less for it.

62. At all times relevant herein, Plaintiff Laing operated his 2018 Jeep Wrangler in a reasonably foreseeable manner and as the vehicle was intended to be used.

63. Plaintiff Laing has suffered an ascertainable loss as a result of Defendant's unfair and deceptive conduct, breach of contractual, common law and statutory duties, and omissions and/or misrepresentations associated with the "Death

Wobble" and associated safety risk, including but not limited to, out-of-pocket losses and diminished value of his Class Vehicle.

64. Neither Defendant nor any of its agents, dealers or other representatives informed Plaintiff Laing of the "Death Wobble" and associated safety risk prior to the purchase of his Class Vehicles.

Plaintiff Thomas Jared Pineda

65. Plaintiff Thomas Pineda is a citizen and resident of the State of Tennessee.

66. Plaintiff Pineda owns a 2018 Jeep Wrangler for personal use. On April 14, 2018, Pineda leased his vehicle new from Chrysler Dodge Jeep Ram of Franklin ("Franklin Jeep"), located in Franklin, Tennessee, for approximately $48,232.08 (including monthly payments of $661.43). The VIN of his Class Vehicle is 1C4HJXDG5JW134310.

67. By August 2018, Plaintiff Pineda began to experience the "Death Wobble" in his Jeep Wrangler, which was not able to be fixed even after multiple attempts to diagnose and repair the issue.

68. Plaintiff Pineda experienced the "Death Wobble" while the vehicle was driven on the interstate within the normal speed limits.

69. As a result of the "Death Wobble," Plaintiff Pineda altered his daily route to work and the route taken to his son's school in order to avoid interstate driving that would cause the "Death Wobble."

70. Plaintiff Pineda brought his vehicle back to Franklin Jeep, where he was told numerous times that the issue could not be recreated by the dealership and where he was accused of fabricating the problem. He was also told by the Franklin Jeep that no other owner had complained of a similar problem.

71. On October 3, 2018, Plaintiff Pineda brought his vehicle to Franklin Jeep and informed them that he had experienced the "Death Wobble." Franklin Jeep brushed off his concerns as a one-time occurrence due to the rough road conditions present due to highway construction.

72. During November 2018, Plaintiff Pineda began to regularly experience the "Death Wobble" issue. Plaintiff Pineda researched whether other Jeep Wrangler owners experienced the same issue, and determined other Jeep Wrangler owners were having the same experiences having located November 20, 2018 article at www. Motor1.com.[5]

[5] Exhibit 4, Christopher Smith, *New Jeep Wrangler Owners Reporting "Death Wobble" on Highway*, motor1.com (Nov. 20, 2018), https://www.motor1.com/news/276958/jeep-wrangler-owners-death-wobble/ (last visited July 26, 2021).

73. On December 17, 2018, Plaintiff Pineda again brought his Jeep Wrangler to Franklin Jeep asking that they repair the "Death Wobble" issue. At that visit, Plaintiff Pineda informed Franklin Jeep about the article he saw that indicated others had experienced the "Death Wobble" as well. The service record for this date indicates the Franklin Dealership found there were "no loose/damaged/or faulty front suspension components", there were no "frame or weld issues", and that the vehicle "drives in a normal fashion, no abnormal steering or driving conditions experienced."

74. Shortly thereafter, Plaintiff Pineda again brought his Jeep Wrangler to Franklin Jeep to address the "Death Wobble" issue. A representative from Franklin Jeep indicated that they remembered the "Death Wobble" complaint, performed a cursory check, and once again claimed there was no issue with Plaintiff Pineda's vehicle.

75. After April 25, 2019, after Franklin Jeep failed to identify and repair the "Death Wobble" issue affecting Plaintiff Pineda's vehicle, Plaintiff Pineda took his vehicle to another dealership, Bob Frensley Chrysler Jeep Dodge ("Frensley Jeep"). Frensley Jeep tested and immediately identified the "Death Wobble" problem affecting Plaintiff Pineda's vehicle.

76. As reflected in an April 25, 2019 service invoice from Frensley Jeep, Plaintiff Pineda complained of "violent wobble while driving at interstate speeds and

hitting a pothole." Frensley Jeep's service records indicate the issue was resolved by replacement of a "steering damper."

77. The "Death Wobble" problem recurred in Plaintiff Pineda's vehicle a week following the supposed fix performed by Frensley Jeep on April 25, 2019.

78. On June 25, 2019, Plaintiff Pineda brought his vehicle back to Frensley Jeep to address the "Death Wobble" issue yet again. The service records from Frensley Jeep note that Plaintiff Pineda reported "bad vibration in front end (Death Wobble)" and that for the second time, the "steering damper" was replaced with an updated design as a fix for the issue.

79. Despite this second supposed fix, Plaintiff Pineda's vehicle still exhibits "Death Wobble."

80. In August 2019, FCA mailed Plaintiff Pineda a Customer Satisfaction Notice for CSN V41, which identified the reason repairs were necessary as follows:

> The frontal suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per Hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

81. Plaintiff Pineda returned to Frensley Jeep where the recall repair work was performed pursuant to CSN V41 in November 2019. The new steering damper and repair set forth in CSN V41 failed to remedy the defects causing the "Death Wobble," with continues today.

82. Had Plaintiff Pineda known or otherwise been made aware of the Class Vehicles' "Death Wobble" problem and FCA's inability to repair or cure it, he would not have leased his Jeep or otherwise would have paid significantly less for it. Prior to leasing his 2018 Jeep, Plaintiff Pineda performed research on the vehicle, including its pricing. None of the materials he reviewed contained any disclosure relating to the "Death Wobble," FCA's inability or unwillingness to fix properly repair it, and/or the associated safety risks.

83. When Plaintiff Pineda leased his Jeep, he reasonably relied on the reasonable expectation that his Class Vehicle would be equipped with a steering system that was free from defects and safe to operate and/or Jeep could, and would, properly repair and eradicate any such defects. Had FCA disclosed that the "Death Wobble" it knew or should have known would occur in its Class Vehicles without a remedy, Plaintiff Pineda would not have leased his 2018 Jeep Wrangler, or would have paid substantially less for it.

84. At all times relevant herein, Plaintiff Pineda operated his 2018 Jeep Wrangler in a reasonably foreseeable manner and as the vehicle was intended to be used.

85. Plaintiff Pineda has suffered an ascertainable loss as a result of Defendant's unfair and deceptive conduct, breach of contractual, common law and statutory duties, and omissions and/or misrepresentations associated with the "Death

Wobble" and associated safety risk, including but not limited to, out-of-pocket losses and diminished value of his Class Vehicle.

86. Neither Defendant nor any of its agents, dealers or other representatives informed Plaintiff Pineda of the "Death Wobble" and associated safety risk prior to the lease of his Class Vehicles.

Plaintiff William Martin Powers

87. Plaintiff William Martin Powers is a citizen of Colorado.

88. In February 2018, Plaintiff Powers purchased a 2018 Jeep Wrangler Unlimited for approximately, $56,045.70 from AutoNation Chrysler Jeep Broadway ("AutoNation"), located in Littleton, Colorado. The VIN of his Class Vehicle is VIN 1C4HJXEG3JW106214.

89. In or around December 2018, and during the warranty period, Plaintiff Powers began to experience the "Death Wobble" with approximately 14,588 miles on the Jeep.

90. As reflected in the service records, Plaintiff Powers returned to AutoNation on February 15 and February 23, 2019 and complained that when the Jeep was "on the highway, going over 60 . . . it violently shakes and shutters. Ha[ve] to slow down to 50. It is not when taking turns, it is when going highway speeds of 60 or above and following the curves."

91. AutoNation returned the Jeep to Plaintiff Powers on March 7, 2019, with a replaced steering damper.

92. On April 1, 2019, only weeks after the steering damper replacement, Plaintiff Powers returned again to AutoNation following a reoccurrence of the "Death Wobble."

93. Over the next month, Plaintiff Powers made multiple unfulfilled requests to AutoNation to provide a rental car or a satisfactory repair for the Jeep. On May 2, 2019, Plaintiff Powers returned to AutoNation requesting an in-person meeting with AutoNation's General Manager.

94. During the May 2, 2019 conversation, the AutoNation Service Manager ultimately admitted to Plaintiff Powers that "parts are not available" to fix the Jeep's "Death Wobble" problem and offered to use "aftermarket" products or take them off of a Jeep on the AutoNation lot.

95. AutoNation's service manager, Brandy, advised at that time that she believed the problem with the Jeep was the steering damper, but FCA does not have a replacement steering damper available to remedy the problem.

96. Plaintiff Powers submitted a complaint to FCA for consideration of a total buy back. After not receiving a response, he attempted to follow-up with FCA multiple times and ultimately found that FCA closed the file. Another escalation

was initiated in which the FCA representative called the AutoNation store, received the information and rejected the escalation request.

97. Without any satisfaction, Plaintiff Powers left his Jeep Wrangler at AutoNation as of May 2, 2019 and sought relief through a non-binding arbitration complaint against FCA seeking a re-purchase of the Jeep. On July 11, 2019, a non-binding arbitration hearing was held, attended by Plaintiff Powers, Plaintiff Powers' sister, and on behalf of FCA via speakerphone, David Kinzer.

98. On July 18, 2019, after the informal hearing, the arbitrator issued a decision denying Plaintiff's request that FCA repurchase the Jeep. The arbitrator reasoned that (1) there had not been an unreasonable amount of repair attempts and (2) that Plaintiff Powers had not given FCA an opportunity to fix the problem since new parts had become available.

99. On August 12, 2019, Plaintiff Powers notified FCA that he formally rejected the arbitrator's decision, thereby leaving Plaintiff Powers free to pursue other legal remedies.

100. In September 2019, FCA mailed Plaintiff Powers a Customer Satisfaction Notice for CSN V41, which identified the reason repairs were necessary as follows:

> The frontal suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH)

88 Kilometers Per Hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

101. On October 3, 2019, Plaintiff Powers made a request to AutoNation for the status of his Jeep, which has been in AutoNation's possession since May – six months.

102. On December 18, 2019, Plaintiff Powers' Class Vehicle was picked up from AutoNation where it had been since May 2, 2019. It was taken to Medved Chrysler Dodge Jeep Ram ("Medved") and delivered for replacement of the steering damper pursuant to CSN V41 that same day.

103. The work was completed and Plaintiff Powers picked up his Class Vehicle from Medved on December 23, 2019, but the "Death Wobble" returned on the drive home from Medved. Plaintiff Powers immediately returned to Medved that same day, December 23, 2019, where additional service was provided relating to an air bleeding process per FCA direction. The "Death Wobble" however remains in Plaintiff Powers' Class Vehicle.

104. Had Plaintiff Powers known or otherwise been made aware of the Class Vehicles' "Death Wobble" problem and FCA's inability to repair or cure it, he would not have purchased his Jeep or otherwise would have paid significantly less for it. Prior to purchasing his 2018 Jeep, Plaintiff Powers performed research on the vehicle, including its pricing. None of the materials he reviewed contained any

disclosure relating to the "Death Wobble," FCA's inability or unwillingness to fix properly repair it, and/or the associated safety risks.

105. When Plaintiff Powers purchased his Jeep, he reasonably relied on the reasonable expectation that his Class Vehicle would be equipped with a steering system that was free from defects and safe to operate and/or Jeep could, and would, properly repair and eradicate any such defects. Had FCA disclosed that the "Death Wobble" it knew or should have known would occur in its Class Vehicles without a remedy, Plaintiff Powers would not have purchased his 2018 Jeep Wrangler or would have paid substantially less for it.

106. At all times relevant herein, Plaintiff Powers operated his 2018 Jeep Wrangler in a reasonably foreseeable manner and as the vehicle was intended to be used.

107. Plaintiff Powers has suffered an ascertainable loss as a result of Defendant's unfair and deceptive conduct, breach of contractual, common law and statutory duties, and omissions and/or misrepresentations associated with the "Death Wobble" and associated safety risk, including but not limited to, out-of-pocket losses and diminished value of his Class Vehicle.

108. Neither Defendant nor any of its agents, dealers or other representatives informed Plaintiff Powers of the "Death Wobble" and associated safety risk prior to the purchase of his Class Vehicles.

Plaintiff Trina Hancock

109. Plaintiff Trina Hancock is a citizen and resident of the State of Georgia.

110. On October 19, 2018 Plaintiff Hancock purchased a used 2018 Jeep Wrangler for personal use from Mountain Valley Motors in Blueridge, Georgia for approximately $38,395. The VIN for Plaintiff Hancock's Class Vehicle is 1C4HJXDG3JW112502. The vehicle had 1,640 miles on the odometer at the time of purchase.

111. In or around September 2019, FCA mailed Plaintiff Hancock a Customer Satisfaction Notice for CSN V41, which identified the reason repairs were necessary to her Vehicle as follows:

> The frontal suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per Hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

112. On October 9, 2019 Plaintiff Hancock's Class Vehicle was repaired at Mountain Valley Motors in Blueridge, Georgia pursuant to the Customer Satisfaction Notice.

113. On October 10, 2019, Plaintiff Hancock began to notice an intermittent shimmy of the entire front end of her Class Vehicle. Plaintiff Hancock intended to take her vehicle back to Mountain Valley Motors for a subsequent repair, but was unable to do so due to a pending trip to Pennsylvania.

114. In November 2019, Plaintiff Hancock experienced a manifestation of the Death Wobble defect while traveling from her home to Pennsylvania. She was traveling in the far-left lane of Highway 81 at between 70 and 75 miles per hour when her Class Vehicle began violently shaking to such a degree that Plaintiff Hancock believed the tires were separating from her Class Vehicle.

115. Despite barely maintaining control of the steering wheel, Plaintiff Hancock was able to maneuver her vehicle across four occupied lanes of traffic before decelerating and stopping her vehicle, at which point the Class Vehicle ceased wobbling. Plaintiff Hancock, an experienced driver, indicates that the manifestation of the Death Wobble defect was the most frightening experience of her life.

116. Plaintiff Hancock proceeded to drive her Class Vehicle to Miller's Chrysler Dodge Jeep Ram in Martinsburg, West Virginia in order to have her vehicle repaired. Plaintiff Hancock did not want to continue driving her vehicle but was forced to do so out of necessity. When Plaintiff Hancock initially contacted Miller's Chrysler Dodge Jeep Ram, she was told by an employee and/or representative that she had experienced the "Death Wobble" defect.

117. On November 14, 2019 Plaintiff Hancock's Vehicle was repaired at Miller's Chrysler Dodge Jeep Ram. At the time, Plaintiff Hancock was told by an employee and/or representative of Miller's Chrysler Dodge Jeep Ram that the steering damper installed on October 9 by Mountain Valley Motors was installed

upside down. The November 14, 2019 repair consisted of removing and re-installing the steering damper that was in place at the time.

118. When Plaintiff Hancock called Mountain Valley Motors to inform the dealership that she was told the damper in her vehicle was installed upside down, she was informed by an employee and/or representative of Mountain Valley Motors that the damper in Plaintiff's Vehicle was installed pursuant to FCA's instructions, and that these instructions had been subsequently revised by FCA approximately six (6) times.

119. After Plaintiff Hancock's vehicle was repaired at Miller's Chrysler Dodge Jeep Ram, she proceeded to drive her vehicle to Asheville, North Carolina in order to meet her husband. At that point in time, Plaintiff Hancock's husband drove Plaintiff Hancock's vehicle back to their home in Georgia because Plaintiff no longer felt safe driving her vehicle, and had experienced severe mental anxiety and trauma from the manifestation of the Death Wobble defect. Since this time, Plaintiff Hancock refused to drive her Vehicle for fear of the Death Wobble defect manifesting.

120. Upon returning to their home in Georgia, Plaintiff Hancock's husband proceeded to drive Plaintiff's Vehicle to Mountain Valley Motors for the installation of a new steering damper. Plaintiff was subsequently informed by an employee and/or representative of Mountain Valley Motors that numerous vehicles

experiencing the Death Wobble defect had come into the dealership for repairs, including vehicles that had been repaired multiple times.

121. On November 20, 2019, Plaintiff Hancock traded in her Vehicle at Mountain Valley Motors because she no longer felt safe driving it. At the time Plaintiff Hancock traded in her vehicle, the odometer reading was 13,543 miles. The Death Wobble defect continued to exist in Plaintiff Hancock's Class Vehicle at the time it was traded in and returned to Defendant's agent, Mountain Valley Motors.

122. Plaintiff Hancock was forced to trade in her vehicle at a loss for a discounted price due to the manifestation of the Death Wobble defect. Defendant was unable to remediate the Death Wobble, despite multiple opportunities to do so, before Plaintiff Hancock traded in her Class Vehicle, and the Death Wobble remained at the time she traded in her Class Vehicle.

123. Plaintiff Hancock purchased her Class Vehicle because of the Wrangler's reputation as a rugged vehicle that could operate in inclement, all-terrain conditions. Had FCA disclosed the Class Vehicles' "Death Wobble" problem to Plaintiff Hancock and FCA's inability to repair or cure it, she would not have purchased her Jeep or otherwise would have paid significantly less for it.

124. When Plaintiff Hancock purchased her Jeep, she reasonably relied on the reasonable expectation that her Class Vehicle would be equipped with a steering

system that was free from defects and safe to operate and/or Jeep could, and would, properly repair and remedy any such defects.

125. At all times relevant herein, Plaintiff Hancock operated her 2019 Jeep Wrangler in a reasonably foreseeable manner and as the vehicle was intended to be used.

126. Plaintiff has suffered an ascertainable loss as a result of Defendant's unfair and deceptive conduct, breach of contractual, common law and statutory duties, and omissions and/or misrepresentations associated with the "Death Wobble" and associated safety risk, including but not limited to, out-of-pocket losses and diminished value of her Class Vehicle.

127. Neither Defendant nor any of its agents, dealers or other representatives informed Plaintiff Hancock of the "Death Wobble" and associated safety risk prior to the purchase of the Class Vehicle.

Plaintiff Ken Schafer

128. Plaintiff Ken Schafer is a citizen and resident of the State of North Carolina.

129. Plaintiff Schafer purchased a 2019 Jeep Wrangler for personal use from Leith Honda in Raleigh, North Carolina on or about February 28, 2019 for approximately $30,174. The VIN for Plaintiff Schafer's Class Vehicle is 1C4GJXAG7KW569749. The Class Vehicle had approximately 5,500 miles on it.

130. Shortly after purchase, Plaintiff Schafer began experiencing the "Death Wobble," which has occurred twice thus far. Both times, he was travelling on Interstate Highways between 65-75 mph when his Class Vehicle's steering system violently began shaking from the steering wheel through the entire front end of the Class Vehicle.

131. During the first incident, Plaintiff Schafer decelerated to regain control of the Class Vehicle. At that time, the violent shaking ceased. Plaintiff Schafer then pulled off the roadway, stopped, and made a visual inspection of his Vehicle to determine whether any observable damage existed.

132. The second incident was almost identical to the first. Plaintiff Shafer was forced to pull the Class Vehicle off to the side of the Interstate, while vehicles were going by at high speeds. Again, he inspected and observed the Class Vehicle to ensure that there were no observable damage or issues with the Class Vehicle.

133. In or around late summer 2019, FCA mailed Plaintiff Schafer a Customer Satisfaction Notice for CSN V41, which identified the reason repairs were necessary as follows:

> The frontal suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per Hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

134. Plaintiff brought his Vehicle to the dealer on December 3, 2019 as a result of the Death Wobble incidents. The dealership replaced the steering damper as required pursuant to CSN V41. While at the dealership, the lead technician downplayed the problem, but later admitted that there is a defect.

135. Plaintiff Shafer is now hesitant to drive his Class Vehicle, especially for long distances, due to concerns over the recurring "Death Wobble."

136. Had FCA disclosed or Plaintiff Schafer had otherwise been made aware of the Class Vehicles' "Death Wobble" problem and FCA's inability to repair or cure it, he would not have purchased her Jeep or otherwise would have paid significantly less for it.

137. When Plaintiff Schafer purchased his Jeep, he reasonably relied on the reasonable expectation that his Class Vehicle would be equipped with a steering system that was free from defects and safe to operate and/or Jeep could, and would, properly repair and eradicate any such defects.

138. At all times relevant herein, Plaintiff Schafer operated his 2019 Jeep Wrangler in a reasonably foreseeable manner and as the vehicle was intended to be used.

139. Plaintiff Shafer has suffered an ascertainable loss as a result of Defendant's unfair and deceptive conduct, breach of contractual, common law and statutory duties, and omissions and/or misrepresentations associated with the "Death

Wobble" and associated safety risk, including but not limited to, out-of-pocket losses and diminished value of his Class Vehicle.

140. Neither Defendant nor any of its agents, dealers or other representatives informed Plaintiff Schafer of the "Death Wobble" and associated safety risk prior to the purchase of the Class Vehicle.

Plaintiff Melinda Martinez

141. Plaintiff Melinda Martinez is a citizen and resident of the State of California.

142. Plaintiff Martinez owns a 2018 Jeep Wrangler for personal use that she purchased new in March 2019 from the Jeep Chrysler Dodge RAM FIAT dealership of Ontario in Ontario, California, for approximately $43,000.

143. After purchasing her vehicle, Plaintiff Martinez experienced the "Death Wobble" multiple times. On one occasion, Plaintiff Martinez was driving with her child on a freeway overpass when her Jeep's steering wheel began to violently shake, consistent with the "Death Wobble." The shaking was so severe that Plaintiff Martinez believed she was going to lose control of her vehicle. Needless to say, Plaintiff was absolutely terrified, fearing for her safety and the safety of her child.

144. As a result, Plaintiff Martinez took her Jeep to the Jeep Chrysler Dodge RAM FIAT dealership of Ontario in late January 2020 to have the "Death Wobble" defect fixed. When Plaintiff Martinez arrived at the Jeep dealership, she described

to a dealership employee the "Death Wobble" issue plaguing her vehicle. In response, the employee laughed and explained that the issue is known as the "death shake" and "it happens."

145. Thereafter, Plaintiff Martinez's Jeep received the purported repair set forth in CSN V41. However, after having the repair performed, Plaintiff still experienced the "Death Wobble," which the repair was falsely represented to remediate.

146. As a result, in July 2020, Plaintiff Martinez—once again—returned to the Jeep Chrysler Dodge RAM FIAT dealership of Ontario, which—once again—replaced her Jeep's steering damper.

147. Unfortunately, Plaintiff Martinez continues to experience the "Death Wobble" when driving her Jeep despite it having received multiple "repairs."

148. Had Plaintiff Martinez known or otherwise been made aware of the "Death Wobble" defect and FCA's inability to repair or cure it, she would not have purchased her Jeep or otherwise would have paid significantly less for it.

149. When Plaintiff Martinez purchased her Jeep, she reasonably relied on the reasonable expectation that her Class Vehicle would be equipped with a steering system that was free from defects and safe to operate and/or that Jeep could, and would, properly repair and eradicate any such defects.

150. At all times relevant herein, Plaintiff Martinez operated her 2018 Jeep Wrangler in a reasonably foreseeable manner and as the vehicle was intended to be used, but can no longer do so given the recurring "Death Wobble."

151. Plaintiff Martinez has suffered an ascertainable loss as a result of Defendant's unfair and deceptive conduct, breach of contractual, common law and statutory duties, and omissions and/or misrepresentations associated with the "Death Wobble" and associated safety risk, including but not limited to, out-of-pocket losses and diminished value of her Class Vehicle.

152. Neither Defendant nor any of its agents, dealers or other representatives informed Plaintiff of the "Death Wobble" and associated safety risk prior to Plaintiff Martinez's purchase of the Class Vehicle.

Defendant

153. Defendant FCA U.S., LLC is a Delaware limited liability company with its principal place of business at 1000 Chrysler Drive, Auburn Hills, Michigan. The Class Vehicles at issue here are part of the FCA U.S., LLC family of companies, which is, in turn, part of Fiat Chrysler Automobiles N.V.

154. At all times relevant to this action, Defendant and/or its agents manufactured, distributed, sold, leased, and warranted the Class Vehicles throughout the United States. Defendant and/or its agents designed, caused, manufactured, the Jeep knowing about the "Death Wobble" problem, without either disclosing it at the

time of sale or attempting to remedy it. Defendant and/or its agents also developed and disseminated the owner's manuals, warranty booklets, advertisements, and other promotional materials relating to the Jeep.

FACTUAL ALLEGATIONS

A. The Death Wobble Defect

155. FCA designs, engineers, manufactures, and sells vehicles under the Chrysler, Jeep, Dodge, Ram, Fiat, and Maserati brands in this District and throughout the United States. FCA designs, manufactures, distributes, and sells motor vehicles and parts through its network of authorized motor vehicle dealers.

156. Due to the solid front axle and four-link suspension, the Class Vehicles experience premature suspension bushing and component wear that results in an inability to absorb natural vibrations, harshness, and bumps associated with normal and anticipated driving conditions.

157. As background, a typical solid axle system is comprised of a solid axle that runs from one side of the vehicle to the other (pictured below). This system uses only the leaf springs to locate the axle and resist forward, sideways, vertical, and torsional motion. When the axle hits an obstacle, the leaf spring compresses, getting flatter and longer. Advantages of this system include fewer moving components and thereby decreasing the number of wear items within the suspension system. To further emphasize this point, the below diagram includes only four (4) pivot points

that manage the forward, sideways, vertical, and torsional location of the front solid axle. Since each pivot point also contains a bushing, this system translates into fewer wear items within the suspension system.

158. The Class Vehicles do not contain a typical solid axle suspension system. Instead of utilizing leaf springs, the Class Vehicles utilize coil springs (simulation pictured below). Because the coil springs are unable to locate the axle as in the traditional system, the Class Vehicles use four links for front-to-rear positioning of the axle. To keep the axle from moving side to side (or centered), the Class Vehicles must also utilize a track bar. The significant disadvantage of this system is that it incorporates many moving components and thereby increases the number of wear items (including bushings) within the suspension system. To further emphasize this point, the below diagram includes ten (10) pivot points that manage the forward, sideways, vertical, and torsional location of the front solid axle. Since

each pivot point also contains a bushing, this system translates into a greater number of wear items within the suspension system.

159. In addition to a four-link front suspension, the Class Vehicles also incorporate a steering damper (or steering stabilizer). A steering damper operates on the same principle as a shock absorber, the main difference being the system it effects. While a typical shock absorber is designed to absorb impacts from things like potholes or other road hazards in order to provide a smoother ride, a steering damper reduces vibration and the transfer of energy from the suspension into the steering wheel, which helps to eliminate driver fatigue as well as to improve vehicle drivability. However, even a properly functioning steering damper is unable to absorb the forces generated by a malfunctioning underlying suspension system.

160. Due to the front suspension design in the Class Vehicles, they will experience increased vibrations and forces thereby requiring high quality suspension

components, including bushings, that are not susceptible to premature wear and failure. When the suspension system components, including bushings, wear prematurely or fail, the energy, vibrations, and forces that would have been absorbed and deflected by a properly functioning suspension system is transferred to the steering wheel. This vibration transfer to the steering wheel presents a safety issue to the vehicle operator and passengers.

161. As explained above, the Class Vehicles contain numerous pivot points within the front suspension system. These pivot points are subject to extreme load, deflection and repeated movement. The Class Vehicles contain inadequate rubber bushings that experience tearing, premature wear and failure. These rubber bushings are unable to withstand the operational environment of the front suspension system as designed. A steering damper will likewise prematurely wear and fail in this operational environment, and it only serves to temporarily mask the Class Vehicles' defects, but does not remedy the "Death Wobble."

162. As a result of the defect described above, which occurs most often when traveling at speeds over 45 mph, and the front suspension system and steering components can become jarred out of equilibrium when the Class Vehicles encounter customary and expected variations in the roadway.

163. The resulting shaking of the steering wheel and front of the Class Vehicles is a serious safety concern. For the unsuspecting driver, this unexpected

violent shaking of the steering column at highway speeds is both alarming and dangerous. To eradicate the problem, the suspension components, and bushings need to be inspected and replaced, often at a significant cost.

164. In a report dated October 31, 2019, a journalist for CBS News in Boston video recorded the "Death Wobble" experience in James Squires Class Vehicle, which clearly demonstrates the safety concerns of the "Death Wobble" and the severity of this defect.[6]

165. Defendant has attempted to mask the suspension defect through the use and redesign of a steering damper; however, as explained above, even a properly functioning steering damper is unable to adequately compensate for a suspension system that is prematurely worn and in need of repair.

B. FCA's Longstanding Knowledge of the Defect

1. 2012 Reporting on Jeep's "Death Wobble" Problem

166. Defendant received numerous complaints about the Jeep's "Death Wobble" for years and failed to take action to remedy it or inform its customers of its potential to occur at high speed travel.

167. In a 2012 news report from ABC7 in San Francisco, two Jeep owners

[6] Exhibit 5, Christina Hager, *I-Team: 'Jeep Wobble' Has Federal Investigators Looking at Safety*, CBS Boston (Oct. 31, 2019), https://boston.cbslocal.com/2019/10/31/jeep-wobble-federal-investigators-safety-wbz-iteam/ (last viewed July 26, 2021).

from California reported that "the whole front end of the vehicle shakes back and forth" and that "[i]t literally feels like the front of your vehicle is going to shake apart."[7]

168. The reporter asked one of the owners featured in the story if she would have bought the Jeep if she had known about the problem, she responded, "No, absolutely not. I drive my son to school and this is my primary form of transportation for my son and I."[8] She went further, "[t]his is something that I purchased to drive at freeway speeds; ***there was no waiver or disclosure*** at the time associated with it that I should have to be concerned driving it at normal speed…"[9]

169. In response to the ABC7 news story, FCA "declined a request to go on camera, but Corporate Communications…issued a statement saying 'vehicles equipped with a solid axle can be susceptible to this condition.'" Refusing to accept responsibility, FCA went further and blamed its customers by claiming that "most reported incidents…are often linked to poorly installed or maintained after-market equipment."

170. But, as the reporter pointed out, neither of the Jeeps at issue for the story—*nor the Plaintiffs here*— have any after-market equipment.[10]

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[7] Exhibit 6, Dan Noyes, Jeep 'death wobble' leaves drivers shaken, ABC News, https://abc7news.com/8224/ (last viewed July 26, 2021).
[8] *Id*.
[9] *Id*. (emphasis added).
[10] *Id*.

171. FCA also told ABC7 that the "Death Wobble" can be corrected with "a change of tires or installation of a simple steering dampener." Again, consistent with Plaintiffs' experiences, the report indicates that one Jeep owner "replaced the dampener and was hit by the wobble again."[11]

172. Following this report in 2012, California Congressional Representatives Henry Waxman and Anna Eshoo wrote a letter to FCA in July 2012 urging it to launch a campaign informing its customers that the Jeeps they own could suffer from a safety risk called the "Death Wobble."

173. Specifically, the lawmakers wrote that they "believe[d] Chrysler should undertake an outreach campaign to its customers, such as a Customer Satisfaction Campaign, to notify Jeep owners of the risk of the 'wobble' condition, also described as a 'vibration' or 'shimmy,' and the possible methods for repairing and preventing the problem," and to "advise customers how to stop the wobble if they experience it while driving."[12]

174. In response, in August 2012, FCA issued a technical service bulletin to its dealerships acknowledging the issues with Jeep's steering and suspension components and outlining just what dealers should be looking for when someone

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[11] *Id*.

[12] Exhibit 7, Pete Kasperowicz, *Dems press Chrysler to help its customers fix "Jeep Death Wobble,"* The Hill (July 6, 2012), https://thehill.com/blogs/floor-action/house/236483-dems-press-chrysler-to-help-its-customers-fix-jeep-death-wobble (last visited July 26, 2021).

comes in complaining of front end shaking, including a detailed inspection of the steering controls and components as well as the tires. However, FCA would not agree to pay for any such repairs for vehicles outside of the factory warranty period.

175. In November 2018, as reported in the Detroit Free Press, a Jeep owner from Massachusetts who purchased a 2018 stock Jeep Sport model with some basic comfort and convenience options for just under $38,000, experienced the "Death Wobble" on I-495 while taking one of his children to a basketball tournament.[13]

176. In the report, the owner described the incident, "I hit a bump that should have been nothing and all of a sudden I thought I had a flat tire or something else bad because the whole car and steering wheel start[ed] shaking. I slowed down and was getting ready to pull over and then it went away when I slowed down enough (probably around 50 mph)." "It was concerning, but right that second I just brushed it off," but then, the "[s]ame thing happened once or twice more that weekend on the highway and then once again Monday or Tuesday on the way to work" so he made a service appointment.[14]

177. The report states that he was told by the dealership that the steering stabilizer was "shot and had no pressure" and that contrary to the claims of FCA otherwise, the dealership told him ***it was a safety issue, and he should not be driving***

[13] Exhibit 3.
[14] *Id.*

the vehicle.[15]

178. In the story, the owner rejected FCA's claims that the "Death Wobble" did not present a safety issue, stating that "[h]aving to rapidly slowdown in the center lane of a highway while going 70 mph definitely is unsafe and the amount of vibration happening from this is just bound to break something eventually…"[16]

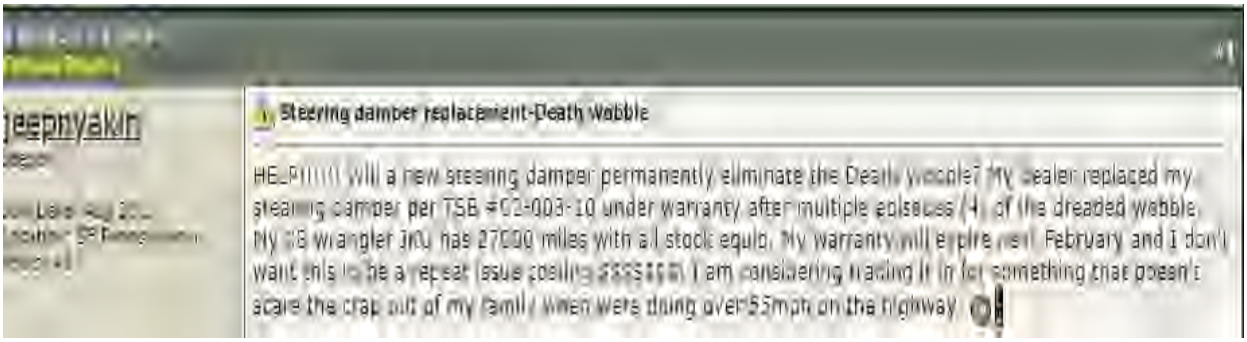
2. Reports to NHTSA and FCA's Technical Service Bulletins

179. The National Highway Traffic Safety Administration ("NHTSA") has received numerous complaints about Jeep's "Death Wobble" problem. In 2018, it was reported that the NHTSA is looking into the "Death Wobble" reports.[17]

180. Prior to Plaintiffs' purchases, and even before public news reports, FCA was internally aware of the complaints about the Class Vehicles' "Death Wobble." In fact, in an October 28, 2010, Technical Service Bulletin (02-003-10), FCA instructed its dealerships that for Jeep Wranglers built between 2007-2009, when customers complain about "vibration from rough surfaces" they should replace "the steering damper and steering damper bracket."

[15] *Id*.
[16] *Id*.
[17] *Id*.

181. But, just as with Plaintiffs, owners posting in various online forums discussing the Class Vehicle's "Death Wobble" report that replacing the damper only masks the problem. One Jeep owner wrote on www.wranglerforum.com in



April 2011:[18]

182. To which, another member of the forum posted:[19]

183. Currently, the NHTSA online complaint database is replete with complaints, below are only a few examples of those made just in 2019:

> **NHTSA ID Number**: 11208173
> **Incident Date** January 1, 2019
> **Consumer Location** Unknown
> **Vehicle Identification Number** 1C4HJXDG0JW****
> **Summary of Complaint**

[18] Exhibit 8, WranglerForum.com, https://www.wranglerforum.com/f202/steering-damper-replacement-death-wobble-89608.html (last visited July 26, 2021).
[19] *Id.*

WHILE TRAVELING ON THE FREEWAY AT SPEEDS FROM 65-75 MY JEEP WILL START TO "DEATH WOBBLE" WHEN YOU HIT A BUMP OR UNEVEN SPOT ON THE ROAD REQUIRING ME TO DECELERATE OR COME TO A COMPLETE STOP. MY VEHICLE HAS BEEN BACK TO THE DEALER 5 TIMES SINCE MY PURCHASE IN NOV OF 2018. FIVE DIFFERENT THINGS HAVE BEEN REPLACED AND ***ONE OF THE DAMPENERS HAS BEEN REPLACED TWICE NOW.*** IT'S BEEN AT THE DEALER FOR 3 WEEKS STRAIGHT NOW. CHRYSLER SAYS THAT THERE IS NOTHING THAT THEY CAN DO AT THIS TIME AND REFERRED ME BACK TO THE DEALER, THE DEALER SUGGESTED I GET AN ATTORNEY SPECIALIZING IN THE LEMON LAW. I HAVE DONE SO AND ALSO WILL BE TALKING TO THE FEDERAL TRADE COMMISSION. SO FAR I HAVE LOST A DAYS WORK AND FIVE 30 MILE TRIPS TO AND FROM THE DEALERSHIP ONLY TO FIND OUT THAT THE PROBLEM STILL PERSISTS. IT'S VERY DANGEROUS TO DRIVE. THE DEALERSHIP SAID THAT THE NEW ONES WILL SOMETIMES HAVE A LITTLE "WIGGLE" TO THEM AT TIMES AND I INFORMED HIM THAT IF I HAD KNOW THIS ***I WOULD NOT HAVE BOUGHT IT HAD I KNOW THIS.*** I AM VERY UPSET WITH CHRYSLER AT THE MOMENT. I HAVE NEVER HAD A PROBLEM OUT OF MY 2015 JEEP WRANGLER SAHARA UNLIMITED OR MY 2009 JEEP ALI WRY. I AM VERY DISAPPOINTED IN JEEP.[20]

HTSA ID Number: 11206377

[20] Exhibit 9, *2018 Jeep Wrangler*, NHTSA, https://www.nhtsa.gov/vehicle/2018/JEEP/WRANGLER/SUV/4WD%252520Later%252520Release#complaints (emphasis added) (last visited July 26, 2021).

Incident Date January 1, 2019

Consumer Location RICHMOND, TX
Vehicle Identification Number 1C4HJXEG4JW****
Summary of Complaint

VIOLENT STEERING WHEEL SHAKING AND FRONT END STEERING SHAKING WHEN DRIVING OVER ROAD IMPERFECTIONS OVER 60 MPH. LOOSE AND WANDERING STEERING RESULTING IN MULTIPLE STEERING CORRECTIONS TO REMAIN STRAIGHT IN LINE ON A FLAT STRAIGHT AND LEVELED SURFACE. WRANGLER WAS IN DEALERSHIP FOR MORE THAN 40 DAYS TOTAL FOR BACKORDERED PARTS AND REPAIRS. WRANGLER PICKED UP TODAY AFTER 3RD VISIT. ***STEERING DAMPER REPLACED FOR 2ND TIME***. DRIVER SIDE SHOCK ABSORBER REPLACED. VIOLENT SHAKING HAS BEEN RESOLVED SO FAR. BUT LOOSE AND INDIRECT STEERING IS STILL PRESENT. VIDEOS AVAILABLE UPON REQUEST.[21]

NHTSA ID Number: 11205859
Incident Date May 3, 2019
Consumer Location PRESCOTT, AZ
Vehicle Identification Number 1C4HJXFG7JW****
Summary of Complaint

AFTER INSTALLATION OF THE JEEP MANUFACTURED AND WARRANTIED 2 INCH MOPAR LIFT KIT AT THE JEEP DEALERSHIP, THE ***VEHICLE'S STEERING WHEEL AND FRONT END WILL VIOLENTLY SHAKE AFTER HITTING A BUMP AT SPEEDS OF 50 MILES PER HOUR AND ABOVE.*** THIS WAS MOST COMMONLY SEEN WHEN DRIVING OVER BRIDGES AT SPEEDS OF AROUND 50 MPH. THE VEHICLE WAS TAKEN TO

[21] *Id.*

THE DEALER WHEN THEY CLAIMED THEY COULD NOT DUPLICATE THE RESULTS. I THEN HAD TO RISK MY OWN SAFETY TO DEMONSTRATE TO A TECHNICIAN THAT THE PROBLEM WAS INDEED HAPPENING. THIS OSCILLATION OF THE STEERING AND SUSPENSION COMPONENTS IS EXTREMELY DANGEROUS AND REQUIRES ME TO COME TO A COMPLETE STOP BEFORE THE VEHICLE WILL STOP SHAKING. I ALSO HAVE LITTLE TO NO CONTROL OVER THE VEHICLE WHEN THIS HAPPENS UNTIL THE VEHICLE HAS BEEN SLOWED DOWN SUBSTANTIALLY. THE PROBLEM IS ONGOING AND HAS YET TO BE SOLVED.

NHTSA ID Number: 11205782
Incident Date May 4, 2019
Consumer Location CHESTER, NJ
Vehicle Identification Number 1C4HJXDG9JW****
Summary of Complaint

WHILE DRIVING AT NORMAL HIGHWAY SPEEDS (60MPH AND ABOVE) EACH OVERPASS, SEAM OR POTHOLE IN THE ROAD CAUSES MY 2018 WRANGLER TO SHAKE AND VIBRATE UNCONTROLLABLY. AT TIMES THIS "DEATH WOBBLE" IS SO VIOLENT THAT THE ONLY WAY TO MAKE IT STOP IS TO PULL OVER AND COME TO A COMPLETE STOP. IMAGINE TRYING TO KEEP CONTROL OF YOUR JEEP WHILE IT'S SHAKING UNCONTROLLABLY AND YOU HAVE TO CROSS 3 LANES OF TRAFFIC TO PULL OVER. THIS WAS MY EXPERIENCE ON 5.4.19. THIS WAS NOT THE FIRST TIME. ***THIS IS ALSO AFTER THE DEALERSHIP AND MANUFACTURER HAVE "REPAIRED" THE ISSUE ON 3 PREVIOUS OCCASIONS.***

NHTSA ID Number: 11205408
Incident Date May 2, 2019

> **Consumer Location** ESSEX, VT
> **Vehicle Identification Nu**mber 1C4HJXEN6JW****
> **Summary of Complaint**
>
> WHILE DRIVING ABOUT 65 MILES PER HOUR I RAN OVER A BRIDGE EXPANSION JOINT ON A BRIDGE APPROXIMATELY TEN OR MORE TIMES DURING MY TRIP. ***ON THREE OCCASIONS WHEN I RAN OVER THE EXPANSION JOINT THE FRONT OF THE VEHICLE BEGAN TO SHAKE VIOLENTLY UP THROUGH THE STEERING WHEEL CAUSING ME TO LEAVE MY LANE OF TRAVEL***. I FEEL IF A CAR WAS NEXT TO ME AT THE TIME I COULD HAVE CRASHED. APPLYING BRAKES AND SLOWING ENDED THE PROBLEM EACH TIME.

184. On October 24, 2018, a citizen petition was filed with NHTSA requesting that it initiate a safety defect investigation concerning 2018 Jeep Wranglers, which the NHTSA's Office of Defects Investigation ("ODI") opened for evaluation on November 16, 2018. A Defect Petition was opened by ODI on November 16, 2018.[22]

185. On March 8, 2019, ODI wrote Defendant seeking information concerning this safety defect investigation, and defined the alleged defect to include: "Concerns related to the steering system such as: … Vibration, oscillation or wobbling while driving, including after encountering bumps, potholes or other irregular roadway surfaces." ODI requested documents detailing steering related complaints received by FCA complaint

[22] Exhibit 10, ODI Resume, Investigation: DP 18004.

186. In response ODI's information demand of March 8, 2019, FCA identified 3,566 distinct "Steering related complaints, including steering shimmy/wobble, intermittent lock-up, and looseness/wandering" concerning the 2018-2019 Jeep Wranglers. While ODI had only received 608 of these complaints, FCA had already received 3,255 additional, separate steering complaints on the Class Vehicles by Summer 2019.

187. While ODI proceeded with its Defect Investigation of these alleged defects, FCA orchestrated the ineffective CSN V41 campaign to again unsuccessfully remediate the defects that cause the "Death Wobble." This campaign began with a confidential Dealer Notification Program that began soon after FCA received the March 8, 2019, letter from ODI demanding information relating to steering concerns frequently described as the "Death Wobble." This Dealer Notification Program was established by FCA prior to June 2019, and has been modified several times since.

188. FCA intended to notify owners of Class Vehicles it identified that the repair work set forth in CSN V41 was required to remedy the defects that manifest as the "Death Wobble." FCA required notification to all specifically identified Class Vehicle owners, which FCA identified as about 192,000 owners out of an estimated population of approximately 270,000 2018-2019 Jeep Wrangler vehicles.

189. In or around August 2019, Defendant began to mail individual notices

to approximately 192,000 owners of 2018-2019 Class Vehicles conceding the existence of the defect alleged herein, and requiring the repair set forth in CSN V41. The mandated repair is the replacement of steering damper (580AC) with steering damper (580AE). As Plaintiffs allege, the replacement steering damper (580AE) and repair required by CSN V41 does not remediate the defects that cause the "Death Wobble."

190. On September 16, 2019, ODI concluded that a Preliminary Evaluation was necessary based on its investigation pursuant to Defect Petition DP 18-004. ODI then opened Preliminary Evaluation PE 19-012 and closed DP 18-004 the next day, September 17, 2019.[23] In opening the Preliminary Evaluation, ODI concluded further evaluation was necessary concerning "Various frame weld quality concerns, such as excessive slag, lack of and/or over penetration, overweld or weld drip, weld splash and porous welds, and steering related issues that may be a result of the aforementioned weld quality concerns."[24] ODI further stated it "need[ed] to further evaluate the alleged steering-related defects reported through MY 2019 and the alleged defects' relation to weld quality."[25]

191. In conclusion, the ODI stated: "The petition was granted on September 16, 2019. Preliminary Evaluation PE19-012 has been opened to further assess the

[23] *See* Exhibit 10.
[24] Exhibit 11, NHTSA, ODI Investigation: PE 19-012.
[25] Exhibit 10.

scope, frequency, and potential safety-related consequences of alleged weld quality deficiencies and steering related concerns on the MY 2018-2019 'JL' Jeep Wrangler vehicles."[26]

192. After Plaintiff Reynolds filed her initial Complaint in June 2019, Mark Chernoby, FCA Chief Technical Compliance Officer, was interviewed by the Detroit Free Press and admitted the existence of the "Death Wobble" defect, comparing it to a tuning fork, stating:

> "if you bang it with that frequency it'll just sit there and keep going forever. It won't slow down, it won't dissipate, and that's essentially what we're talking about here with the vibration in the new Wrangler. […] When you hit a bump in the road, if everything is just right, this suspension can set off that resonance and what we started seeing is as soon as it got cold this past fall, early winter, we started seeing complaints."[27]

193. Mr. Chernoby continued, describing the failure that causes the "Death Wobble" in the steering damper as "air getting into the damper on the front suspension of the Wrangler during cold temperatures, when oil becomes 'thick like molasses' and air bubbles take a long time to get out of the oil."[28]

194. When asked whether the existing steering dampers (580AC) are

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[26] *Id.*

[27] Exhibit 12, Eric Lawrence, *Fiat Chrysler Automobiles says it has fix for Jeep 'Death Wobble,'* Detroit Free Press (Aug. 10, 2019), https://www.freep.com/story/money/cars/chrysler/2019/08/10/jeep-death-wobble-fix/1969368001/ (last visited July 26, 2021).

[28] *Id.*

defective, Mr. Chernoby stated: "It was a combination of design and manufacturing process."[29]

195. The new damper is produced by the same supplier as the old damper, who Mr. Chernoby declined to identify. Instead, Mr. Chernoby quipped over this serious safety concern stating: "***We steer away*** ... from any kind of blame game or even open discussion on suppliers even on safety recalls,"[30]

196. On November 20, 2019, Defendant extended these issues to the 2020 Jeep Wrangler and 2020 Jeep Gladiator pursuant to Service Bulletin No. 19-002-19 relating to "Shimmy In The Steering Wheel After Hitting An Irregularity On The Road Surface" and refers service technicians to an available video instructing them "on how to properly diagnosis [sic] and repair this issue."[31] The Service Bulletin again acknowledges the defect, recognizing that "[t]he customer may notice a shimmy in the steering wheel after hitting an irregularity on the road surface such as an expansion joint, pothole or bump."[32]

197. FCA, through (1) its public acknowledgement of the problem; (2) its own records of customers' complaints; (3) dealership repair records; (4) records from the National Highway Traffic Safety Administration (NHTSA); (5) warranty

[29] *Id.*
[30] *Id.*
[31] Exhibit 13, Service Bulletin No. 19-002-19.
[32] *Id.*

and post-warranty claims; (6) internal pre-sale durability testing and internal investigations; and (7) other various sources, has always known or should have known the MY 2018-2019 and later defects in the Class Vehicles manifest as the "Death Wobble." Yet, at no time has FCA disclosed these defects or the "Death Wobble" to consumers or warned of the "Death Wobble" despite knowing the defects persist today with no known way to remediate the existing Class Vehicles.

198. Defendant failed to adequately research, design, test and/or manufacture the Class Vehicles before warranting, advertising, promoting, marketing, and/or selling them as suitable and safe for use in an intended and/or reasonably foreseeable manner. And despite actual knowledge of the "Death Wobble," Defendant failed to remediate the defect or replace the defective parts to cure the defect.

199. Defendant is experienced in the design and manufacture of consumer vehicles. As an experienced manufacturer, Defendant conducts tests, including pre-sale durability testing, to verify the vehicles it sells are free from defect and align with Defendant's specifications and intended use of the Jeep, including routine highway travel.

200. Upon information and belief, Defendant performs a four-part durability evaluation on its vehicles before they are released for sale to the general public. The four steps are a virtual analysis, data acquisition, bench testing, and road testing.

201. The virtual analysis stage is conducted by FCA engineers. It is designed to identify risk areas early in the development process by using software simulations to identify potential part failures by using advanced mathematical models. This process allows FCA to identify and correct any issues with its vehicles before they are produced and when it is the least costly to remedy.

202. The data acquisition stage is also conducted by FCA engineers. FCA engineers collect and analyze road load data (data regarding the expected load the vehicles will undergo during their anticipated lifetime).

203. Bench testing involves testing individual components of the vehicle to simulate real world conditions. Bench testing is designed to verify the overall soundness of a design under controlled conditions. The testing performed typically includes testing various component parts to failure.

204. Finally, FCA's presale durability road testing system is nicknamed DUMBO, which stands for Durability Monitoring Box and Off-board.

205. The purpose of DUMBO is to detect preliminary degradation of vehicle component parts. Road testing of the vehicles is conducted and data is logged through an on-board unit within the vehicle, which is then transferred to a server for analysis. The DUMBO system is used to verify the correct execution of durability tests, to monitor any performance losses, and to collect data. The collected data is then run through various event recognition, event validation, and performance

evaluation algorithms to identify any loss of performance.

206. FCA knew of the "Death Wobble" and its associated defects when performing these quality control metrics on the Class Vehicles and made no substantive design modifications to eliminate the defects in the Class Vehicles that manifest as the "Death Wobble."

C. FCA Provides No Disclosure or Warning About the "Death Wobble"

207. Despite its knowledge, FCA failed to warn consumers about the "Death Wobble" and how to safely gain control of the vehicle should it occur at highway speed.

208. Yet, in the 2018 Jeep Wrangler owner's manual, FCA does include a section titled "On-Road Driving Tips" and warns drivers about higher ground clearances and that the driver should "[a]void sharp turns and abrupt maneuvers" and that "failure to operate th[e] vehicle correctly may result in loss of control or vehicle rollover."[33]

209. FCA took it upon itself to speak and warn about safe operation of the Jeep. With its long standing knowledge of the Jeep's "Death Wobble," FCA had a similar duty to not only warn its consumers both before and after purchase, but also

[33] Exhibit 14, 2018 Jeep All New Wrangler Owners Manual at 359 (available at https://www.jlwranglerforums.com/downloads/guides/2018-Jeep-Wrangler-JL-JLU-Owners-Manual.pdf) (last visited July 26, 2021).

to provide similar precautions, warnings, and instructions on how to safely operate the vehicle during the "Death Wobble" and bring the vehicle back to normal operating conditions.

D. FCA Touts Safety in its Marketing and Advertising

210. FCA has touted its "commitment" and "dedication" to "transportation safety includ[ing] engineering active and passive features for diverse drivers and vehicle segments."[34] Amid worsening reliability ratings and recall investigations from NHTSA,[35] FCA's head of vehicle safety and regulatory compliance assured the market in 2014 that "safety considerations are baked into every component of every product we make."[36]

211. On its website, FCA represents that its "objective is to ensure vehicle quality and safety."[37] Defendant informs consumers that FCA "vehicles meet the highest standard in terms of safety, ecological profile, driving performance and

[34] Exhibit 15, FCA 2015 Sustainability Report, https://www.fcagroup.com/en-US/investors/financial_information_reports/sustainability_reports/sustainability_reports/2015_Sustainability_Report.pdf (last visited July 26, 2021).
[35] Exhibit 16, Michael Wayland, *Quality Chief Leaves FCA Amid Recalls, Poor Reliability*, THE DETROIT NEWS (Oct. 29, 2014), https://www.detroitnews.com/story/ business/autos/chrysler/2014/10/28/fiat-chrysler-replaces-longtime-quality-chief/18052121/ (last visited July 26, 2021).
[36] Exhibit 17, Sandy Smith, *Sandy Says: Are You a Safety Advocate?*, EHS TODAY, (Feb. 4, 2016), http://ehstoday.com/safety-leadership/sandy-says-are-you-safety-advocate (last visited July 26, 2021).
[37] Exhibit 18, FCA Media Center, https://www.fcagroup.com/en-US/media_center/insights/Pages/quality_lifecycle.aspx. (last visited July 26, 2021).

quality."[38] Specifically, FCA's website focuses on Defendant's purported rigorous testing and quality control:

> To ensure that FCA vehicles deliver maximum safety and quality to customers over their entire life, every mechanical and electronic component, body part and trim element is rigorously tested. The designers work with a team of researchers during the testing phase to ensure vehicles meet the highest standards in terms of safety, ecological profile, driving performance and quality.[39]

212. On its webpage advertising the 2018 Jeep Wrangler, FCA states that it "builds on a proven tradition of smart design combined with preventative features to help keep you safe and secure."[40] It also says that the 2018 Jeep Wrangler "has been designed to make your life easier, more convenient, safer, and more secure."[41] FCA made these claims and advertisements touting its dedication to safety to boost sales of the Class Vehicles even though it knew the "Death Wobble" presented a safety risk on these vehicles.

E. Warranties Related to the Defect

213. The Class Vehicles come with a three-year/36,000 mile Basic Limited Warranty. The Basic Limited Warranty lasts for three years from the date delivery of the Class Vehicle is taken, or for 36,000 miles on the odometer, whichever occurs

[38] *Id.*
[39] *Id.*
[40] Exhibit 19, Jeep Wrangler webpage, https://www.jeep.com/wrangler/safety-security.html. (last visited Jan. 26, 2020).
[41] *Id.*

first. The Class Vehicles also come with a five-year/60,000 mile Powertrain Warranty. The Powertrain Warranty covers the engine, transmission, and drive systems.

214. FCA instructs vehicle owners and lessees to bring their vehicles to an FCA dealership for the warranty repairs. Many owners and lessees have presented Class Vehicles to FCA dealerships with complaints about the Death Wobble.

215. Despite FCA's knowledge of the problem—and presumably its knowledge of how to appropriately remediate and prevent the "Death Wobble" from recurring (replacing suspension systems ball joints, track bar and upper inner tie rods)—FCA refuses to provide appropriate warranty coverage, instead opting only to replace the Jeep's steering damper pursuant to the warranty or suggesting to the consumer that they have their tires aligned, rotated, or purchase new tires altogether. None of FCA's suggestions are covered by the warranty nor will they remediate the defect to solve the "Death Wobble" problem.

CLASS ALLEGATIONS

216. Plaintiffs bring this action pursuant to the provisions of Rules 23(a), 23(b)(2), and 23(b)(3) of the Federal Rules of Civil Procedure, on behalf of themselves and the following proposed State Subclasses:

> **New Jersey Subclass:**
> All persons or entities who purchased or leased a Class Vehicle in New Jersey.

Colorado Subclass:
All persons or entities who purchased or leased a Class Vehicle in Colorado.

Georgia Subclass:
All persons or entities who purchased or leased a Class Vehicle in Georgia.

Tennessee Subclass:
All persons or entities who purchased or leased a Class Vehicle in Tennessee.

Minnesota Subclass:
All persons or entities that purchased or leased a Class Vehicle in Minnesota.

North Carolina Subclass:
All persons or entities that purchased or leased a Class Vehicle in North Carolina.

California Subclass:
All persons or entities that purchased or leased a Class Vehicle in California.

217. Excluded from the Class are FCA, its employees, officers, directors, legal representatives, heirs, successors, wholly- or partly-owned, and its subsidiaries and affiliates; FCA dealers; proposed Class counsel and their employees; the judicial officers and associated court staff assigned to this case and their immediate family members; all persons who make a timely election to be excluded from the Class; governmental entities; and the judge to whom this case is assigned and his/her immediate family.

218. Certification of Plaintiffs' claims for class-wide treatment is appropriate because Plaintiffs can prove the elements of her claims on a class-wide basis using the same evidence as would be used to prove those elements in individual actions alleging the same claim. Defendant has identified uniformity in approximately 192,000 Class Vehicles through the CSN V41 effort to remediate the "Death Wobble."

219. This action has been brought and may be properly maintained on behalf of the Class proposed herein under Federal Rule of Civil Procedure 23.

220. Numerosity. Federal Rule of Civil Procedure 23(a)(1): The members of the Class are so numerous and geographically dispersed that individual joinder of all Class members is impracticable. Defendant, at a minimum, has specifically identified about 192,000 2018-2019 Class Vehicles that are identified in Defendant's DealerCONNECT Global Recall System (GRS) and Vehicle Information Plus (VIP). Additional Class Vehicles may be identified during the pendency of this action and all owners and lessors notified by recognized, Court-approved notice dissemination methods, which may include U.S. Mail, electronic mail, Internet postings, and/or published notice. The Class members may be easily derived from Jeep sales records.

221. Commonality and Predominance. Federal Rule of Civil Procedure 23(a)(2) and 23(b)(3): This action involves common questions of law and fact, which

predominate over any questions affecting individual Class members, including, without limitation:

a. Whether FCA engaged in the conduct alleged herein;

b. Whether FCA designed, advertised, marketed, distributed, leased, sold, or otherwise placed the Class Vehicles into the stream of commerce in the United States;

c. Whether the "Death Wobble" constitutes a safety defect;

d. Whether FCA knew about the "Death Wobble" at the time of Plaintiffs and the Class members purchase the Class Vehicles and failed to disclose the risk of the Death Wobble;

e. Whether FCA designed, manufactured, marketed, and distributed the Class Vehicles knowing that the "Death Wobble" could and would occur;

f. Whether FCA's conduct violates consumer protection statutes, false advertising laws, sales contracts, warranty laws, and other laws as asserted herein;

g. Whether FCA owed a duty to warn Plaintiffs and Class Members about the "Death Wobble" and how to safely stop it when operating their Class Vehicles at highway speeds;

h. Whether Plaintiffs and the other Class members overpaid for their Class Vehicles;

i. Whether FCA breached the warranty by failing to properly inspect and repair the Class Vehicles' suspension system after Plaintiffs and Class Members complained about the "Death Wobble";

j. Whether Plaintiffs and the other Class members are entitled to equitable relief, including, but not limited to, restitution or injunctive relief; and

k. Whether Plaintiffs and the other Class members are entitled to damages and other monetary relief and, if so, in what amount.

222. Typicality. Federal Rule of Civil Procedure 23(a)(3): Plaintiffs' claims are typical of the other Class members' claims because, among other things, all Class members were comparably injured through FCA's wrongful conduct as described above.

223. Adequacy. Federal Rule of Civil Procedure 23(a)(4): Plaintiffs are adequate Class representatives because their interests do not conflict with the interests of the other members of the Class she seeks to represent; Plaintiffs have retained counsel competent and experienced in complex class action litigation; and Plaintiffs intend to prosecute this action vigorously. The interests of the Class will be fairly and adequately protected by Plaintiffs and her counsel.

224. Declaratory and Injunctive Relief. Federal Rule of Civil Procedure 23(b)(2): FCA has acted or refused to act on grounds generally applicable to Plaintiffs and the other members of the Class, thereby making appropriate final injunctive relief and declaratory relief with respect to the Class as a whole.

225. Superiority. Federal Rule of Civil Procedure 23(b)(3): A class action is superior to any other available means for the fair and efficient adjudication of this controversy, and no unusual difficulties are likely to be encountered in the management of this class action. The damages or other financial detriment suffered by Plaintiffs and the other Class members are relatively small compared to the burden and expense that would be required to individually litigate their claims

against FCA, so it would be impracticable for the members of the Class to individually seek redress for FCA's wrongful conduct. Even if Class members could afford individual litigation, the court system could not. Individualized litigation creates a potential for inconsistent or contradictory judgments and increases the delay and expense to all parties and the court system. By contrast, the class action device presents far fewer management difficulties, and provides the benefits of single adjudication, economy of scale, and comprehensive supervision by a single court.

VIOLATIONS ALLEGED

FIRST CAUSE OF ACTION
VIOLATION OF MAGNUSON-MOSS WARRANTY ACT, 15 U.S.C. § 2301, *et seq*. ("MMWA")
On Behalf of Each State Sub-Class

226. Plaintiffs hereby incorporate by reference the allegations contained in the preceding paragraphs of this Complaint.

227. The MMWA provides a private right of action by purchasers of consumer products against retailers who, *inter alia*, fail to comply with the terms of an implied or written warranty-. 15 U.S.C. § 2310(d)(1). As alleged herein, FCA has failed to comply with its implied warranty of merchantability with regard to the Class Vehicles.

228. The Class Vehicles are consumer products, as that term is defined in 15 U.S.C. § 2301(1).

229. Plaintiffs and the members of each State Sub-Class are consumers, as that term is defined in 15 U.S.C. § 2301(3).

230. FCA is a supplier and warrantor, as those terms are defined in 15 U.S.C. § 2301(4)-(5).

231. The MMWA provides a cause of action for breach of warranty or other violations of the Act. 15 U.S.C. § 2310(d)(1). FCA breached its express and/or the implied warranty of merchantability for the Class Vehicles, as alleged herein, which it cannot disclaim under the MMWA, 15 U.S.C. § 2308(a)(1), by failing to by failing to remediate the Death Wobble and failing to provide merchantable goods. Plaintiffs have suffered damages as a result of FCA's breach of its express warranty and the implied warranty of merchantability as set forth herein. 15 U.S.C. § 2310(d)(1)-(2).

232. FCA was provided notice of the claims raised by Plaintiffs and was afforded a reasonable opportunity to cure. FCA failed to cure in that it only replaced the vehicles steering damper with knowledge that the cause of the "Death Wobble" is due to loosening or weakening of the suspension system. Until Plaintiffs' representative capacity is determined, notice and opportunity to cure through Plaintiffs, and on behalf of each State Sub-Class, can be provided under 15 U.S.C. § 2310(e).

233. FCA's acts and omissions in violation of the MMWA are "[u]nfair methods of competition in or affecting commerce, and unfair or deceptive acts or

practices in or affecting commerce," and they are unlawful. 15 U.S.C. § 2310(b); 15 U.S.C. § 45(a)(1).

234. Plaintiffs and the members of the Sub-Classes have suffered, and are entitled to recover, damages as a result of FCA's breach of express and/or implied warranties and violations of the MMWA.

235. Plaintiffs also seek an award of costs and expenses, including attorneys' fees, under the MMWA to prevailing consumers in connection with the commencement and prosecution of this action. 15 U.S.C. § 2310(d)(2). Plaintiffs and the prospective Sub-Classes intend to seek such an award, including expert witness costs and other recoverable costs, as prevailing consumers at the conclusion of this lawsuit.

CLAIMS BROUGHT ON BEHALF OF THE NEW JERSEY SUBCLASS

SECOND CAUSE OF ACTION
BREACH OF IMPLIED WARRANTY OF MERCHANTABILITY
On Behalf of the New Jersey Subclass

236. Plaintiffs Clair Reynolds and Monica Martirano ("Plaintiffs," for purposes of all New Jersey Subclass Counts) hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

237. FCA manufactured and distributed Class Vehicles throughout the United States for sale to Plaintiffs and the Sub-Class Members.

238. FCA impliedly warranted to Plaintiffs and members of the Sub-Class that their Class Vehicles were free of defects, and were merchantable and fit for their ordinary purpose for which such goods are used.

239. As alleged herein, FCA breached the implied warranty of merchantability because the Class Vehicles suffer from defects that cause the "Death Wobble" when operated at normal highway speeds. The Class Vehicles are therefore defective, unmerchantable, and unfit for their ordinary, intended purpose.

240. After Plaintiffs experienced the "Death Wobble" on numerous occasions and returned the vehicle to the dealership on multiple occasions without relief, Plaintiffs gave reasonable and adequate notice to FCA that the Class Vehicles were defective, unmerchantable, and unfit for their intended use or purpose.

241. Due to the defects that manifest as the "Death Wobble," Plaintiffs and the members of each Sub-Class are unable to operate their vehicles as intended in a safe condition, substantially free from defects. The Class Vehicles do not provide safe and reliable transportation to Plaintiffs and Sub-Class members under conditions acknowledged by Defendant. As a result, Plaintiffs and members of the Sub-Classes are unable to safely drive their Class Vehicles without manifestation, or imminent threat of manifestation, of the "Death Wobble."

242. Plaintiffs did not receive or otherwise have the opportunity to review, at or before the time of sale, the written warranty containing the purported exclusions

and limitations of remedies. Accordingly, any such exclusions and limitations of remedies are unconscionable and unenforceable, and Plaintiffs are entitled to all remedies available under Article 2 of the Uniform Commercial Code and other state laws of each Sub-Classes. Any purported warranty disclaimers, exclusions, and limitations were unconscionable and unenforceable. As a direct and proximate result of the breach of implied warranty of merchantability, Plaintiffs and members of the Sub-Classes have been injured in an amount to be proven at trial.

THIRD CAUSE OF ACTION
BREACH OF EXPRESS WARRANTY
On Behalf of the New Jersey Subclass

243. Plaintiffs hereby incorporate by reference the allegations contained in the preceding paragraphs of this Complaint.

244. Defendant provided all purchasers and lessees of the Class Vehicles with the same express warranties described herein, which became part of the basis of the bargain.

245. The parts affected by the "Death Wobble" were distributed by Defendant in the Class Vehicles and are covered by the warranties Defendant provided to all purchasers and lessors of Class Vehicles.

246. Defendant breached these warranties by selling and leasing Class Vehicles with the Death Wobble, requiring repair or replacement within the

applicable warranty periods, and refusing to honor the warranties by providing free repairs or replacements during the applicable warranty periods.

247. Plaintiffs notified Defendant of the breach within the warranty period, but Defendant already knew of defects causing the "Death Wobble" and yet chose to conceal it and to failed to comply with its warranty obligations, including the ineffective repair detailed in CSN V41.

248. Defendant's Chief Technical Compliance Officer, Mark Chernoby, attributed the defects causing the "Death Wobble" as ones that resulted from "a combination of design and manufacturing process."

249. As a direct and proximate cause of Defendant's breach, Plaintiffs and the members of the New Jersey Sub-Class bought or leased Class Vehicles they otherwise would not have, overpaid for their vehicles, did not receive the benefit of their bargain, and their Class Vehicles suffered a diminution in value. Plaintiffs and New Jersey Sub-Class Members have also incurred and will continue to incur costs related to the diagnosis and repair of the "Death Wobble."

250. Defendant's attempt to disclaim or limit these express warranties are unconscionable and unenforceable under the circumstances here.

251. Specifically, Defendant's warranty limitation is unenforceable because it knowingly sold a defective product without informing consumers about the defect.

252. The time limits contained in Defendant's warranty period were also unconscionable and inadequate to protect Plaintiffs and members of the New Jersey Sub-Class. The repeated band-aid repairs by replacing the steering damper are designed to push the "Death Wobble" issue beyond the warranty period shifting the repair burden to Plaintiffs and Sub-Class members. A gross disparity in bargaining power existed between Defendant and the Sub-Class Members, and Defendant knew or should have known that the Class Vehicles were defective at the time of sale and would fail well before their useful lives.

253. Plaintiffs and the New Jersey Sub-Classes Members have complied with all obligations under the warranty, or otherwise have been excused from performance of said obligations as a result of Defendant's conduct described herein.

FOURTH CAUSE OF ACTION
VIOLATIONS OF THE NEW JERSEY CONSUMER FRAUD ACT, N.J.S.A. § 56:8-2, *et seq.* ("CFA")
On Behalf of the New Jersey Sub-Class

254. Plaintiffs hereby incorporate by reference the allegations contained in the preceding paragraphs of this Complaint.

255. Plaintiffs and other members of the New Jersey Sub-Class are "consumers" within the meaning of the New Jersey Consumer Fraud Act.

256. The Class Vehicles are "merchandise" within the meaning of the CFA, as they are goods that are offered directly or indirectly to the public for sale.

257. At all relevant times, Defendant conducted trade and commerce in New Jersey and elsewhere within the meaning of the CFA.

258. The CFA is, by its terms, a cumulative remedy, such that remedies under its provisions can be awarded in addition to those provided under other remedies.

259. Defendant has engaged in deceptive, unconscionable, unlawful, unfair, fraudulent and misleading commercial practices, including misleading omissions of material fact, in connection with the marketing, promotion, and sale of Class Vehicles without disclosing the probability of the "Death Wobble."

260. Defendant knew of the probability that the "Death Wobble" would occur when the Class Vehicles are operated at routine highway speeds and did not disclose it to consumers like Plaintiffs and did not provide any warning to protect consumers like Plaintiffs or instructions on how to safely operate the vehicle during the "Death Wobble" or how to return the vehicle to normal operating conditions once the "Death Wobble" ensued.

261. Defendant had knowledge of the Class Vehicles' propensity to "Death Wobble" at the time of sale. The causes of the "Death Wobble" in the Class Vehicles are latent and are not something that Plaintiffs or New Jersey Sub-Class members could, in the exercise of reasonable diligence, have discovered independently prior to purchase.

262. Defendant intended that consumers like Plaintiffs and members of the New Jersey Sub-Class rely on its deceptive, false and misleading misrepresentations or omissions of material fact in order to increase its sales and profits.

263. Defendant intended that Plaintiffs and the other members of the New Jersey Sub-Class to rely on its acts of concealment and omissions by purchasing the Class Vehicles at full price rather than paying less or purchasing a competitors' vehicle.

264. Had Defendant disclosed all material information regarding the Death Wobble to Plaintiffs and other members of the New Jersey Sub-Class, they would not have purchased the Class Vehicles, or they would have paid less for them.

265. Plaintiffs have provided Defendant multiple opportunities to remedy the defects alleged here and cure the "Death Wobble" in their Class Vehicles, but each repair effort failed and Defendant has not provided a remedy under the terms of any warranty available to Plaintiffs and the New Jersey Sub-Class.

266. Defendant's conduct had an impact on the public interest because the acts were part of a generalized course of conduct affecting numerous consumers.

267. As a result of the foregoing acts, omissions, and practices, Plaintiffs and other members of the New Jersey Sub-Class have suffered an ascertainable loss by purchasing defective Class Vehicles they would not have otherwise purchased or paid less for, which are unable to perform their essential function for their expected

useful life, have lost value as a result of the Death Wobble, and present a risk of safety to Plaintiffs and members of the New Jersey Sub-Class. Plaintiffs are entitled to recover such damages, together with appropriate penalties, including treble damages, attorneys' fees, and costs of suit.

CLAIMS BROUGHT ON BEHALF OF THE TENNESSEE SUBCLASS

FIFTH CAUSE OF ACTION
VIOLATIONS OF THE TENNESEE CONSUMER PROTECTION ACT
Tenn. Code Ann. § 47-18-101, et seq.
On Behalf of the Tennessee Subclass

268. Plaintiff Thomas Jared Pineda ("Plaintiff," for purposes of all Tennessee Subclass Counts) hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

269. Plaintiff brings this action on behalf of himself and the Tennessee Sub-Class against Defendant.

270. Plaintiff and the Tennessee Sub-Class are "natural persons" and "consumers" within the meaning of Tenn. Code § 47-18-103(2). Defendant is a "person[s]" within the meaning of Tenn. Code § 47-18-103(9).

271. Defendant is engaged in "trade" or "commerce" or "consumer transactions" within the meaning Tenn. Code § 47-18-103(9).

272. The Tennessee Consumer Protection Act ("Tennessee CPA") prohibits "unfair or deceptive acts or practices affecting the conduct of any trade or commerce." Tenn. Code § 47-18-104.

273. Defendant has engaged in deceptive, unconscionable, unlawful, unfair, fraudulent and misleading commercial practices, including misleading omissions of material fact, in connection with the marketing, promotion, and sale of Class Vehicles without disclosing the probability of the "Death Wobble."

274. Defendant knew of the probability that the "Death Wobble" would occur when the Class Vehicles are operated at routine highway speeds and did not disclose it to consumers like Plaintiff and did not provide any warning to protect consumers like Plaintiff or instructions on how to safely operate the vehicle during the "Death Wobble" or how to return the vehicle to normal operating conditions once the "Death Wobble" ensued.

275. Defendant had knowledge of the Class Vehicles' propensity to "Death Wobble" at the time of sale. The causes of the "Death Wobble" in the Class Vehicles are latent and are not something that Plaintiff or the Tennessee Sub-Class members could, in the exercise of reasonable diligence, have discovered independently prior to purchase.

276. Defendant intended that consumers like Plaintiff and members of the Tennessee Sub-Class rely on its deceptive, false and misleading misrepresentations or omissions of material fact in order to increase its sales and profits.

277. Defendant intended that Plaintiff and the other members of the Tennessee Sub-Class to rely on its acts of concealment and omissions by purchasing

the Class Vehicles at full price rather than paying less or purchasing competitors' vehicle.

278. Had Defendant disclosed all material information regarding the Death Wobble to Plaintiff and other members of the Tennessee Sub-Class, they would not have purchased the Class Vehicles, or they would have paid less for them.

279. Defendant's conduct had an impact on the public interest because the acts were part of a generalized course of conduct affecting numerous consumers.

280. As a result of the foregoing acts, omissions, and practices, Plaintiff and other members of the Class have suffered an ascertainable loss by purchasing defective Class Vehicles that are unable to perform their essential function for their expected useful life and present a risk of safety to Plaintiff and members of the Class. Plaintiff is entitled to recover such damages, together with appropriate penalties, including treble damages, attorneys' fees, and costs of suit.

CLAIMS BROUGHT ON BEHALF OF THE COLORADO SUBCLASS

SIXTH CAUSE OF ACTION

BREACH OF EXPRESS WARRANTY (COLO. REV. STAT. §§ 4-2-313 AND 4-2.5-210)

On Behalf of the Colorado Subclass

281. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

282. Defendant is and was at all relevant times a "merchant" with respect to motor vehicles under Colo. Rev. Stat. §§ 4-2-104(1) and 4-2.5-103(3); and is a seller of motor vehicles under Colo. Rev. Stat. § 4-2-103(1)(d).

283. With respect to leases, Defendant is and was at all relevant times "lessors" of motor vehicles under Colo. Rev. Stat. § 4-2.5-103(1)(p).

284. In connection with the purchase or lease of a Class Vehicle, Defendant provides an express New Vehicle Limited Warranty ("NVLW") for a period of three years or 36,000 miles, whichever occurs first. This NVLW exists to cover "defect in materials and workmanship."

285. Defendant states the defects causing the Death Wobble result from a "combination of design and manufacturing process." Nonetheless, Defendant failed to inform Plaintiff and the Colorado Sub-Class that the Class Vehicles were defectively designed and/or manufactured.

286. Defendant breached the express warranty promising to repair and correct the defects alleged herein that manifest as the "Death Wobble," including Defendant's failed attempt to remediate the "Death Wobble" through CSN V41.

287. Plaintiff afforded Defendant multiple opportunities to cure its breach of warranty, and FCA has been unable to do so after each opportunity. Further opportunities to cure would be futile.

288. As alleged herein, at the time Defendant warranted and sold the Class Vehicles, it knew that the Class Vehicles did not conform to Defendant's warranties and were inherently defective, and Defendant wrongly and fraudulently concealed the material facts regarding its Class Vehicles. Plaintiff and other Colorado Sub-Class members were therefore induced to purchase or lease the Class Vehicles under false and/or fraudulent pretenses.

289. Due to Defendant's failure and/or continued failure to provide any remedy within a reasonable time, any limitation on Plaintiff and the Colorado Sub-Class members' remedies would be insufficient to make Plaintiff and the other Colorado Sub-Class members whole.

290. Defendant was provided notice of these issues by Plaintiff, numerous complaints against it, including those submitted to NHTSA and FCA, within a reasonable amount of time after the defect was discovered. Further, the investigation launched by NHTSA provided ample notice of these defects.

291. As a direct and proximate result of Defendant's breach of express warranties, Plaintiff and the Colorado Sub-Class have been damaged in an amount to be determined at trial.

SEVENTH CLAIM FOR RELIEF
BREACH OF IMPLIED WARRANTY OF MERCHANTABILITY
(COLO. REV. STAT. §§ 4-2-313 AND 4-2.5-212)
On Behalf of the Colorado Subclass

292. Plaintiff incorporates by reference all preceding allegations as though fully set forth herein.

293. Defendant is and was at all relevant times a "merchant" with respect to motor vehicles under Colo. Rev. Stat. §§ 4-2-104(1) and 4-2.5-103(3); and is a seller of motor vehicles under Colo. Rev. Stat. § 4-2-103(1)(d).

294. With respect to leases, FCA is and was at all relevant times "lessors" of motor vehicles under Colo. Rev. Stat. § 4-2.5-103(1)(p).

295. The Class Vehicles are and were at all relevant times "goods" within the meaning of Colo. Rev. Stat. § 4-2-105(1) and 4-2.5-103(1)(h).

296. A warranty that the Class Vehicles were in merchantable condition is implied by law in the instant transactions. The Class Vehicles, when sold and at all times thereafter, were not in merchantable condition and are not fit for the ordinary purpose for which cars are used. Specifically, the Class Vehicles include defects that manifest as the "Death Wobble" while driving as described above.

297. Defendant was provided notice of these issues by Plaintiff, as well as by numerous complaints against it, including those submitted to NHTSA and FCA, within a reasonable amount of time after the defect was discovered. Further, the investigation launched by NHTSA provided ample notice of these defects.

298. As a direct and proximate result of Defendant's breach of the warranties of merchantability, Plaintiff and the Colorado Sub-Class have been damaged in an amount to be determined at trial.

CLAIMS ON BEHALF OF THE MINNESOTA SUBCLASS

EIGHTH CLAIM FOR RELIEF
BREACH OF EXPRESS WARRANTY
(Minnesota Stat. § 336.2-313, et seq.)
On Behalf of the Minnesota Sub-Class

299. Plaintiff Brady Laing ("Plaintiff," for purposes of all Minnesota Subclass Counts) hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

300. Plaintiff and members of the Minnesota Sub-Class are persons as defined under Minnesota Stat. § 336.1-201(27).

301. Defendant is a seller of the Class Vehicles and sold the Class Vehicles in Minnesota to Plaintiff and the Minnesota Sub-Class with the defects alleged herein that manifest as the "Death Wobble."

302. Defendant provides an express warranty with each Class Vehicle sold to Plaintiff and the Minnesota Sub-Class, which was breached when the Class Vehicles were sold with the defects and no remedy provided to Plaintiff or the Minnesota Sub-Class under the terms of the express warranty.

303. As a direct and foreseeable result of this breach, Plaintiff and the Minnesota Sub-Class have suffered injury.

304. Plaintiff provided Defendant notice of his breach of warranty claim, both express and implied.

NINTH CLAIM FOR RELIEF
BREACH OF IMPLIED WARRANTY OF MERCHANTABILITY
(Minn. Stat. § 336.2-314)
On Behalf of the Minnesota Subclass

305. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

306. Plaintiff and members of the Minnesota Sub-Class are persons as defined under Minnesota Stat. § 336.1-201(27).

307. Defendant is a merchant under Minn. Stat. § 336.2-314.

308. Pursuant to Minnesota Stat. § 336.2-314, Defendant warrants the Class Vehicles as merchantable, when they were not. Minn. Stat.§336.2-314(2)(f). The Class Vehicles are also not fit for the ordinary purposes for which they were to be used because they are unsafe to drive. *See* Minn. Stat. §336.2-314(2)(c).

309. This implied warranty extends to Plaintiff and members of the Minnesota Sub-Class as a "person who may reasonably be expected to use, consume or be affected by the goods and who is injured by the breach of the warranty." Minnesota Stat. § 336.2-318.

310. Plaintiff and the Minnesota Sub-Class, as the purchasers and lessors of the Class Vehicles were reasonably expected to be affected by the defects that cause the "Death Wobble."

311. Defendant breached these implied warranties because the Class Vehicles were not merchantable.

312. As a direct and foreseeable result of this breach, Plaintiff and the Minnesota Sub-Class have suffered injury.

313. Plaintiff provided Defendant notice of their breach of warranty claim as set forth above.

TENTH CAUSE OF ACTION

VIOLATION OF THE MINNESOTA UNLAWFUL TRADE PRACTICES ACT (Minn. Stat. §§325D.09-325D.16)

On Behalf of the Minnesota Subclass

314. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

315. Minnesota Statute § 8.31, subdivision 3a, provides: "any person injured by a violation of any of the laws referred to in subdivision 1 may bring a civil action and recover damages, together with costs and disbursements… reasonable attorneys' fees, and receive other equitable relief as determined by the court.

316. Subdivision 1 includes the Unlawful Trade Practices Act, which states: "No person shall, in connection with the sale of merchandise, knowingly misrepresent, directly or indirectly, the true quality, ingredients or origin of such merchandise." Minn. Stat. § 325D.13.

317. FCA is engaged in the business of designing, manufacturing, advertising, promoting, distributing and selling motor vehicles, including Class Vehicles.

318. FCA, in connection with the sale of the Class Vehicles, has knowingly misrepresented their true quality by failing to disclose the known probability of the "Death Wobble."

319. FCA knew of the probability that the "Death Wobble" would occur when the Class Vehicles are operated at routine highway speeds and did not disclose it to consumers like Plaintiff and did not provide any warning to protect consumers like Plaintiff or instructions on how to safely operate the vehicle during the "Death Wobble" or how to return the vehicle to normal operating conditions once the "Death Wobble" ensued.

320. FCA knew of the Class Vehicles' propensity to "Death Wobble" at the time of sale. The causes of the "Death Wobble" in the Class Vehicles are latent and are not something that Plaintiff or the Minnesota Sub-Class members could, in the exercise of reasonable diligence, have discovered independently prior to purchase.

321. FCA intended that consumers like Plaintiff and members of the Minnesota Sub-Class rely on its deceptive, false and misleading misrepresentations or omissions of material fact in order to increase its sales and profits.

322. Upon information and belief, FCA's false and misleading representations of fact and conduct influenced the purchasing decisions of Plaintiff and the Minnesota Sub-Class, resulting in harm to Plaintiff and the Minnesota Sub-Class.

323. FCA intended that Plaintiff and the other members of the Minnesota Sub-Class rely on its acts of concealment and omissions by purchasing the Class Vehicles at full price rather than paying less or purchasing a competitors' vehicle.

324. Had FCA disclosed all material information regarding the Death Wobble to Plaintiff and other members of the Minnesota Sub-Class, they would not have purchased the Class Vehicles, or they would have paid less for them.

325. As a result of the foregoing acts, omissions, and practices, Plaintiff and other members of the Minnesota Sub-Class have suffered an ascertainable loss by purchasing defective Class Vehicles that are unable to perform their essential function for their expected useful life and present a risk of safety to Plaintiff and members of the Minnesota Sub-Class. Plaintiff and the Minnesota Sub-Class are entitled to recover such damages, together with appropriate penalties, including damages, attorneys' fees, and costs of suit.

ELEVENTH CAUSE OF ACTION
VIOLATION OF THE MINNESOTA PREVENTION OF CONSUMER FRAUD ACT (Minn. Stat. §§325F.69, et seq.)
On Behalf of the Minnesota Subclass

326. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

327. Minnesota Statute § 8.31, subdivision 3a, provides: "any person injured by a violation of any of the laws referred to in subdivision 1 may bring a civil action and recover damages, together with costs and disbursements… reasonable attorneys' fees, and receive other equitable relief as determined by the court.

328. Subdivision 1 includes Minn. Stat. § 325F.69, which provides that:

> The act, use, or employment by any person of any fraud, false pretense, false promise, misrepresentation, misleading statement or deceptive practice, with the intent that others rely thereon in connection with the sale of any merchandise, whether or not any person has in fact been misled, deceived, or damaged thereby, is enjoinable.

329. FCA is engaged in the business of designing, manufacturing, advertising, promoting, distributing and selling motor vehicles, including the Class Vehicles.

330. FCA, in connection with the sale of the Class Vehicles, has knowingly misrepresented their true quality by failing to disclose the known probability of the "Death Wobble."

331. FCA knew of the probability that the "Death Wobble" would occur when the Class Vehicles are operated at routine highway speeds and did not disclose

it to consumers like Plaintiff and did not provide any warning to protect consumers like Plaintiff or instructions on how to safely operate the vehicle during the "Death Wobble" or how to return the vehicle to normal operating conditions once the "Death Wobble" ensued.

332. FCA had knowledge of the Class Vehicles' propensity to "Death Wobble" at the time of sale. The causes of the "Death Wobble" in the Class Vehicles are latent and are not something that Plaintiff or the Minnesota Sub-Class members could, in the exercise of reasonable diligence, have discovered independently prior to purchase.

333. FCA intended that consumers like Plaintiff and members of the Minnesota Sub-Class rely on its deceptive, false and misleading misrepresentations or omissions of material fact in order to increase its sales and profits.

334. Upon information and belief, FCA's false and misleading representations of fact and conduct influenced the purchasing decisions of Plaintiff and the Minnesota Sub-Class, resulting in harm to Plaintiff and the Minnesota Sub-Class.

335. FCA intended that Plaintiff and the other members of the Minnesota Sub-Class to rely on its acts of concealment and omissions by purchasing the Class Vehicles at full price rather than paying less or purchasing competitors' vehicle.

336. Had FCA disclosed all material information regarding the Death Wobble to Plaintiff and other members of the Minnesota Sub-Class, they would not have purchased the Class Vehicles, or they would have paid less for them.

337. As a result of the foregoing acts, omissions, and practices, Plaintiff and other members of the Minnesota Sub-Class have suffered an ascertainable loss by purchasing defective Class Vehicles that are unable to perform their essential function for their expected useful life and present a risk of safety to Plaintiff and members of the Minnesota Sub-Class. Plaintiff and the Minnesota Sub-Class are entitled to recover such damages, together with appropriate penalties, including damages, attorneys' fees, and costs.

CLAIMS ON BEHALF OF THE GEORGIA SUBCLASS

TWELFTH CLAIM FOR RELIEF
BREACH OF EXPRESS WARRANTY
(Ga. Code Ann. § 11-2-313, et seq.)
On Behalf of the Georgia Sub-Class

338. Plaintiff Trina Hancock ("Plaintiff," for purposes of all Georgia Subclass Counts) hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

339. FCA is and was at all relevant times a merchant with respect to motor vehicles.

340. Defendant provided all purchasers and lessees of the Class Vehicles with the same express warranties described herein, which became part of the basis of the bargain.

341. In connection with the purchase or lease of a Class Vehicle, FCA provides an express New Vehicle Limited Warranty ("NVLW") for a period of three years or 36,000 miles, whichever occurs first. This NVLW exists to cover "defect in materials and workmanship."

342. The parts affected by the "Death Wobble" were distributed by Defendant in the Class Vehicles and are covered by the warranties Defendant provided to all purchasers and lessors of Class Vehicles.

343. Defendant breached these warranties by selling and leasing Class Vehicles with the Death Wobble, requiring repair or replacement within the applicable warranty periods, and refusing to honor the warranties by providing free repairs or replacements during the applicable warranty periods.

344. Plaintiff notified Defendant of the breach within the warranty period, but Defendant already knew of the defects causing the "Death Wobble" and yet chose to conceal it. Defendant failed to comply with its warranty obligations.

345. FCA was provided notice of these issues by numerous complaints filed against it, including those submitted to NHTSA and the instant Complaint, within a reasonable amount of time after the defects were discovered.

346. Defendant's Chief Technical Compliance Officer, Mark Chernoby, attributed the defects causing the "Death Wobble" as ones that resulted from "a combination of design and manufacturing process."

347. As a direct and proximate cause of Defendant's breach, Plaintiff and the members of each Sub-Class bought or leased Class Vehicles they otherwise would not have, overpaid for their vehicles, did not receive the benefit of their bargain, and their Class Vehicles suffered a diminution in value. Plaintiff and Sub-Class Members have also incurred and will continue to incur costs related to the diagnosis and repair of the "Death Wobble."

348. Defendant's attempt to disclaim or limit these express warranties are unconscionable and unenforceable under the circumstances here.

349. Specifically, Defendant's warranty limitation is unenforceable because it knowingly sold a defective product without informing consumers about the defect.

350. The time limits contained in Defendant's warranty period were also unconscionable and inadequate to protect Plaintiff and members of the Sub-Classes. The repeated band-aid repairs by replacing the steering damper are designed to push the "Death Wobble" issue beyond the warranty period shifting the repair burden to Plaintiffs and Sub-Class members. A gross disparity in bargaining power existed between Defendant and the Class Members, and Defendant knew or should have

known that the Class Vehicles were defective at the time of sale and would fail well before their useful lives.

351. Plaintiff and the Sub-Classes Members have complied with all obligations under the warranty, or otherwise have been excused from performance of said obligations as a result of Defendant's conduct described herein.

THIRTEENTH CLAIM FOR RELIEF
BREACH OF IMPLIED WARRANTY OF MERCHANTABILITY
(Ga. Code Ann. § 11-2-314)
On Behalf of the Georgia Sub-Class

352. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

353. FCA manufactured and distributed Class Vehicles throughout the United States for sale to Plaintiff and the Georgia Sub-Class members.

354. FCA impliedly warranted to Plaintiff and members of the Georgia Sub-Class that their Class Vehicles were free of defects and were merchantable and fit for their ordinary purpose for which such goods are used.

355. As alleged herein, FCA breached the implied warranty of merchantability because the Class Vehicles suffer from defects that cause the "Death Wobble" when operated at normal highway speeds. The Class Vehicles are therefore defective, unmerchantable, and unfit for their ordinary, intended purpose.

356. After Plaintiff experienced the "Death Wobble" on numerous occasions and returned the vehicle to the dealership on multiple occasions without relief,

Plaintiff gave reasonable and adequate notice to FCA that the Class Vehicles were defective, unmerchantable, and unfit for their intended use or purpose.

357. FCA was also provided notice of these issues by complaints lodged by consumers with FCA and NHTSA – which vehicle manufacturers like FCA routinely monitor – before or within a reasonable amount of time after the allegations of the Class Vehicle defects became public.

358. Due to the defects that manifest as the "Death Wobble," Plaintiff and the members of each Sub-Class are unable to operate their vehicles as intended in a safe condition, substantially free from defects. The Class Vehicles do not provide safe and reliable transportation to Plaintiff and Georgia Sub-Class members under conditions acknowledged by Defendant. As a result, Plaintiff and members of the Georgia Sub-Class are unable to safely drive their Class Vehicles without manifestation, or imminent threat of manifestation, of the "Death Wobble."

359. Plaintiff did not receive or otherwise have the opportunity to review, at or before the time of sale, the written warranty containing the purported exclusions and limitations of remedies. Accordingly, any such exclusions and limitations of remedies are unconscionable and unenforceable, and Plaintiff is entitled to all remedies available under Article 2 of the Uniform Commercial Code and other state laws of each Sub-Classes. Any purported warranty disclaimers, exclusions, and limitations were unconscionable and unenforceable. As a direct and proximate result

of the breach of implied warranty of merchantability, Plaintiff and members of the Georgia Sub-Class have been injured in an amount to be proven at trial.

FOURTEENTH CLAIM FOR RELIEF
VIOLATION OF GEORGIA'S FAIR BUSINESS PRACTICES ACT
(Ga. Code Ann. § 10-1-390, *et seq*.)
On Behalf of the Georgia Sub-Class

360. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

361. The Georgia Fair Business Practices Act ("Georgia FBPA") declares "[u]nfair or deceptive acts or practices in the conduct of consumer transactions and consumer acts or practices in trade or commerce" to be unlawful, Ga. Code. Ann. § 10-1-393(a), including but not limited to "representing that goods or services have sponsorship, approval, characteristics, ingredients, uses, benefits, or quantities that they do not have," "[r]epresenting that goods or services are of a particular standard, quality, or grade . . . if they are of another," and "[a]dvertising goods or services with intent not to sell them as advertised," Ga. Code. Ann. § 10-1-393(b).

362. In the course of its business, Defendant willfully failed to disclose and actively concealed the "Death Wobble" discussed herein and otherwise engaged in activities with a tendency or capacity to deceive. Defendant also engaged in unlawful trade practices by employing deception, deceptive acts or practices, fraud, misrepresentations, or concealment, suppression, or omission of any material fact

with intent that others rely upon such concealment, suppression, or omission, in connection with the sale of the Class Vehicles.

363. Defendant knew it had installed defective parts that caused the "Death Wobble," knew that the Class Vehicles were not safe, as advertised, and knew it had installed no measures to prevent the "Death Wobble" from occurring. Defendant knew this for many years but concealed all of that information.

364. Defendant was also aware that it valued profits over safety, and that it was manufacturing, selling, and distributing vehicles throughout the United States that did not perform as advertised and jeopardized the safety of the vehicle's occupants. Defendant concealed this information as well.

365. By failing to disclose that the propensity of the Class Vehicles to experience the "Death Wobble," and by marketing its vehicles as safe, reliable, and of high quality, and by presenting itself as a reputable manufacturer that valued safety and stood behind its vehicles after they were sold, Defendant engaged in deceptive business practices in violation of the Georgia FBPA.

366. Defendant's unfair or deceptive acts or practices were likely to and did in fact deceive reasonable consumers, including Plaintiff and the other Georgia Sub-Class members, about the true performance of the Class Vehicles, the quality of the FCA brand, the devaluing of safety and performance at FCA, and the true value of the Class Vehicles.

367. Defendant intentionally and knowingly misrepresented material facts regarding the Class Vehicles with an intent to mislead Plaintiff and the Georgia Sub-Class.

368. Defendant knew or should have known that its conduct violated the Georgia FBPA.

369. As alleged above, Defendant made material statements about the safety and utility of the Class Vehicles and the FCA brand that were either false or misleading.

370. Defendant owed Plaintiff a duty to disclose the true safety, performance, and reliability of the Class Vehicles, and the devaluing of safety and performance at FCA, because FCA:

a. Possessed exclusive knowledge that it valued profits and cost-cutting over safety and performance, and that it was manufacturing, selling, and distributing vehicles throughout the United States that included a defective design that cause the "Death Wobble";

b. Intentionally concealed the foregoing from Plaintiff and the Class; and/or

c. Made incomplete representations about the safety and performance of the Class Vehicles while purposefully withholding material facts from Plaintiffs and the Class that contradicted these representations.

371. Defendant's fraudulent omissions, concealment and misrepresentations of the defects causing the "Death Wobble" and the Class Vehicles' true performance were material to Plaintiff and the Georgia Sub-Class. A vehicle made by a reputable

manufacturer of safe, high-performing vehicles is safer and worth more than an otherwise comparable vehicle made by a disreputable manufacturer of unsafe, vehicles that conceals defects rather than promptly remedying them.

372. Plaintiff and the Georgia Sub-Class suffered ascertainable loss caused by Defendant's misrepresentations and its concealment of and failure to disclose material information. Georgia Sub-Class members who purchased the Class Vehicles either would have paid less for their vehicles or would not have purchased or leased them at all but for Defendant's violations of the Georgia FBPA.

373. Defendant had an ongoing duty to all FCA customers to refrain from unfair and deceptive practices under the Georgia FBPA. All owners of the Class Vehicles suffered ascertainable loss in the form of the diminished value of their vehicles as a result of Defendant's deceptive and unfair acts and practices made in the course of Defendant's business.

374. Defendant's violations present a continuing risk to Plaintiff as well as to the general public. Defendant's unlawful acts and practices complained of herein affect the public interest.

375. As a direct and proximate result of Defendant's violations of the Georgia FBPA, Plaintiff and the Georgia Sub-Class have suffered injury-in-fact and/or actual damage.

376. Because Defendant fraudulently concealed the defects causing the "Death Wobble" and the true performance of Class Vehicle, resulting in a raft of negative publicity once the defects finally began to be disclosed, the value of the Class Vehicles has greatly diminished. In light of the stigma attached to those vehicles by Defendant's conduct, they are now worth significantly less than they otherwise would be.

377. Plaintiff and the Georgia Sub-Class are entitled to recover damages and exemplary damages (for intentional violations) per Ga. Code. Ann § 10-1-399(a).

378. Plaintiff also seeks an order enjoining FCA's unfair, unlawful, and/or deceptive practices, attorneys' fees, and any other just and proper relief available under the Georgia FBPA per Ga. Code. Ann § 10-1-399.

CLAIMS ON BEHALF OF THE NORTH CAROLINA SUBCLASS

FIFTEENTH CLAIM FOR RELIEF
BREACH OF EXPRESS WARRANTY
(N.C. Gen. Stat. § 25-2-313 and § 25-2A-210)
On Behalf of the North Carolina Sub-Class

379. Plaintiff Ken Schafer ("Plaintiff," for purposes of all North Carolina Subclass Counts) hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint.

380. FCA is and was at all relevant times a "merchant" with respect to motor vehicles under N.C. Gen. Stat. § 25-2-104(1) and a "seller" of motor vehicles under § 25-2-313(1).

381. With respect to leases, FCA is and was at all relevant times a "lessor" with respect to motor vehicles under N.C. Gen. Stat. § 25-2A-103(1)(p) and § 25-2A-210.

382. The Class Vehicles are and were at all relevant times "goods" within the meaning of N.C. Gen. Stat. § 25-2-105(1) and N.C. Gen. Stat. § 25-2A-103(1)(h).

383. Defendant provided all purchasers and lessees of the Class Vehicles with the same express warranties described herein, which became part of the basis of the bargain.

384. In connection with the purchase or lease of a Class Vehicle, FCA provides an express New Vehicle Limited Warranty ("NVLW") for a period of three years or 36,000 miles, whichever occurs first. This NVLW exists to cover "defect in materials and workmanship."

385. The parts affected by the "Death Wobble" were distributed by Defendant in the Class Vehicles and are covered by the warranties Defendant provided to all purchasers and lessors of Class Vehicles.

386. Defendant breached these warranties by selling and leasing Class Vehicles with the Death Wobble, requiring repair or replacement within the applicable warranty periods, and refusing to honor the warranties by providing free repairs or replacements during the applicable warranty periods.

387. Plaintiff notified Defendant of the breach within the warranty period, but Defendant already knew of the defects causing the "Death Wobble" and yet chose to conceal it. Defendant failed to comply with its warranty obligations.

388. Defendant's Chief Technical Compliance Officer, Mark Chernoby, attributed the defects causing the "Death Wobble" as ones that resulted from "a combination of design and manufacturing process."

389. As a direct and proximate cause of Defendant's breach, Plaintiff and the members of each Sub-Class bought or leased Class Vehicles they otherwise would not have, overpaid for their vehicles, did not receive the benefit of their bargain, and their Class Vehicles suffered a diminution in value. Plaintiff and Sub-Class Members have also incurred and will continue to incur costs related to the diagnosis and repair of the "Death Wobble."

390. Defendant's attempt to disclaim or limit these express warranties are unconscionable and unenforceable under the circumstances here.

391. Specifically, Defendant's warranty limitation is unenforceable because it knowingly sold a defective product without informing consumers about the defect.

392. The time limits contained in Defendant's warranty period were also unconscionable and inadequate to protect Plaintiff and members of the North Carolina Sub-Classes. The repeated band-aid repairs by replacing the steering damper are designed to push the "Death Wobble" issue beyond the warranty period

shifting the repair burden to Plaintiffs and North Carolina Sub-Class members. A gross disparity in bargaining power existed between Defendant and the Class Members, and Defendant knew or should have known that the Class Vehicles were defective at the time of sale and would fail well before their useful lives.

393. Plaintiff and the North Carolina Sub-Classes Members have complied with all obligations under the warranty, or otherwise have been excused from performance of said obligations as a result of Defendant's conduct described herein.

CLAIMS ON BEHALF OF THE CALIFORNIA SUBCLASS

SIXTEENTH CAUSE OF ACTION
VIOLATION OF CALIFORNIA'S CONSUMERS LEGAL REMEDIES ACT
(CAL. CIV. CODE § 1750, *et seq.*)
On Behalf of the California Subclass

394. Plaintiff incorporates by reference and re-allege the allegations contained in the preceding paragraphs of this Complaint, as though fully set forth herein.

395. Plaintiff brings this cause of action on her own behalf and on behalf of the members of the California Subclass.

396. FCA is a "person" as defined by California Civil Code § 1761(c).

397. Plaintiff and California Subclass members are "consumers" within the meaning of California Civil Code § 1761(d) because they purchased their Class Vehicles primarily for personal, family, or household use.

398. By failing to disclose and concealing the "Death Wobble" defect from Plaintiff and California Subclass members, FCA violated California Civil Code § 1770(a), as it represented that the Class Vehicles had characteristics and benefits that they do not have and represented that the Class Vehicles were of a particular standard, quality, or grade when they were of another. *See* Cal. Civ. Code §§ 1770(a)(5) & (7).

399. Defendant's unfair and deceptive acts or practices occurred repeatedly in Defendant's trade or business, were capable of deceiving a substantial portion of the purchasing public and imposed a serious safety risk on the public.

400. Defendant knew that the Class Vehicles suffered from an inherent safety defect, were defectively designed, and were not suitable for their intended use.

401. Because of their reliance on Defendant's omissions, owners and/or lessees of the Class Vehicles, including Plaintiff and California Subclass members, suffered an ascertainable loss of money, property, and/or value of their Class Vehicles. Additionally, because of the "Death Wobble" defect, Plaintiff and California Subclass members were harmed and suffered damages in that the Class Vehicles are not suitable for their intended use and are dangerous.

402. Defendant was under a duty to Plaintiff and California Subclass members to disclose the defective and unsafe nature of the Class Vehicles because:

(a) Defendant was in a superior position to know the true state of

facts about the safety defect in the Class Vehicles;

(b) Plaintiff and California Subclass members could not reasonably have been expected to learn or discover that their vehicles had a defect with dangerous safety concerns until it manifested; and

(c) Defendant knew that Plaintiff and California Subclass members could not reasonably have been expected to learn of or discover the safety defect.

403. In failing to disclose the defective nature of the Class Vehicles, Defendant knowingly and intentionally concealed material facts and breached its duty not to do so.

404. The facts Defendant concealed from or failed to disclose to Plaintiff and California Subclass members are material in that a reasonable consumer would have considered them to be important in deciding whether to purchase or lease the Class Vehicles or pay less. Had Plaintiff and California Subclass members known that the Class Vehicles were defective, they would not have purchased or leased the Class Vehicles or would have paid less for them.

405. Plaintiff and California Subclass members are reasonable consumers who do not expect their Class Vehicles to be defective, as described herein. This is the reasonable and objective consumer expectation relating to a Class Vehicle.

406. Because of Defendant's conduct, Plaintiff and California Subclass members were harmed and suffered actual damages in that, on information and belief, the Class Vehicles experienced and will continue to experience the "Death Wobble."

407. As a direct and proximate result of Defendant's unfair or deceptive acts or practices, Plaintiff and California Subclass members suffered and will continue to suffer actual damages.

408. Plaintiff and California Subclass members are entitled to equitable relief.

SEVENTEENTH CAUSE OF ACTION
BREACH OF EXPRESS WARRANTY
(CAL. COM. CODE §§ 2313 and 10210)
On Behalf of the California Subclass

409. Plaintiff incorporates by reference and re-allege the allegations contained in the preceding paragraphs of this Complaint, as though fully set forth herein.

410. Plaintiff brings this cause of action on her own behalf and on behalf of the members of the California Subclass.

411. FCA is and was at all relevant times a "merchant" with respect to motor vehicles under Cal. Com. Code §§ 2104(1) and 10103(c), and a "seller" of motor vehicles under § 2103(1)(d).

412. With respect to leases, FCA is and was at all relevant times a "lessor" of motor vehicles under Cal. Com. Code § 10103(a)(16).

413. The Class Vehicles are and were at all relevant times "goods" within the meaning of Cal. Com. Code §§ 2105(1) and 10103(a)(8).

414. FCA provided all purchasers and lessees of the Class Vehicles with the same express warranties described herein, which became a material part of the bargain.

415. In connection with the purchase or lease of a Class Vehicle, FCA provides an express warranty for a period of three years or 36,000 miles, whichever occurs first. This warranty exists to cover "defect in materials and workmanship."

416. The parts affected by the "Death Wobble" were distributed by Defendant in the Class Vehicles and are covered by the warranties Defendant provided to all purchasers and lessors of Class Vehicles.

417. Defendant breached these warranties by selling and leasing Class Vehicles with the "Death Wobble" defect, requiring repair or replacement within the applicable warranty periods, and refusing to honor the warranties by providing free—and effective—repairs or replacements during the applicable warranty periods.

418. Plaintiff notified Defendant within the warranty period, but Defendant already knew of the defects causing the "Death Wobble." Defendant failed to comply with its warranty obligations.

419. In addition, FCA was provided notice of these issues by numerous complaints filed against it, including those submitted to NHTSA, within a reasonable amount of time after the defects were discovered.

420. Defendant's Chief Technical Compliance Officer, Mark Chernoby, attributed the defects causing the "Death Wobble" as ones that resulted from "a combination of design and manufacturing process."

421. As a direct and proximate cause of Defendant's breach, Plaintiff and California Subclass members bought or leased Class Vehicles they otherwise would not have, overpaid for their vehicles, did not receive the benefit of their bargain, and their Class Vehicles suffered a diminution in value. Plaintiff and California Subclass members have also incurred and will continue to incur costs related to the diagnosis and repair of the "Death Wobble."

422. Defendant's attempt to disclaim or limit these express warranties are unconscionable and unenforceable under the circumstances here.

423. Specifically, Defendant's warranty limitation is unenforceable because it knowingly sold a defective product without informing consumers about the defect.

424. The time limits contained in Defendant's warranty period were also unconscionable and inadequate to protect Plaintiff and California Subclass members. The repeated band-aid repairs of replacing the steering damper are designed to push the "Death Wobble" issue beyond the warranty period shifting the repair burden to Plaintiff and California Subclass members. A gross disparity in bargaining power existed between Defendant and Class members, and Defendant knew or should have known that the Class Vehicles were defective at the time of sale and would fail well before their useful lives.

425. Plaintiff and the California Subclass members have complied with all obligations under the warranty, or otherwise have been excused from performance of said obligations as a result of Defendant's conduct described herein.

EIGHTEENTH CAUSE OF ACTION
BREACH OF THE IMPLIED WARRANTY
PURSUANT TO THE SONG-BEVERLY CONSUMER WARRANTY ACT
(CAL. CIV. CODE §§ 1792 and 1791.1, *et seq*.)
On Behalf of the California Subclass

426. Plaintiff incorporates by reference and re-alleges the allegations contained in the preceding paragraphs of this Complaint, as though fully set forth herein.

427. Plaintiff brings this cause of action on her own behalf and on behalf of the members of the California Subclass.

428. Plaintiff and the California Subclass members are "buyers" within the meaning of Cal. Civ. Code § 1791(b).

429. FCA is and was at all relevant times a "manufacturer" within the meaning of Cal. Civ. Code § 1791(j).

430. The Class Vehicles are and were at all relevant times are "consumer goods" within the meaning of Cal. Civ. Code § 1791(a).

431. A warranty that the Class Vehicles were in merchantable condition and fit for the ordinary purpose for which vehicles are used is implied by law under Cal. Civ. Code §§ 1791.1(a) & 1792.

432. FCA knew or had reason to know of the specific use for which the Class Vehicles were purchased or leased. FCA directly sold and marketed the Class Vehicles to customers through authorized dealers, like those from whom Plaintiff and the California Subclass members bought or leased their vehicles. FCA knew that the Class Vehicles would and did pass unchanged from the authorized dealers to Plaintiff and the California Subclass members, with no modification.

433. FCA provided Plaintiff and California Subclass members with an implied warranty that the Class Vehicles and their components and parts are merchantable and fit for the ordinary purposes for which they were sold.

434. FCA impliedly warranted that the Class Vehicles were of merchantable quality and fit for such use. This implied warranty included, among other things:

(i) a warranty that the Class Vehicles were manufactured, supplied, distributed, and/or sold by FCA were safe and reliable vehicles for providing transportation; and (ii) a warranty that the Class Vehicles would be fit for their intended use while the Class Vehicles were being operated.

435. Contrary to the applicable implied warranties, the Class Vehicles at the time of sale and thereafter were not fit for their ordinary and intended purpose of providing Plaintiff and California Subclass members with reliable, durable, and safe transportation. Instead, the Class Vehicles are defective, including, but not limited to, the "Death Wobble" defect, and the existence of the defect at the time of sale or lease and thereafter. FCA knew of this defect at the time these sale or lease transactions occurred.

436. As a result of FCA's breach of the applicable implied warranties, the Plaintiff and the California Subclass members suffered an ascertainable loss of money, property, and/or value of their Class Vehicles. Additionally, as a result of the "Death Wobble" defect, Plaintiff and the California Subclass members were harmed and suffered actual damages.

NINETEENTH CAUSE OF ACTION
BREACH OF THE IMPLIED WARRANTY OF MERCHANTABILITY
(CAL. COM. Code § 2314)
On Behalf of the California Subclass

437. Plaintiff incorporates by reference and re-alleges the allegations contained in the preceding paragraphs of this Complaint, as though fully set forth herein.

438. Plaintiff brings this cause of action on her own behalf and on behalf of the members of the California Subclass.

439. FCA is and was at all relevant times a merchant with respect to motor vehicles under Cal. Com. Code § 2104.

440. A warranty that the Class Vehicles were in merchantable condition was implied by law in the instant transaction, pursuant to Cal. Com. Code § 2314.

441. The Class Vehicles, when sold or leased and at all times thereafter, were not in merchantable condition and are not fit for the ordinary purpose for which cars are used. Specifically, the Class Vehicles are inherently defective in that they contain the "Death Wobble" defect, as described herein, and the Class Vehicles were not adequately designed, manufactured, and tested.

442. FCA was clearly on notice of the defect, as described herein.

443. Plaintiff and California Subclass members have had sufficient direct dealings with either FCA or its agents (*e.g.*, dealerships) to establish privity of contract. Notwithstanding this, privity is not required because Plaintiff and

California Subclass members are intended third-party beneficiaries of contracts between FCA and its dealers; specifically, they are the intended beneficiaries of FCA's implied warranties. The dealers were not intended to be the ultimate consumers of the Class Vehicles and have no rights under the warranty agreements provided with the Class Vehicles; the warranty agreements were designed for and intended to benefit the ultimate consumers only. Finally, privity is also not required because the Class Vehicles are dangerous instrumentalities due to the "Death Wobble" defect and nonconformities.

444. As a direct and proximate result of FCA's breach of the warranties of merchantability, Plaintiff and the California Subclass members have been damaged in an amount to be proven at trial.

TWENTIETH CAUSE OF ACTION
VIOLATION OF CALIFORNIA BUSINESS AND PROFESSIONS CODE § 17200, *ET SEQ.*
On Behalf of the California Subclass

445. Plaintiff incorporates by reference and re-alleges the allegations contained in the preceding paragraphs of this Complaint, as though fully set forth herein.

446. Plaintiff brings this cause of action on her own behalf and on behalf of the members of the California Subclass.

447. Because of their reliance on Defendant's omissions, owners and/or lessees of the Class Vehicles, including Plaintiff and California Subclass members,

suffered an ascertainable loss of money, property, and/or value of their Class Vehicles. Additionally, because of the "Death Wobble" defect, Plaintiff and California Subclass members were harmed and suffered actual damages.

448. California Business & Professions Code § 17200 prohibits acts of "unfair competition," including any "unlawful, unfair or fraudulent business act or practice" and "unfair, deceptive, untrue or misleading advertising."

449. Plaintiff and California Subclass members are reasonable consumers who do not expect their Class Vehicles to be defective.

450. Defendant knew the Class Vehicles were defectively designed or manufactured, and were not suitable for their intended use.

451. In failing to disclose the "Death Wobble" defect, Defendant has knowingly and intentionally concealed material facts and breached its duty not to do so.

452. Defendant was under a duty to Plaintiff and California Subclass members to disclose the defective and unsafe nature of the Class Vehicles and because:

(a) Defendant was in a superior position to know the true state of facts about the safety defect in the Class Vehicles; and

(b) Defendant actively concealed the defective nature of the Class Vehicles from Plaintiff and California Subclass members.

453. The facts Defendant concealed from or failed to disclose to Plaintiff and California Subclass members are material in that a reasonable person would have considered them to be important in deciding whether to purchase or lease Class Vehicles. Had they known of the defect, Plaintiff and California Subclass members would have paid less for Class Vehicles or would not have purchased or leased them at all.

454. Defendant continued to conceal the defective nature of the Class Vehicles even after problems were reported.

455. Defendant's conduct was and is likely to deceive consumers.

456. Defendant's acts, conduct, and practices were unlawful, in that they constituted:

(a) Violations of California's Consumers Legal Remedies Act;

(b) Violations of the Song-Beverly Consumer Warranty Act;

(c) Breach of the Implied Warranty of Merchantability under California Commercial Code section 2314;

(d) Violations of the Magnuson-Moss Warranty Act; and

(e) Breach of Express Warranty under California Commercial Code section 2313.

457. By its conduct, Defendant has engaged in unfair competition and unlawful, unfair, and fraudulent business practices.

458. Defendant's unfair or deceptive acts or practices occurred repeatedly in Defendant's trade or business and were capable of deceiving a substantial portion of the purchasing public.

459. As a direct and proximate result of Defendant's unfair and deceptive practices, Plaintiff and California Subclass members have suffered and will continue to suffer actual damages.

460. Defendant has been unjustly enriched and should be required to make restitution to Plaintiff and California Subclass members.

REQUEST FOR RELIEF

WHEREFORE, Plaintiffs, individually and on behalf of members of the Class and Subclasses, respectfully request that the Court enter judgment against FCA and in favor of Plaintiffs, the Class, and Sub-Classes, and award the following relief:

A. Certification of this action as a class action pursuant to Rule 23 of the Federal Rules of Civil Procedure, declaring Plaintiffs as the representatives of the Sub-Classes, and Plaintiffs' counsel as counsel for the Sub-Classes;

B. An order awarding declaratory relief and temporarily and permanently enjoining FCA from continuing the unlawful, deceptive, fraudulent, and unfair business practices alleged in this Complaint;

C. Appropriate injunctive and/or declaratory relief, including, without limitation, an order that requires Defendant to repair, recall, and/or replace the Class

Vehicles and to extend the applicable warranties to a reasonable period of time, or, at a minimum, to provide Plaintiffs and members of all Sub-Classes with appropriate curative notice regarding the existence and cause of the "Death Wobble";

D. An award of appropriate damages to repair or replace the Class Vehicles;

E. A declaration that FCA is financially responsible for all Class notice and the administration of Class relief;

F. An order awarding any applicable statutory and civil penalties;

G. An order requiring FCA to pay both pre- and post-judgment interest on any amounts awarded;

H. An award of costs, expenses, and attorneys' fees as permitted by law; and

I. Such other or further relief as the Court may deem appropriate, just, and equitable.

DEMAND FOR JURY TRIAL

Plaintiffs hereby demand a jury trial for all claims so triable.

DATED: August 6, 2021

Respectfully submitted,

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Attorneys for Plaintiffs and the Subclasses

CERTIFICATE OF SERVICE

I hereby certify that on August 6, 2021, I electronically filed the foregoing document with the Clerk of the Court using the ECF system which will send notification of such filing to all attorneys of record.

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Exhibit 3	Eric Lawrence, *Jeep Wrangler drivers report 'death wobble' on highways*, Detroit Free Press
Exhibit 4	Christopher Smith, *New Jeep Wrangler Owners Reporting "Death Wobble" on Highway*, motor1.com
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EXHIBIT 1

Jeep Death Wobble: How To Properly Handle, Diagnose And Fix

BLOG

Matt Konkle | March 16, 2018

Photography By: Quadratec

by **Matt Konkle**
Quadratec Channel Editor

The wobble.

Anyone who has driven a Jeep for any length of time most likely knows all about the wobble.

That wheel shake, almost a violent one, which seems to show up out of nowhere after hitting some sort of bump or pothole, or sometimes following a hard press on the brake pedal.

Mike Kelly remembers the first time he encountered the wobble.

Kelly, owner of East Coast-based overlanding company Wheelers LLC (/c/blog/wheelers-overland-adventure), is a long time overlander and trail rider, and had just gotten a 2014 Wrangler JK when his struck on Interstate 95 in Center City, Philadelphia.

”I was going about 65-70 in the middle lane and hit a bump,” he says. “And the next thing you know, I had to slow down almost to a stop to get that wobble to go away.”

“It can definitely be a scary thing, death wobble, with the Jeep violently bashing and everything inside rattling, especially on the highway. It almost felt like the axle was going to fall off.”

In reality, the axle won’t fall off. Nor will the wheels come apart. It just feels that way. And, really, even the term death wobble is quite a bit misleading because for all the shaking and, um, wobbling, it is just a matter of keeping your head and using common sense to regain control and safely overcome the situation. It is also important to remember that even though the problem is termed death wobble, no one has ever died because of the issue.

In fact, for all its mystique and talk among enthusiasts, there never has been a recall issued by the National Highway Transportation Safety Administration for death wobble. According to the *Detroit News* , NHTSA last did a study on the 2005-10 model year Jeeps and found only two crashes blamed on death wobble, with just one listed as causing some sort of non-fatal injury. In contrast, Jeep sold 542,134 Wranglers during that time frame.

Chrysler did issue a Technical Service Bulletin back in 2012 warning drivers of its solid axle vehicles that steering systems needed to be kept in good working condition, but also did not issue any sort of recall.

So, now that you have a little background, what exactly is death wobble? What are the causes and best ways to handle the issue when it occurs? And what are some of the most important things to check, in order to fix the problem.

Death Wobble Explained

Quite simply, death wobble is the seemingly uncontrollable side-to-side shaking of a Jeep's front end steering components and – by extension – its steering wheel. While its dark name by no way indicates what will happen to you after the problem starts, death wobble does make the Jeep difficult to control, and can make you think the whole front end is about to fall apart. It is a problem inherent to solid axle vehicles, and can certainly make for some white-knuckle driving if it catches you unaware. But it is not something 'guaranteed' to happen. So just because you own a Jeep does not mean you are going to be affected. However, if it does happen, it usually starts when one tire hits a groove, pothole, or some other bump in the pavement at speeds around 45 miles-per-hour - or even after a heavy tap on the brake.

Death Wobble In a Jeep Cherokee XJ View of Steering

"Death wobble is caused by something very simple - it's the vehicles inability to absorb the natural vibration caused by driving," says Mike Gardner, longtime Jeep enthusiast, vintage Jeep expert and co-host of Willys restoration show 'Throwing Wrenches'. "This problem can be in the front suspension or in the steering. As your Jeep drives down the road it vibrates. Imagine the vibration is a ripple in a pond, starting at the front bumper and traveling through the Jeep to the rear bumper, then bouncing back. In the case of your Jeep the ripple in the pond is a constant and ever changing wave. Your Jeep is designed to absorb and control this vibration, but the frequency becomes to much to absorb at 40 to 55 miles-per-hour when your Jeep has death wobble."

Now, this wobble isn't to be confused with another Jeep issue called 'Bump Steer', which is a problem that normally arises after adding a suspension lift to the Jeep. Bump steer occurs when the vehicle darts right or left after hitting a bump in the road, and is easier to identify through improperly installed suspension kits, or broken/damaged steering components.

Nor should it be confused with a vibrations felt at higher speeds, as this is normally caused by an improperly aligned vehicle.

Safely Overcoming Death Wobble

The first thing to do when the wobble strikes is not to panic. That may seem obvious, but it still can be difficult to accomplish when your vehicle suddenly hits a bump and starts shaking wildly at higher speeds. It is also important to remember that even though it may feel like you are out of control, the vehicle is still going straight.

Maintain a solid grip on the steering wheel throughout the experience. Not a strangulation hold, but good enough to keep control. Often times, the harder you grip the wheel, the more you could damage your fingers or hands from violent steering wheel sways.

Death wobble From the Interior of a Jeep Cherokee

As far as resolving the issue, the best way - and really only way - is to bring the Jeep to a stop through controlled braking. Don't mash the brake pedal, as that will only make the vehicle more difficult to control, and do not give the Jeep gas in hopes of accelerating through the problem. Instead, bring it to a controlled stop on the shoulder, and out of the way of other traffic.

"If you experience wobble you need to come to a complete stop, because only a complete stop will stop the shake," Gardner says. "People like to power through the wobble by increasing speed, but it is very possible it would get worse and cause more damage or cause you to lose all control of the vehicle. My suggestion is to stop completely on the side of the road as safe as possible. If needed, change your pants and start moving again. This time avoid the speed that caused it, usually 40 to 55 miles per hour, but not always. Also avoid large pot holes or large impacts such as speed bumps. If you have to hit an impact take it slow. Hitting them slow will keep any shaking down to a minimum and not cause more damage to your vehicle that already has some obvious issues."

Death Wobble Misconceptions

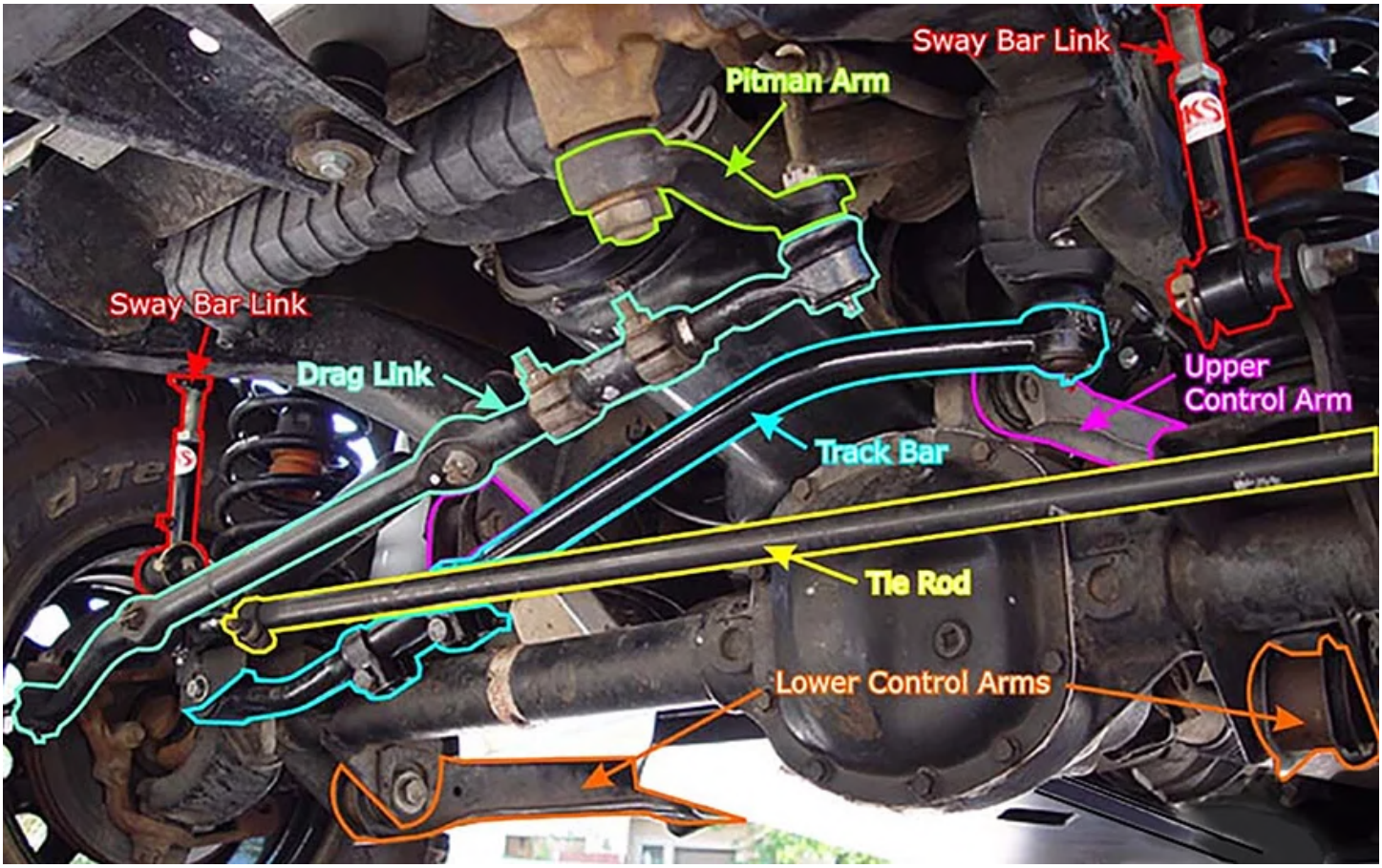
One of the biggest myths regarding death wobble is that all stock Jeeps are immune, and only lifted Jeeps are affected. This is absolutely not true, as any solid front axle vehicle can get death wobble under the right conditions. However, those who have recently added suspension upgrades usually are more likely to experience death wobble.

Another incorrect belief is that swapping out the Jeep's steering stabilizer to a stronger version will solve death wobble. While a steering stabilizer (/categories/jeep_steering_brake_parts/steering_stabilizers_brackets) is a good tool to act as a 'cushion' for your steering, and help dampen normal steering wander after hitting a rut, in reality a stronger steering stabilizer will only tend to mask the underlying issues. In fact, a steering stabilizer can only make things more difficult to resolve and even may cause more problems down the road.

Possible Causes of Death Wobble

The effects of death wobble are easy to see (and tough to experience), but discovering reasons and causes behind the problem are a bit more difficult to diagnose, mainly because this extreme wobble can be caused by numerous different loose or damaged components throughout the entire steering and suspension system. Or it can be caused by one worn or bad part. See the problem? It is not a hard and fast rule. But most likely if you experience death wobble, it is because these parts have been bad for awhile.

”While it seems like death wobble comes out of nowhere, the signs and symptoms are typically building towards that first time you hit 55 mph and you get completely shocked by the overwhelming feeling that comes with death wobble,” says Jeff Yurk, Chief of Operations at Unofficial Use Only - a Michigan-based custom vehicle builder and garage. “I run 42-inch tires on the Ripp Supercharged Grappler JK build and one of the things I have always tried to ensure was that all the steering and suspension components were top notch and able to handle the harsh requirements that come with running a very large off-road tire.”



The best place to start understanding and rooting out the causes of death wobble is to get under the vehicle and give the steering and suspension a good visual inspection. Components like your front track bar, tie rod and tie rod ends, ball joints, upper and lower control arms as well as bushings, and wheel bearings should all be checked for excessive wear, damage or missing parts. In addition, if you have recently installed a new suspension lift then ensure the hardware is properly torqued and nothing is loose or out of place.

"My first way of finding a cause is a simple hands on walk around," Gardner says. "I pull, push and twist suspension and steering by hand, and it is best to do this on a lift. Many times you can inspect and or remove the steering stabilizer and test drive it see if the problem still exists. Your Jeep is designed to function absolutely perfectly without a steering stabilizer. After that easy and simple cause had been identified or eliminated you can move on to other systems."

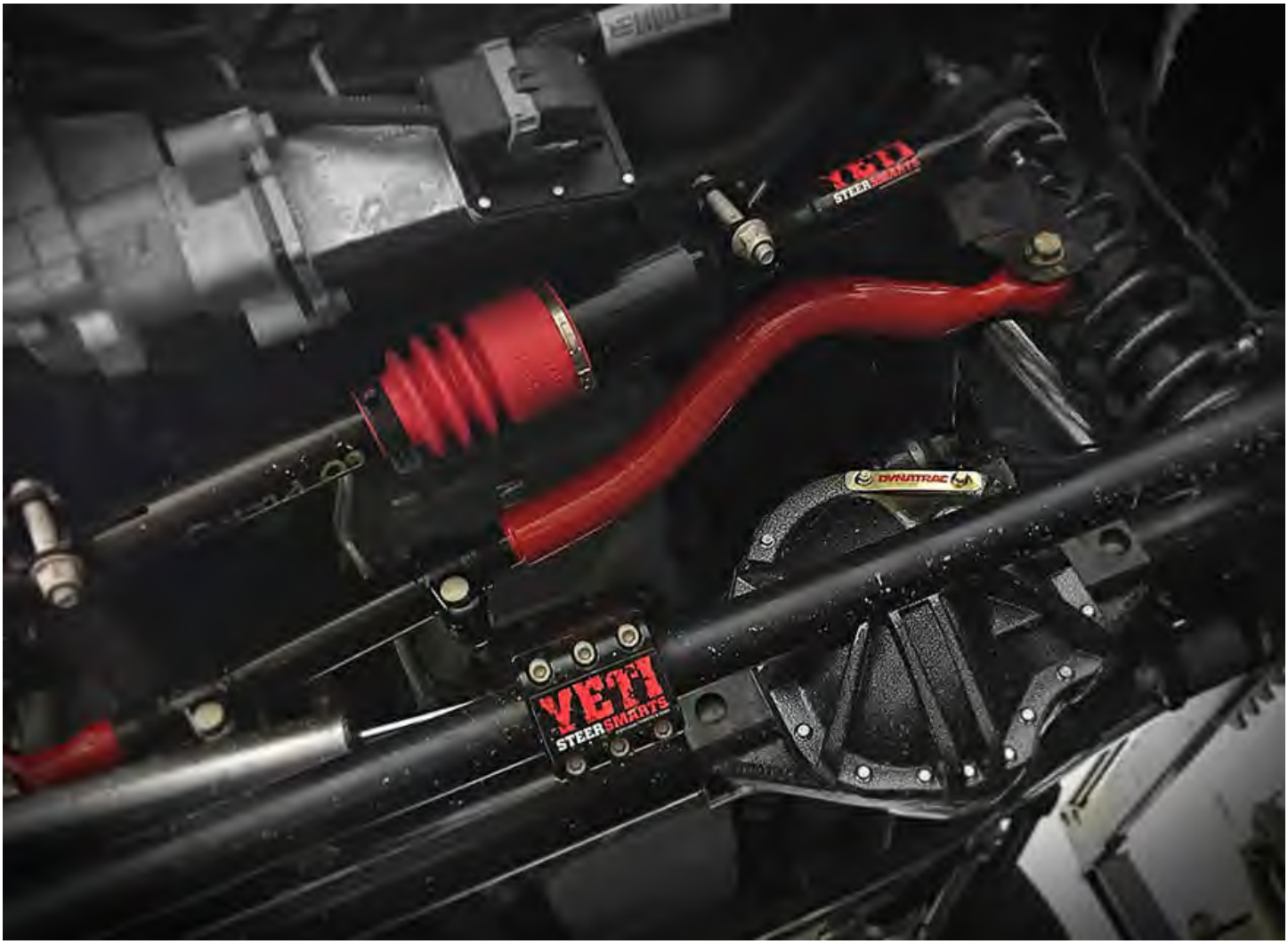
Another important thing to check is the alignment of your wheels and tires. While these aren't necessarily a cause of death wobble, any unbalance can certainly make the issue worse. Plus, if you are out of alignment, then getting your wheels set up correctly will save tire life.

Fixing Death Wobble

Like we've said before, death wobble can strike both a stock or lifted Jeep thanks to all of these vehicle having solid front axles. So knowing that, and owing a Jeep, how can you fix the problem and prevent it from happening – or happening again if you've been through it before?

Well for starters, remember to ignore anyone who says throwing a new steering stabilizer at the problem will solve the issue. We previously covered this as a misconception and, in fact, the best thing you can do when striving to fix wobble is to disconnect that stabilizer in order to get a more accurate diagnosis.

Next, take what you've learned from your visual inspection and make sure all the bolts in your suspension and steering parts are tightened to proper specs. Basically, if there is any looseness in these bolts, then death wobble can take advantage at the right moment.



After tightening all bolts, the first part to attack is your factory track bar. This is a product designed to absorb a lot of force and keep your vehicle's axle from drifting side to side. Over time though, this force can deform the bar's frame side bolt hole, causing the bolt to become loose and track bar bushings to wear out. The result can be a significant amount of play in the track bar.

Luckily, is it pretty simple to determine if there is an issue.

Grab a buddy and set the Jeep in neutral with the motor off, but key in the 'on' position. Have your buddy turn the steering wheel back and forth – about a quarter turn each way. Ideally, your track bar should stay firmly in place when this happens. However, if there is play in the track bar and you know

the bolt is properly torqued, then either the bushing or bolt may be bad. Also, if your track bar was moving even with the bolt firmly in place, then your bushing is worn out and the track bar (/categories/jeep_lift_kits_suspension/track_bars) should be replaced.

Your Jeep's tie rod and tie rod ends should be next on the hit list. To check these, use a jack to lift up the front of the Jeep and then have a friend grab one wheel and twist it back and forth. If the tie rod doesn't move, but the ends seem to wiggle, then they most likely need replacement. Of course, if the rubber boot is torn or damaged that is another replacement sign. Plus, if the actual tie rod is bent then definitely look at swapping out that tie rod (/categories/jeep_steering_brake_parts/steering_linkage/tie-rods). A bent tie rod not only can cause shaky steering wheel syndrome and bump steer, but also will certainly exacerbate death wobble and causes excessive tire wear.

The vehicle's ball joints are yet another important part to investigate when trying to eliminate death wobble. These ball joints connect the steering knuckle to the axle, are encased in rubber boots filled with grease and designed to help smooth out steering. If these boots are damaged and grease is

leaking then it's a good bet the ball joints need replacement. You can also lift up the vehicle with a jack and check the ball joints by pushing against the tire with a pry bar. If there is any movement in the joint then definitely replace those ball joints (/categories/jeep_steering_brake_parts/ball_joints).

Control arms and control arm bushings can also be an issue and this is something easily determined with a visual inspection. Basically, if the arms are bent or cracked then it is a good idea to replace the control arm (/categories/jeep_lift_kits_suspension/control_arms) as these parts help 'control' the up and down movement of your Jeep's suspension. Damaged arms remove that control and lead to

excessive vibration in the suspension. If the control arms are fine, don't forget to check the bushings as these rubber pieces can enlarge and wear out over time - affecting the ability of the control arms to do their thing.

Worn wheel bearings may contribute to death wobble as well and are very easy to test. Jack up one of your Jeep's front wheels and grasp the tire at the 12- and 6-o'clock position, then wiggle the tire. If you feel movement, then you most likely have a worn wheel bearing. Check the other side as well.

One other thing to check which can also have an impact on death wobble is your tires. Unbalanced, damaged, or improperly inflated tires play a role in the sense that something needs to start the wobble. A warped, underinflated or unbalanced tire hitting a bump or pothole can be enough to set the whole thing in motion.

Finally, anytime after installing a new suspension lift or adding new steering and suspension components, you should get a front end alignment. Make sure you use a company who knows how to deal with 4x4 vehicles and won't sell you on simply getting a four-wheel alignment, as you do not have independent rear suspension in your Jeep. A good alignment shop will also know how to properly set your vehicle's caster and toe angle.

Follow Up Maintenance

So with everything now inspected, all those components correctly tightened and maybe even a few parts replaced, the risk of getting that crazy wobble after unexpectedly striking a bump or pothole is significantly less. However, the job isn't really over. Truth is, it is never really over.

Regular checks of these components, especially the tires and suspension hardware, and specifically after installing any new suspension lift kits or parts (/categories/jeep-lift-kits-suspension), is all part of a proper maintenance plan that will provide peace of mind and help ensure the wobble is a thing of the past.

Need To Fix Your Jeep's Death Wobble? Shop The Parts You Need Below

BALL JOINTS (/CATEGORIES/JEEP_STEERING_BRAKE_PARTS/BALL_JOINTS)
2007-2018 Wrangler JK (/vehicle/2007-2017-jeep-wrangler-jk/steering-brakes/ball-joints)
1997-2006 Wrangler TJ (/vehicle/1997-2006-wrangler-tj/steering-and-brakes/ball-joints)
1987-1995 Wrangler YJ (/vehicle/1987-1995-wrangler-yj/steering-and-brakes/ball-joints)

WHEEL BEARINGS (/CATEGORIES/JEEP-DRIVELINE/AXLE-SEALS-BEARINGS)
2007-2018 Wrangler JK (/vehicle/2007-2017-jeep-wrangler-jk/driveline/hub-parts)
1997-2006 Wrangler TJ (/vehicle/1997-2006-wrangler-tj/driveline/hub-parts)
1987-1995 Wrangler YJ (/vehicle/1987-1995-wrangler-yj/driveline/hub-parts)

TRACK BARS (/CATEGORIES/JEEP_LIFT_KITS_SUSPENSION/TRACK_BARS)
2007-2018 Wrangler JK (/vehicle/2007-2017-jeep-wrangler-jk/lift-kits-suspension/track-bars)
1997-2006 Wrangler TJ (/vehicle/1997-2006-wrangler-tj/lift-kits-and-suspension/track-bars)
1987-1995 Wrangler YJ (/vehicle/1987-1995-wrangler-yj/lift-kits-and-suspension/track-bars)

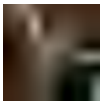
STEERING LINKAGE (/CATEGORIES/JEEP_STEERING_BRAKE_PARTS/STEERI
2007-2018 Wrangler JK (/vehicle/2007-2017-jeep-wrangler-jk/steering-brakes/steering-linkage)
1997-2006 Wrangler TJ (/vehicle/1997-2006-wrangler-tj/steering-and-brakes/steering-linkage)
1987-1995 Wrangler YJ (/vehicle/1987-1995-wrangler-yj/steering-and-brakes/steering-linkage)

CONTROL ARMS (/CATEGORIES/JEEP_LIFT_KITS_SUSPENSION/CONTROL_ARMS)
2007-2018 Wrangler JK (/vehicle/2007-2017-jeep-wrangler-jk/lift-kits-suspension/control-arms)
1997-2006 Wrangler TJ (/vehicle/1997-2006-wrangler-tj/lift-kits-and-suspension/control-arms)

Tags: How to (/c/tag/how-to), Product Information (/c/tag/product-information), Driveline (/c/tag/driveline)

Comments

6 Comments Sort by **Newest**



Add a comment...

Kathy Rossello

I had a 1996 Cherokee that had this issue, I replaced the entire front suspension for about $500 and never had the problem again.

Like · Reply · 1w

Lori K. Wikle-Aberle

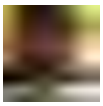
I have been through the death wobble twice in my 2004 LJ. Both times, we did all the recommended replacements, tightening everything down well and making sure everything was perfect. First time, worked. Second time, no luck. We tried and tried and tried. Finally looked at my 60,000 mile tires that only had 30,000 miles on them. One tire had cupped. Replaced the tires and problem solved.

Like · Reply · 2w

Greg Grace

Our 2013 developed the wobble within a few weeks or months of a suspension leveling. I tried a new steering dampner that only made it worse. I put the stock dampner back on. Eventually me and a friend found the lower track bar bolt very loose. He and I tightened it and the problem was solved.

Like · Reply · 9w



Joe Rodriguez

2000 Jeep Wrangler sport. 4" Fabtech lift. 33x 12.5 x 15 tires. Knock wood never had a death wobble experience.

Like · Reply · 9w

Greg Newman

New 2018 Jeep JL with less than 6K miles. Already had the recalled steering damper replaced. Happened two days ago on Interstate 69 at 72mph. Crossed a somewhat rough bridge expansion joint and the entire vehicle started shaking like it was going to come apart. Slowed to around 20mph and it stopped the episode.

Like · Reply · 2 · 12w

Kathy Young

I had the same issue, been in the shop x5. I think its finally better. Call brandywine jeep on Kirkwood road in Wilmington Delaware to find out how they fixed it. I bought my jeep brand new, it was worse in colder weather and higher speeds

Like · Reply · 1 · 9w

Don Comstock

Same here.. So took to dealership and they replaced the shock and had it happen again, said it was the replacement with the same part number? So the fix was again another shock.. I am not happy as I know it will come back at some point..I did have them check tork

specks on front suspension.. time will tell now.. They were in contact with jeep experts and said it was not death wobble.. right...

Like · Reply · 1 · 8w

Gena Tow

Top Jeep Articles

(/c/blog/bantam-jeep-heritage-festival-puts-rare-jeep-grabs)

BLOG

Bantam Jeep Heritage Festival Puts Rare Jeep Up For Grabs (/c/blog/bantam-jeep-heritage-festival-puts-rare-jeep-grabs)

Matt Konkle | January 21, 2020

One of the country's premier Jeep events raffling off restored 1981 Jeep Scrambler.

(/c/blog/jeep-wrangler-ecodiesel-awarded-four-wheelers-2020-suv-year)

BLOG

Jeep Wrangler EcoDiesel Awarded FOUR WHEELER'S 2020 'SUV of the Year' (/c/blog/jeep-wrangler-ecodiesel-awarded-four-wheelers-2020-suv-year)

Matt Konkle | January 15, 2020

Vehicle beat out Wrangler's 3.6L eTorque and Ranger Rover Sport HSE P3600 for the 47th annual FOUR WHEELER award.

(/c/blog/how-and-why-engage-your-jeeps-four-wheel-drive)

REFERENCE

How and Why to Engage Your Jeep's Four Wheel Drive (/c/blog/how-and-why-engage-your-jeeps-four-wheel-drive)

Matt Konkle | January 13, 2020

Not all road, or off-road, conditions are created equal. So knowing which four-wheel-drive setting to use in those different conditions is certainly helpful. So, too, is knowing how to reach those settings.

(/c/blog/young-gladiator-takes-home-2020-north-american-truck-year-award)

BLOG

Young Jeep Gladiator Wins 2020 North American Truck of the Year Award (/c/blog/young-gladiator-takes-home-2020-north-american-truck-year-award)

Matt Konkle | January 13, 2020

Jeep's newest vehicle sold 40k units in 2019, and marked the brand's first truck since 1992.

(/c/reference/installing-tj-wrangler-fishbone-fenders-and-sliders)

HOW-TOS

Installing TJ Wrangler Fishbone Fenders and Sliders (/c/reference/installing-tj-wrangler-fishbone-fenders-and-sliders)

Scott Ammerman | January 8, 2020

If you are looking to retool your TJ look with some new flares and sliders, Fishbone has some pieces that are perfect for your needs.

(/c/blog/fca-displays-electric-jeep-wrangler-4xe-plug-hybrid-ces-2020)

BLOG

FCA Displays Electric Jeep Wrangler 4XE Plug-In Hybrid At CES 2020 (/c/blog/fca-displays-electric-jeep-wrangler-4xe-plug-hybrid-ces-2020)

Matt Konkle | January 7, 2020

While information on FCA's first-ever electric Wrangler won't be available until March, the automaker

(/c/reference/installing-sb-filters-jk-wrangler-cold-air-intake)

REFERENCE

Installing an S&B Filters JK Wrangler Cold Air Intake (/c/reference/installing-sb-filters-jk-wrangler-cold-air-intake)

Scott Ammerman | January 6, 2020

With increased airflow over the factory intake, as well as near-perfect efficiency, the S&B Cold Air Intake is a cost-effective way to increase your vehicle's horsepower and performance.

(/c/reference/do-i-really-need-hardtop-seal-kit)

REFERENCE

Do I Really Need a Hardtop Seal Kit? (/c/reference/do-i-really-need-hardtop-seal-kit)

Scott Ammerman | January 3, 2020

These rubber pieces can be the perfect solution for those who have water leakage, or simply just loud wind noise.

(/c/blog/fcas-2019-sales-mixed-bag)

BLOG

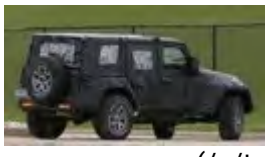
FCA Reports 2019 Sales Off 1% Despite Strong Performance From Gladiator, Ram (/c/blog/fcas-2019-sales-mixed-bag)

Matt Konkle | January 3, 2020

Wrangler posts record fourth quarter numbers, but Jeep brand slows five percent for year as FCA reports mixed bag of 2019 sales.

TRENDING TOPICS

(/c/tag/jeeps-java)
Jeeps & Java (/c/tag/jeeps-java)



(/c/tag/jeep-wrangler-jl)
Jeep Wrangler (JL) (/c/tag/jeep-wrangler-jl)

(/c/tag/quadratec-cares)
Quadratec Cares (/c/tag/quadratec-cares)

(/c/tag/quadratec-academy)
Quadratec Academy (/c/tag/quadratec-academy)

HOW-TO GUIDES

(/c/reference/installing-tj-wrangler-fishbone-fenders-and-sliders)

Installing TJ Wrangler Fishbone Fenders and Sliders (/c/reference/installing-tj-wrangler-fishbone-fenders-and-sliders)

(/c/howto/how-upgrade-your-factory-jk-hood-latches-mopar-jl-hood-hold-downs)

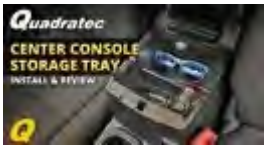
How To Upgrade Your Factory JK Hood Latches To Mopar's JL Version (/c/howto/how-upgrade-your-factory-jk-hood-latches-mopar-jl-hood-hold-downs)

(/c/howto/how-properly-jumpstart-your-jeep)

How To Properly Jumpstart Your Jeep (/c/howto/how-properly-jumpstart-your-jeep)

VIDEOS

Oracle Oculus 9 inch Bi-LED Headlights Install and Review for Jeep Wrangler JL & Jeep Gladiator JT (/c/video/oracle-oculus-9-inch-bi-led-headlights-install-and-review-jeep-wrangler-jl-jeep-gladiator-jt)



(/c/video/quadratec-center-console-storage-tray-jeep-wrangler-and-jeep-gladiator)

Quadratec Center Console Storage Tray for Jeep Wrangler and Jeep Gladiator (/c/video/quadratec-center-console-storage-tray-jeep-wrangler-and-jeep-gladiator)

(/c/video/how-install-quadratec-flashlight-bracket-jeep-wrangler-jl-and-jeep-gladiator-jt)

How to Install the Quadratec Flashlight Bracket for Jeep Wrangler JL and Jeep Gladiator JT (/c/video/how-install-quadratec-flashlight-bracket-jeep-wrangler-jl-and-jeep-gladiator-jt)

EXPERT REVIEWS

Uniden Bearcat Wireless Microphone Helps Make Trail Experiences Better, Safer (/c/howto/uniden-bearcat-wireless-

microphone-helps-make-trail-experiences-better-safer)


(/c/howto/uniden-bearcat-wireless-microphone-helps-make-trail-experiences-better-safer)


(/c/review/10000-miles-road-strong)

BFGoodrich KO2 Tires - 10,000 Miles Of Off-Road Strong (/c/review/10000-miles-road-strong)


(/c/review/cutting-cord-warns-wireless-remote-control-system)

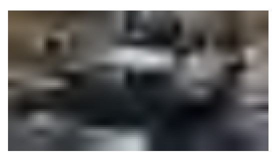
Cutting the Cord with Warn's Wireless Remote Control System (/c/review/cutting-cord-warns-wireless-remote-control-system)

JEEP BUILD-UPS


(/c/build-up/copperhead-2002-jeep-wrangler-tj)
Project Copperhead - 2002 Jeep Wrangler TJ 4.0L (/c/build-up/copperhead-2002-jeep-wrangler-tj)


(/c/build-up/project-redrum-2000-jeep-cherokee-xj)
RedRum - 2000 Jeep Cherokee XJ (/c/build-up/project-redrum-2000-jeep-cherokee-xj)


(/c/build-up/x-factor-2003-jeep-wrangler-tj-x)
X Factor - 2003 Jeep Wrangler TJ X (/c/build-up/x-factor-2003-jeep-wrangler-tj-x)


(/c/build-up/project-grey-wolf-2014-wrangler-jku)
Project Grey Wolf - 2014 Wrangler JKU (/c/build-up/project-grey-wolf-2014-wrangler-jku)

Shopping Tools

Stay Connected

Follow Quadratec

(https://www.youtube.com/subscription_center?add_user=quadratec)

* Low Price Guarantee (/help/lowest-price-guarantee)

** Free Shipping Details, Shipping Policies and Restrictions (/help/shipping-policy)

EXHIBIT 2

FIAT CHRYSLER AUTOMOBILES

Revision 2 June 2019

Dealer Service Instructions for:

Customer Satisfaction Notification V41 Steering Damper

NOTE: Figure 2 position of Steering Damper Intake Bulge location updated.

Remedy Available

2018 - 2019 (JL) Jeep® Wrangler vehicles

NOTE: Some vehicles above may have been identified as not involved in this campaign and therefore have been excluded from this campaign.

IMPORTANT: Some of the involved vehicles may be in dealer new vehicle inventory. Dealers should also consider this requirement to apply to used vehicle inventory and should perform this campaign on vehicles in for service. Involved vehicles can be determined by using the VIP inquiry process.

Subject

The front suspension steering damper on about 192,000 of the above vehicles may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

Repair

Replace the front suspension steering damper on all of the above involved vehicles.

Parts Information

Parts will be manually allocated to dealers based on VIN assignment. This process will continue to during the next several months.

Part Number	Description
CCUKV411AA	**Left Hand Drive (LHD) Part Package**

Each package contains the following components:

Quantity	Description
1	Steering Damper, Left Hand Drive

Part Number	Description
CCUKV412AA	**Right Hand Drive (RHD) Part Package**

Each package contains the following components:

Quantity	Description
1	Steering Damper, Right Hand Drive

Part Number	Description
CCUKV413AA	**Fastener Part Package (LHD and RHD)**

Each package contains the following components:

Quantity	Description
1	Bolt, Axle Mount Steering Damper
1	Nut and Washer, Axle Mount Steering Damper
1	Bolt, Bracket Steering Damper
1	Nut, Bracket Steering Damper

Parts Return

No parts return required for this campaign.

Special Tools

No special tools are required to perform this service procedure.

Service Procedure

1. Place the front wheels in a straight ahead position.
2. Raise and support the vehicle.
3. Remove the steering damper nut and bolt from the tie rod bracket (Figure 1).

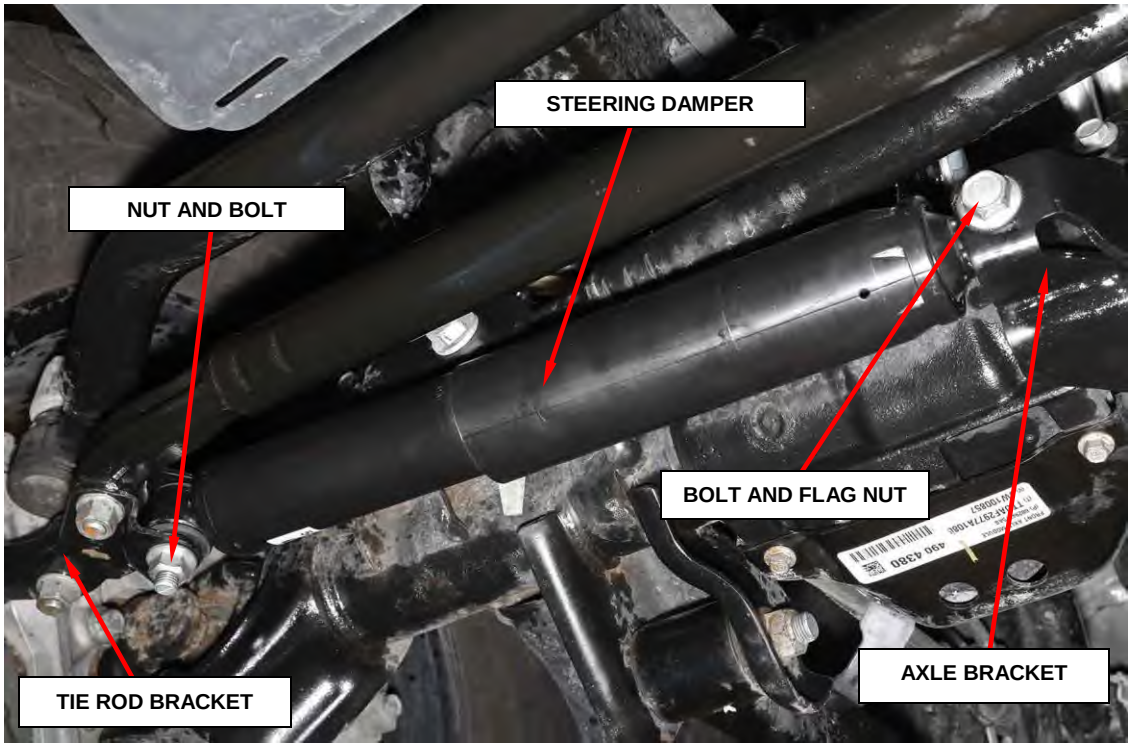


Figure 1 – Steering Damper

4. Remove the steering damper bolt and flag nut from the axle bracket.

   NOTE: The damper flag nuts and bolts must be replaced.

5. Remove the steering damper from the vehicle and **discard.**

Service Procedure [Continued]

6. Align the **NEW** steering damper to the mounting bolt holes on the axle bracket and the tie rod bracket.

   NOTE: Location of side Intake Bulge on the base cup must be positioned in the downward position (Figure 2).

Figure 2 – Intake Bulge Location

7. Install the **NEW** steering damper bolt through the axle bracket and start it a few threads into the **NEW** flag nut (Figure 1).

8. Install the **NEW** steering damper bolt through the tie rod bracket and start it a few threads into the **NEW** nut (Figure 3).

   NOTE: Steering Damper Bolt has a square guide that must align with the tie rod bracket square hole and be fully seated (Figure 3).

Service Procedure [Continued]

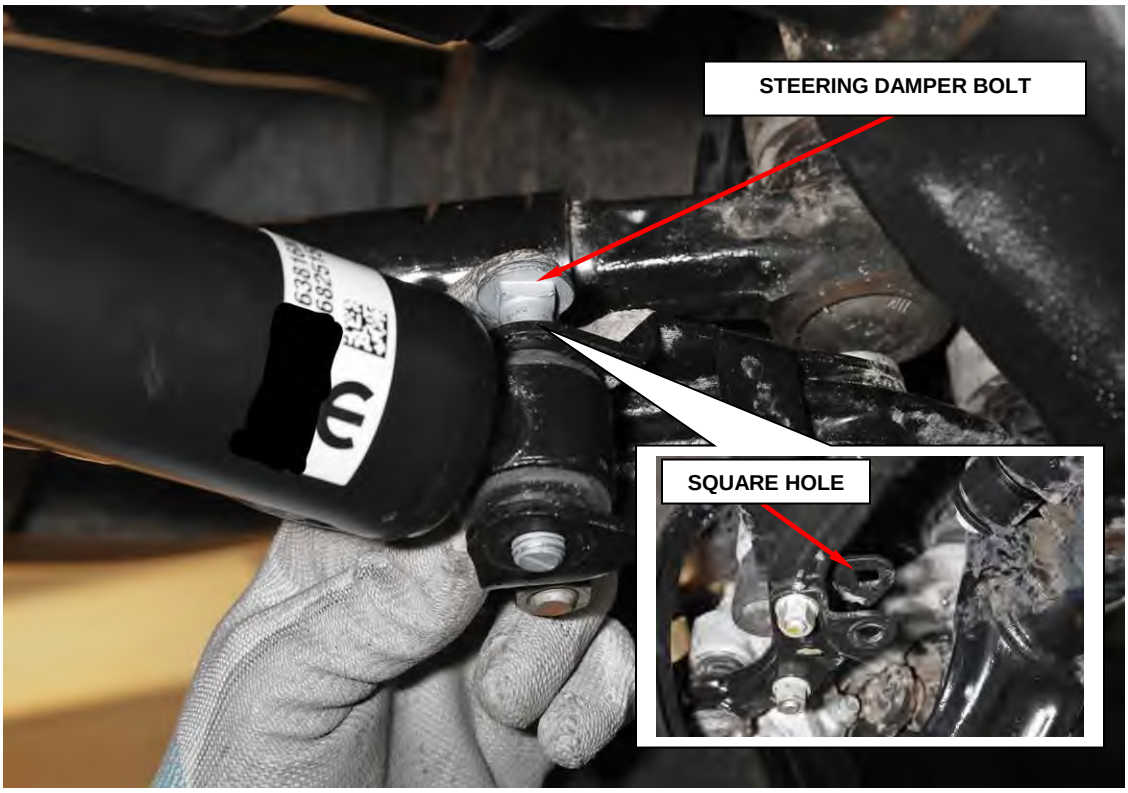


Figure 3 – Tie Rod Bracket

9. Tighten the **NEW** steering damper nut on the axle bracket to 80 N·m (59 ft. lbs.) (Figure 1).

10. Tighten the **NEW** steering damper nut on the tie rod bracket to 70 N·m (51 ft. lbs.) (Figure 3).

11. Lower the vehicle and return it to the customer.

Completion Reporting and Reimbursement

Claims for vehicles that have been serviced must be submitted on the DealerCONNECT Claim Entry Screen located on the Service tab. Claims paid will be used by FCA to record Customer Satisfaction Notification service completions and provide dealer payments.

Use the following labor operation number and time allowance:

	Labor Operation Number	**Time Allowance**
Replace Steering Damper	02-V4-11-82	0.3 hours

NOTE**:** See the Warranty Administration Manual, Recall Claim Processing Section, for complete claim processing instructions.

Dealer Notification

To view this notification on DealerCONNECT, select "Global Recall System" on the Service tab, then click on the description of this notification.

Owner Notification and Service Scheduling

All involved vehicle owners known to FCA are being notified of the service requirement by mail. They are requested to schedule appointments for this service with their dealers. A generic copy of the owner letter is attached.

Vehicle Lists, Global Recall System, VIP and Dealer Follow Up

All involved vehicles have been entered into the DealerCONNECT Global Recall System (GRS) and Vehicle Information Plus (VIP) for dealer inquiry as needed.

GRS provides involved dealers with an updated VIN list of their incomplete vehicles. The owner's name, address and phone number are listed if known. Completed vehicles are removed from GRS within several days of repair claim submission.

To use this system, click on the **"Service"** tab and then click on **"Global Recall System."** Your dealer's VIN list for each recall displayed can be sorted by: those vehicles that were unsold at campaign launch, those with a phone number, city, zip code, or VIN sequence.

Dealers should perform this repair on all unsold vehicles *before* retail delivery. Dealers should also use the VIN list to follow up with all owners to schedule appointments for this repair.

VIN lists may contain confidential, restricted owner name and address information that was obtained from the Department of Motor Vehicles of various states. Use of this information is permitted for this notification only and is strictly prohibited from all other use.

Additional Information

If you have any questions or need assistance in completing this action, please contact your Service and Parts District Manager.

Customer Service / Field Operations
FCA US LLC

This notice applies to your vehicle,

[Model Year and Model]
VIN XXXXXXXXXXXXXXXXX

V41

LOGO

VEHICLE PICTURE

YOUR SCHEDULING OPTIONS

1. **RECOMMENDED OPTION**
   Call your authorized Chrysler / Dodge / Jeep® / RAM Dealership.

2. **Call the FCA Recall Assistance Center at 1-800-853-1403. An agent can confirm part availability and help schedule an appointment.**

3. **Visit recalls.mopar.com, scan the QR code below, or download the Mopar Owner's Companion App.**

QR Code

Get access to recall notifications, locate your nearest dealer, and more through this website or Mopar Owner's Companion App. You will be asked to provide your Vehicle Identification Number (VIN) to protect and verify your identity.

DEALERSHIP INSTRUCTIONS
Please reference CSN V41.

CUSTOMER SATISFACTION NOTIFICATION

Steering Damper

Dear [Name],

At FCA US LLC, we recognize that the success of our business depends on the satisfaction of our customers. We are constantly monitoring the quality of our products and looking for opportunities to improve our vehicles even after they are sold. Because your long-term satisfaction is important to us, we are contacting you on important improvements we would like to make to your vehicle [1]. This will be done at no charge to you.

We are recommending the following improvements be performed on certain [2018 - 2019 Model Year Jeep® Wrangler] vehicles.

WHY DOES MY VEHICLE NEED REPAIRS?

The front suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

HOW DO I RESOLVE THIS CUSTOMER SATISFACTION NOTIFICATION

FCA will repair your vehicle free of charge (parts and labor). To do this, your dealer will replace the steering damper. The estimated repair time is half an hour. In addition, your dealer will require your vehicle for proper check-in, preparation, and check-out during your visit, which requires more time. Your time is important to us, so we recommend that you schedule a service appointment to minimize your inconvenience. Please bring this letter with you to your dealership.

TO SCHEDULE YOUR FREE REPAIR,
CALL YOUR CHRYSLER, DODGE, JEEP OR RAM DEALER TODAY

WHAT IF I ALREADY PAID TO HAVE THIS REPAIR COMPLETED?

If you have already experienced this specific condition and have paid to have it repaired, you may visit **www.fcarecallreimbursement.com** to submit your reimbursement request online. [2] Once we receive and verify the required documents, reimbursement will be sent to you within 60 days. If you have had previous repairs performed and/or already received reimbursement, you may still need to have the repair performed.

We apologize for any inconvenience, but are sincerely concerned about your satisfaction. Thank you for your attention to this important matter.

Customer Assistance/Field Operations
FCA US LLC

FCA
FIAT CHRYSLER AUTOMOBILES

Mr. Mrs. Customer
1234 Main Street
Hometown, MI 48371

[1] If you no longer own this vehicle, please help us update our records. Call the FCA Recall Assistance Center at 1-800-853-1403 to update your information.

[2] You can also mail in your original receipts and proof of payment to the following address for reimbursement consideration: FCA Customer Assistance, P.O. Box 21-8004, Auburn Hills, MI 48321-8007, Attention: Recall Reimbursement.

EXHIBIT 3

Jeep Wrangler drivers report 'death wobble' on highways

Eric D. Lawrence, Detroit Free Press Published 6:00 a.m. ET Nov. 19, 2018 | **Updated 1:44 p.m. ET Nov. 19, 2018**

(Photo: FCA US)

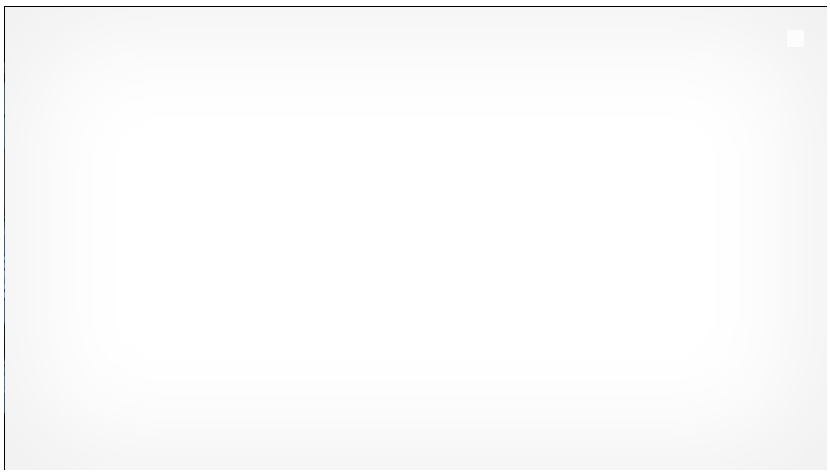
Rich Person was satisfying a long-held desire in May when he bought a Jeep Wrangler Unlimited Sport with a 3.6-liter V6 engine.

In a picture taken by his salesman, Person is seen standing beside his new ride at a dealership in Massachusetts, grinning widely and flashing two thumbs up.

“I have wanted one forever and just never pulled the trigger. My wife has always wanted a convertible. This year was our 20th anniversary, and with the oldest going to college next year we figured it was now or a long time from now,” Person wrote in an email to the Free Press.

But Person, a married father of four, became troubled by something about his dream SUV, a problem that kept him off the road for a month recently.

It’s an issue that Jeepophiles call the "death wobble," and it's something that has prompted quite a bit of online diagnosis. The National Highway Traffic Safety Administration has started looking into some recent complaints about the issue.



More: FCA leaks name of new Jeep pickup — and it's not what we expected (/story/money/cars/chrysler/2018/11/15/jeep-pickup-gladiator-scrambler/2011589002/)

Death wobble is a term that sounds dramatic, but it is not known to have led to any deaths. A spokesman for Fiat Chrysler Automobiles, which owns the Jeep brand, references the term “steering system vibration” when answering queries about it.

The issue arises after a vehicle hits a bump at highway speeds and then the steering wheel begins to shake, sometimes "violently." Online videos (https://www.youtube.com/watch?v=D2U47-ia4Ms#action=share) claiming to demonstrate the issue show the wheels of some older or modified Jeeps moving back and forth rapidly after driving over a board or similar obstruction.

The phenomenon prompted concern from lawmakers in years past, but it has begun popping up again recently in a number of consumer complaints on the NHTSA website about the redesigned 2018 Jeep Wrangler JL.

Violent shaking

A sort of typical description — unverified as such complaints to NHTSA are — came from a driver in Farmington Hills at the end of October who said he experienced the wobble on I-696 during heavy rush hour traffic:

“Vehicles tires begin to shake violently at speeds in the 70-75 mph range on the highway. Condition occurs after hitting a small bump on the highway. The condition becomes so violent, I have to slow the vehicle from 70+ mph to about 40 mph to stop the shaking. …”

A Fiat Chrysler Automobiles spokesman said the issue is not a safety problem and can happen with any vehicle that has a solid front axle (rather than an independent front suspension), such as the Wrangler. Solid front axle vehicles are usually considered more capable in extreme off-road conditions, which is one of the Wrangler's big selling points.

“Steering system vibration is not a widespread condition, nor is it a safety issue,” according to an email from Mike Palese, a company spokesman.

On Friday, eight complaints on the NHTSA website listed the words “death wobble” with 2018 Jeep Wrangler, but a search of “steering” and 2018 Jeep Wrangler generated more than 200 complaints. The vast majority describe issues such as overly stiff or drifting steering, but some also describe a violent shaking after hitting a bump or shift in pavement type at highway speeds, just like the death wobble. A number of those who have filed complaints said the shaking stopped only after the vehicle slowed down.

The issue appears primarily focused on Jeep Wranglers, but a few complaints about the wobble name the 2018 Ford F-250 as well. In response to a request last Monday for comment, a Ford spokeswoman said she would look into the issue but did not provide a comment.

Federal examination

NHTSA said it is aware of the issue, citing 11 complaints in the last month, and is checking into it. The agency did not say whether vehicles that experience such steering system vibrations are safe. If the number of new complaints does not grow significantly, it would represent a fraction of the Wranglers on the road, with FCA reporting 204,269 Wranglers sold this year through October.

Palese said it is FCA’s understanding that “NHTSA has looked at this over the years and determined it was not a safety issue.” He indicated there is no connection between the vibration complaints and a recall of 18,000 2018 and 2019 Wrangler JLs (/story/money/cars/chrysler/2018/10/16/recall-notice-says-jeep-wrangler-weld-issue-could-lead-crash/1650832002/) for problem welds.

Reports of the wobble in 2012 prompted letters from U.S. Rep. Anna Eshoo and then-U.S. Rep. Henry Waxman, both California Democrats, to the late FCA CEO Sergio Marchionne as well as NHTSA officials raising concerns about the issue.

In March of that year, San Francisco’s KGO-TV (Channel 7) posted a story (https://abc7news.com/archive/8586987/) saying it had found more than 600 complaints to NHTSA about Jeeps wobbling or vibrating since 1995, listing no deaths but five injuries.

NHTSA sent a letter to Eshoo in April of that year, describing the issue as a front suspension shimmy. The agency, according to a copy of the letter posted at the Center for Auto Safety (https://www.autosafety.org/jeep-wrangler-death-wobble/)website, said it found 402 relevant complaints out of the 542,134 2005-10 Wranglers and two possibly relevant crashes, “one of which alleged nonfatal injuries.”

“… The complaint narratives indicate that, while the condition is disconcerting to drivers, it does not result in loss of control such as the vehicle moving out of its travel lane,” the agency said.

The agency said a similar issue had been investigated in 2005-07 Ford F-250 and F-350 Super Duty trucks, but it had found “no basis for a safety recall.”

The current batch of complaints does not list any deaths or injuries.

The email from FCA said that “any manufacturer vehicle equipped with a solid axle can experience steering system vibration and, if experienced, it is routinely corrected.”

Most incidents are linked to vehicle modifications, such as poorly installed lift kits or oversized tires, damaged or worn steering system components or incorrect tire pressure or wheel balance, according to the email.

But in checking the complaints, many describe recently purchased vehicles with no modifications.

Person, 44, called his Wrangler an “overall pretty stock Sport model with some basic comfort and convenience options,” which he purchased this year at Colonial Dodge Chrysler Jeep in Hudson, Massachusetts, for just under $38,000.

The first time he experienced the issue was at the end of September, driving south on I-495 near Hopkinton, Massachusetts. He was taking one of his children to a basketball tournament.

“I hit a bump that should have been nothing and all of a sudden I thought I had a flat tire or something else bad because the whole car and steering wheel starting shaking. I slowed down and was getting ready to pull over and then it went away when I slowed down enough (probably around 50 mph)," he said.

“It was concerning, but right that second I just brushed it off," Person said. "Same thing happened once or twice more that weekend on the highway and then once again Monday or Tuesday on the way to work so I called for an appointment to get it checked.”

Read more:

Fiat Chrysler should change its name, investor says (/story/money/cars/chrysler/2018/11/09/rename-fiat-chrysler-jeep-ram/1930217002/)

Ex-UAW leader who aided prosecution gets 2 months in training center scandal (/story/money/cars/chrysler/2018/11/13/virdell-king-uaw-fca-scandal/1981077002/)

Person has since gotten his Wrangler back from the dealership following repairs after being told the steering stabilizer was “shot and had no pressure.” Person said he was told by the dealership that it was a safety issue, and he should not be driving the vehicle.

A call from the Free Press to a manager at the dealership was not returned.

Person, who is an electrical engineer by training but now designs and tests baseball protective equipment, is skeptical of the company's explanations about the issue. He said he drove a past generation Wrangler as a rental while his Wrangler was being repaired and another this summer for a week without the issue.

He said he is “not buying that it’s ‘not a safety issue.’ ”

“Having to rapidly slow down in the center lane of a highway while going 70 mph definitely is unsafe and the amount of vibration happening from this is just bound to break something eventually,” Person said. “I don't want a steering or suspension component snapping at 70 mph.”

Contact Eric D. Lawrence: elawrence@freepress.com. Follow him on Twitter: @_ericdlawrence.

Read or Share this story: https://www.freep.com/story/money/cars/chrysler/2018/11/19/jeep-wrangler-death-wobble-nhtsa/2028633002/

EXHIBIT 4

NOV 20, 2018 at 11:44AM

By: **CHRISTOPHER SMITH**

It's not a new problem in the Wrangler world, but it can certainly be frightening.

Apparently, new Jeep Wranglers still have some of the old not-so-welcome characteristics inherent in the off-roader's design. The National Highway Traffic Safety Administration (NHTSA) is looking into complaints about the dreaded "death wobble" in the steering system that some drivers have reported. In short, the steering wheel begins to shake quite badly after hitting a bump at higher speeds. The shaking goes away once the Jeep slows down, but it can be a rather frightening situation for drivers – especially on a busy highway.

As mentioned, this isn't uncharted territory for the Wrangler and to be honest, it's not necessarily a Wrangler-specific issue. *Any* vehicle that uses a solid front axle can be susceptible to the wobble, especially those with modified suspensions or worn suspension components. The death wobble also isn't quite as dramatic as the nickname makes it sound; no deaths have actually occurred as far as anyone knows, and while the shaking can become quite dramatic, it shouldn't lead to a loss-of-control.

Gallery: 2018 Jeep Wrangler: First Drive

The *Detroit Free Press* did some legwork on the issue and found instances of the wobble with the Wrangler dating as far back as 1995. In the report, a spokesperson for Fiat Chrysler Automobiles is quoted as calling the condition a "steering system vibration" and saying it "is not a widespread condition, nor is it a safety issue." The spokesperson also reportedly said FCA believed the NHTSA had investigated and also determined it wasn't a safety issue.

New Wranglers are being investigated for potential frame weld problems, but it's believed that issue is unrelated to new reports of steering wheel shake. The NHTSA currently lists 305 complaints for the 2018 Jeep Wrangler, with 220 devoted just to steering. We didn't look at every single complaint, but those we did see mentioned two problems – stiffness in the steering and the death

wobble. The majority of those complaints also specifically stated the vehicle was stock and under 10,000 miles.

Source: *The Detroit Free Press*, *NHTSA*

New Jeep Wrangler Owners Reporting "Death Wobble" On Highway

EXHIBIT 5

I-Team: 'Jeep Wobble' Has Federal Investigators Looking At Safety

By Christina Hager October 31, 2019 at 11:50 pm **Filed Under:** Christina Hager, I-Team, Jeep Wrangler

BOSTON (CBS) — James Squires has always loved Jeeps, until he hit a bump in the road, "and then the car just started shaking," he said.

He took WBZ's I-Team for a ride. "It kind of feels like with all the stress on the vehicle, that something could break," he said. As soon as the vehicle hit a small bump in the road at 50 miles per hour, it happened. "You can see my hands on the wheel," he said. "They're shaking bad." Oddly enough, the shaking stopped when the Jeep hit

another small bump, or if he hit the brakes. But it wasn't long before he hit yet another bump, causing the wheels to wobble again.

A spokesperson for Fiat Chrysler Automobiles, which owns Jeep, says there's never a loss of control. But when the I-Team looked through the National Highway Transportation Safety Administration's logs, there was a long history of similar complaints from Wrangler owners. In the last three years, the I-Team found 231 complaints with the term "wobble". While many drivers refer to it by its nickname, "death wobble", FCA is quick to point out there has never been a reported death. In a statement, FCA says it's "…not a safety issue. FCA US strongly objects to any insinuation otherwise."

James Squires demonstrated the "Jeep wobble" for WBZ-TV's Christina Hager (WBZ-TV)

Safety expert Sean Kane, who heads up Safety, Research, & Strategies, Inc., has studied the issue for decades. "Anytime you have a steering wheel violently shaking in a driver's hands, that's a safety problem," he said. "Certainly you can see where it could lead to loss of control in a crash."

FCA says the shaking is rooted in one of the very characteristics that Jeep owners love. It comes from the solid front axle, which allows wheels to safely navigate through boulders and rugged terrain. "The steering wheel system design associated with this condition affords the unique capability that is valued by our customers and the market," says the company's statement.


Authorities Warn Of TikTok Viral Video Challenge That's Causing Fires


First Responders Concerned As Natick Emergency Room Shuts Down


First Child Flu Death Of Season Reported In Massachusetts


Milan Lucic Posts Photo With Nathan Horton And David Krejci, Delighting Bruins Fans


Friends, Former Teammates Voice Concern For Delonte West

Jeep owners say the design leads to problems when they hit highway speeds. One complaint to NHTSA said it caused the driver "to swerve off the road…since then my daughter had been complaining about neck pains. Another driver wrote, "I feel the pain in back and neck."

It's now the subject of a federal safety investigation, with NHTSA looking into steering-related issues for a second time, along with a report of welding problems on frames. So far there hasn't been a recall, but Jeep is installing shock absorbers called dampers in its newer models free of charge.

Even though James Squires' Wrangler came with one already in place, he says the wobble still happened. His local dealer replaced it with a new, better damper, which some safety experts say is just a Band-Aid on a flaw that seems to make one of America's favorite rugged rides just a little too rugged.

Comments

EXHIBIT 6

AUTOMOTIVE

Jeep 'death wobble' leaves drivers shaken

By Dan Noyes

SAN FRANCISCO, Calif. (KGO) -- Imagine driving down the highway and having your car suddenly start to shake violently. It's been happening to Jeep owners across the country. The ABC7 News I-Team has been looking into it and has the results of its investigation.

The shaking is so violent and shocking that many Jeep owners call it the "death wobble." The I-Team knows of no one who has died, but we've obtained public records that link the problem to some serious accidents.

Videos from YouTube show how frequently it happens to some Jeep owners. It's become so common it has a nickname -- the "death wobble" -- because it is so jarring.

"The whole font end of the vehicle shakes back and forth," Jeep owner Christopher O'Halloran said.

"It literally feels like the front end of your vehicle is going to shake apart," Jeep owner Jeri McNeill said.

McNeill and O'Halloran are two Jeep owners from Oakland who say it's happening so often they've started documenting their wobble.

McNeill and O'Halloran aren't alone -- I've experienced the death wobble on my own 2007 Jeep Wrangler. It would hit right as I would get on the Golden Gate Bridge. There's the bump and when the shaking starts it's so intense it's hard to keep it in the narrow lane and you are worried about breaking with someone right behind you.

Just days ago, an ABC7 producer's 2006 Jeep began shaking after he hit a bump at about 50 mph on Highway 101 in San Francisco. The steering wheel vibrates violently. Beneath the car, the wheels wobble. It stops only when the driver slows down.

Chrysler owns Jeep and declined a request to go on camera, but Corporate Communications Chrysler Group LLC spokesperson Mike Michael Palese issued a statement saying, "...vehicles equipped with a solid axle can be susceptible to this condition."

When asked if she would have bought the Jeep if she had known about the problem, McNeill said, "No, absolutely not. I drive my son to school and this is my primary form of transportation for my son and I."

Jeep said in a statement, "most reported incidents in all manufacturer vehicles equipped with or without a solid axle are often linked to poorly installed or maintained after-market equipment."

But no aftermarket modifications were made to the Jeeps belonging me, the producer, McNeill or O'Halloran. They all went into the shop just as they left the dealer show room.

Jeep says the problem can be fixed.

"It is routinely corrected with a change of tires or installation of a simple steering dampener," Palese said in the statement.

"They were willing to change the steering dampener on the vehicle because they expected this problem to occur," McNeill said.

However, just days ago the I-Team drove with McNeill when the death wobble hit again.

O'Halloran replaced the dampener and was hit by the wobble again. The dealer told him he had bad tires.

"There is no reason that my vehicle should be unstable when it's got 20,000 miles of wear on tires rated for 50,000 miles," O'Halloran said.

McNeill and O'Halloran say Jeep needs to do something about the problem.

been reported, but at least five people report being injured.

In South Carolina, a driver complained, "The vehicle with several passengers crashed upside down in a 10 foot storm water waterway."

In Lakewood, Calif., another driver "...had to veer off the road across several lanes of freeway traffic, almost causing an accident." The driver sprained her wrist.

Jeep denies that these injuries were related to the death wobble, stating, "This is not a safety issue, and there are no injuries involving Chrysler Group vehicles related to this allegation. Indeed, the name you've given to this condition has no basis in fact. "

The NHTSA would not go on camera either to talk about the death wobble, but stated in an email it is "aware of the condition and is reviewing consumer complaints as they are received. The agency will continue to monitor the issue and will take action to address the problem as necessary."

The NHTSA says because the problem is intermittent and predictable, that the vehicle remains controllable, "and that the vibrations can be mitigated by applying the brakes."

"Because I can slow down my front end won't fall apart, but every time I do that I am risking causing a pile up on the highway," O'Halloran said.

"This is something that I purchased to drive at freeway speeds; there was no waiver or disclosure at the time associated with it that I should have to be concerned driving it at normal speed," McNeill said.

"I think it's extremely dangerous if it's not fixed," 4x4 And More owner Eric Forbes said.

Mechanics say the problem is real.

"I am actually surprised that there hasn't been more occurrences of people, you know, resulting in injury or fatality because of it getting rear ended or getting hit," Forbes said.

Forbes, a Scotts Valley mechanic, specializes in Jeeps.

"I cringe when I'm test driving a vehicle that I think might have a death wobble because I can feel it before it starts to do it," he said. "I've experienced it hundreds of times, even to this day, the heart, you know definitely pounds."

Forbes has seen the death wobble mostly on the Wrangler, but mechanics say they have seen it on other Jeep vehicles as well, including Grand Cherokee and Cherokee models. They all have one piece of metal in common -- it's called a track bar. It is a key part of the vehicle's steering mechanism.

Mechanics the I-Team spoke to, as well as off-road enthusiasts, suggest replacing the stock track bar that came with the vehicle. It can run anywhere from $200-$400, plus labor.

"The stock stuff is OK, it's just not great," Kevin Fell said.

"If you upgrade to aftermarket products, which are thicker, beefier, stiffer, that sort of thing, then often times that will eliminate the problem completely," Fell said.

McNeill and O'Halloran say the dealership never mentioned the problem might be the track bar. They say they are frustrated that they continue to experience the death wobble and mechanics say they are not alone.

"With how many occurrences I have seen, and how much of an issue it's become, I think that Jeep for should be liable for at least some reimbursement costs," Forbes said.

Chrysler says its "vehicles meet or exceed every applicable government safety standard and have excellent safety records."

But some Jeep owners might disagree with that, the I-Team wants to hear from you. Call the tip line at 1-888-40-I-TEAM.

Written and produced by Ken Miguel

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EXHIBIT 7

Dems press Chrysler to help its customers fix 'Jeep Death Wobble'

BY PETE KASPEROWICZ - 07/06/12 06:44 PM EDT

California House Democrats Anna Eshoo and Henry Waxman this week called on Chrysler to launch a campaign informing its customers that the Jeeps they own could suffer from a safety risk that they call the "Jeep Death Wobble."

The letter comes after Chrysler said just one death occurred in a Jeep that could have been caused by a vibrating suspension.

Eshoo and Waxman have already pressed the National Highway Traffic Safety Administration to investigate Jeep Wranglers, but the agency declined earlier this year. After a May meeting with Chrysler executives, the two members want the company to start a campaign on its own.

"As discussed in the May 21st meeting, we believe Chrysler should undertake an outreach campaign to its customers, such as a Customer Satisfaction Campaign, to notify Jeep owners of the risk of the 'wobble' condition, also described as a 'vibration' or 'shimmy,' and the possible methods for repairing and preventing the problem," they wrote in a letter released Thursday.

The members suggested that these alerts could provide information about how to fix the problem, and to "advise customers how to stop the wobble if they experience it while driving."

Their letter also said Chrysler should do more to train its workers to help customers with the problem, and share internal technical bulletins that could help customers understand the potential problem.

The Detroit News reported Friday that Chrysler said its Jeep Wranglers have good safety records, and said all cars can suffer from vibration when parts are installed incorrectly.

"In fact, most reported incidents — in all manufacturer vehicles equipped with or without a solid axle — are often linked to poorly installed or maintained after-market equipment, such as lifters, oversized tires, etc." Chrysler spokesman Michael Palese said, according to *The Detroit News*. "The name you've given to this condition has no basis in fact."

Despite the company's objection to the term "death wobble," Eshoo and Waxman repeatedly used that name to describe the problem in a Thursday statement. They said they first sought an investigation into the "Jeep Death Wobble" after consumer complaints about shaking in the front suspension of some Jeep Wranglers.

Chrysler, along with GM, were propped up by billions of taxpayer dollars in 2009 as part of the automaker bailout. The government gave nearly $25 billion to Chrysler and GM and their financing arms in 2009.

Just In...

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BLOG BRIEFING ROOM — 12M 21S AGO

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INTERNATIONAL — 24M 1S AGO

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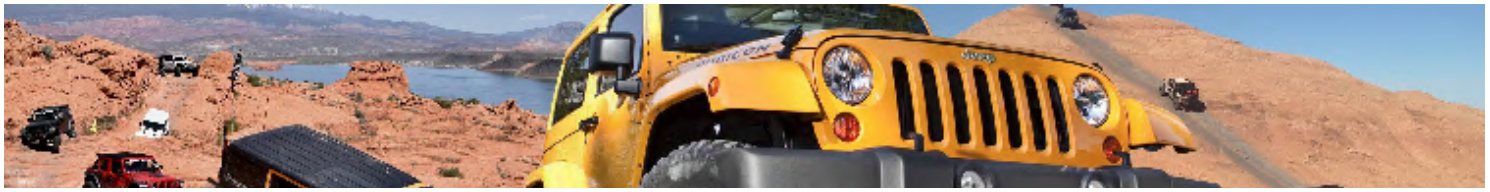
EXHIBIT 8



Steering damper replacement-Death wobble

1 - 9 of 9 Posts

jeepnyakin · Registered
Joined Aug 30, 2010 · 49 Posts

Discussion Starter · #1 · Apr 16, 2011

HELP!!!!!! Will a new steering damper permanently eliminate the Death Wobble? My dealer replaced my stearing damper per TSB #02-003-10 under warranty after multiple episodes (4) of the dreaded wobble. My 08 wrangler JKU has 27000 miles with all stock equip. My warranty will expire next February and I don't want this to be a repeat issue costing $$$$$$! I am considering trading it in for something that doesn't scare the crap out of my family when were doing over 55mph on the highway. :banghead:

Reply Save Share

MTH · Registered
Joined Oct 14, 2010 · 8,554 Posts

#2 · Apr 16, 2011

Nope, only mask it. Review the first few posts in the sticky at the top of the page. :thumb:

Mike

2010 JKU "Mountain" Edition

Reply Save Share

jeepjones · Premium Member

Joined Jul 12, 2010 · 1,893 Posts

#3 · Apr 16, 2011

^x2

Reply Save Share

jeepnyakin · Registered
Joined Aug 30, 2010 · 49 Posts

J

Discussion Starter · #4 · Apr 16, 2011

So if my dealer states that they inspected the track bar and related components and all other front end suspension components, checked front end alignment and all were ok, I will have the death wobble again in the future? WTF???!!! How long does a steering damper last? I realize that Wranglers are badged "Trail Rated." It would be nice if they were "Highway Rated" as well. Sorry, just venting!

Reply Save Share

daggo66 · The Bad Guy
Joined May 25, 2009 · 23,239 Posts

#5 · Apr 16, 2011

Less "venting" more reading. The sticky is the best explanation I've seen.

Tom

Reply Save Share

MTH · Registered
Joined Oct 14, 2010 · 8,554 Posts

#6 · Apr 16, 2011

^^Exactly. The steering damper has just about nothing to do with anything. Set aside 30 minutes and read the sticky--it's clear, concise as possible, has pictures, explains common misdiagnoses, etc etc. DW is not normal and something is wrong. The very fact that your dealer even thinks a steering damper will solve the problem indicates he doesn't understand it, so unless you do (again, read the sticky) you will be perpetually led astray.

(again, read the sticky) you will be perpetually led astray.

Mike

2010 JKU "Mountain" Edition

Reply Save Share

jeepnyakin · Registered
Joined Aug 30, 2010 · 49 Posts

Discussion Starter · #7 · Apr 21, 2011

I am Wrangler owner no more. Couldn't take the wobble and the dealer anymore. The health and safety of my family is more important than my jeep. Thanks for all of the insight on many topics. So long.

Reply Save Share

FlyinJeeps · Registered
Joined Aug 28, 2010 · 401 Posts

#8 · Apr 22, 2011

> jeepnyakin said:
> I am Wrangler owner no more. Couldn't take the wobble and the dealer anymore. The health and safety of my family is more important than my jeep. Thanks for all of the insight on many topics. So long.

Sorry to hear that, it's very dishearting news to know a dealer wouldn't go out of there way to fix something as serious as DW on a stock, warranty jeep. Chrylser should go after bad dealers, experiences like this drive away generations of customers.

If you could, take the time to write a short email to chrysler outlining your expierences, and why they lost a customer.

Reply Save Share

daggo66 · The Bad Guy
Joined May 25, 2009 · 23,239 Posts

#9 · Apr 22, 2011

Keep in mind there are 3 sides to every story. This one is suspicious to me.

Tom

Reply Save Share

1 - 9 of 9 Posts

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Recommended Reading

New Jeep Owner-Death Wobble issue.
General Jeep Discussion

9 2K M MusicBoyKameron · updated Sep 14, 2012

Can death wobble be fixable?
JK General Discussion Forum

9 5K A AGNP2013 · updated Dec 19, 2015

problems with the 07
JK General Discussion Forum

10 2K R rico_w · updated Nov 23, 2009

What percent experience death wobble?
JK General Discussion Forum

20 6K M Melor · updated Sep 21, 2011

Some newguy questions
JL Wrangler General Discussion

4 639 U Underrated · updated Jun 27, 2019

EXHIBIT 9

2018

JEEP WRANGLER

SUV 4WD Later Release

©EV2X IMAGES

11
RECALLS

INVESTIGATIONS 4

COMPLAINTS 1232

Not been rated

OVERALL SAFETY RATING

Safety Ratings.

NHTSA's 5-Star Safety Ratings help consumers compare vehicle safety when searching for a car. More stars mean safer cars.

FRONTAL CRASH | SIDE CRASH | ROLLOVER

Overall Front Star Rating

Combines Driver and Passenger star ratings into a single frontal rating. The frontal barrier test simulates a head-on collision between two similar vehicles, each moving at 35 mph.

Front Driver Side
(Not Rated)

Front Passenger Side
(Not Rated)

Recommended Safety Technologies

These features have been either verified by NHTSA or reported by the vehicle manufacturers as meeting NHTSA's performance criteria.

Learn about safety technology →

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Learn More

NO

Lane Departure Warning

Learn More

NO

Crash Imminent Braking

Learn More

NO

Dynamic Brake Support

Learn More

NO

All vehicle safety features

Recalls & Safety Issues.

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Learn about our recall process →

Have a safety problem?

Report a problem with your vehicle, tires, car seats or other equipment. We review every problem as we work to keep our roads safe.

Report a safety problem →

Find recalls **by VIN.**

Every vehicle has a unique VIN. Enter a VIN to learn if a specific vehicle needs to be repaired as part of a recall.

SEARCH BY VIN

Recall information from this VIN lookup tool is provided by the manufacturer conducting the recall. NHTSA does not record VIN information or results provided through this tool.

COMPLAINTS RECALLS INVESTIGATIONS MANUFACTURER COMMUNICATIONS

1232 Complaints
for 2018 JEEP WRANGLER

FILTER COMPLAINTS BY AFFECTED COMPONENTS

All (1232) AIR BAGS (4) BACK OVER PREVENTION (1) ELECTRICAL SYSTEM (75) ELECTRONIC STABILITY CONTROL (46)
ENGINE (31) EQUIPMENT (1) EXTERIOR LIGHTING (8) FUEL SYSTEM, GASOLINE (1) FUEL/PROPULSION SYSTEM (9)
LANE DEPARTURE (2) LATCHES/LOCKS/LINKAGES (1) POWER TRAIN (68) SEAT BELTS (7) SEATS (5) SERVICE BRAKES (15)
SERVICE BRAKES, HYDRAULIC (1) STEERING (905) STRUCTURE (72) SUSPENSION (272) UNKNOWN OR OTHER (130)
VEHICLE SPEED CONTROL (13) VISIBILITY (1) VISIBILITY/WIPER (25) WHEELS (51)

August 2, 2021
NHTSA ID NUMBER: 11427524
Components: UNKNOWN OR OTHER

July 23, 2021
NHTSA ID NUMBER: 11426167
Components: STEERING

July 18, 2021
NHTSA ID NUMBER: 11425331
Components: POWER TRAIN, ELECTRICAL SYSTEM, FUEL/PROPULSION SYSTEM

July 14, 2021
NHTSA ID NUMBER: 11424797
Components: STEERING, ELECTRICAL SYSTEM, ENGINE

July 7, 2021
NHTSA ID NUMBER: 11423804
Components: POWER TRAIN

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VOLKSWAGEN ATLAS
SUV AWD

★★★★★
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JEEP WRANGLER
SUV 4WD Later Release

Not been rated
OVERALL SAFETY RATING

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2019
RAM 2500
PU/RC 2WD

Not been rated
OVERALL SAFETY RATING

2019 RAM 2500

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National Highway Traffic Safety Administration

1200 New Jersey Avenue, SE
Washington, D.C. 20590 20590

1-888-327-4236
1-800-424-9153 (TTY)

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EXHIBIT 10

U.S. Department of Transportation
National Highway Traffic Safety Administration

NHTSA

1200 New Jersey Avenue SE.
Washington, DC 20590

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

MAR - 8 2019

Mr. Thomas McCarthy, Head
Safety Compliance and Product Analysis
Fiat Chrysler Automobiles US LLC
800 Chrysler Drive
CIMS 482-00-83
Auburn Hills, Michigan 48326

NEF0102dp
DP18-004

Dear Mr. McCarthy:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Defect Petition (DP18-004) to investigate allegations of defective welds applied to the chassis/frame assembly. The scope of the investigation is the model year (MY) 2018 through current production Jeep Wrangler (the JL platform vehicles) manufactured for sale in the United States and US territories by Fiat Chrysler Automobiles (FCA). This letter requests certain information as described below.

In September 2018, FCA filed NHTSA Safety Recall 18V-675 identifying a manufacturing-related weld defect of a suspension system bracket on the frame (chassis) of certain MY 2018 Wrangler JL vehicles; the defect resulted in a safety concern affecting the steering system. ODI has identified 524 reports that, in its view, may potentially be related to the concerns raised by the Petitioner, including reports of poor weld quality, steering system issues (92% of the 524 reports) and concerns for the vehicle's structural integrity (crashworthiness) during a crash event. Accordingly, the scope of this request seeks frame weld allegations as well as those of other potentially related systems, such as steering and suspension. An electronic copy of each of the above reports will be provided to your office.

Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject vehicles:** All MY 2018 through current production Jeep Wrangler JL platform vehicles manufactured for sale or lease in the United States, including, but not limited to, the District of Columbia, and current U.S. territories and possessions.

- **Alleged Defect:** Reports, including consumer complaints (e.g., CAIRs), lawsuits, those submitted by dealership personnel (technicians, sales staff, etc.) such as STAR cases and/or STAR on-line cases, and/or reports from FCA field staff (including third party and

contract staff such as EAA or Bosch Automotive Services) that involve any of the following allegations on the Subject Vehicles:

1. Concerns related to welds applied to the chassis/frame assembly such as:
   a. Non-penetrating (cold) weld(s);
   b. Over-penetrating (burn-thru) weld(s);
   c. Porous weld(s);
   d. Off-seam weld(s) (i.e., the weld was not centered on the materials to be joined);
   e. Incomplete welds (the weld was not of sufficient length to properly secure the materials to be joined);
   f. Any other manufactured weld defect that results in substandard structural integrity not included above; and
   g. Disconnection, separation or improper positioning (locating) of any chassis/frame -related component due to an actual or alleged weld-related issue or failure.
2. Concerns related to the suspension system such as disconnection, separation or improper positioning (locating) of any suspension system-related component due to an actual or alleged chassis weld-related issue or failure;
3. Concerns related to the steering system such as:
   a. Pulling/drifting from the driver's intended or steered direction while driving;
   b. Intermittent lock-up/stiction;
   c. Unresponsive and/or vague steering feel or response when operating in the near straight ahead (wheel centerline) position;
   d. Vibration, oscillation or wobbling while driving, including after encountering bumps, potholes or other irregular roadway surfaces; and
   e. Disconnection, separation or improper positioning (locating) of any steering system-related component due to an actual or alleged chassis weld-related issue or failure.
4. Concerns related to the safety performance and/or structural integrity of the chassis, suspension or steering systems occurring during or during the course of a crash event.

- **FCA:** Fiat Chrysler Automobiles, all of their past and present officers and employees, whether assigned to their principal offices or any of their field or other locations, including all of their divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of FCA (including all business units and persons previously referred to), who are or, in or after January 1, 2014, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

  a. Design, engineering, analysis, modification or production (e.g. quality control);
  b. Testing, assessment or evaluation;
  c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or

Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers.

- **Document:** "Document(s)" is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by FCA, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available, "document(s)" also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by FCA or not. If a document is not in the English language, provide both the original document and an English translation of the document.

- **Other Terms:** To the extent that they are used in these information requests, the terms "claim," "consumer complaint," "dealer field report," "field report," "fire," "fleet," "good will," "make," "model," "model year," "notice," "property damage," "property damage claim," "rollover," "type," "warranty," "warranty adjustment," and "warranty claim," whether used in singular or in plural form, have the same meaning as found in 49 CFR 579.4.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as FCA has previously provided a document to ODI, FCA may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the organization of this information request letter (including all individual requests and subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response. After FCA's response to each request, identify the source of the information and indicate the last date the information was gathered.

1. State, by model and model year, the number of subject vehicles FCA has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by FCA, state the following:

   a. Vehicle identification number (VIN);
   b. Model Year;
   c. Date of manufacture of the vehicle;
   d. Serial number of the frame/chassis;
   e. Date of manufacture of the frame/chassis;
   f. Date warranty coverage commenced;
   g. The sales codes the vehicle is equipped with; and
   h. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

   Provide the table in Microsoft Access 2010, or a compatible format, entitled "PRODUCTION DATA." Also include a decode description of each sales code.

2. State the number of each of the following, received by FCA, or of which FCA is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:

   a. Consumer complaints, including those from fleet operators;
   b. Field reports, including dealer field reports;
   c. Reports involving a crash, injury or fatality;
   d. Property damage claims;
   e. Third-party arbitration proceedings where FCA is or was a party to the arbitration; and
   f. Lawsuits, both pending and closed, in which FCA is or was a defendant or codefendant.

   For subparts "a" through "f" state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items "c" through "f" provide a summary description of the alleged problem and causal and contributing factors and FCA's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:

   a. FCA's file number or other identifier used;
   b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
   c. Vehicle owner or fleet name (and fleet contact person), street address, email address and telephone number;
   d. Vehicle's VIN;
   e. Vehicle's model year;
   f. Vehicle's mileage at time of incident;
   g. Incident date;
   h. Report or claim date;
   i. Applicable alleged defect item number(s) and sub category(ies) (e.g., 1d, 1e, and 3c for a vehicle with allegations of off-seam welds, incomplete welds and steering wobble);
   j. Whether a crash is alleged;
   k. Whether property damage is alleged;
   l. Number of alleged injuries, if any; and
   m. Number of alleged fatalities, if any.

   Provide this information in Microsoft Access 2010, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method FCA used for organizing the documents. Describe in detail the search methods and search criteria used by FCA to identify the items in response to Request No. 2.

5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by FCA to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

   Separately, for each such claim, state the following information:

   a. FCA's claim number;
   b. Vehicle owner or fleet name (and fleet contact person), street address, email address and telephone number;
   c. VIN;

d. Repair date;
e. Vehicle mileage at time of repair;
f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
g. Labor operation number(s);
h. Problem code(s);
i. Diagnostic trouble code(s) and their associated module;
j. Replacement part number(s) and description(s);
k. Concern stated by customer;
l. Cause as stated on the repair order;
m. Correction as stated on the repair order; and
n. Additional comments, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2010, or a compatible format, entitled "WARRANTY DATA."

6. Describe in detail the search methods and search criteria used by FCA to identify the claims in response to Request No. 5, including the labor operations, problem codes, diagnostic trouble codes, part numbers and any other pertinent parameters used.

Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions, diagnostic trouble codes and diagnostic trouble code descriptions, module names and brief description of module control domain applicable to the alleged defect in the subject vehicles. State whether the diagnostic trouble codes are automatically reported to the warranty database electronically or manually entered into the warranty database by a claims administrator.

State, by make and model year, the terms of the new vehicle warranty coverage offered by FCA on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that FCA offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that FCA has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that FCA is planning to issue within the next 120 days.

8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, FCA or in conjunction with the component supplier or other party. Include all actions related to the track bar bracket weld defect described in the NHTSA recall 18V-675 defect statement. For each such action, provide the following information:

a. Action title or identifier;
b. The actual or planned start date;
c. The actual or expected end date;
d. Brief summary of the subject and objective of the action;
e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

9. Describe all modifications or changes made by, or on behalf of, FCA or in conjunction with the component supplier or other party, in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:

a. The date or approximate date on which the modification or change was incorporated into vehicle production;
b. A detailed description of the modification or change;
c. The reason(s) for the modification or change;
d. The part number(s) (service and engineering) of the original component;
e. The part number(s) (service and engineering) of the modified component;
f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
g. When the modified component was made available as a service component; and
h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that FCA is aware of which may be incorporated into vehicle production within the next 120 days.

10. Furnish FCA's assessment of the alleged defect in the subject vehicle, including:

a. The causal or contributory factor(s);
b. The failure mechanism(s);
c. The failure mode(s);
d. The risk to motor vehicle safety that it poses; and
e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning;
f. The effectiveness of each action taken to address an alleged defect; and
g. The reports included with this inquiry.

Legal Authority for This Request

This letter is being sent to FCA pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49 and to request reports and the production of things. It constitutes a new request for information.

Civil Penalties

FCA's failure to respond promptly and fully to this letter could subject FCA to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) The Vehicle Safety Act, as amended, 49 U.S.C. § 30165(a)(3), provides for civil penalties of up to $21,000 per violation per day, with a maximum of $105,000,000 for a related series of daily violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. *See* 49 CFR 578.6 (as amended by Fixing America's Surface Transportation Act (the "FAST Act"), Pub. L. 114-94, § 24110(a)(2), 129 Stat. 1312 (Dec. 4, 2015)). This includes failing to respond completely, accurately, and in a timely manner to ODI information requests.

If FCA cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, FCA does not submit one or more requested documents or items of information in response to this information request, FCA must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, the name and position of the person(s) from, and the person(s) to whom it was sent, and the name and position of any other recipient (to include all carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

Confidential Business Information

All business confidential information must be submitted directly to the Office of Chief Counsel as described in the following paragraph and should not be sent to this office. In addition, do not submit any business confidential information in the body of the letter submitted to this office. Please refer to DP18-004 in FCA's response to this letter and in any confidentiality request submitted to the Office of Chief Counsel.

If FCA claims that any of the information or documents provided in response to this information request constitute confidential commercial material within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, FCA must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512, as amended, to the Office of Chief Counsel (NCC-100), National Highway Traffic Safety Administration, Room W41-227, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590. FCA is required to **submit two copies of the documents containing allegedly confidential information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.**

Please remember that the phrase "ENTIRE PAGE CONFIDENTIAL BUSINESS INFORMATION" or "CONTAINS CONFIDENTIAL BUSINESS INFORMATION" (as appropriate) must appear at the top of each page containing information claimed to be confidential, and the information must be clearly identified in accordance with 49 CFR 512.6. If you submit a request for confidentiality for all or part of your response to this IR, that is in an electronic format (e.g., CD-ROM), your request and associated submission must conform to the new requirements in NHTSA's Confidential Business Information Rule regarding submissions in electronic formats. *See* 49 CFR 512.6(c) (as amended by 72 Fed. Reg. 59434 (October 19, 2007)).

If you have any questions regarding submission of a request for confidential treatment, contact the Office of the Chief Counsel, at 202-366-5263.

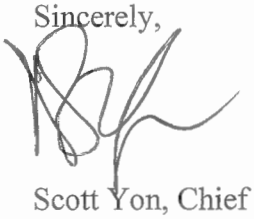
Due Date

FCA's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by **April 26, 2019.** FCA's response must include all non-confidential attachments and a redacted version of all documents that contain confidential information. If FCA finds that it is unable to provide all of the information requested within the time allotted, FCA must request an extension from me at (202) 366-0139 no later than five business days before the response due date. If FCA is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information FCA then has available, even if an extension has been granted.

Please send email notification to Daniel Pinero-Espinoza at daniel.pinero@dot.gov and to ODI_IRresponse@dot.gov when FCA sends its response to this office and indicate whether there is confidential information as part of FCA's response.

If you have any technical questions concerning this matter, please call Daniel Pinero-Espinoza of my staff at (202) 366-5677.

Sincerely,



3/8/19

Scott Yon, Chief
Vehicle Defects Division B
Office of Defects Investigation

The VOQ reports cited above (some of which may be duplicative by VIN or complainant) can be viewed at NHTSA.gov under the following ODI numbers:

11076098, 11083434, 11088501, 11092815, 11093172, 11093797, 11093915, 11094164,
11096401, 11096641, 11097747, 11099250, 11099966, 11100553, 11101051, 11101409,
11101791, 11102860, 11104081, 11104236, 11104306, 11104307, 11104460, 11104788,
11104830, 11104934, 11104958, 11104989, 11105125, 11105388, 11109579, 11109767,
11109814, 11109826, 11109854, 11109898, 11109903, 11109950, 11109951, 11109953,
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11114130, 11114563, 11115137, 11115639, 11115658, 11115850, 11118116, 11118123,
11118214, 11118232, 11118238, 11118277, 11118312, 11118376, 11118403, 11118430,
11118559, 11118598, 11118663, 11118679, 11118692, 11118742, 11118806, 11118885,
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11119633, 11119650, 11119676, 11119707, 11119865, 11120232, 11120812, 11120833,
11120835, 11120880, 11120971, 11121906, 11122227, 11122260, 11122395, 11123581,
11123604, 11123990, 11124139, 11124307, 11124312, 11124444, 11128080, 11128334,
11128531, 11128566, 11128639, 11128665, 11128812, 11128828, 11128861, 11129161,
11129193, 11129667, 11129738, 11129836, 11130008, 11130168, 11130295, 11130768,
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11153280, 11153292, 11153293, 11153300, 11153301, 11153311, 11153405, 11153451,
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11154398, 11154409, 11154518, 11154519, 11154554, 11154645, 11154661, 11154685,
11154695, 11154709, 11154791, 11154823, 11154879, 11154899, 11155179, 11155295,
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11156970, 11157067, 11157174, 11160565, 11160625, 11160655, 11160747, 11160760, 11160784, 11160827, 11160857, 11160937, 11160942, 11160976, 11161035, 11161201, 11161223, 11161243, 11161276, 11161369, 11161429, 11161694, 11161741, 11161842, 11161866, 11161867, 11161897, 11161900, 11161916, 11161933, 11162117, 11162272, 11162584, 11163060, 11163103, 11163106, 11163145, 11163204, 11163245, 11163764, 11163892, 11163916, 11163920, 11163925, 11163982, 11164010, 11164062, 11164105, 11164106, 11164179, 11164213, 11164220, 11164232, 11164329, 11164381, 11164392, 11164394, 11164411, 11164431, 11164549, 11164575, 11164611, 11164769, 11164912, 11164917, 11165033, 11165140, 11165191, 11165360, 11165462, 11165620, 11165642, 11165668, 11165821, 11165977, 11166024, 11166110, 11166345, 11166346, 11166416, 11166422, 11166573, 11166621, 11166654, 11166764, 11169832, 11169849, 11169881, 11169971, 11169990, 11170088, 11170209, 11170375, 11170404, 11170417, 11170446, 11170558, 11170636, 11170733, 11170740, 11171108, 11171136, 11171138, 11171212, 11171355, 11171412, 11171490, 11171580, 11171581, 11171636, 11171669, 11171707, 11171786, 11172027, 11172175, 11172232, 11172237, 11172260, 11172269, 11172335, 11172372, 11172451, 11172672, 11172714, 11172715, 11172980, 11173174, 11173667, 11173745, 11173940, 11174244, 11174306, 11174458, 11174468, 11174735, 11174782, 11174964, 11175032, 11175035, 11175850, 11175855, 11175861, 11175935, 11176028, 11176042, 11176053, 11176207, 11176332, 11176431, 11176486, 11176584, 11176588, 11176598, 11176657, 11179880, 11179957, 11180383, 11180502, 11180522, 11180942, 11181056, 11181099, 11181308, 11181482, 11181524, 11181595, 11181634, 11181717, 11181746, 11181749, 11181761, 11181781, 11181922, 11181939, 11181941, 11182079, 11182161, 11182477, 11182613, 11182654, 11182670, 11182701, 11182725, 11182760, 11182792, 11182828, 11183736, 11183772.

EXHIBIT 11

U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION
NHTSA

Investigation: PE 19-012
Date Opened: 09/16/2019
Investigator: Daniel Pinero **Reviewer:** Scott Yon
Approver: Stephen Ridella
Subject: Weld Quality Deficiencies

MANUFACTURER & PRODUCT INFORMATION

Manufacturer:	Chrysler (FCA US LLC)
Products:	2018-2019 Jeep Wrangler
Population:	270,000 (Estimated)
Problem Description:	Various frame weld quality concerns, such as excessive slag, lack of and/or over penetration, overweld or weld drip, weld splash and porous welds, and steering related issues that may be a result of the aforementioned weld quality concerns.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	46	131	152**
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	608	3,255	3,566**

***Description of Other:** Steering related complaints, including steering shimmy/wobble, intermittent lock-up, and looseness/wandering

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: Open this Preliminary Evaluation.

Summary:

In a letter received on October 24, 2018, a citizen petitioned the National Highway Traffic Safety Administration (NHTSA) to initiate a safety defect investigation into frame weld deficiencies on model year (MY) 2018 'JL' Jeep Wrangler vehicles. The petitioner described a broad list of frame weld deficiencies, including porous welds, excessive slag, lack of weld penetration, over penetration of welds, overweld or weld drip, and weld splash. The weld defects are allegedly located at a variety of locations on the frame assembly.

On November 16, 2018, the Office of Defects Investigation (ODI) opened a Defect Petition (DP18-004) to evaluate whether to grant or deny the petition. On March 8, 2019, ODI sent an Information Request letter to Fiat Chrysler Automobiles (FCA) requesting information on frame weld related issues on all MY 2018-2019 Jeep Wrangler 'JL' vehicles. Due to a previous steering related recall that was caused by a misaligned weld on the front track bar (NHTSA Recall No. 18V-675), ODI opted to include a request for additional information concerning reports of steering shimmy or wobble, loose steering, and steering lockup in the March request letter. ODI has performed a preliminary analysis on the information obtained from FCA. Based on ODI's review of the applicable materials, NHTSA has decided to grant the petition.

While reviewing the applicable materials obtained from the manufacturer, ODI identified various reports and references to frame welded component detachments that were outside of the scope of NHTSA Recall No. 18V-675. Additionally, the information that FCA provided did not adequately address whether frame weld quality deficiencies compromise the structural integrity of vehicles, and therefore may pose an unreasonable risk to motor vehicle safety.

Finally, ODI needs to further evaluate the alleged steering-related defects reported through MY 2019 and the alleged defects' relation to weld quality.

ODI has granted the petition and is opening this investigation to further assess the scope, frequency, and potential safety-related consequences of alleged weld quality deficiencies and steering related concerns on the MY 2018-2019 'JL' Jeep Wrangler vehicles.

The ODI reports cited above can be viewed on NHTSA.gov under the following reference numbers: 11234967, 11222390, 11219370, 11217080, 1204905, 11179954, 11171786, 11161243, 11155523, 11153044, 11143617, 11142722, 11142426, 11141336, 11141035, 11140637, 11140344, 11140262, 11140085, 11140057, 11139880, 11139866, 11139557, 11139467, 11139436, 11138974, 11138758, 11138757, 11132030, 11129738, 11129667, 11124312, 11120232, 11119676, 11119650, 11119454, 11119450, 11115658, 11115137, 11113029, 11112515, 11110583, 11109903, 11093172, 11088501, 11076098

EXHIBIT 12

Detroit Free Press

CHRYSLER

Fiat Chrysler Automobiles says it has fix for Jeep 'Death Wobble'

Eric D. Lawrence Detroit Free Press

Published 6:00 a.m. ET Aug. 10, 2019 | **Updated 10:55 a.m. ET Aug. 10, 2019**

A key Fiat Chrysler Automobiles executive says the company has a solution for what's known as the Jeep "Death Wobble."

The company will install a new steering damper, a part also known as a stabilizer, in affected Jeep Wranglers in an effort to address the steering wheel vibration reported by some owners after their vehicles hit a bump at highway speeds, an experience many describe as frightening. Mailings announcing the campaign were to be sent to customers beginning Friday.

The issue, which FCA says is not a safety problem but which many owners insist must be, is the subject of a lawsuit in federal court in Detroit. A Free Press report in November on the "Death Wobble," prompted a flood of emails from Jeep customers grappling with the issue.

"Death Wobble" is a dramatic-sounding term, but FCA said it is not aware of fatalities or injuries caused by the phenomenon.

The lawsuit, however, raises questions about the use of a steering damper, essentially a type of shock absorber, as a way to address the issue, calling it a "Band-Aid fix." The lawsuit, filed in June, said the wobble will return and "can only be remedied by substantial revisions and repair to the suspension."

A new steering damper, however, is the solution FCA is proposing.

More: Jeep Wrangler drivers report 'death wobble' on highways

More: Top Ford manager goes to woman's home to inspect Fiesta, fix her troubled transmission

Like a tuning fork

Mark Chernoby, chief technical compliance officer for the Italian-American automaker, said the vibration is not unique to Wranglers and can happen with any solid front axle vehicle. The issue is resonance, he said, describing it as equivalent to hitting a tuning fork.

"if you bang it with that frequency it'll just sit there and keep going forever. It won't slow down, it won't dissipate, and that's essentially what we're talking about here with the vibration in the new Wrangler," Chernoby said. "When you hit a bump in the road, if everything is just right, this suspension can set off that resonance and what we started seeing is as soon as it got cold this past fall, early winter, we started seeing complaints."

The issue, Chernoby said, had to do with air getting into the damper on the front suspension of the Wrangler during cold temperatures, when oil becomes "thick like molasses" and air bubbles take a long time to get out of the oil.

"We were losing the damping on some of these parts," he said, noting that the part is supposed to quickly damp out the resonance when it develops.

Are the parts defective?

“No, I would not blame it on manufacturing," Chernoby said. "It was a combination of design and manufacturing process."

The new damper is produced by the same supplier as the old damper, and Chernoby declined to name the supplier.

“We steer away ... from any kind of blame game or even open discussion on suppliers even on safety recalls,” Chernoby said.

Plaintiffs' perception

The federal class-action lawsuit, which lists a New Jersey woman as the lead plaintiff and targets 2015-18 Wranglers, perhaps not surprisingly offered a different perspective:

"Jeep vehicles contain a defectively designed and/or manufactured front axle and damping system that causes the steering wheel to shake violently when operating at highway speeds after encountering common and expected road variations."

FCA is seeking dismissal of the lawsuit.

Chernoby said the complaints about the "Death Wobble" — FCA officials prefer a term like vibration — represented about 2% of the approximately 370,000 new Wranglers built as of June. He did not dismiss the concerns, saying “any steering type vibration will make people concerned for sure.”

He told the Free Press that the company has videos of the phenomenon showing a steering wheel vibrating 5 degrees back and forth.

Chernoby said there are two ways to stop the vibration once it starts: Slow down or speed up.

The campaign the company is launching is called a customer satisfaction note — a company spokesman insisted the campaign is not a safety recall. Customers should receive a letter in the mail telling them they can go to a dealership and get a new damper free of charge. Chernoby said Wranglers not yet sold have already been receiving the new part.

In an email after the Chernoby interview, FCA issued a statement about the vibration:

"This rarely occurring phenomenon is not peculiar to any one vehicle and is not a safety issue. FCA US strongly objects to any insinuation otherwise. There is no loss of steering or braking — two key functions that help ensure vehicle safety. The steering-system design associated with this condition affords unique capability that is greatly valued by our customers, and the market."

Scores of Wrangler owners reached out to the Free Press after the paper reported on the issue last year, with many saying their Wrangler had been in the shop multiple times without the issue being resolved. Many described the experience as disturbing, and one even offered that "there are bull riders down here in Arizona wearing rodeo champion buckles that have not been shaken that badly."

Rich Person, a Massachusetts man who satisfied a dream last year when he bought a Jeep Wrangler Unlimited Sport with a 3.6-liter V6 engine, no longer has his Jeep. He experienced the "wobble" multiple times but found that attempts to fix the issue with a steering damper did not work.

"Unfortunately (or fortunately), FCA ended up buying back our Jeep after the fourth time that the steering damper broke and we'd had enough. By the time we turned it in, the part was so gone that if I hit any kind of bump on the highway I ended up having to put my hazard lights on and slow down to 40 mph or less to get the shaking to stop," Person told the Free Press. "We did not get another Jeep because I had no confidence they had a fix for the problem and went with a Durango instead. We've had it for about a month and so far so good with this."

A National Highway Traffic Safety Administration spokesperson had previously indicated the agency was looking into complaints about the issue, and NHTSA said Friday it would update the media when it completes its review.

Contact Eric D. Lawrence: elawrence@freepress.com or 313-223-4272. Follow him on Twitter: @_ericdlawrence.

EXHIBIT 13

FIAT CHRYSLER AUTOMOBILES

Revision 6 November 2019

Dealer Service Instructions for:

Customer Satisfaction Notification V41 Steering Damper

NOTE: NEW information in step 12

Remedy Available

2018 - 2019 (JL) Jeep® Wrangler vehicles

NOTE: Some vehicles above may have been identified as not involved in this campaign and therefore have been excluded from this campaign.

IMPORTANT: Some of the involved vehicles may be in dealer new vehicle inventory. Dealers should also consider this requirement to apply to used vehicle inventory and should perform this campaign on vehicles in for service. Involved vehicles can be determined by using the VIP inquiry process.

Subject

The front suspension steering damper on about 192,000 of the above vehicles may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

Repair

Replace the front suspension steering damper on all of the above involved vehicles.

Parts Information

Parts will be manually allocated to dealers based on VIN assignment. This process will continue to during the next several months.

Part Number	Description
CCUKV411AA	**Left Hand Drive (LHD) Part Package**

Each package contains the following components:

Quantity	Description
1	Steering Damper, Left Hand Drive

Part Number	Description
CCUKV412AA	**Right Hand Drive (RHD) Part Package**

Each package contains the following components:

Quantity	Description
1	Steering Damper, Right Hand Drive

Part Number	Description
CCUKV413AA	**Fastener Part Package (LHD and RHD)**

Each package contains the following components:

Quantity	Description
1	Bolt, Axle Mount Steering Damper
1	Nut and Washer, Axle Mount Steering Damper
1	Bolt, Bracket Steering Damper
1	Nut, Bracket Steering Damper

Parts Return

No parts return required for this campaign.

Special Tools

No special tools are required to perform this service procedure.

Service Procedure

1. Place the front wheels in a straight ahead position.
2. Raise and support the vehicle.
3. Remove the steering damper nut and bolt from the tie rod bracket (Figure 1).

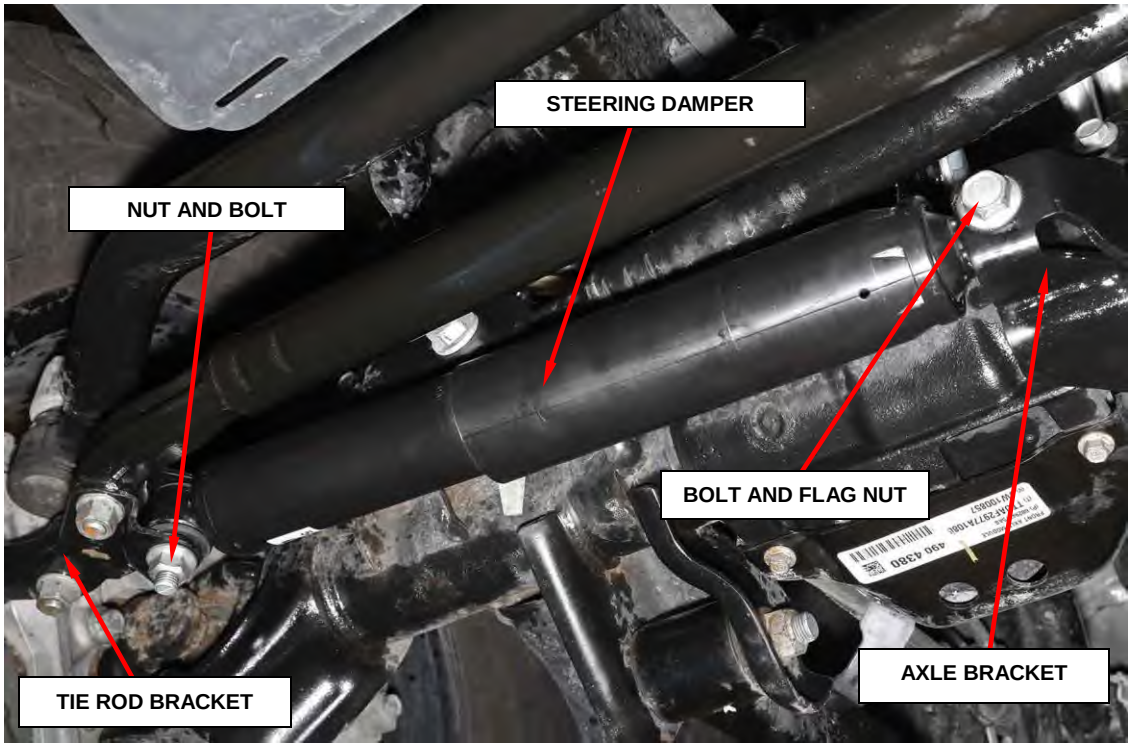

Figure 1 – Steering Damper

4. Remove the steering damper bolt and flag nut from the axle bracket.

   NOTE: The damper flag nuts and bolts must be replaced.

5. Remove the steering damper from the vehicle and **discard.**

Service Procedure [Continued]

6. Align the **NEW** steering damper to the mounting bolt holes on the axle bracket and the tie rod bracket.

   NOTE: Location of side Intake Bulge on the base cup must be positioned in the downward position and the arrow on the damper label must point to the front of the vehicle (Figure 2).

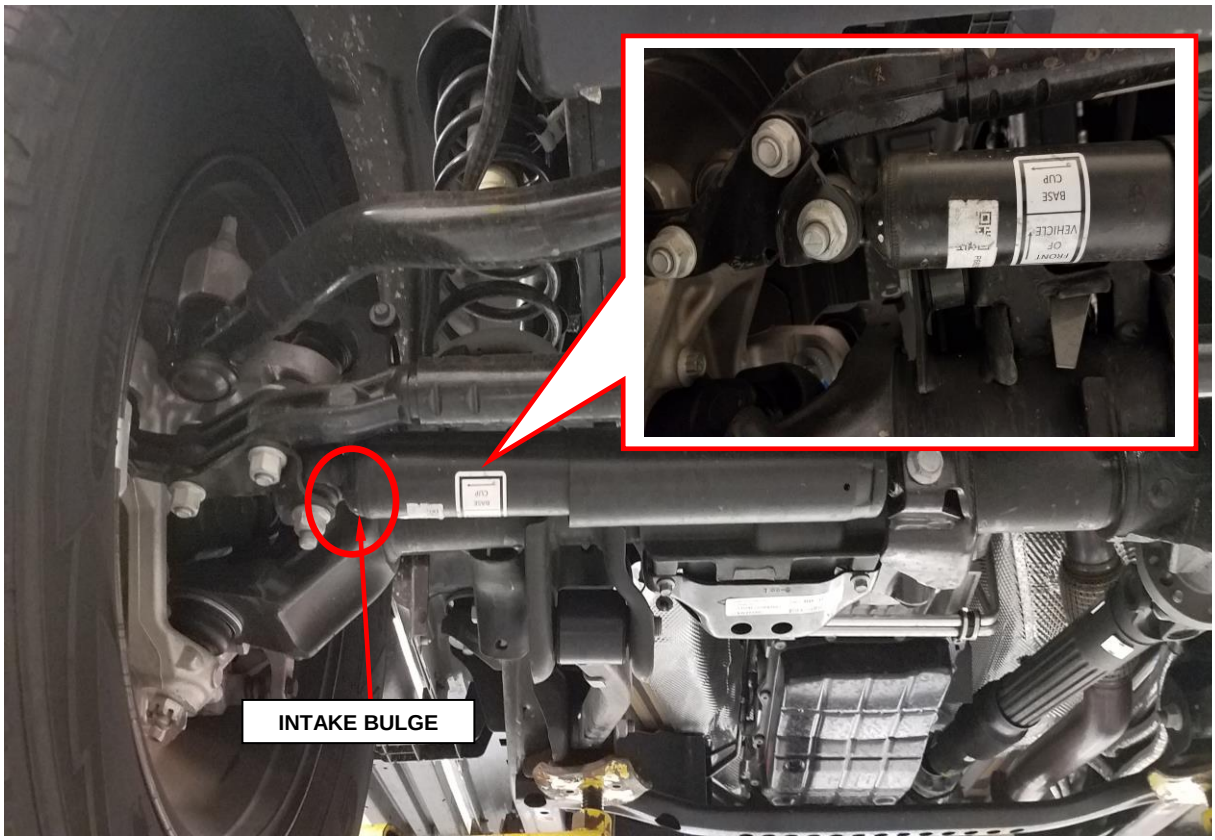

Figure 2 – Intake Bulge Location

7. Install the **NEW** steering damper bolt through the axle bracket and start it a few threads into the **NEW** flag nut (Figure 1).

8. Install the **NEW** steering damper bolt through the tie rod bracket and start it a few threads into the **NEW** nut (Figure 3).

   NOTE: Steering Damper Bolt has a square guide that must align with the tie rod bracket square hole and be fully seated (Figure 3).

Service Procedure [Continued]

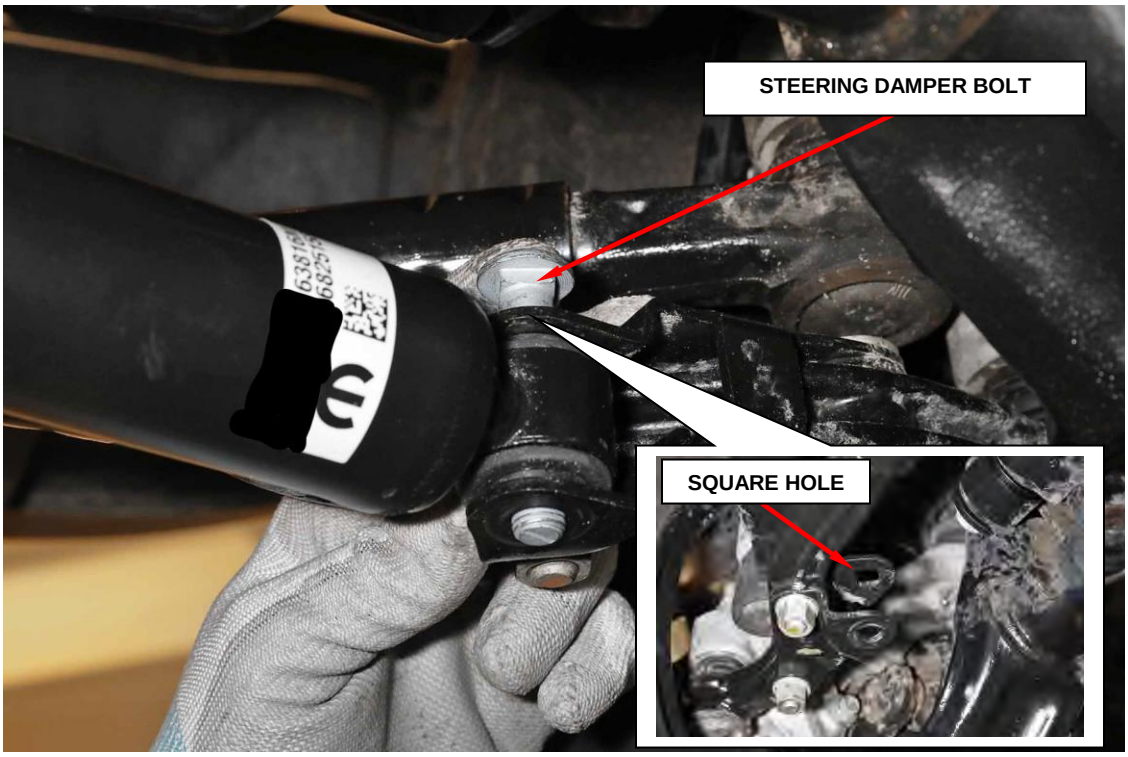

Figure 3 – Tie Rod Bracket

9. Tighten the **NEW** steering damper bolt on the axle bracket to 80 N·m (59 ft. lbs.) (Figure 1).

10. Tighten the **NEW** steering damper nut on the tie rod bracket to 80 N·m (59 ft. lbs.) (Figure 3).

11. After the steering damper is assembled in the correct orientation (base cup bulge at 6 o'clock location) lower the vehicle on the ground (Figure 2).

12. With the vehicle on the ground, it is required to turn the steering wheel for five **continuous full** lock to lock turns ("Full Left – Full Right – Center" OR "Full Right – Full Left – Center" counted as 1) at a **minimum speed of** 1 rotation/sec **without any stops** to prime the steering damper and purge out the air.

    NOTE: It is important to prime the new damper by rotating the steering wheel Five **continuous** full lock to lock turns **as fast as possible without any stops** to purge any trapped air out.

13. Return the vehicle to the customer.

Completion Reporting and Reimbursement

Claims for vehicles that have been serviced must be submitted on the DealerCONNECT Claim Entry Screen located on the Service tab. Claims paid will be used by FCA to record Customer Satisfaction Notification service completions and provide dealer payments.

Use the following labor operation number and time allowance:

	Labor Operation Number	**Time Allowance**
Replace Steering Damper	02-V4-11-82	0.3 hours

NOTE**:** See the Warranty Administration Manual, Recall Claim Processing Section, for complete claim processing instructions.

Dealer Notification

To view this notification on DealerCONNECT, select "Global Recall System" on the Service tab, then click on the description of this notification.

Owner Notification and Service Scheduling

All involved vehicle owners known to FCA are being notified of the service requirement by mail. They are requested to schedule appointments for this service with their dealers. A generic copy of the owner letter is attached.

Vehicle Lists, Global Recall System, VIP and Dealer Follow Up

All involved vehicles have been entered into the DealerCONNECT Global Recall System (GRS) and Vehicle Information Plus (VIP) for dealer inquiry as needed.

GRS provides involved dealers with an updated VIN list of their incomplete vehicles. The owner's name, address and phone number are listed if known. Completed vehicles are removed from GRS within several days of repair claim submission.

To use this system, click on the **"Service"** tab and then click on **"Global Recall System."** Your dealer's VIN list for each recall displayed can be sorted by: those vehicles that were unsold at campaign launch, those with a phone number, city, zip code, or VIN sequence.

Dealers should perform this repair on all unsold vehicles *before* retail delivery. Dealers should also use the VIN list to follow up with all owners to schedule appointments for this repair.

VIN lists may contain confidential, restricted owner name and address information that was obtained from the Department of Motor Vehicles of various states. Use of this information is permitted for this notification only and is strictly prohibited from all other use.

Additional Information

If you have any questions or need assistance in completing this action, please contact your Service and Parts District Manager.

Customer Service / Field Operations
FCA US LLC

This notice applies to your vehicle,

[Model Year and Model]
VIN XXXXXXXXXXXXXXXXX

V41

LOGO

VEHICLE PICTURE

YOUR SCHEDULING OPTIONS

1. **RECOMMENDED OPTION**
   Call your authorized Chrysler / Dodge / Jeep® / RAM Dealership.

2. **Call the FCA Recall Assistance Center at 1-800-853-1403. An agent can confirm part availability and help schedule an appointment.**

3. **Visit recalls.mopar.com, scan the QR code below, or download the Mopar Owner's Companion App.**

QR Code

Get access to recall notifications, locate your nearest dealer, and more through this website or Mopar Owner's Companion App. You will be asked to provide your Vehicle Identification Number (VIN) to protect and verify your identity.

DEALERSHIP INSTRUCTIONS
Please reference CSN V41.

CUSTOMER SATISFACTION NOTIFICATION

Steering Damper

Dear [Name],

At FCA US LLC, we recognize that the success of our business depends on the satisfaction of our customers. We are constantly monitoring the quality of our products and looking for opportunities to improve our vehicles even after they are sold. Because your long-term satisfaction is important to us, we are contacting you on important improvements we would like to make to your vehicle [1]. This will be done at no charge to you.

We are recommending the following improvements be performed on certain [2018 - 2019 Model Year Jeep® Wrangler] vehicles.

WHY DOES MY VEHICLE NEED REPAIRS?

The front suspension steering damper on your vehicle may not effectively damp oscillation of the steering system, resulting in a sustained shake or shimmy in the steering wheel. This can be more noticeable when driving at speeds exceeding 55 Miles Per Hour (MPH) 88 Kilometers Per hour (KPH) after contacting a bumpy road surface and in temperatures below 40° Fahrenheit (5° Celsius).

HOW DO I RESOLVE THIS CUSTOMER SATISFACTION NOTIFICATION

FCA will repair your vehicle free of charge (parts and labor). To do this, your dealer will replace the steering damper. The estimated repair time is half an hour. In addition, your dealer will require your vehicle for proper check-in, preparation, and check-out during your visit, which requires more time. Your time is important to us, so we recommend that you schedule a service appointment to minimize your inconvenience. Please bring this letter with you to your dealership.

TO SCHEDULE YOUR FREE REPAIR,
CALL YOUR CHRYSLER, DODGE, JEEP OR RAM DEALER TODAY

WHAT IF I ALREADY PAID TO HAVE THIS REPAIR COMPLETED?

If you have already experienced this specific condition and have paid to have it repaired, you may visit **www.fcarecallreimbursement.com** to submit your reimbursement request online. [2] Once we receive and verify the required documents, reimbursement will be sent to you within 60 days. If you have had previous repairs performed and/or already received reimbursement, you may still need to have the repair performed.

We apologize for any inconvenience, but are sincerely concerned about your satisfaction. Thank you for your attention to this important matter.

Customer Assistance/Field Operations
FCA US LLC

FCA
FIAT CHRYSLER AUTOMOBILES

Mr. Mrs. Customer
1234 Main Street
Hometown, MI 48371

[1] If you no longer own this vehicle, please help us update our records. Call the FCA Recall Assistance Center at 1-800-853-1403 to update your information.

[2] You can also mail in your original receipts and proof of payment to the following address for reimbursement consideration: FCA Customer Assistance, P.O. Box 21-8004, Auburn Hills, MI 48321-8007, Attention: Recall Reimbursement.

EXHIBIT 14

Jeep®

2018 All-New Wrangler

OWNER'S MANUAL

VEHICLES SOLD IN CANADA

With respect to any Vehicles Sold in Canada, the name FCA US LLC shall be deemed to be deleted and the name FCA Canada Inc. used in substitution therefore.

DRIVING AND ALCOHOL

Drunken driving is one of the most frequent causes of accidents.

Your driving ability can be seriously impaired with blood alcohol levels far below the legal minimum. If you are drinking, don't drive. Ride with a designated non-drinking driver, call a cab, a friend, or use public transportation.

WARNING!

Driving after drinking can lead to an accident. Your perceptions are less sharp, your reflexes are slower, and your judgment is impaired when you have been drinking. Never drink and then drive.

This manual illustrates and describes the operation of features and equipment that are either standard or optional on this vehicle. This manual may also include a description of features and equipment that are no longer available or were not ordered on this vehicle. Please disregard any features and equipment described in this manual that are not on this vehicle.

FCA US LLC reserves the right to make changes in design and specifications, and/or make additions to or improvements to its products without imposing any obligation upon itself to install them on products previously manufactured.

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INTRODUCTION

Dear Customer, congratulations on selecting your new vehicle. Be assured that it represents precision workmanship, distinctive styling, and high quality.

This is a specialized utility vehicle. It can go places and perform tasks that conventional passenger vehicles are not intended. It handles and maneuvers differently from many passenger vehicles both on-road and off-road, so take time to become familiar with your vehicle. If equipped, the two-wheel drive version of this vehicle was designed for on-road use only. It is not intended for off-road driving or use in other severe conditions suited for a four-wheel drive vehicle. Before you start to drive this vehicle, read the Owner's Manual. Be sure you are familiar with all vehicle controls, particularly those used for braking, steering, transmission, and transfer case shifting. Learn how your vehicle handles on different road surfaces. Your driving skills will improve with experience. When driving off-road, or working the vehicle, don't overload the vehicle or expect the vehicle to overcome the natural laws of physics. Always observe federal, state, provincial and local laws wherever you drive. As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of control or a collision. Refer to the "Driving Tips" section for further information.

This Owner's Manual has been prepared with the assistance of service and engineering specialists to acquaint you with the operation and maintenance of your vehicle. It is supplemented by Warranty Information, and customer oriented documents. In the attached Warranty Booklet you will find a description of the services that FCA offers to its customers, the Warranty Certificate and the details of the terms and conditions for maintaining its validity. Please take the time to read all of these publications carefully before driving your vehicle for the first time. Following the instructions, recommendations, tips, and important warnings in this manual will help assure safe and enjoyable operation of your vehicle.

This Owner's Manual describes all versions of this vehicle. Options and equipment dedicated to specific markets or versions are not expressly indicated in the text. Therefore, you should only consider the information which is related to the trim level, engine, and version that you have purchased. Any content introduced throughout the Owner's Information, that may or may not be applicable to your vehicle, will be identified with the wording "If Equipped". All data contained in this publication are intended to help you use your vehicle in the best possible way. FCA aims at a constant improvement of the vehicles produced. For this reason, it reserves the right to make changes to the model

described for technical and/or commercial reasons. For further information, contact an authorized dealer.

If applicable, refer to the owners manual supplement for related information.

NOTE: After reviewing the Owner's Information, it should be stored in the vehicle for convenient referencing, and remain with the vehicle when sold.

When it comes to service, remember that your authorized dealer knows your vehicle best, has factory-trained technicians and genuine MOPAR® parts, and cares about your satisfaction.

ROLLOVER WARNING

Utility vehicles have a significantly higher rollover rate than other types of vehicles. This vehicle has a higher ground clearance and a higher center of gravity than many passenger vehicles. It is capable of performing better in a wide variety of off-road applications. Driven in an unsafe manner, all vehicles can go out of control. Because of the higher center of gravity, if this vehicle is out of control it may roll over while some other vehicles may not.

Do not attempt sharp turns, abrupt maneuvers, or other unsafe driving actions that can cause loss of vehicle control. Failure to operate this vehicle safely may result in a collision, rollover of the vehicle, and severe or fatal injury. Drive carefully.

Rollover Warning Label

Failure to use the driver and passenger seat belts provided is a major cause of severe or fatal injury. In fact, the U.S. government notes that the universal use of existing seat belts could cut the highway death toll by 10,000 or more each year and could reduce disabling injuries by two million annually. In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt. Always buckle up.

HOW TO USE THIS MANUAL

Essential Information

Consult the Table of Contents to determine which section contains the information you desire.

Since the specification of your vehicle depends on the items of equipment ordered, certain descriptions and illustrations may differ from your vehicle's equipment.

The detailed index at the back of this Owner's Manual contains a complete listing of all subjects.

Symbols

Consult the following table for a description of the symbols that may be used on your vehicle or throughout this Owner's Manual:

010533317

WARNINGS AND CAUTIONS

This Owner's Manual contains **WARNINGS** against operating procedures that could result in a collision, bodily injury and/or death. It also contains **CAUTIONS** against procedures that could result in damage to your vehicle. If you do not read this entire Owner's Manual, you may miss important information. Observe all Warnings and Cautions.

VEHICLE MODIFICATIONS/ALTERATIONS

WARNING!

Any modifications or alterations to this vehicle could seriously affect its roadworthiness and safety and may lead to a collision resulting in serious injury or death.

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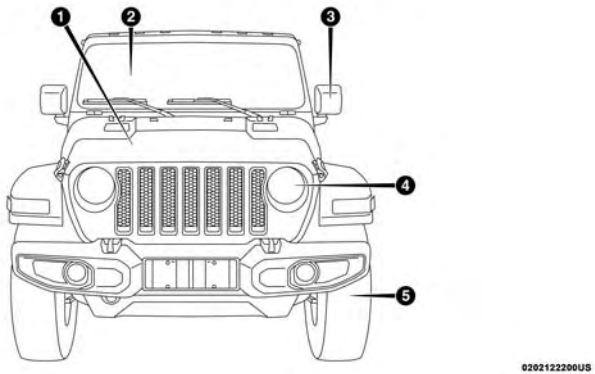
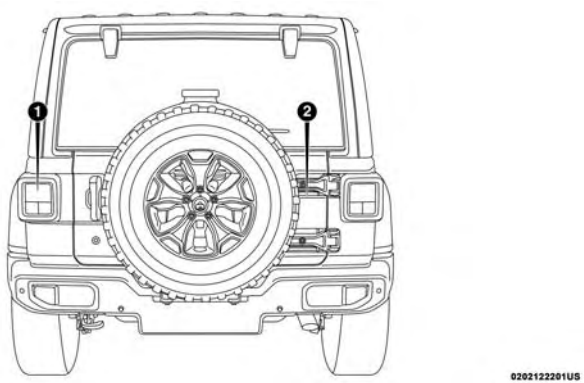


Front View

1 — Hood/Engine Compartment
2 — Windshield
3 — Exterior Mirrors
4 — Headlights
5 — Wheels

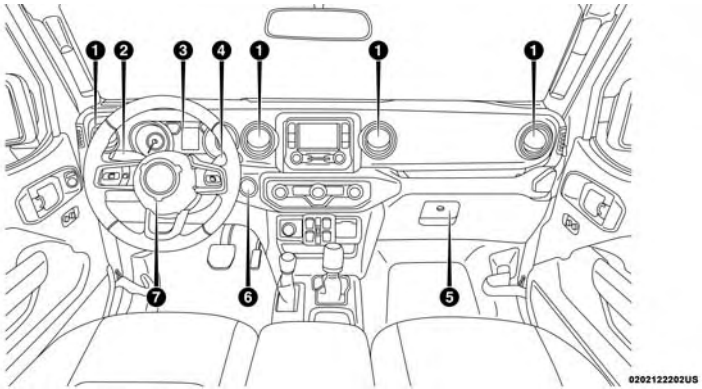
REAR VIEW



Rear View

1 — Rear Lights
2— Swing Gate

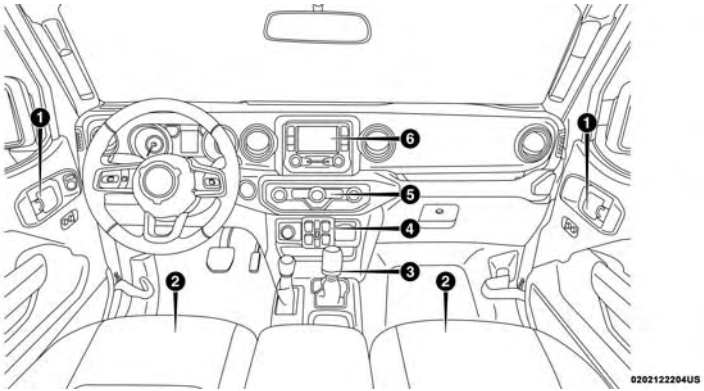
INSTRUMENT PANEL



Instrument Panel

1 — Air Outlet
2 — Turn Signal/High Beam Control
3 — Instrument Cluster
4 — Multifunction Lever
5 — Storage Compartment
6 — Push Button Ignition
7 — Steering Wheel

INTERIOR



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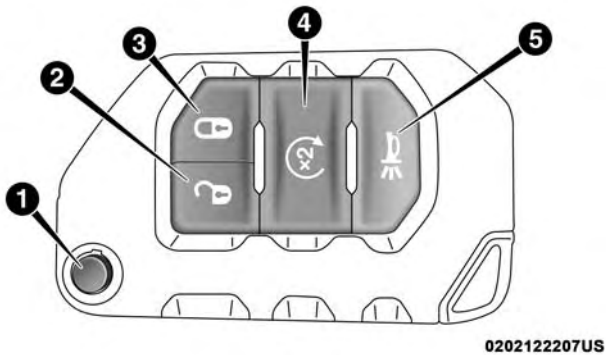
KEYS

Key Fob



Key Fob

1 — Flip Key Release Button
2 — Unlock Button
3 — Lock Button
4 — Remote Start Button
5 — Panic Button

Your vehicle uses a keyless ignition system. The ignition system consists of a key fob with Keyless Go and a START/STOP push button ignition system. The Remote Keyless Entry system consists of a key fob with a mechanical key and Keyless Enter-N-Go feature if equipped.

NOTE: The key fob may not be detected by the vehicle if it is located next to a mobile phone, laptop or other electronic device; these devices may block the key fob's wireless signal.

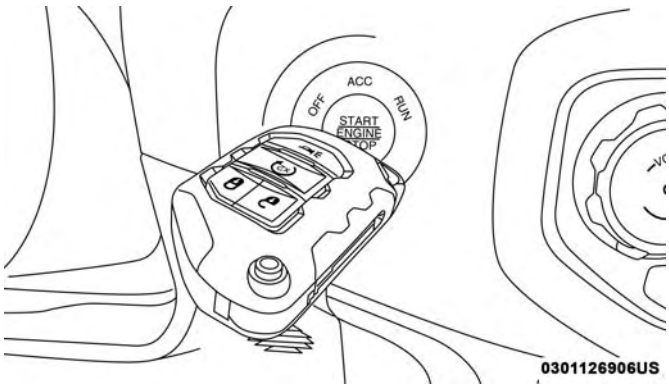
The key fob allows you to lock or unlock the doors and swing gate from distances up to approximately 66 ft (20 m) by pressing the appropriate button on the fob. The key fob does not need to be pointed at the vehicle to activate the system.

NOTE:

- In the ON/RUN position, the lock button is disabled. Only the unlock button is enabled.

Backup Mode Starting

In case the ignition switch does not change with the push of a button, the key fob may have a low or dead battery. In this situation, a back up method can be used to operate the ignition switch. Put the nose side of the key fob against the ENGINE START/STOP button, and push to operate the ignition switch.



Backup Starting Method

To Unlock The Doors And Swing Gate

Push and release the key fob unlock button once to unlock the driver's door only, or twice to unlock all the doors and swing gate. When the key fob unlock button is pushed, the Illuminated Entry will initiate, and the turn signal lights will flash twice.

To Lock The Doors And Swing Gate

Push and release the lock button on the key fob to lock all doors. The turn signals will flash, and the horn will chirp once to acknowledge the lock signal.

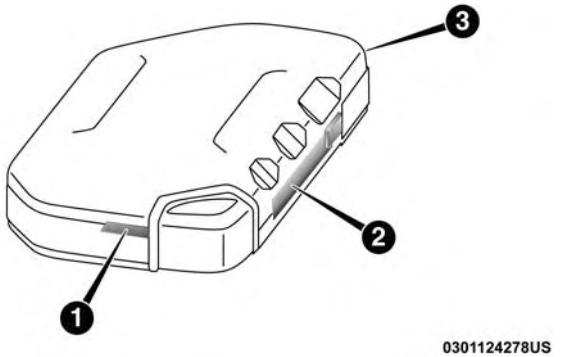
Key Fob Battery Replacement

NOTE: When a key fob battery is low, a warning will be indicated on the vehicle's instrument cluster, and the fob LED will no longer illuminate with a button press.

The recommended replacement battery is CR2450.

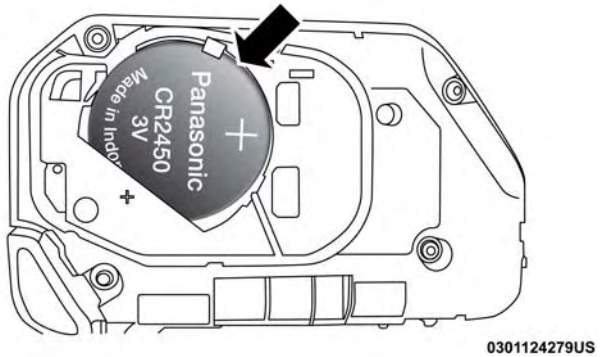
NOTE: Perchlorate Material – special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate .

1. Remove the back cover of the fob by inserting a flat-blade screw driver into the slot on the bottom of the fob. Pry until the cover unsnaps being careful not to damage the seal. Proceed counter-clockwise to pry the remaining snaps until the battery cover can be removed.



1-3 – Back Cover Pry Points

2. Remove the depleted battery by inserting a small flat-blade screwdriver into the battery removal slot and sliding the battery forward and up being careful not to damage the electronic board underneath.



Battery Replacement

3. Install the new battery into the key fob, making sure the positive (+) side is facing up. Slide the battery until it is seated securely below the tabs.
4. Reassemble the back cover making sure it is properly aligned before snapping it back in place.

Programming Additional Key Fobs

Programming the key fob may be performed by your authorized dealer.

Request For Additional Key Fobs

NOTE: Only key fobs that are programmed to the vehicle electronics can be used to start and operate the vehicle. Once a key fob is programmed to a vehicle, it cannot be programmed to any other vehicle.

WARNING!

- **Always remove the key fobs from the vehicle and lock all doors when leaving the vehicle unattended.**
- **Always remember to place the ignition in the OFF mode.**

Duplication of key fobs may be performed at an authorized dealer. This procedure consists of programming a blank key fob to the vehicle electronics. A blank key fob is one that has never been programmed.

NOTE:

- When having the Sentry Key Immobilizer System serviced, bring all vehicle keys with you to an authorized dealer.
- Keys must be ordered to the correct key cut to match the vehicle locks.

General Information

The following regulatory statement applies to all radio frequency (RF) devices equipped in this vehicle:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

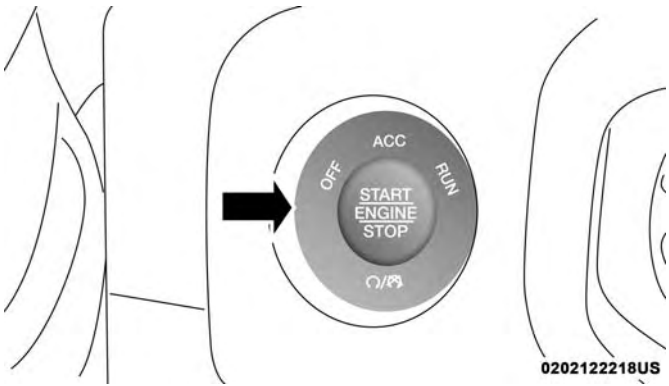
IGNITION SWITCH

Keyless Enter-N-Go — Ignition

This feature allows the driver to operate the ignition switch with the push of a button as long as the key fob is in the passenger compartment.

The Keyless Push Button Ignition has several operating modes that are labeled and will illuminate when in position. These modes are OFF, ACC, RUN, and START.

NOTE: In case the ignition switch does not change with the push of a button, the key fob may have a low or dead battery. In this situation, a back up method can be used to operate the ignition switch. Put the nose side of the key fob (side opposite of the Emergency Key) against the ENGINE START/STOP button and push to operate the ignition switch.



START/STOP Ignition Button

The push button ignition can be placed in the following modes:

OFF

- The engine is stopped.
- Some electrical devices (e.g. Central locking, alarm, etc.) are still available.

ACC

- Engine is not started.
- Some electrical devices are available.

RUN

- Driving position.
- All the electrical devices are available.

START

- The engine will start.

WARNING!

- **When exiting the vehicle, always remove the key fob from the vehicle and lock your vehicle.**

(Continued)

WARNING! *(Continued)*

- **Never leave children alone in a vehicle, or with access to an unlocked vehicle.**
- **Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child or others could be seriously or fatally injured. Children should be warned not to touch the parking brake, brake pedal or the gear selector.**
- **Do not leave the key fob in or near the vehicle, or in a location accessible to children, and do not leave the ignition of a vehicle equipped with Keyless Enter-N-Go in the ON/RUN mode. A child could operate power windows, other controls, or move the vehicle.**
- **Do not leave children or animals inside parked vehicles in hot weather. Interior heat build-up may cause serious injury or death.**

CAUTION!

An unlocked vehicle is an invitation for thieves. Always remove key fob from the vehicle and lock all doors when leaving the vehicle unattended.

NOTE: Refer to "Starting The Engine," in "Starting And Operating" for further information.

Vehicle On Message

When opening the driver's door when the ignition is in RUN (engine not running), a chime will sound to remind you to place the ignition in the OFF position. In addition to the chime, the message will display "Ignition Or Accessory On" in the cluster.

NOTE: The power window switches will remain active up to ten minutes after the ignition is cycled to the OFF position. Opening either front door will cancel this feature. The time for this feature is programmable.

WARNING!

- **Before exiting a vehicle, always come to a complete stop, then shift the automatic transmission into PARK, apply the parking brake, place the engine in the OFF position, remove the key fob from the vehicle and lock your vehicle. If equipped with Keyless Enter-N-Go, always make sure the keyless ignition is in "OFF" position, remove the key fob from the vehicle and lock the vehicle.**
- **Never leave children alone in a vehicle, or with access to an unlocked vehicle.**

(Continued)

WARNING! *(Continued)*

- **Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child or others could be seriously or fatally injured. Children should be warned not to touch the parking brake, brake pedal or the gear selector.**
- **Do not leave the key fob in or near the vehicle, or in a location accessible to children, and do not leave the ignition of a vehicle equipped with Keyless Enter-N-Go in the ON/RUN mode. A child could operate power windows, other controls, or move the vehicle.**
- **Do not leave children or animals inside parked vehicles in hot weather. Interior heat build-up may cause serious injury or death.**

CAUTION!

An unlocked vehicle is an invitation for thieves. Always remove key fob from the vehicle and lock all doors when leaving the vehicle unattended.

REMOTE STARTING SYSTEM — IF EQUIPPED

This system uses the key fob to start the engine conveniently from outside the vehicle while still maintaining security. The system has a range of 328 ft (100 m).

The Remote Starting System also activates the Climate Control, vented seats (if equipped) in temperatures above 80° F (26.7° C), and the optional heated seats, and optional heated steering wheel in temperatures below 40° F (4.4° C). Refer to "Heated Seats" and in "Seats" in this section for further information.

NOTE:

- The vehicle must be equipped with an automatic transmission to be equipped with Remote Start.
- Obstructions between the vehicle and key fob may reduce this range.

How To Use Remote Start

- Push Remote Start button on the key fob twice within five seconds. Pushing the Remote Start button a third time shuts the engine off.

- To drive the vehicle, push unlock button, and place the ignition in the ON/RUN position.
- With remote start, the engine will only run for 15 minutes (timeout) unless the ignition key is placed in the ON/RUN position.
- The vehicle must be started with the key after two consecutive timeouts.

All of the following conditions must be met before the engine will remote start:

- Gear Selector in PARK
- Doors closed
- Hood closed
- Swing Gate closed
- Hazard switch off
- Brake switch inactive (brake pedal not pushed)
- Battery at an acceptable charge level
- PANIC button not pushed
- System not disabled from previous remote start event
- Vehicle alarm system indicator flashing
- Ignition in STOP/OFF position
- Fuel level meets minimum requirement
- All removable doors must not be removed
- Malfunction indicator light not illuminated

WARNING!

- **Do not start or run an engine in a closed garage or confined area. Exhaust gas contains Carbon Monoxide (CO) which is odorless and colorless. Carbon Monoxide is poisonous and can cause serious injury or death when inhaled.**
- **Keep key fobs away from children. Operation of the Remote Start System, windows, door locks or other controls could cause serious injury or death.**

Remote Start Cancel Message — If Equipped

The following messages will display in the instrument cluster if the vehicle fails to remote start or exits remote start prematurely:

- Remote Start Cancelled — Door Open
- Remote Start Cancelled — Hood Open
- Remote Start Cancelled — Fuel Low
- Remote Start Cancelled — Swing Gate Open

- Remote Start Cancelled — Time Expired
- Remote Start Disabled — Start Vehicle To Reset

The message will stay active until the ignition is placed in the ON/RUN position.

To Enter Remote Start Mode

Push and release the Remote Start button on the key fob twice within five seconds. The vehicle doors will lock, the turn signals will flash twice, and the horn will chirp twice. Then the engine will start, and the vehicle will remain in the Remote Start mode for a 15-minute cycle.

NOTE:

- If an engine fault is present or fuel level is low, the vehicle will start and then shut down in 10 seconds.
- The park lamps will turn on and remain on during Remote Start mode.
- For security, power window operation is disabled when the vehicle is in the Remote Start mode.
- The engine can be started two consecutive times (two 15-minute cycles) with the key fob. However, the ignition must be placed in the ON/RUN position before you can repeat the start sequence for a third cycle.

To Exit Remote Start Mode Without Driving The Vehicle

Push and release the Remote Start button one time or allow the remote start cycle to complete the entire 15-minute cycle.

NOTE: To avoid unintentional shutdowns, the system will disable the one time push of the Remote Start button for two seconds after receiving a valid Remote Start request.

To Exit Remote Start Mode And Drive The Vehicle

Before the end of 15-minute cycle, push and release the unlock button on the key fob to unlock the doors, or unlock the vehicle using Keyless Enter-N-Go — Passive Entry via the door handles, and disarm the vehicle security alarm (if equipped). Then, prior to the end of the 15-minute cycle, push and release the START/STOP button.

NOTE: For vehicles equipped with the Keyless Enter-N-Go — Passive Entry feature, the message “Remote Start Active — Push Start Button” will display in the instrument cluster display until you push the ignition START button.

Remote Start Comfort Systems — If Equipped

When Remote Start is activated, the Climate Controls, optional heated seats, and optional heated steering wheel in temperatures below 40° F (4.4° C). These features will stay on through the duration of Remote Start or until the ignition switch is cycled to the ON/RUN position.

General Information

The following regulatory statement applies to all Radio Frequency (RF) devices equipped in this vehicle:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

SENTRY KEY

The Sentry Key Immobilizer system prevents unauthorized operation by disabling the vehicle. The system does not need to be armed or activated. Operation is automatic, regardless of whether the vehicle is locked or unlocked.

The system uses the key fob to prevent unauthorized vehicle operation. Therefore, only key fobs that are programmed to the vehicle can be used to start and operate the vehicle. The system will shut the engine off in two seconds if an invalid key fob is used to start the engine.

After turning the ignition switch to the ON/RUN position, the vehicle security light will turn on for three seconds for a bulb check. If the light remains on after the bulb check, it indicates that there is a problem with the electronics. In addition, if the light begins to flash after the bulb check, it indicates that someone used an invalid key fob to start the engine. Either of these conditions will result in the engine being shut off after two seconds.

If the vehicle security light turns on during normal vehicle operation (vehicle running for longer than 10 seconds), it indicates that there is a fault in the electronics. Should this occur, have the vehicle serviced as soon as possible by an authorized dealer.

CAUTION!

The Sentry Key Immobilizer system is not compatible with some aftermarket remote starting systems. Use of these systems may result in vehicle starting problems and loss of security protection.

All of the key fobs provided with your new vehicle have been programmed to the vehicle electronics.

Replacement Keys

NOTE: Only key fobs that are programmed to the vehicle electronics can be used to start and operate the vehicle. Once a key fob is programmed to a vehicle, it cannot be programmed to any other vehicle.

CAUTION!

- **Always remove the key fobs from the vehicle and lock all doors when leaving the vehicle unattended.**
- **For vehicles equipped with Keyless Enter-N-Go — Ignition, always remember to place the ignition in the OFF position.**

NOTE: Duplication of key fobs may be performed at an authorized dealer. This procedure consists of programming a blank key fob to the vehicle electronics. A blank key fob is one that has never been programmed.

When having the Sentry Key Immobilizer System serviced, bring all vehicle keys with you to an authorized dealer.

General Information

The following regulatory statement applies to all radio frequency (RF) devices equipped in this vehicle:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

VEHICLE SECURITY ALARM — IF EQUIPPED

The vehicle security alarm monitors the vehicle doors for unauthorized entry and the ignition switch for unauthorized operation. When the alarm is activated, the interior switches for door locks are disabled. The vehicle security alarm provides both audible and visible signals. If something triggers the alarm, the vehicle security alarm will provide the following audible and visible signals: the horn will pulse, the park lamps and/or turn signals will flash, and the vehicle security light in the instrument cluster will flash.

Rearming Of The System

If something triggers the alarm, and no action is taken to disarm it, the vehicle security alarm will turn the horn off after 29 seconds, 5 seconds between cycles, up to 8 cycles if the trigger remains active and then the vehicle security alarm will rearm itself.

To Arm The System

Follow these steps to arm the vehicle security alarm:

1. Make sure the vehicles ignition is cycled to the "OFF" position (refer to "Starting The Engine" in "Starting And Operating" for further information).
2. Perform one of the following methods to lock the vehicle:
   - Push lock on the interior power door lock switch with the driver and/or passenger door open.
   - Push the lock button on the exterior Passive Entry Door Handle with a valid key fob available in the same exterior zone (refer to "Keyless Enter-N-Go — Passive Entry" in "Getting To Know Your Vehicle" for further information).
   - Push the lock button on the key fob.
3. If any doors are open, close them.

To Disarm The System

The vehicle security alarm can be disarmed using any of the following methods:

- Push the unlock button on the key fob.
- Grasp the Passive Entry Unlock Door Handle (if equipped, refer to "Keyless Enter-N-Go — Passive Entry" in "Getting To Know Your Vehicle" for further information).
- Cycle the vehicle ignition system out of the OFF position.

NOTE:

- The driver's door key cylinder cannot arm or disarm the vehicle security alarm.
- When the vehicle security alarm is armed, the interior power door lock switches will not unlock the doors.

The vehicle security alarm is designed to protect your vehicle. However, you can create conditions where the system will give you a false alarm. If one of the previously described arming sequences has occurred, the vehicle security alarm will arm regardless of whether you are in the vehicle or not. If you remain in the vehicle and open a door, the alarm will sound. If this occurs, disarm the vehicle security alarm.

If the vehicle security alarm is armed and the battery becomes disconnected, the vehicle security alarm will remain armed when the battery is reconnected; the exterior lights will flash, and the horn will sound. If this occurs, disarm the vehicle security alarm.

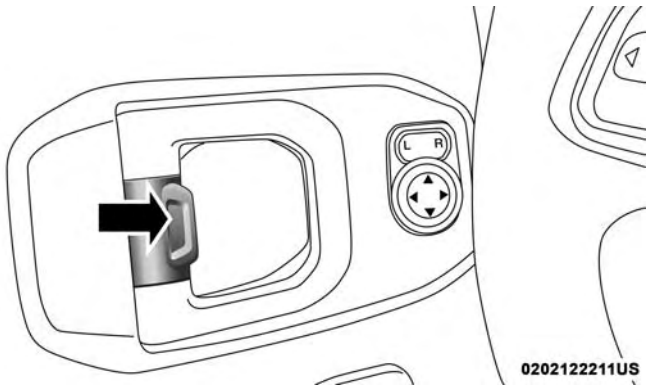
DOORS

CAUTION!

Careless handling and storage of the removable door panels may damage the seals, causing water to leak into the vehicle's interior.

Manual Door Locks

All doors are equipped with an interior rocker-type door lock lever. To lock a door when leaving your vehicle, push the rocker lever forward to the lock position and close the door. To unlock the door, push the rocker lever rearward.



Manual Door Lock

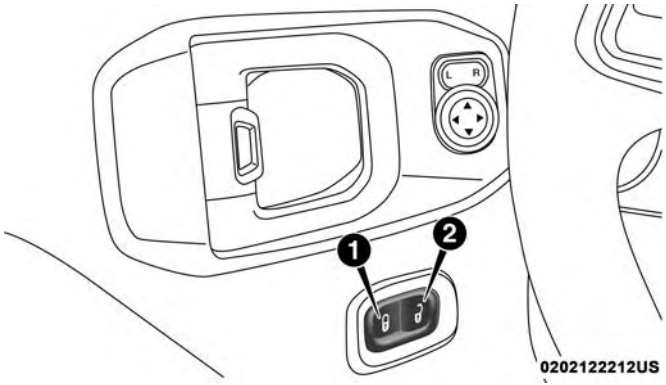
NOTE: The mechanical flip key can be used to lock or unlock the doors, swing gate, glove compartment, and console storage.

WARNING!

- **For personal security reasons and safety in a collision, lock the vehicle doors when you drive, as well as when you park and exit the vehicle.**
- **When exiting the vehicle, always switch off the ignition and remove the key from the vehicle. Unsupervised use of vehicle equipment may cause severe personal injuries and death.**
- **Never leave children alone in a vehicle, or with access to an unlocked vehicle.**
- **Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child or others could be seriously or fatally injured. Children should be warned not to touch the parking brake, brake pedal or the gear selector.**
- **Do not leave the key fob in or near the vehicle or in a location accessible to children. A child could operate power windows, other controls, or move the vehicle.**

Power Door Locks — If Equipped

The power door lock switch is located on each front door panel. Push the switch forward to lock the doors, and rearward to unlock the doors.



Power Door Lock Switch

1 — Lock Button
2 — Unlock Button

WARNING!

- **For personal security reasons and safety in a collision, lock the vehicle doors when you drive, as well as when you park and exit the vehicle.**
- **When exiting the vehicle, always switch off the ignition and remove the key from the vehicle. Unsupervised use of vehicle equipment may cause severe personal injuries and death.**
- **Never leave children alone in a vehicle, or with access to an unlocked vehicle.**
- **Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child or others could be seriously or fatally injured. Children should be warned not to touch the parking brake, brake pedal or the gear selector.**
- **Do not leave the key fob in or near the vehicle or in a location accessible to children. A child could operate power windows, other controls, or move the vehicle.**

Keyless Enter-N-Go — Passive Entry (If Equipped)

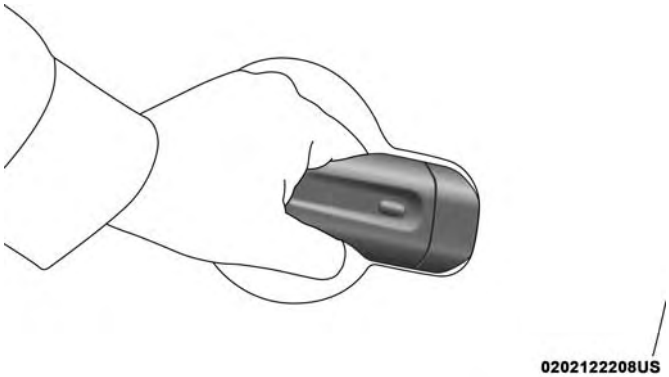
The Passive Entry system is a feature that allows you to lock and unlock the vehicle's door(s) and swing gate without having to push the key fob lock or unlock buttons.

NOTE:

- Passive Entry may be programmed ON/OFF; refer to "Uconnect Settings" in "Multimedia" for further information.
- The key fob may not be detected by the vehicle passive entry system if it is located next to a mobile phone, laptop, or other electronic device; these devices may interfere with the key fob's wireless signal and prevent the passive entry system from locking/unlocking the vehicle.
- Passive Entry Unlock initiates illuminated approach (Low Beams, License Plate Lamp, Position Lamps) for whichever time duration is set between 0, 30 (default), 60 or 90 seconds. Passive Entry Unlock also initiates two flashes of the turn signal lamps.
- If wearing gloves on your hands, or if it has been raining/snowing on the Passive Entry door handle, the unlock sensitivity can be affected, resulting in a slower response time.
- If the vehicle is unlocked by Passive Entry and no door is opened within 60 seconds, the vehicle will re-lock and if equipped will arm the security alarm.

To Unlock From The Driver Side

With a valid Passive Entry key fob within 5 ft (1.5 m) of the driver's door handle, grab the front driver door handle to unlock the driver's door automatically.



Grab The Door Handle To Unlock

NOTE: If "Unlock All Doors 1st Push" is programmed all doors will unlock when you grab hold of the front driver's door handle. To select between "Unlock Driver Door 1st Press" and "Unlock All Doors 1st Press," refer to "Uconnect Settings" in "Multimedia" for further information.

To Unlock From The Passenger Side

With a valid Passive Entry key fob within 5 ft (1.5 m) of the passenger door handle, grab the front passenger door handle to unlock all doors and the swing gate automatically.

NOTE: All doors will unlock when the front passenger door handle is grabbed regardless of the driver's door unlock preference setting ("Unlock Driver Door 1st Press" or "Unlock All Doors 1st Press").

Preventing Inadvertent Locking Of Passive Entry Key Fob In Vehicle (FOBIK-Safe)

To minimize the possibility of unintentionally locking a Passive Entry key fob inside your vehicle, the Passive Entry system is equipped with an automatic door unlock feature which will function only if the ignition switch is in the OFF position.

FOBIK-Safe only executes in vehicles with passive entry. There are three situations that trigger a FOBIK-Safe search in any passive entry vehicle:

- A lock request is made by a valid Passive Entry key fob while a door is open.
- A lock request is made by the Passive Entry door handle while a door is open.

- A lock request is made by the door panel switch while the door is open.

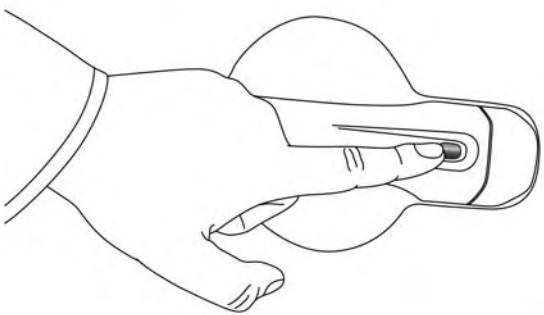
When any of these situations occur, after all open doors are shut, the FOBIK-Safe search will be executed. If it finds a Passive Entry key fob inside the car, the car will unlock and alert the customer. If Passive Entry is disabled using Uconnect System, the key protection described in "Preventing Inadvertent Locking of Passive Entry Key Fob in Vehicle" remains active/functional.

NOTE: The vehicle will only unlock the doors during a FOBIK-Safe operation when a valid Passive Entry key fob is detected inside the vehicle. The vehicle will not unlock the doors when any of the following conditions are true:

- A valid Passive Entry key fob is also detected outside of the vehicle.
- The doors are manually locked using the door lock knobs.
- Three attempts are made to lock the doors using the door panel switch and then close the doors.
- There is a valid Passive Entry key fob outside the vehicle within 5 ft. (1.5 m) of a Passive Entry door handle.

To Lock The Vehicle's Doors And Swing Gate

With one of the vehicle's Passive Entry key fob within 5 ft (1.5 m) of the driver or passenger front door handles, pushing the passive entry lock button will lock the vehicle doors and the swing gate.



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Push The Door Handle Button To Lock

NOTE: DO NOT grab the door handle, when pushing the door handle lock button. This could unlock the door(s).

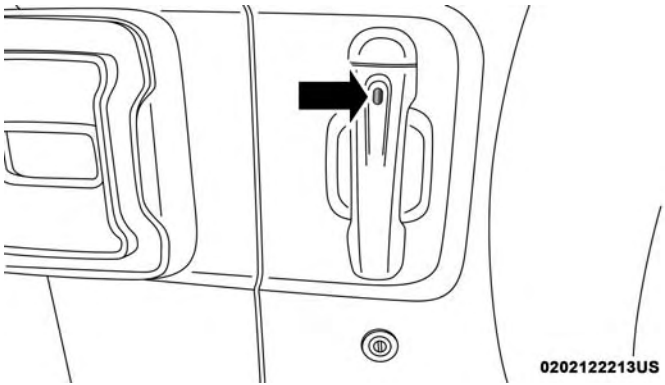
DO NOT Grab The Door Handle When Locking

The vehicle doors can also be locked by using the lock button located on the vehicle's interior door panel.

To Unlock/Enter The Swing Gate

The Swing Gate passive entry unlock feature is built into handle of the Swing Gate. With a valid Passive Entry key fob within 5 ft (1.5 m) of the Swing Gate, grab the Swing Gate handle to unlock the Swing Gate automatically, and pull the Swing Gate to open.

NOTE: If "Unlock All Doors 1st Press" is programmed all doors & the swing gate will unlock when you grab hold of the swing gate handle. To select between "Unlock Driver Door 1st Press" and "Unlock All Doors 1st Press," refer to "Uconnect Settings" in "Multimedia" for further information.



Swing Gate Passive Entry Location

To Lock The Swing Gate

With a valid Passive Entry key fob within 5 ft (1.5 m) of the swing gate, pushing the passive entry lock button will lock the vehicle doors and the swing gate.

NOTE:

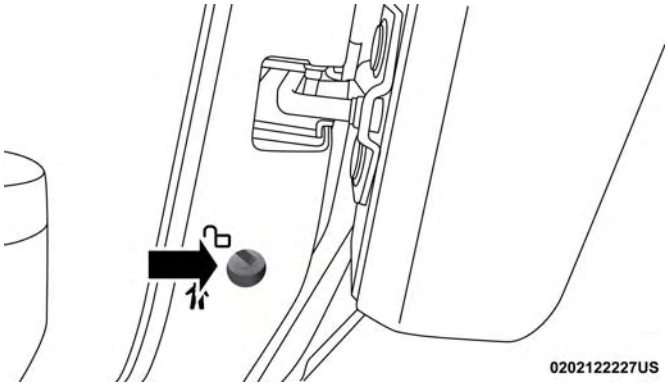
- After pushing the door handle button, you must wait two seconds before you can lock or unlock the doors, using any Passive Entry door handle. This is done to allow you to check if the vehicle is locked by pulling the door handle without the vehicle reacting and unlocking.
- If Passive Entry is disabled using Uconnect System, the key protection described in "Preventing Inadvertent Locking of Passive Entry Key Fob in Vehicle" remains active/functional.
- The Passive Entry system will not operate if the key fob battery is dead.

Child-Protection Door Lock System — Rear Doors

To provide a safer environment for small children riding in the rear seats, the rear doors are equipped with Child-Protection Door Lock system.

To Engage Or Disengage The Child-Protection Door Lock System

1. Open the rear door.
2. Insert the tip of the ignition key into the lock and rotate to the lock or unlock position.
3. Repeat steps one and two for the opposite rear door.



Child Protection Door Lock Function

WARNING!

Avoid trapping anyone in a vehicle in a collision. Remember that the rear doors can only be opened from the outside when the Child-Protection locks are engaged (locked).

NOTE: For emergency exit with the system engaged, move the lock lever rearward (located on the door trim panel), roll down the window and open the door with the outside door handle.

Front Door Removal

WARNING!

Do not drive your vehicle on public roads with the doors removed as you will lose the protection they can provide. This procedure is furnished for use during off-road operation only.

0305128425US

Door Removal Warning Label

WARNING!

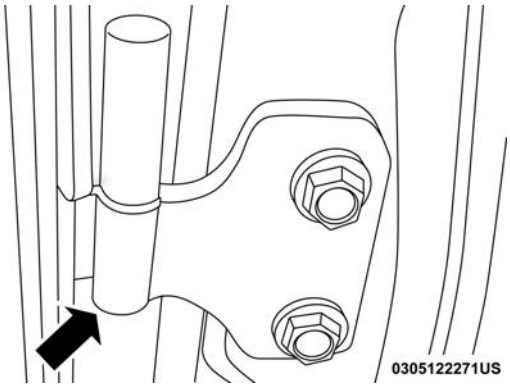
All occupants must wear seat belts during off-road operation with doors removed.

NOTE:

- **Doors are heavy; use caution when removing them.**
- **Hinge pin can break if overtightened during door reinstall (Max Torque: 10 N·m / 7.5 ft· lb).**

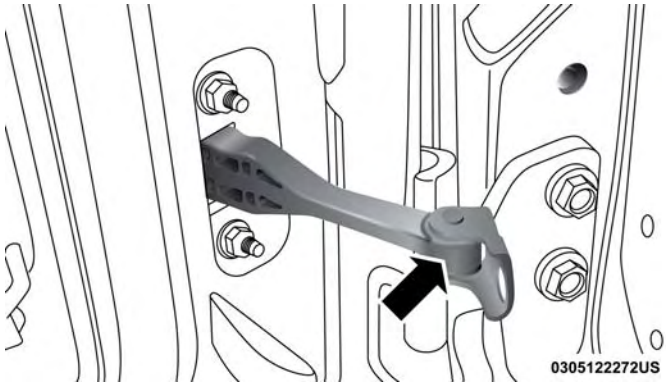
1. Roll down the glass window to prevent any damage.
2. Remove the hinge pin screws from the upper and lower outside hinges (using a #T50 Torx head driver).

NOTE: The hinge pin screws and nuts can be stowed in the rear cargo tray located under the rear loadfloor.



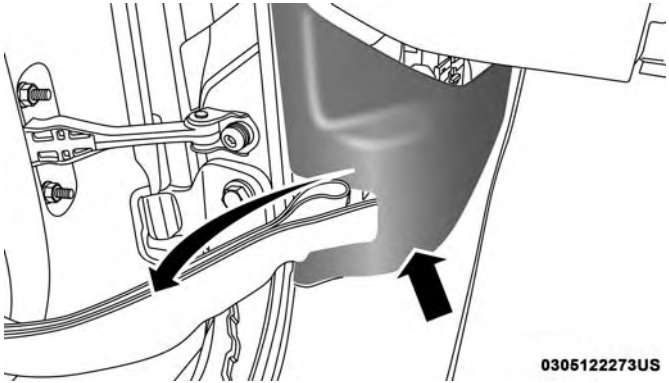
Hinge Pin Screw

3. Remove the check screw from the center door check (using a #T40 Torx head driver).



Door Check (Detached)

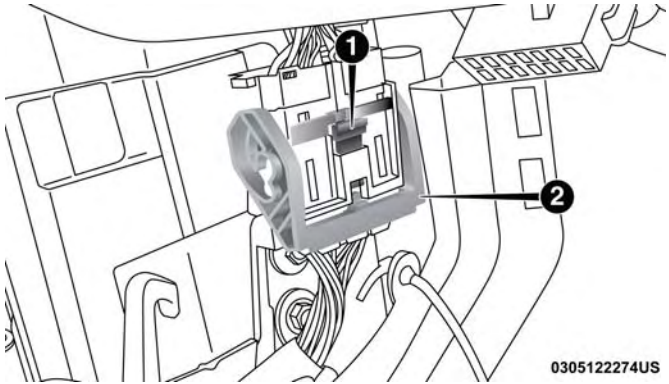
4. Remove the plastic wiring access door under the instrument panel by sliding the plastic panel along the door frame toward the seats until the tabs are detached.



Wiring Access Door

NOTE: Do not pry back to open, as this will break the plastic cover.

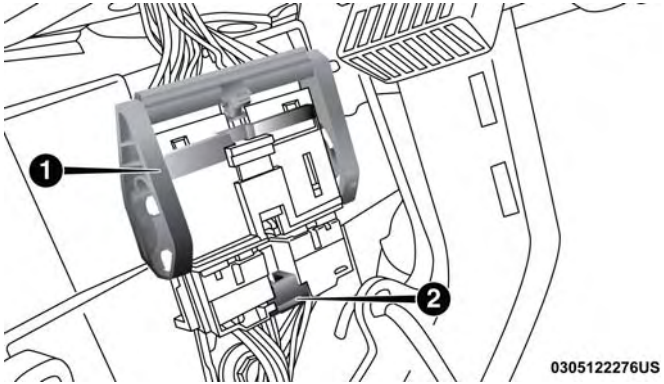
5. Pull up on the red locking tab to unlock the wiring harness.



Closed Wiring Harness

1 – Locking Tab
2 – Wiring Harness

6. Push and hold down the black security tab under the wiring harness, and lift the harness into the open position.



Open Wiring Harness

1 – Wiring Harness
2 – Security Tab

7. With the wiring harness open, pull downward on the wiring connector to unplug. Store wiring connector in the lower door basket.
8. With the door open, lift the door to clear the hinge pins from their hinges and remove the door.

To reinstall the door(s), perform the previous steps in the opposite order.

NOTE: The upper hinge has a longer pin, which can be used to assist in guiding the door into place when reinstalling.

Rear Door Removal (Four-Door Models)

WARNING!

Do not drive your vehicle on public roads with the doors removed as you will lose the protection they can provide. This procedure is furnished for use during off-road operation only.

Door Removal Warning Label

WARNING!

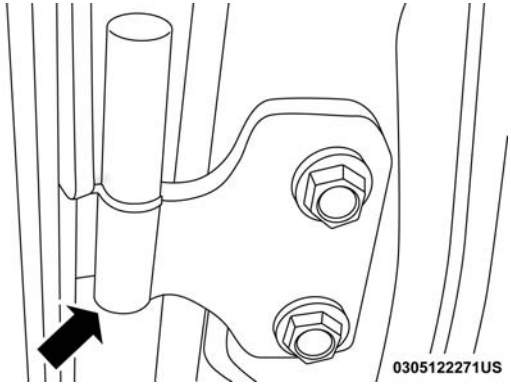
All occupants must wear seat belts during off-road operation with doors removed.

NOTE:

- **Doors are heavy; use caution when removing them.**
- **Hinge pin can break if overtightened during door reinstall (Max Torque: 10 N·m / 7.5 ft· lb).**

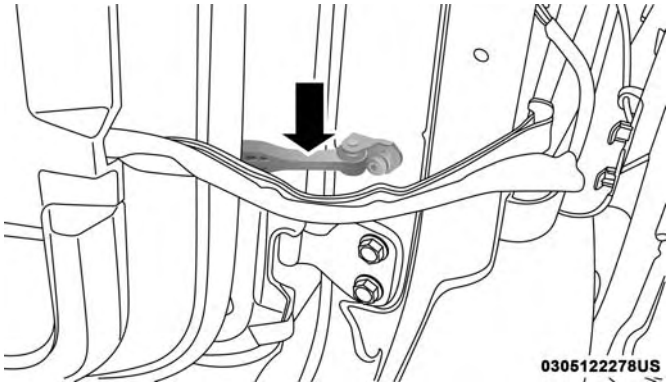
1. Roll down the glass window to prevent any damage.
2. Remove the hinge pin screws from the upper and lower outside hinges (using a #T50 Torx head driver).

NOTE: The hinge pin screws and nuts can be stowed in the rear cargo tray located under the rear load floor.



Hinge Pin Screw

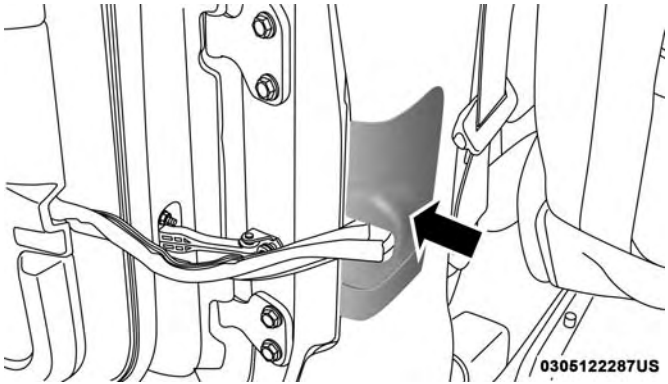
3. Remove the check screw from the center door check (using a #T40 Torx head driver).



Door Check (Attached)

4. Slide the front seat(s) fully forward.

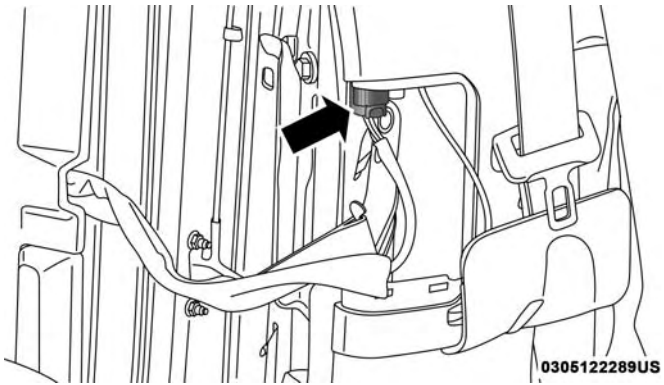
5. Pry open and remove the plastic wiring access door from the bottom of the B-pillar.



Wiring Access Door

6. Unplug the wiring connector.

NOTE: Squeeze the tab on the base of the wiring harness. This will unlock the connector tab, allowing the wiring connector to be unplugged.



Wiring Connector

7. With the door open, lift the door to clear the hinge pins from their hinges and remove the door.

To reinstall the door(s), perform the previous steps in the opposite order.

NOTE: The upper hinge has a longer pin, which can be used to assist in guiding the door into place when reinstalling.

SEATS

Seats are a part of the Occupant Restraint System of the vehicle.

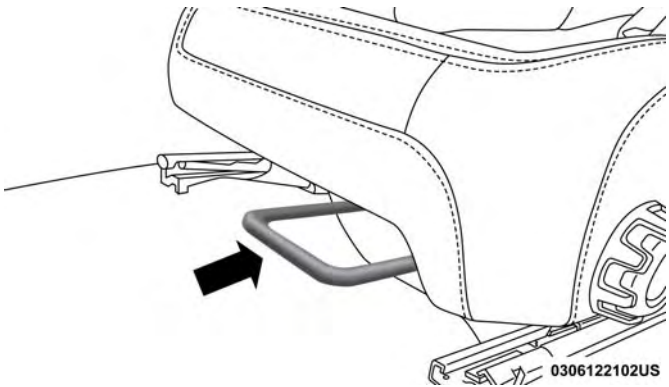
WARNING!

- **It is dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed.**
- **Do not allow people to ride in any area of your vehicle that is not equipped with seats and seat belts. In a collision, people riding in these areas are more likely to be seriously injured or killed.**
- **Be sure everyone in your vehicle is in a seat and using a seat belt properly.**

Manual Front Seats

Front Seat Adjustment

The seat can be adjusted forward or rearward by using a bar located by the front of the seat cushion, near the floor. While sitting in the seat, lift up on the bar located under the seat cushion and move the seat forward or rearward. Release the bar once you have reached the desired position. Then, using body pressure, move forward and rearward on the seat to be sure that the seat adjusters have latched.



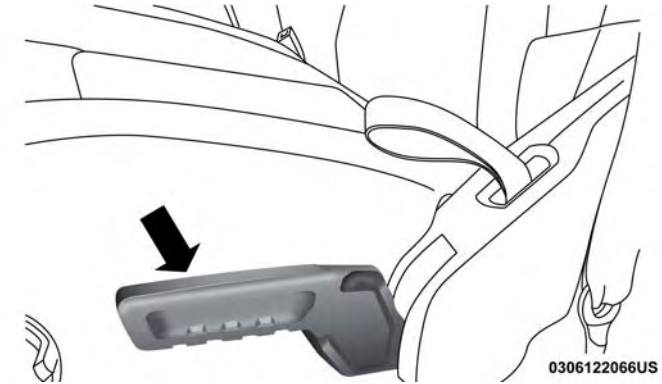
Adjustment Bar Location

WARNING!

- **Adjusting a seat while driving may be dangerous. Moving a seat while driving could result in loss of control which could cause a collision and serious injury or death.**
- **Seats should be adjusted before fastening the seat belts and while the vehicle is parked. Serious injury or death could result from a poorly adjusted seat belt.**

Manual Seat Height Adjustment

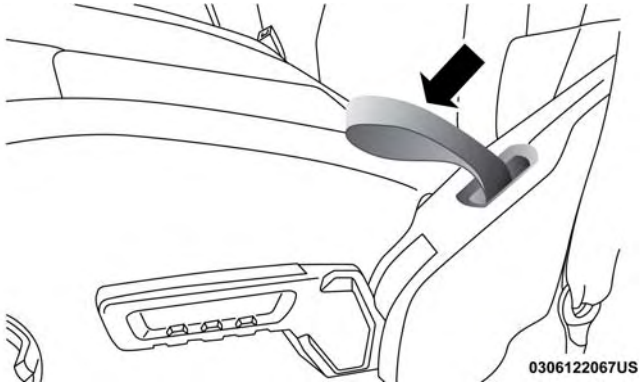
The driver's seat height can be raised or lowered by using the ratcheting handle, located on the outboard side of the seat. Pull upward on the handle to raise the seat, push downward on the handle to lower the seat. Several strokes may be necessary to achieve the desired position.



Seat Height Adjustment

Front Seatback Recline

To recline the seat, pull on the recline strap and lean forward or backward, depending on the direction you would like the seatback to move. Release the strap when the desired position is reached and the seatback will lock into place.



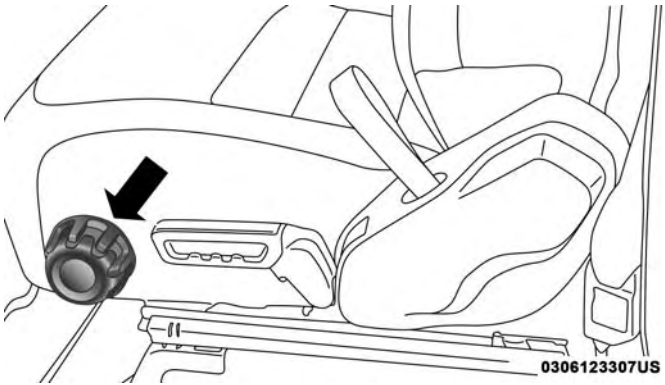
Recline Strap

WARNING!

Do not ride with the seatback reclined so that the shoulder belt is no longer resting against your chest. In a collision you could slide under the seat belt, which could result in serious injury or death.

Lumbar Support

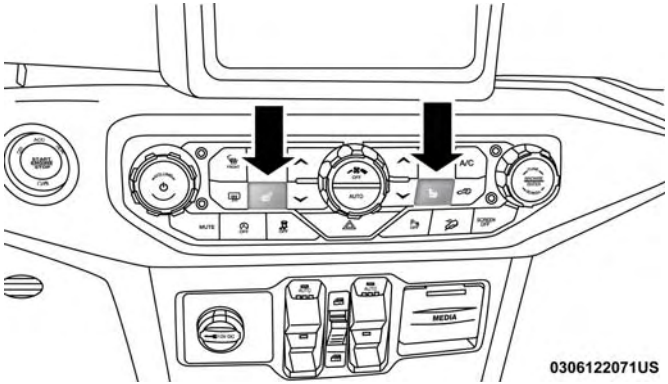
The lumbar control knob is located on the outboard side of the front driver seat. Rotate the control forward to increase and rearward to decrease the desired amount of lumbar support.



Lumbar Control Knob

Heated Seats — If Equipped

The heated seats control buttons are located on the center instrument panel below the touchscreen, and are also located within the climate or controls screen of the touchscreen.



Heated Seat Buttons

- Push the heated seat button once to turn the HI setting on.
- Push the heated seat button a second time to turn the MED setting on.
- Push the heated seat button a third time to turn the LO setting on.
- Push the heated seat button a fourth time to turn the heating elements off.

NOTE:

- The engine must be running for the heated seats to operate.
- The level of heat selected will stay on until the operator changes it.

Vehicles Equipped With Remote Start

On models that are equipped with remote start, the driver's seat can be programmed to come on during a remote start.

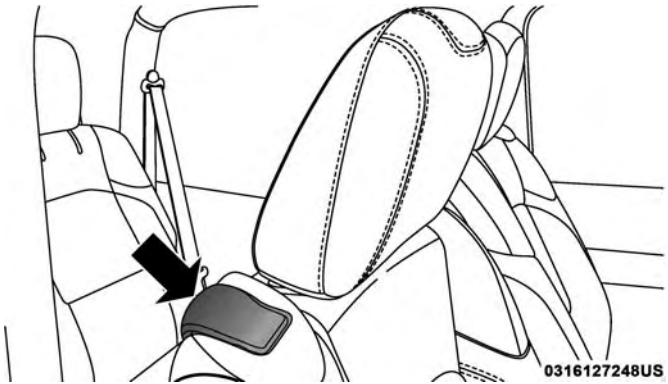
This feature can be programmed through the Uconnect system. Refer to "Uconnect Settings" in "Multimedia" for further information.

WARNING!

- **Persons who are unable to feel pain to the skin because of advanced age, chronic illness, diabetes, spinal cord injury, medication, alcohol use, exhaustion or other physical condition must exercise care when using the seat heater. It may cause burns even at low temperatures, especially if used for long periods of time**
- **Do not place anything on the seat or seatback that insulates against heat, such as a blanket or cushion. This may cause the seat heater to overheat. Sitting in a seat that has been overheated could cause serious burns due to the increased surface temperature of the seat.**

Front Passenger Easy Entry Seat — Two Door Models

Pull upward on the easy entry lever located on the outboard side of the seat back, and slide the entire seat forward.



Easy Entry Lever

To return the seat to a sitting position, fold the seatback upright until it locks and push the seat rearward until the track locks.

NOTE:

- The front passenger seats have a track memory, which returns the seat to its original position.
- The recline strap and easy entry lever should not be used during the automatic returning of the seat to its sitting position.

60/40 Split Folding Rear Seat — Four Door Models

To provide additional storage area, each rear seat can be folded flat to allow for extended cargo space.

NOTE:

- Prior to folding the rear seat, it may be necessary to reposition the front seat to its mid-track position.
- Be sure that the front seats are fully upright and positioned forward. This will allow the rear seat to fold down easily.
- The center head restraints must be in the lowest position to avoid contact with the center console when folding the seat.

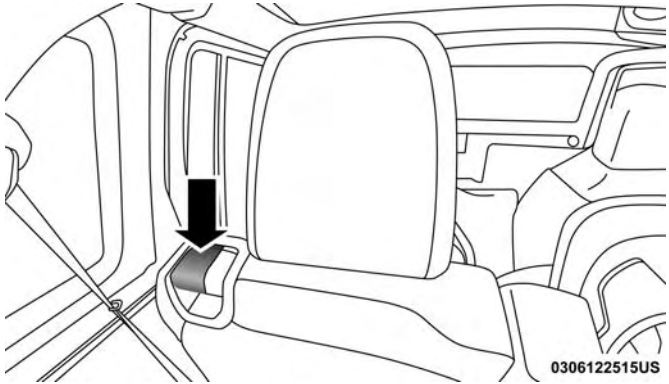
WARNING!

- **It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed.**
- **Do not allow people to ride in any area of your vehicle that is not equipped with seats and seat belts.**
- **Be sure everyone in your vehicle is in a seat and using a seat belt properly.**

To Fold Down The Rear Seat

There are two release levers located on each upper outboard side of the rear seat. The larger of the two release levers folds down the seat and the head restraint simultaneously. The smaller lever folds down the head restraint independently for improved visibility.

To fold the seat, lift upward on the large release lever and slowly fold down the seatback. The head restraint will fold automatically with the seat when this lever is pulled.



Seatback Release Lever

NOTE: You may experience deformation in the seat cushion from the seat belt buckles if the seats are left folded for an extended period of time. This is normal. By simply opening the seats to the open position, the seat cushion will return to its normal shape over time.

To Raise The Rear Seat

Raise the seatback and lock it into place. Then, raise the head restraint until it locks into place. If interference from the cargo area prevents the seatback from fully locking, you will have difficulty returning the seat to its proper position.

WARNING!

Be certain that the seatback is securely locked into position. If the seatback is not securely locked into position the seat will not provide the proper stability for child seats and/or passengers. An improperly latched seat could cause serious injury.

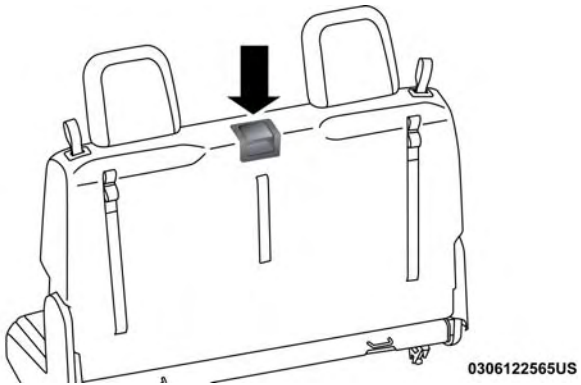
Fold And Tumble Rear Seat — Two Door Models

NOTE:

- Prior to folding the rear seat, it may be necessary to reposition the front seats.
- Be sure that the front seats are fully upright and positioned forward. This will allow the rear seat to fold down easily.

Folding The Rear Seat

1. Lift the seatback release lever and fold the seatback forward.

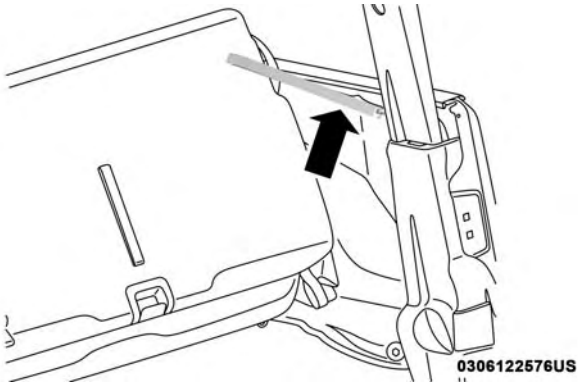


Rear Seatback Release Lever

2. Slowly flip the entire seat forward.

Using The Retention Straps

1. There are two retention straps located on the back of the rear seat and two corresponding wire loops located on the back of each b-pillar. Open the velcro on the strap and thread through the wire loop. Fold the velcro over to keep the seat in the folded position. This should be done on both sides.

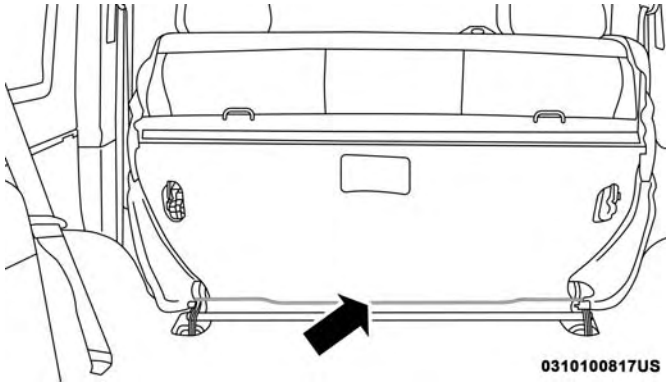


Rear Seat Tumble Position Retention Strap

2. To return the seat to its normal upright position, reverse these steps.

Removing The Rear Seat

1. Push down on the release bar on each side, and pull the seat out and away from the lower bracket.



Release Bar Location

2. Remove the seat from the vehicle.
3. To reinstall the rear seat, just reverse these steps.

NOTE: Do not drive the vehicle without reattaching the rear seat latches.

WARNING!

- **It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed.**
- **Do not allow people to ride in any area of your vehicle that is not equipped with seats and seat belts.**
- **Be sure everyone in your vehicle is in a seat and using a seat belt properly.**
- **In a collision, you or others in your vehicle could be injured if seats are not properly latched to their floor attachments. Always be sure that the seats are fully latched.**

Rear Seat Armrest — If Equipped

The center part of the rear seat can also be used as a rear armrest with cupholders. To unfold it, grab the pull strap under the head restraint and pull it forward.

Rear Seat Armrest

NOTE: The cupholder liner can be removed for cleaning.

WARNING!

Be certain that the seatback is securely locked into position. If the seatback is not securely locked into position the seat will not provide the proper stability for child seats and/or passengers. An improperly latched seat could cause serious injury.

HEAD RESTRAINTS

Head restraints are designed to reduce the risk of injury by restricting head movement in the event of a rear impact. Head restraints should be adjusted so that the top of the head restraint is located above the top of your ear.

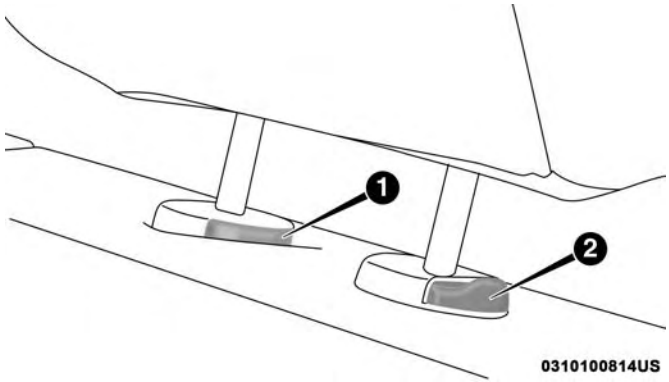
WARNING!

- **All occupants, including the driver, should not operate a vehicle or sit in a vehicle's seat until the head restraints are placed in their proper positions in order to minimize the risk of neck injury in the event of a crash.**
- **Head restraints should never be adjusted while the vehicle is in motion. Driving a vehicle with the head restraints improperly adjusted or removed could cause serious injury or death in the event of a collision.**

Front Head Restraints

To raise the head restraint, pull upward on the head restraint. To lower the head restraint, push the adjustment button located on the base of the head restraint, and push downward on the head restraint. The release button does not need to be pushed to adjust the head restraint.

To remove the head restraint, raise it as far as it can go then push the adjustment button and the release button at the base of each post while pulling the head restraint up. To reinstall the head restraint, put the head restraint posts into the holes and push downward. Then adjust it to the appropriate height.



Front Head Restraint

1 — Release Button
2 — Adjustment Button

WARNING!

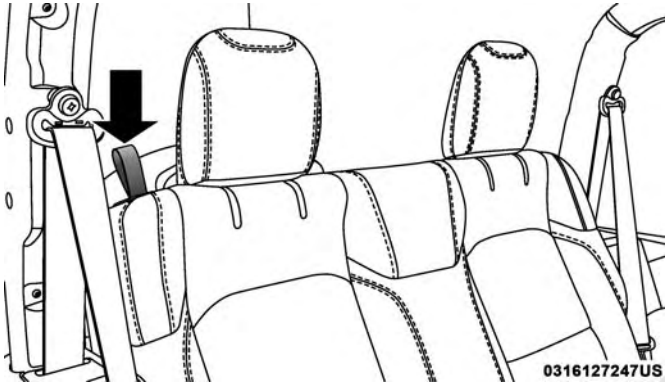
- **A loose head restraint thrown forward in a collision or hard stop could cause serious injury or death to occupants of the vehicle. Always securely stow removed head restraints in a location outside the occupant compartment.**
- **ALL the head restraints MUST be reinstalled in the vehicle to properly protect the occupants. Follow the re-installation instructions above prior to operating the vehicle or occupying a seat.**

NOTE: Do not reposition the head restraint 180 degrees to the incorrect position in an attempt to gain additional clearance to the back of the head.

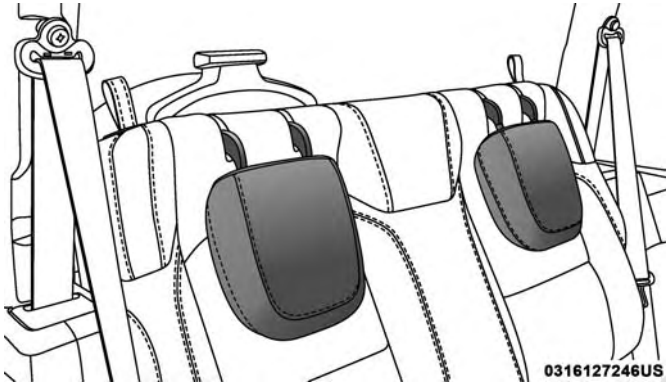
Rear Head Restraints — Two Door Models

The rear seat is equipped with non-adjustable, but foldable head restraints.

To fold the outboard head restraint, pull on the release strap located on the upper outboard side of each rear seat.



Rear Head Restraint Folding Strap Location



Rear Head Restraints Folded

To return the head restraint to its upward position, lift up on the head restraint until it locks into place.

Refer to “Occupant Restraints” in “Safety” for information on child seat tether routing.

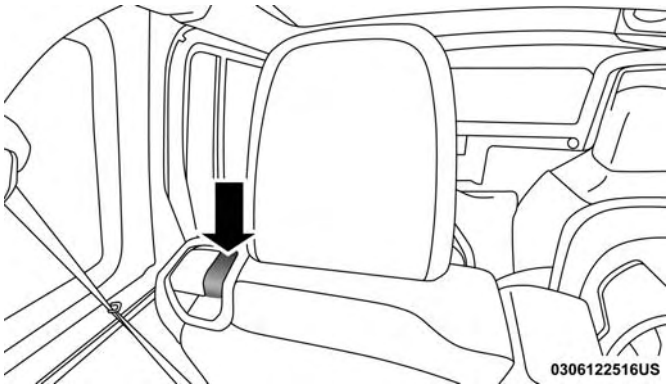
WARNING!

- **Do not drive the vehicle without the rear seat head restraints installed while passengers are occupying the rear seat. In a collision, people riding in this area without the head restraints installed are more likely to be seriously injured or killed.**
- **A loose head restraint thrown forward in a collision or hard stop could cause serious injury or death to occupants of the vehicle. Always securely stow removed head restraints in a location outside the occupant compartment.**
- **ALL the head restraints MUST be reinstalled in the vehicle to properly protect the occupants. Follow the reinstallation instructions above prior to operating the vehicle or occupying a seat.**

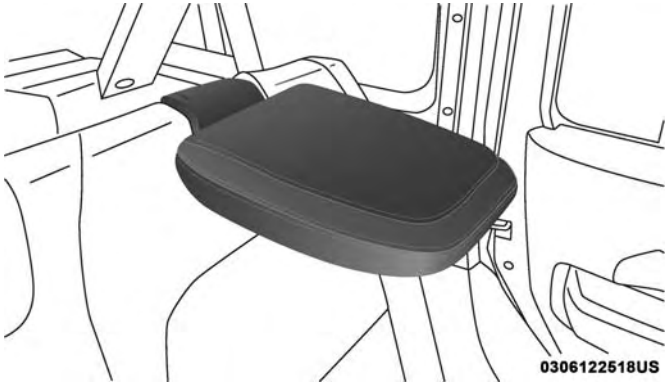
Rear Head Restraints — Four Door Models

The rear seat is equipped with nonadjustable, but foldable, outboard head restraints, as well as an adjustable, removable center head restraint.

To fold the outboard head restraint, pull on the smaller of the release levers, located on the upper outboard side of the rear seat.



Rear Head Restraint Lever



Rear Head Restraint Folded

To return the head restraint to its upward position, lift up on the head restraint until it locks into place.

To raise the center head restraint, lift up on the head restraint. To lower the center head restraint, push the adjustment button, located at the base of the head restraint, and push down on the head restraint.

To remove the center head restraint, push the release button, located on the base of the head restraint, and pull upward on the head restraint.

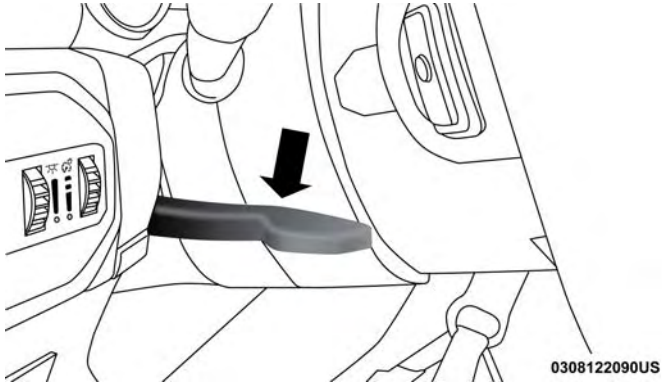
To install the head restraint, hold the release button while pushing downward on the head restraint. Refer to "Occupant Restraint Systems" in "Safety" for information on child seat tether routing.

NOTE: Lower the center head restraint to avoid contact with the center console when folding the seat down.

STEERING WHEEL

Tilt/Telescoping Steering Column

This feature allows you to tilt the steering column upward or downward. It also allows you to lengthen or shorten the steering column. The tilt/telescoping lever is located on the steering column, below the turn signal lever.



Tilt/Telescoping Steering Column Lever

To unlock the steering column, push the control handle downward (toward the floor). To tilt the steering column, move the steering wheel upward or downward as desired. To lengthen or shorten the steering column, pull the steering wheel outward or push it inward as desired. To lock the steering column in position, push the control handle upward until fully engaged.

WARNING!

Do not adjust the steering column while driving. Adjusting the steering column while driving or driving with the steering column unlocked, could cause the driver to lose control of the vehicle. Failure to follow this warning may result in serious injury or death.

Heated Steering Wheel — If Equipped

The steering wheel contains a heating element that helps warm your hands in cold weather. The heated steering wheel has only one temperature setting. Once the heated steering wheel has been turned on, it will stay on until the operator turns it off. The heated steering wheel may not turn on when it is already warm.

The heated steering wheel control button is located on the center of the instrument panel below the touchscreen and within the climate or controls screen of the touchscreen.

- Push the heated steering wheel button once to turn the heating element on.
- Push the heated steering wheel button a second time to turn the heating element off.

NOTE: The engine must be running for the heated steering wheel to operate.

Vehicles Equipped With Remote Start

On models that are equipped with remote start, the heated steering wheel can be programmed to come on during a remote start.

This feature can be programmed through the Uconnect system. Refer to “Uconnect Settings” in “Multimedia” for further information.

WARNING!

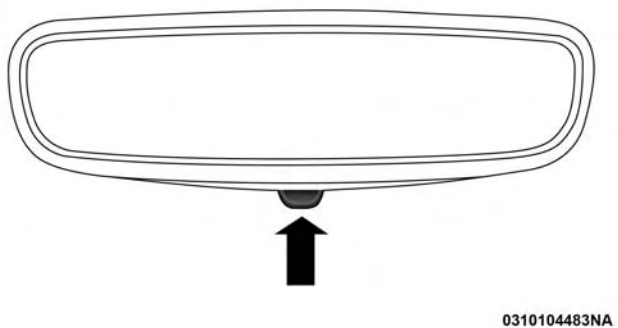
- **Persons who are unable to feel pain to the skin because of advanced age, chronic illness, diabetes, spinal cord injury, medication, alcohol use, exhaustion, or other physical conditions must exercise care when using the steering wheel heater. It may cause burns even at low temperatures, especially if used for long periods.**
- **Do not place anything on the steering wheel that insulates against heat, such as a blanket or steering wheel covers of any type and material. This may cause the steering wheel heater to overheat.**

MIRRORS

Inside Day/Night Mirror — If Equipped

The mirror head can be adjusted up, down, left, and right for various drivers. The mirror should be adjusted to center on the view through the rear window.

Headlight glare from vehicles behind you can be reduced by moving the small control under the mirror to the night position (toward the rear of the vehicle). The mirror should be adjusted while set in the day position (toward the windshield).



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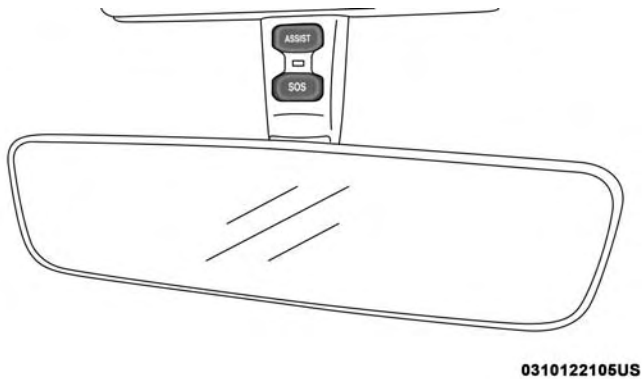
Adjusting Rearview Mirror

Automatic Dimming Mirror — If Equipped

The mirror head can be adjusted up, down, left, and right for various drivers. The mirror should be adjusted to center on the view through the rear window.

The mirror automatically adjusts to headlight glare from vehicles behind you.

NOTE: The Automatic Dimming feature is disabled when the vehicle is in REVERSE to improve the driver's view.



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Automatic Dimming Mirror

The Automatic Dimming feature can be turn on or off through the touchscreen.

- Press the mirror dimmer button once to turn the feature on.
- Press the mirror dimmer button a second time to turn the feature off.

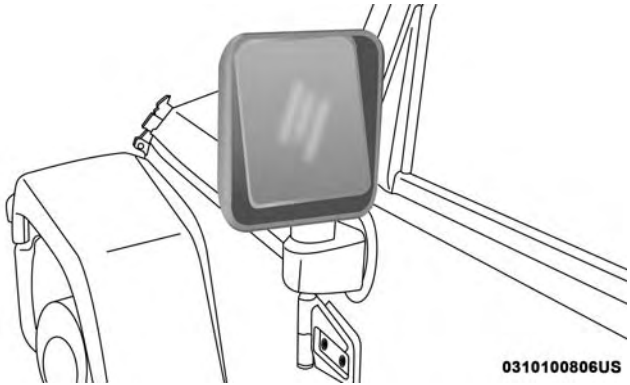
Refer to "Uconnect Settings" in "Multimedia" for further information.

CAUTION!

To avoid damage to the mirror during cleaning, never spray any cleaning solution directly onto the mirror. Apply the solution onto a clean cloth and wipe the mirror clean.

Outside Mirrors

To receive maximum benefit, adjust the outside mirror(s) to center on the adjacent lane of traffic with a slight overlap of the view obtained on the inside mirror.



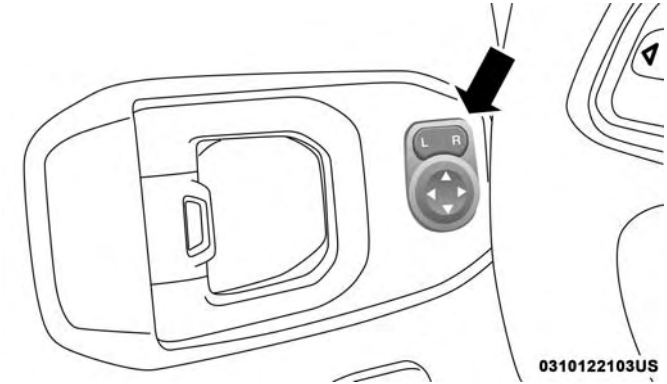
Outside Rearview Mirror

WARNING!

Vehicles and other objects seen in the passenger side convex mirror will look smaller and farther away than they really are. Relying too much on your passenger side mirror could cause you to collide with another vehicle or other object. Use your inside mirror when judging the size or distance of a vehicle seen in the passenger side mirror.

Power Mirrors — If Equipped

The power mirror controls are located on the door panel next to the door handle.



Power Mirror Switch

The power mirror controls consist of mirror select buttons and a four-way mirror control switch. To adjust a mirror, push either the L (left) or R (right) button to select the mirror that you want to adjust.

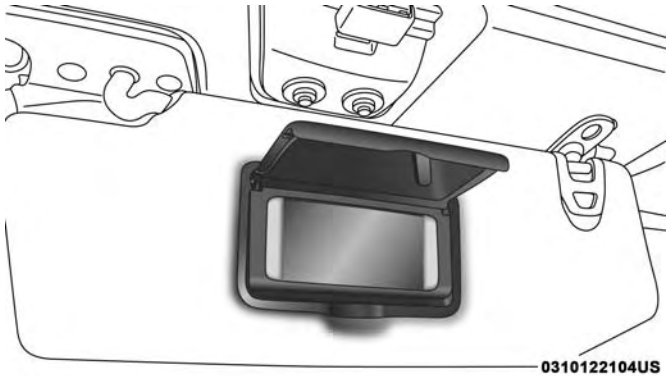
Using the mirror control switch, push any of the four arrows for the direction that you want the mirror to move.

Heated Mirrors — If Equipped

These mirrors are heated to melt frost or ice. This feature will be activated whenever you turn on the rear window defroster (if equipped). Refer to "Climate Controls" in "Getting To Know Your Vehicle" for further information.

Vanity Mirrors

Vanity mirrors are located on the sun visors. To use the mirrors, rotate the sun visor down and swing the mirror cover upward.

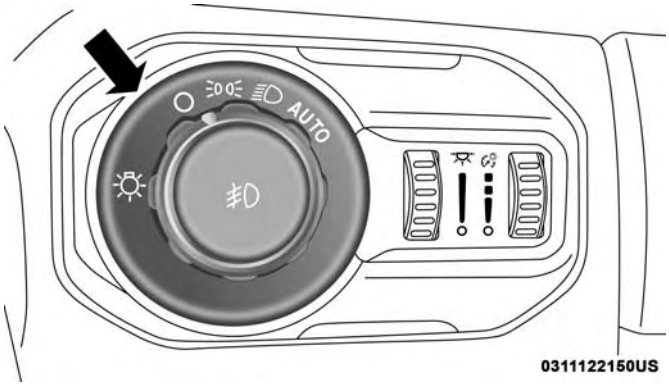


Vanity Mirror

EXTERIOR LIGHTS

Headlight Switch

The headlight switch is located on the left side of the instrument panel. This switch controls the operation of the headlights, parking lights, automatic headlights — if equipped, instrument panel lights, instrument panel light dimming, interior lights, and fog lights — if equipped.



Headlight Switch

Rotate the headlight switch clockwise to the first detent for parking light and instrument panel light operation. Rotate the headlight switch to the second detent for headlight, parking light, and instrument panel light operation.

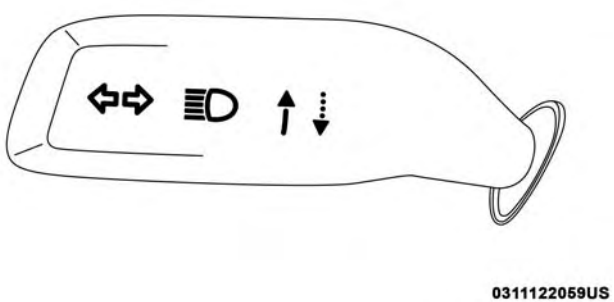
Daytime Running Lights — If Equipped

The headlights come on at a low intensity level when shifted into any position other than PARK (auto transmission) or when the vehicle begins to move (manual transmission).

NOTE: The Daytime Running Light, on the same side of the vehicle as the active turn signal, will turn off automatically when a turn signal is in operation and turn on again when the turn signal is not operating.

High/Low Beam Switch

Push the multifunction lever toward the instrument panel to switch the headlights to high beams. Pull the multifunction lever back toward the steering wheel to return the lights to low beams.



Multifunction Lever

Flash-To-Pass

You can signal another vehicle with your headlights by lightly pulling the multifunction lever toward you. This will cause the high beam headlights to turn on, and remain on, until the lever is released.

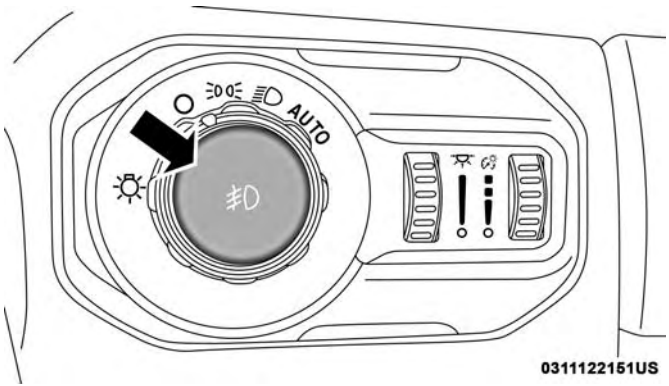
Automatic Headlights — If Equipped

This system automatically turns the headlights on or off according to ambient light levels. To turn the system on, rotate the headlight switch clockwise to the last detent for automatic headlight operation. When the system is on, the headlight time delay feature is also on. This means the headlights will stay on for up to 90 seconds after you place the ignition into the OFF position. To turn the automatic system off, move the headlight switch out of the AUTO position.

NOTE: The engine must be running before the headlights will come on in the automatic mode.

Front Fog Lights — If Equipped

To activate the front fog lights, turn on the parking lights or low beam headlights and push in the center of the headlight switch control knob. Pushing the headlight switch control knob a second time will turn the front fog lights off.



Front Fog Light Switch

Turn Signals

Move the multifunction lever up or down and the arrows on each side of the instrument cluster flash to show proper operation of the front and rear turn signal lights.

NOTE: If either light remains on and does not flash, or there is a very fast flash rate, check for a defective outside light bulb. If an indicator fails to light when the lever is moved, it would suggest that the indicator bulb is defective.

Lane Change Assist — If Equipped

Tap the lever up or down once, without moving beyond the detent, and the turn signal (right or left) will flash three times then automatically turn off.

Lights-On Reminder

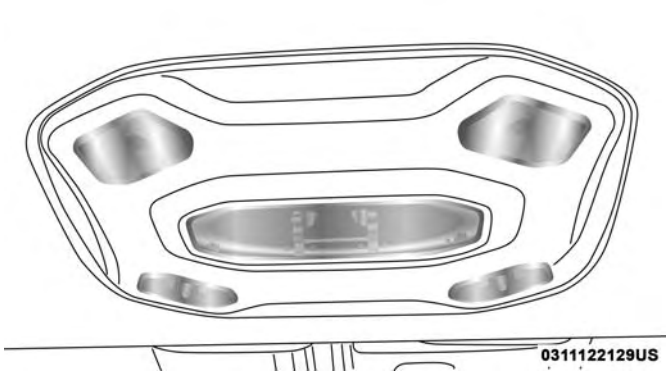
If the headlights, parking lights or cargo lights are left on after the ignition is turned OFF, a chime will sound when the driver's door is opened.

INTERIOR LIGHTS

Courtesy Lights

The courtesy lights will turn on when the front doors are opened, by rotating the dimmer controls on the headlight switch fully upward, or, if equipped, when the unlock button is pushed on the key fob.

The interior courtesy lights are located in the center of the vehicle's sport bar, and consist of one large center light and four smaller reading lights. Each reading light can be turned on by pushing the lens. Pushing the lens a second time will turn the light off.

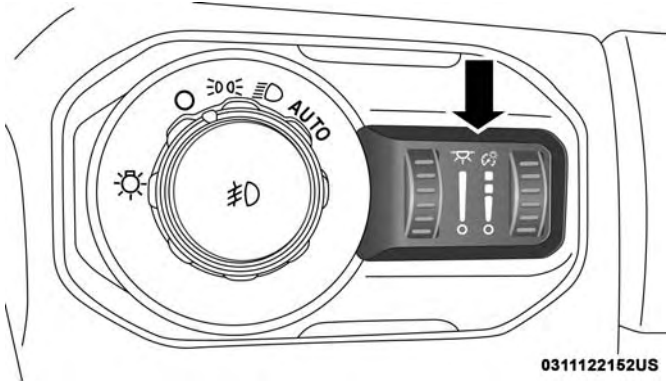


Dome Lights

When a door is open and the interior lights are on, rotating the dimmer control to the extreme bottom position will cause all the interior lights to turn off. This is also known as "Party" mode because it allows the doors to stay open for extended periods of time without discharging the vehicle's battery.

Dimmer Controls

The dimmer controls are part of the headlight switch and are located on the left side of the instrument panel.



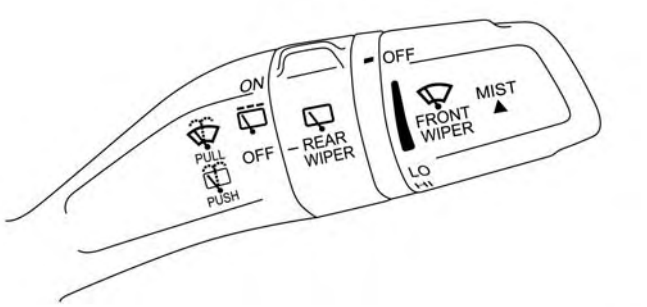
Dimmer Controls

With the parking lights or headlights on, rotating the right dimmer control upward will increase the brightness of the instrument panel lights. Rotating the left dimmer control will adjust the interior and ambient light levels.

WINDSHIELD WIPERS AND WASHERS

The windshield wiper/washer control lever is located on the right side of the steering column. The front wipers are operated by rotating a switch, located at the end of the lever.

Refer to "Rear Window Wiper/Washer" in this section for further information on using the rear window wiper/washer.



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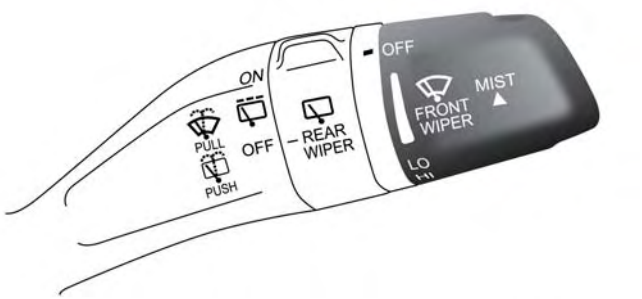
Windshield Wiper/Washer Lever

Windshield Wiper Operation

Rotate the end of the lever upward to the second detent past the intermittent settings for low-speed wiper operation.

Rotate the end of the lever upward to the third detent past the intermittent settings for high-speed wiper operation.



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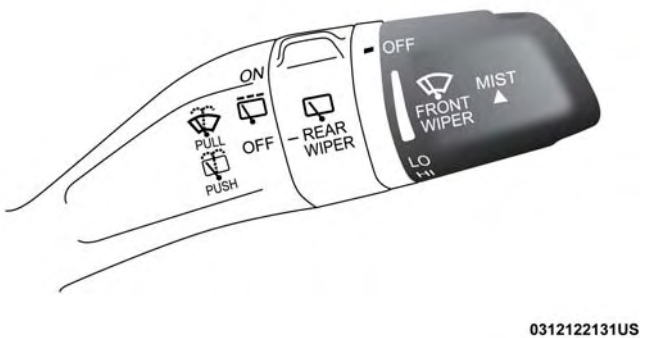
Front Wiper Control

CAUTION!

In cold weather, always turn off the wiper switch and allow the wipers to return to the park position before turning off the engine. If the wiper switch is left on and the wipers freeze to the windshield, damage to the wiper motor may occur when the vehicle is restarted.

Intermittent Wiper System

Use the intermittent wiper when weather conditions make a single wiping cycle, with a variable pause between cycles, desirable. Rotate the end of the lever to the first detent position for one of four intermittent settings. The delay cycle can be set anywhere between 1 to 18 seconds.



Front Wiper Control

NOTE: The wiper delay times depend on vehicle speed. If the vehicle is moving less than 10 mph (16 km/h), delay times will be doubled.

Windshield Washers

To use the washer, pull the lever toward you and hold while spray is desired. If the lever is pulled while in the delay range, the wiper will start and continue to operate for two or three wipe cycles after the lever is released. Then, the intermittent interval previously selected will resume.

If the lever is pulled while in the off position, the wipers will operate for two or three wipe cycles. Then, the wipers will turn off.

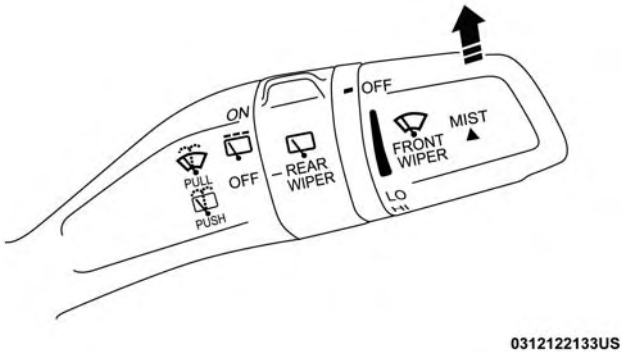
WARNING!

Sudden loss of visibility through the windshield could lead to a collision. You might not see other vehicles or other obstacles. To avoid sudden icing of the windshield during freezing weather, warm the windshield with the defroster before and during windshield washer use.

Mist Feature

Pull up on the wiper lever to activate a single wipe to clear off road mist or spray from a passing vehicle. As long as the lever is held up, the wipers will continue to operate.

NOTE: The mist feature does not activate the washer pump; therefore, no washer fluid will be sprayed on the windshield. The wash function must be used in order to spray the windshield with washer fluid.



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Mist Control

Rear Window Wiper/Washer — If Equipped

A rotary switch on the center portion of the windshield wiper/washer lever controls the operation of the rear wiper/washer function.

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Rear Wiper/Washer Control

Rotate the switch upward to the first detent position for intermittent operation and to the second detent for continuous rear wiper operation.

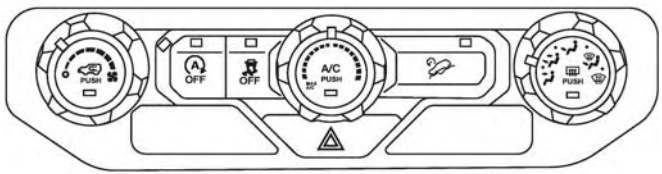
Push the wiper lever toward the instrument panel to activate the rear washer. The washer pump and wiper will continue to operate as long as the lever is held.

If the rear wiper is operating when the ignition is turned to the LOCK position, the wiper will automatically return to the “park” position. When the vehicle is restarted, the wiper will resume function at whichever position the switch is set at.

CLIMATE CONTROLS

Manual Climate Control Overview

The air conditioning and heating system is designed to make you comfortable in all types of weather.



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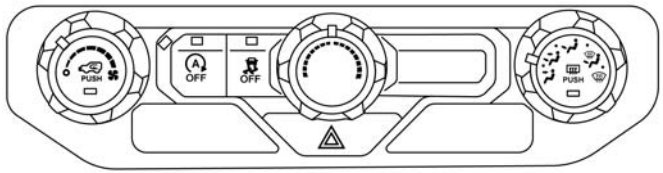
Manual Climate Controls



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Manual Climate Controls – Heater Only

Manual Climate Control Descriptions

Icon	Description
A/C	**A/C Button** Push the A/C button to engage the Air Conditioning (A/C). An LED illuminates when the A/C system is engaged.
MAX A/C	**MAX A/C Setting** Turn the temperature control knob to the MAX Air Conditioning (A/C) setting to engage MAX Air Conditioning (A/C). This is the coldest setting.
	**Recirculation Button** Push and release this button to change the system between recirculation mode and outside air mode. Recirculation can be used when outside conditions such as smoke, odors, dust, or high humidity are present. **NOTE:** • Continuous use of the Recirculation mode may make the inside air stuffy and window fogging may occur. Extended use of this mode is not recommended. • The use of the Recirculation mode in cold or damp weather could cause windows to fog on the inside, because of moisture buildup inside the vehicle. Select the outside air position for maximum defogging. • Recirculation can be used in all modes except for Defrost. • The A/C can be deselected manually without disturbing the mode control selection.

Icon	Description
	**Rear Defrost Button** Push and release the Rear Defrost Control button to turn on the rear window defroster and the heated outside mirrors (if equipped). An indicator will illuminate when the rear window defroster is on. The rear window defroster automatically turns off after ten minutes.
	**Temperature Control** Use this control to regulate the temperature of the air inside the passenger compartment. Rotating the knob counterclockwise, from top center into the blue area of the scale, indicates cooler temperatures. Rotating the knob clockwise, into the red area, indicates warmer temperatures.
	**Blower Control** There are seven blower speeds. Use this control to regulate the amount of air forced through the system in any mode you select. The blower speed increases as you move the control clockwise from the off position.
	**Modes Control** Turn the knob to adjust airflow distribution. The airflow distribution mode can be adjusted so air comes from the instrument panel outlets, floor outlets, defrost outlets and demist outlets.
Panel Mode 	**Panel Mode** Air comes from the outlets in the instrument panel. Each of these outlets can be individually adjusted to direct the flow of air. The air vanes of the center outlets and outboard outlets can be moved up and down or side to side to regulate airflow direction.

Icon	Description
Bi-Level Mode 	**Bi-Level Mode** Air comes from the instrument panel outlets and floor outlets. A slight amount of air is directed through the defrost and side window demister outlets. **NOTE:** Bi-Level mode is designed under comfort conditions to provide cooler air out of the panel outlets and warmer air from the floor outlets.
Floor Mode 	**Floor Mode** Air comes from the floor outlets. A slight amount of air is directed through the defrost and side window demister outlets.
Mix Mode 	**Mix Mode** Air is directed through the floor, defrost, and side window demister outlets. This setting works best in cold or snowy conditions that require extra heat to the windshield. This setting is good for maintaining comfort while reducing moisture on the windshield.
	**Front Defrost Mode** Turn the Knob to the Front Defrost position. Air comes from the windshield and side window demist outlets. Use Defrost mode with maximum temperature settings for best windshield and side window defrosting and defogging.

Automatic Climate Controls Overview

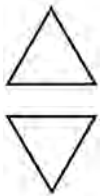
The Climate Control System allows you to regulate the temperature, air flow, and direction of air circulating throughout the vehicle. The controls are located on the instrument panel below the radio.

Uconnect 4 With 7–inch Display Automatic Climate Controls

Uconnect 4C/4C NAV With 8.4–inch Display Automatic Climate Controls

Automatic Control Descriptions

Icon	Description
MAX A/C	**MAX A/C Button** Press to change to the coldest setting, the indicator illuminates when MAX A/C is on. Pressing the button again causes the MAX A/C operation to switch into manual mode and the MAX A/C indicator turns off.
A/C	**A/C Button** Press and release to change the current setting. The indicator illuminates when A/C is on.
	**Recirculation Button** Press and release this button on the touchscreen, or push the button on the faceplate, to change the system between recirculation mode and outside air mode. Recirculation can be used when outside conditions, such as smoke, odors, dust, or high humidity are present. Recirculation can be used in all modes. The A/C can be deselected manually without disturbing the mode control selection. Continuous use of the Recirculation mode may make the inside air stuffy and window fogging may occur. Extended use of this mode is not recommended. The A/C can be deselected manually without disturbing the mode control selection.
AUTO	**AUTO Button** Automatically controls the interior cabin temperature by adjusting airflow distribution and amount. Toggling this function will cause the system to switch between manual mode and automatic modes. Refer to “Automatic Operation” for more information.

Icon	Description
	**Front Defrost Button** The Front Defrost button changes the current airflow setting to Defrost mode. The indicator illuminates when this feature is on. Air comes from the windshield and side window demist outlets. When the defrost button is selected, the blower level may increase. Use Defrost mode with maximum temperature settings for best windshield and side window defrosting and defogging. When toggling the front defrost mode button, the climate system will return to previous setting.
	**Rear Defrost Button** The Rear Defrost Control button turns on the rear window defroster and the heated outside mirrors (if equipped). An indicator will illuminate when the rear window defroster is on. The rear window defroster automatically turns off after a short period of time.
	**Driver And Passenger Temperature Up And Down Buttons** Provides the driver and passenger with independent temperature control. Push the red button on the faceplate or touchscreen or press and slide the temperature bar towards the red arrow button on the touchscreen for warmer temperature settings. Push the blue button on the faceplate or touchscreen or press and slide the temperature bar towards the blue arrow button on the touchscreen for cooler temperature settings.
SYNC	**SYNC Button** Press the SYNC button on the touchscreen to toggle the SYNC feature on/off. The SYNC indicator is illuminated when this feature is enabled. SYNC is used to synchronize the passenger temperature setting with the driver temperature setting. Changing the passenger's temperature setting while in SYNC will automatically exit this feature.

Icon	Description
Faceplate Knob  **Touchscreen Buttons** 	**Blower Control** Blower Control is used to regulate the amount of air forced through the climate system. There are seven blower speeds available. The speeds can be selected using either the blower control knob on the faceplate or the buttons on the touchscreen. • **Faceplate:** The blower speed increases as you turn the blower control knob clockwise from the lowest blower setting. The blower speed decreases as you turn the blower control knob counterclockwise. • **Touchscreen:** Use the small blower icon to reduce the blower setting and the large blower icon to increase the blower setting. The blower can also be selected by pressing the blower bar area between the icons.
 	**Modes Control** Press the button to adjust airflow distribution. The airflow distribution mode can be adjusted so air comes from the instrument panel outlets, floor outlets, defrost outlets and demist outlets.
Panel Mode 	**Panel Mode** Air comes from the outlets in the instrument panel. Each of these outlets can be individually adjusted to direct the flow of air. The air vanes of the center outlets and outboard outlets can be moved up and down or side to side to regulate airflow direction. There is a shut off wheel located below the air vanes to shut off or adjust the amount of airflow from these outlets.

Icon	Description
Bi-Level Mode 	**Bi-Level Mode** Air comes from the instrument panel outlets and floor outlets. A slight amount of air is directed through the defrost and side window demister outlets. **NOTE:** Bi-Level mode is designed under comfort conditions to provide cooler air out of the panel outlets and warmer air from the floor outlets.
Floor Mode 	**Floor Mode** Air comes from the floor outlets. A slight amount of air is directed through the defrost and side window demister outlets.
Mix Mode 	**Mix Mode** Air is directed through the floor, defrost, and side window demister outlets. This setting works best in cold or snowy conditions that require extra heat to the windshield. This setting is good for maintaining comfort while reducing moisture on the windshield.
OFF	**Climate Control OFF Button** This button turns the Climate Control System off.

CAUTION!

Failure to follow these cautions can cause damage to the heating elements:

- **Use care when washing the inside of the rear window. Do not use abrasive window cleaners on the interior surface of the window. Use a soft cloth and a mild washing solution, wiping parallel to the heating elements. Labels can be peeled off after soaking with warm water.**
- **Do not use scrapers, sharp instruments, or abrasive window cleaners on the interior surface of the window.**
- **Keep all objects a safe distance from the window.**

Climate Control Functions

Air Conditioning (A/C)

The Air Conditioning (A/C) button allows the operator to turn the air conditioning system on and off. When the system is turned on, cool dehumidified air flows through the vents into the cabin.

For improved fuel economy, press the A/C button to turn off the air conditioning off and adjust the blower and airflow mode settings. Make sure to only select Panel, Bi-Level, or Floor modes.

NOTE:

- If fog or mist appears on the windshield or windows, select Defrost mode and increase the blower speed.
- If the air conditioning performance is lower than expected, there may a blockage. Gently clean the area around the radiator with water.

MAX A/C

The MAX A/C setting provides the maximum cooling performance.

Press the button to toggle between MAX A/C and your prior setting. The button illuminates when MAX A/C is on.

In the MAX A/C setting, you can adjust the blower level and mode position. Pressing other settings causes the MAX A/C operation to switch to your desired setting.

Recirculation

The Recirculation button helps remove smoke, odors, or high humidity from the cabin.

The indicator illuminates when Recirculation mode is on. Press the button again to turn it off.

NOTE: Using Recirculation in cold weather may cause the windows to fog up and this mode may be unavailable on the touchscreen.

Automatic Temperature Control (ATC) — If Equipped

Automatic Operation

1. Push the AUTO button on the faceplate, or the AUTO button on the touchscreen on the Automatic Temperature Control (ATC) Panel.
2. Next, adjust the temperature you would like the system to maintain by adjusting the driver and passenger temperature control buttons. Once the desired temperature is displayed, the system will achieve and automatically maintain that comfort level.
3. When the system is set up for your comfort level, it is not necessary to change the settings. You will experience the greatest efficiency by simply allowing the system to function automatically.

NOTE:

- It is not necessary to move the temperature settings for cold or hot vehicles. The system automatically adjusts the temperature, mode, and blower speed to provide comfort as quickly as possible.
- The temperature can be displayed in U.S. or Metric units by selecting the US/Metric customer-programmable feature. Refer to the “Uconnect Settings” in “Multimedia” for further information.

To provide you with maximum comfort in the Automatic mode during cold start-ups, the blower fan will remain on low until the engine warms up. The blower will increase in speed and transition into Auto mode.

Manual Operation Override

This system offers a full complement of manual override features. The AUTO symbol in the front ATC display will be turned off when the system is being used in the manual mode.

Operating Tips

NOTE: Refer to the chart at the end of this section for suggested control settings for various weather conditions.

Summer Operation

The engine cooling system must be protected with a high-quality antifreeze coolant to provide proper corrosion protection and to protect against engine overheating. OAT coolant (conforming to MS.90032) is recommended.

Winter Operation

To ensure the best possible heater and defroster performance, make sure the engine cooling system is functioning properly and the proper amount, type, and concentration of coolant is used. Use of the Air Recirculation mode during Winter months is not recommended, because it may cause window fogging.

Vacation/Storage

Before you store your vehicle, or keep it out of service (i.e., vacation) for two weeks or more, run the air conditioning system at idle for about five minutes, in fresh air with the blower setting on high. This will ensure adequate system lubrication to minimize the possibility of compressor damage when the system is started again.

Window Fogging

Vehicle windows tend to fog on the inside in mild, rainy, and/or humid weather. To clear the windows, select Defrost or Mix mode and increase the front blower speed. Do not use the Recirculation mode without A/C for long periods, as fogging may occur.

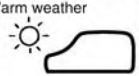
Outside Air Intake

Make sure the air intake, located directly in front of the windshield, is free of obstructions, such as leaves. Leaves collected in the air intake may reduce airflow, and if they enter the plenum, they could plug the water drains. In Winter months, make sure the air intake is clear of ice, slush, and snow.

Cabin Air Filter

The climate control system filters out dust and pollen from the air. Contact an authorized dealer to service your cabin air filter, and to have it replaced when needed.

Operating Tips Chart

WEATHER	CONTROL SETTINGS
Hot weather and vehicle interior is very hot 	Set the mode control to , on, and blower on high. Roll down the windows for a minute to flush out the hot air. Once comfort is achieved adjust controls for comfort.
Warm weather 	Turn on and set the mode control to the position.
Cool Sunny	Operate in position.
Cool & Humid conditions 	Set the mode control to and turn on to keep windows clear.
Cold Weather	Set the mode control to the position. If windshield fogging starts to occur, move the control towards the position.

8000cb71

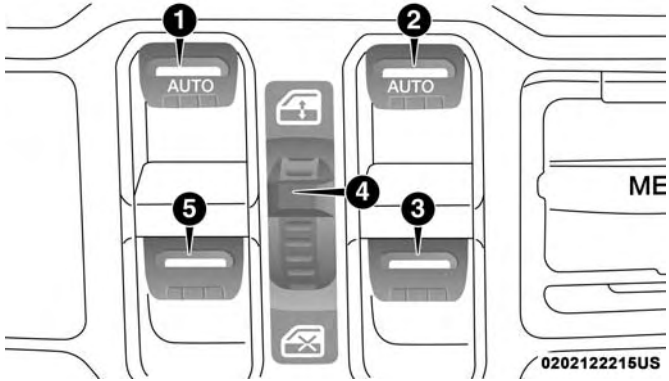
POWER WINDOWS — IF EQUIPPED

The power window switches are located on the instrument panel below the climate controls. Push the switch downward to open the window and upward to close the window.

The top left switch controls the left front window and the top right switch controls the right front window.

WARNING!

Never leave children unattended in a vehicle, and do not let children play with power windows. Do not leave the key fob in or near the vehicle, or in a location accessible to children. Occupants, particularly unattended children, can become entrapped by the windows while operating the power window switches. Such entrapment may result in serious injury or death.



Power Window Switches

1 — Driver Side Front Window Switch
2 — Passenger Side Front Window Switch
3 — Passenger Side Rear Window Switch
4 — Window Lockout Switch
5 — Driver Side Rear Window Switch

NOTE:

- The power window switches will remain active for up to 10 minutes after ignition is switched to the OFF position. Opening either front door will cancel this feature.

Four-Door Models

The lower left switch controls the left rear passenger window, and the lower right switch controls the right rear passenger window.

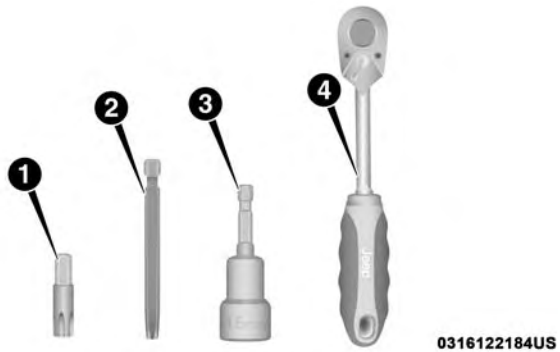
Wind Buffeting

Wind buffeting can be described as the perception of pressure on the ears or a helicopter-type sound in the ears. Your vehicle may exhibit wind buffeting with the windows down in certain open or partially open positions. This is a normal occurrence and can be minimized by adjusting the window opening.

DUAL TOP FOUR DOOR MODELS — IF EQUIPPED

If your vehicle is equipped with a Dual Top, the soft top system will be provided in a separate box located in the rear of the vehicle for shipping purposes only. **The soft top and the hard top are to be used independently.** Your vehicle warranty will not cover damage resulting from both tops being installed at the same time.

For your convenience, a tool kit is provided with your vehicle located in the center console. This kit includes the necessary tools required for the operations described in the following sections. All pieces fit into the ratchet for easy use.

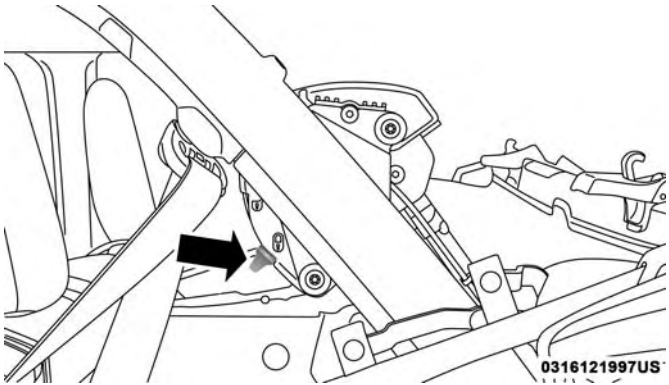


Provided Tools

1 — #50 Torx Head Driver
2 — #40 Torx Head Driver
3 — 15mm Socket
4 — Ratchet

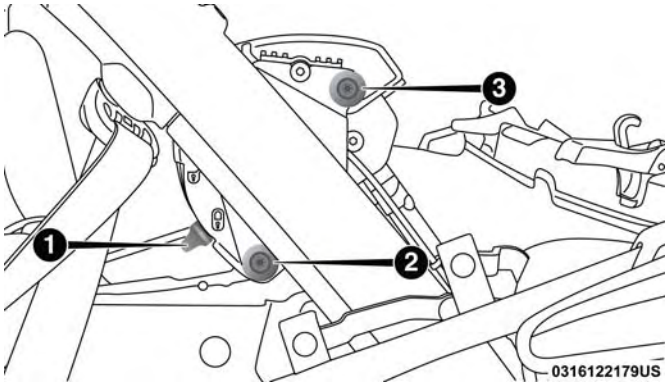
Removing The Soft Top — Four Door Models

1. Fully lower the soft top. Refer to "Soft Top — Four Door Models" in this section.
2. Make sure the lift assist mechanism on both the driver's and passenger's sides are in the "lock" position before removing.



Lock Position

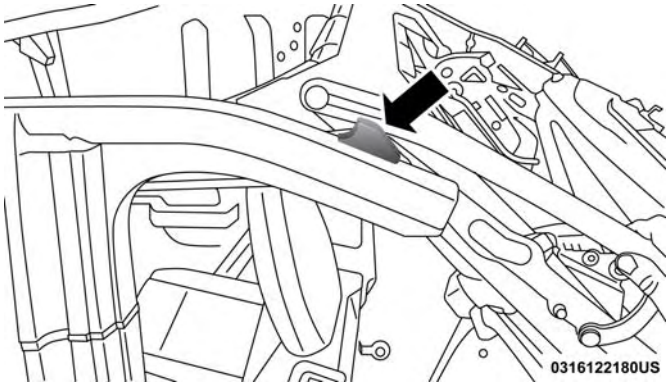
3. Using the provided #40 Torx head driver and ratchet, unscrew the two Torx head screws on each lift assist mechanism, then lift the mechanism up and away from the vehicle.



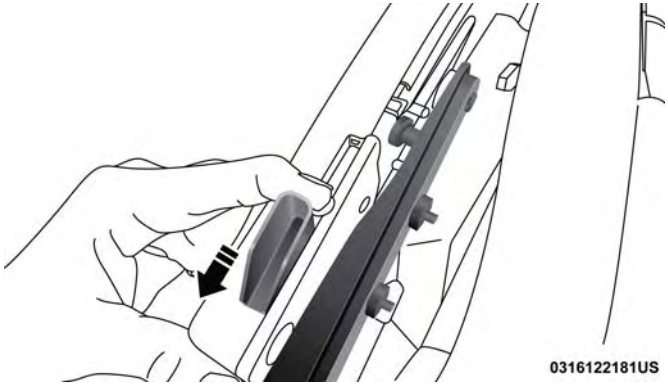
Lift Assist Mechanism

1 — Lock Position
2 — Torx Head Screw
3 — Torx Head Screw

4. Pull the release lever on top of the rail rearward to release the side link from the track.



Release Lever Location

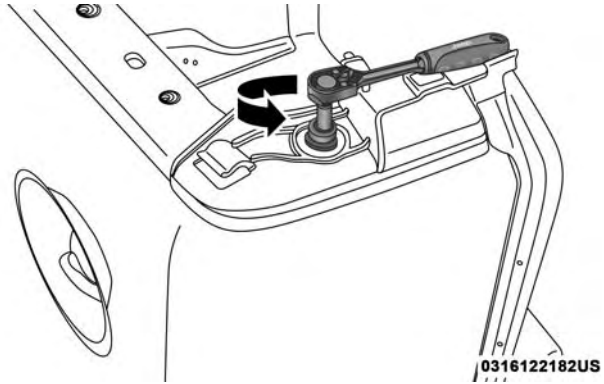


Pull To Release Top From Track

5. Repeat on the opposite side.
6. Remove the soft top from the vehicle and store in a clean, dry location (another person may be needed to help with this operation).

NOTE: If you are doing this alone, use one arm to hold the bundle up, the other to remove the brackets.

7. Using the provided #50 Torx head driver and ratchet, unscrew the Torx screw on both rear corners of the vehicle, removing the retainers.



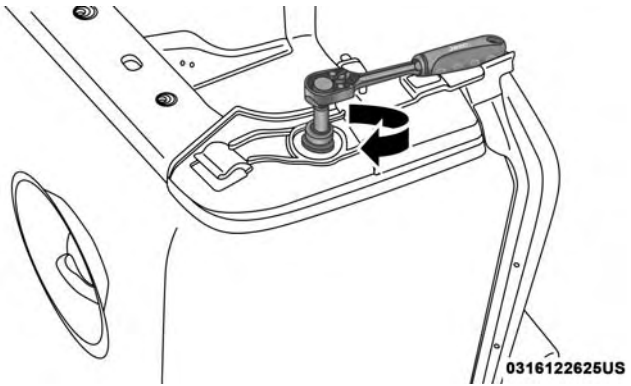
Remove Rear Retainers

Installing The Soft Top — Four Door Models

NOTE: The following procedures are for first time set up only. For future soft top procedures, refer to "Soft Top" in this section.

1. Locate and remove the following items prior to hard top removal:
   - Right and left side door frames
   - Eight door frame attachment Torx head screws
   - Right and left side quarter windows
   - Rear window
   - Swing gate bar
2. Remove the hard top. Refer to "Rear Hard Top Removal" in this section.
3. Install the door frames. Refer to "Door Frame Installation — Four Door Models" in this section.

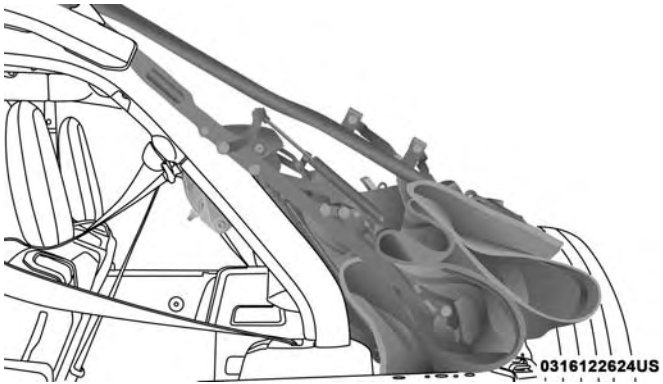
4. Install the rear retainers on each side of the rear of the vehicle using the provided #50 Torx head driver and ratchet. Refer to the table below for recommended torque specifications.



Installing Rear Retainers

Torque Specification For Torx Screw	Maximum	Minimum
119.5 In-lbs	150.5 In-lbs	106.2 In-lbs
13.5 N·m	17.0 N·m	12.0 N·m

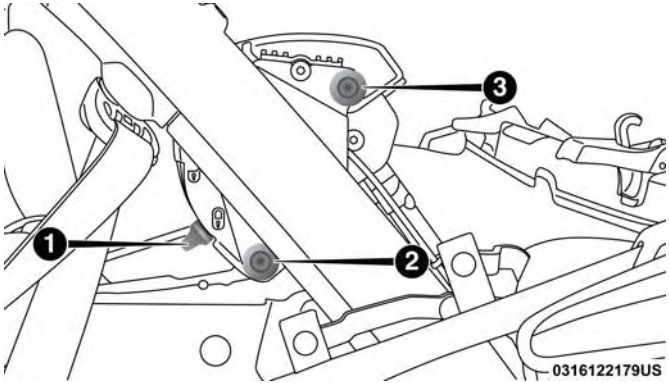
5. Making sure the lift assist mechanism is in the "lock" position, lift the soft top into the rear of the vehicle with the side links pointing toward the front. Lower the lift assist mechanisms onto its retainers on both sides (on the inside of the sport bar).



Soft Top In Place

NOTE: If you are doing this alone, use one arm to hold the soft top up, the other to align the brackets.

6. Using the provided #40 Torx head driver and ratchet, tighten the Torx screws by turning them clockwise. Secure them until they are snug (refer to the table below for recommended torque specifications), being careful not to cross-thread the screws or overtighten. Repeat on the opposite side.



Lift Assist Mechanism In Place

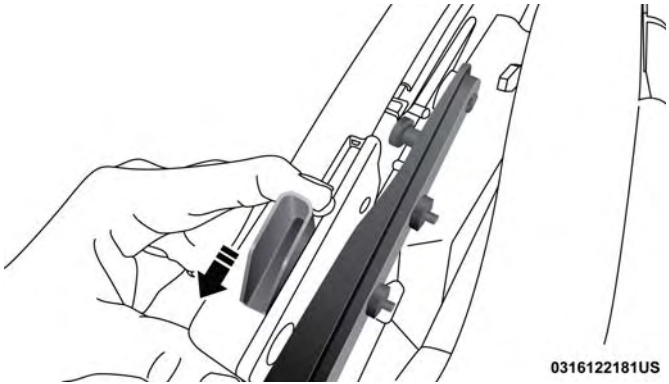
1 — Lock Position
2 — Torx Head Screw
3 — Torx Head Screw

Torque Specification For Torx Screws	Maximum	Minimum
119.5 In-lbs	150.5 In-lbs	106.2 In-lbs
13.5 N·m	17.0 N·m	12.0 N·m

CAUTION!

Do not overtighten the screws. You can strip the screws if they are overtightened.

7. While pulling the release lever on the top of the rail rearward, place the side link into the guide track on the top of the rail then release the lever.



Step Seven

8. Unsnap and remove the black boot cover. This cover should be discarded. It was intended as a protective cover for shipping only.

NOTE: A visual instruction sheet is enclosed in the dual top wrap.

9. Raise the soft top. Refer to "Raising The Soft Top" in this section.

NOTE: Be sure the wire harness in the left rear corner is not tangled in the soft top bows before you lift the top.

FREEDOM TOP THREE-PIECE MODULAR HARD TOP — IF EQUIPPED

CAUTION!

- **The hard top is not designed to carry any additional loads such as roof racks, spare tires, building, hunting, or camping supplies, and/or luggage, etc. Also, it was not designed as a structural member of the vehicle, and thus cannot properly carry any additional loads other than environmental (rain, snow, etc.).**
- **Do not move your vehicle until the top has been either fully attached to the front header, sport bar, and body side or fully removed.**

Failure to follow these cautions may cause interior water damage, stains or mildew:

- **It is recommended that the top be free of water prior to panel removal. Removing the top, opening a door or lowering a window while the top is wet may allow water to drip into the vehicle's interior.**

(Continued)

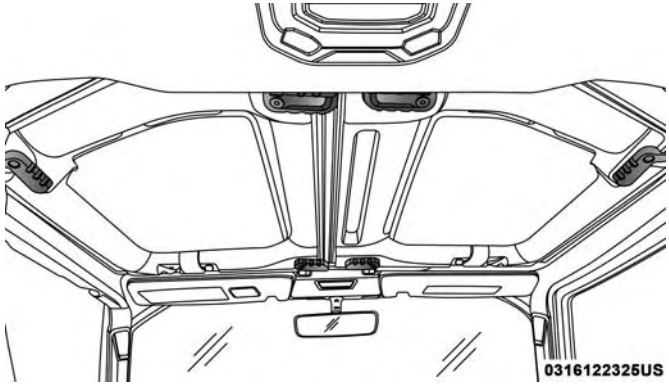
CAUTION! *(Continued)*

- **The hard top assembly must be positioned properly to ensure sealing. Improper installation can cause water to leak into the vehicle's interior.**
- **Careless handling and storage of the removable roof panels may damage the seals, causing water to leak into the vehicle's interior.**
- **The front panel(s) must be positioned properly to ensure sealing. Improper installation can cause water to leak into the vehicle's interior.**

Front Panel(s) Removal

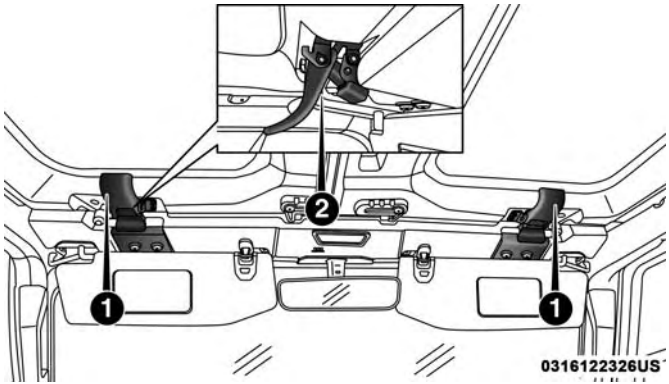
NOTE: The driver's side panel must be removed before removing the passenger's side panel.

1. Fold down the sun visor against the windshield.
2. Turn the three L-shaped locks on the driver's side panel (one at the front, the rear, and outside), unlocking them from the roof.



Roof Panel Lock Locations

3. Unlatch the driver's side header panel latch located at the top of the windshield.



Header Panel Latch Locations

1 — Header Panel Latches
2 — Unlatched Position

4. Remove the driver's side panel.
5. Repeat the steps above to remove the passenger's side panel.

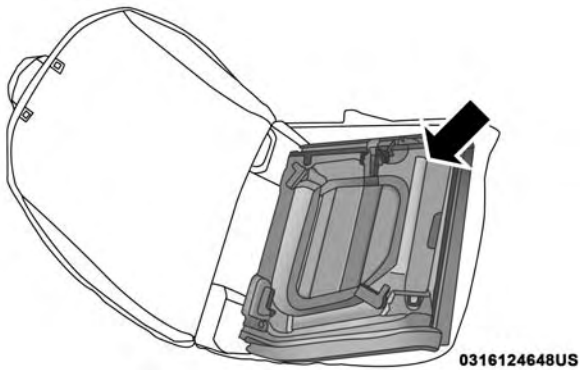
Freedom Top Storage Bag

Vehicles equipped with a Freedom Top Modular Hard Top, come with a Freedom Top storage bag that allows you to store your Freedom Top panels. The storage bag contains two compartments and fits behind the rear seat.

Lay the Freedom bag down so the loops and hooks are facing upward. Unzip the bag and fold back the outer flap.

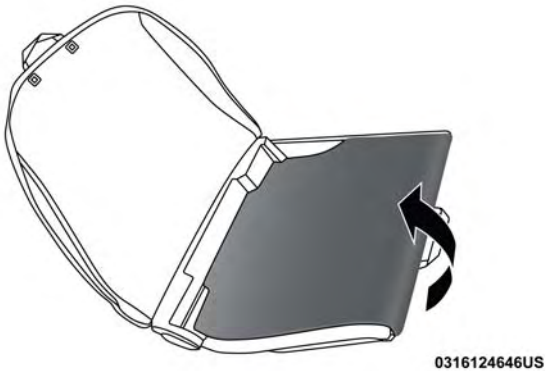
NOTE: Ensure the front Freedom Top panel latch is closed prior to inserting the panel into the Freedom bag.

1. Insert the left side Freedom panel into the bag with the latches facing upward.



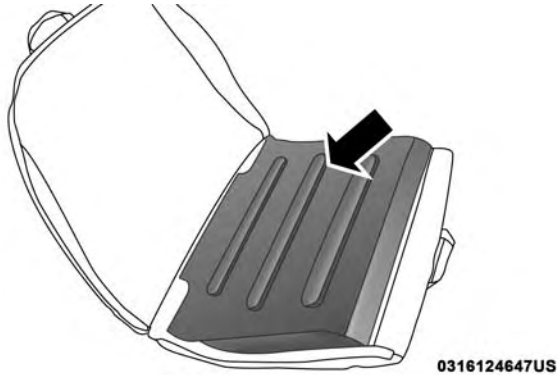
Left Panel — Latches Facing Upward

2. Unfold the black panel divider (ensure the divider is laying flat).



Fold Divider Over Left Panel

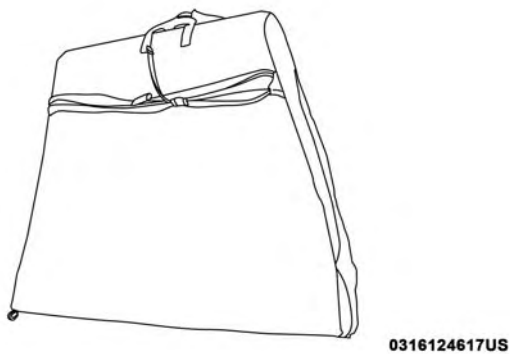
3. Insert the right side Freedom panel into the bag with the latches facing downward.



Right Panel — Latches Facing Downward

NOTE: Ensure the front Freedom panel latch is closed prior to inserting the panel into the bag.

4. Unfold the outer flap and zip the Freedom bag closed.



Storage Bag Closed

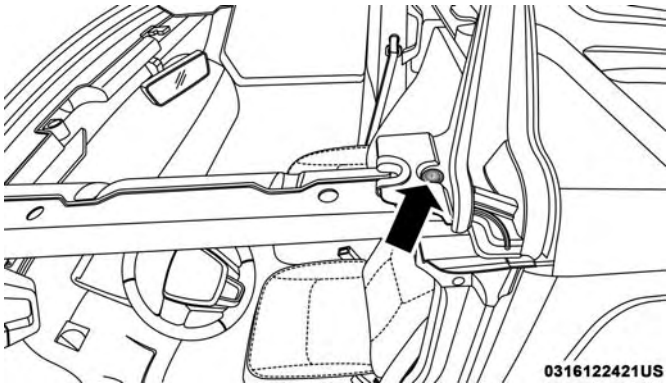
5. Lift the Freedom bag into the vehicle with the hooks and straps facing the back of the rear seat. Attach the clip at the bottom of the bag to the child restraint anchorage, located at the base of the rear seat.
6. Wrap the upper strap around the rear head restraints and loop the strap through the buckle. Pull on the strap to tighten the Freedom bag securely against the rear seat.

Front Panel(s) Installation

1. Set the passenger side panel on the windshield frame with the locating pin in the front receiver mounting hole followed by the driver's side panel, making sure there is no overhang. Also, make sure that the panels are sitting flush with the body.
2. Reinstall the panel(s) using the same steps for removal in reverse order.

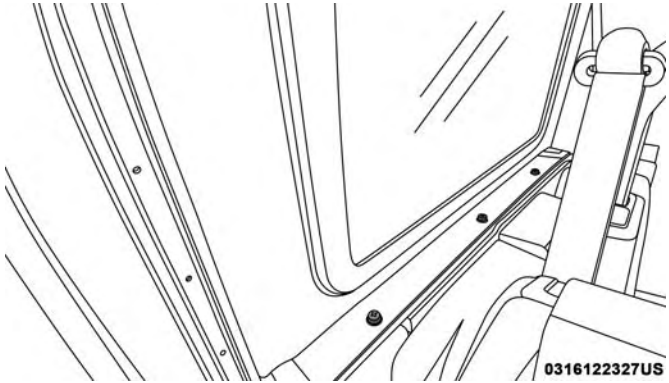
Rear Hard Top Removal

1. Remove both front panels. Refer to “Front Panel(s) Removal” in this section.
2. Open both doors.
3. Using the provided #50 Torx head driver and ratchet, remove the two Torx head screws that secure the hard top at the B-pillar (near the top of the front door).



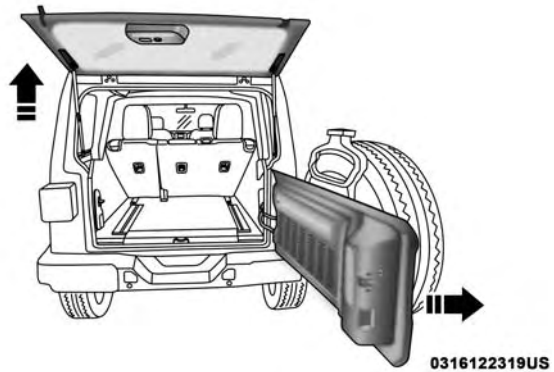
Step Three

4. Remove the six Torx head screws that secure the hard top to the vehicle (along the interior bodyside — three screws on each side) using the #50 Torx head driver.



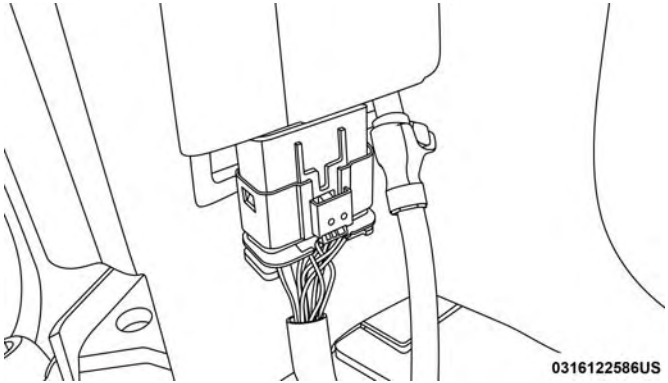
Step Four

5. Open the swing gate all the way to ensure clearance of the rear window glass. Lift the rear window glass.



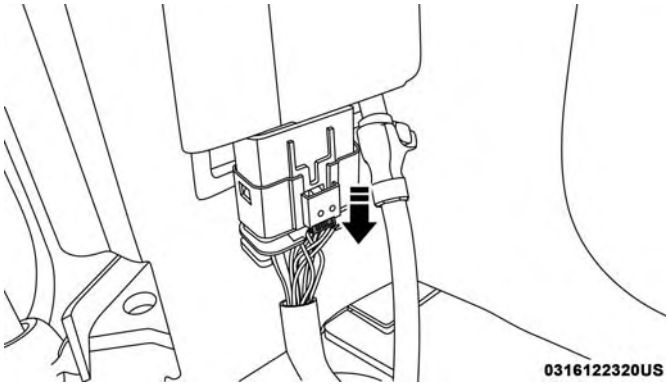
Step Five

6. Locate the wire harness and washer hose on the left rear inside corner of the vehicle.



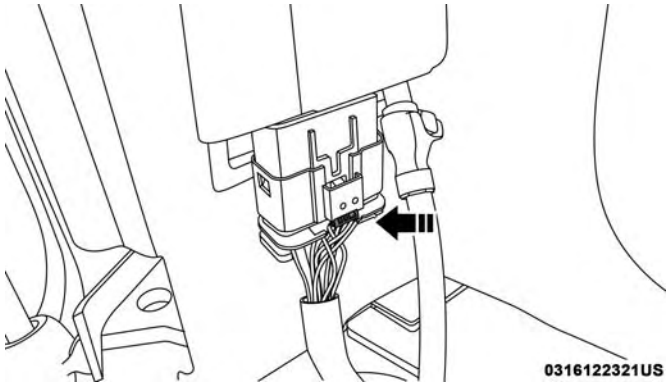
Wire Harness

7. Release the locking tab by pushing it downward.

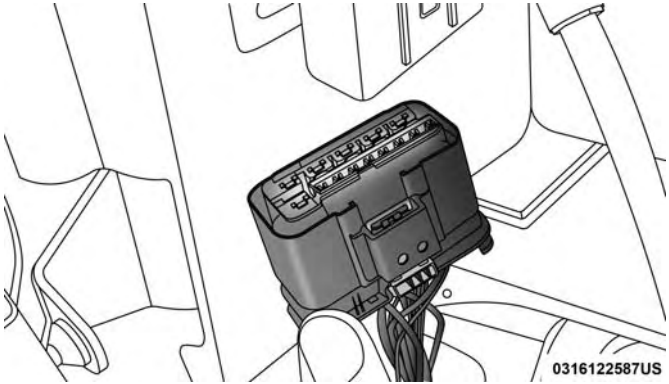


Push Locking Tab Downward

8. To remove the wiring harness, push the tab inward while pulling downward to disconnect.

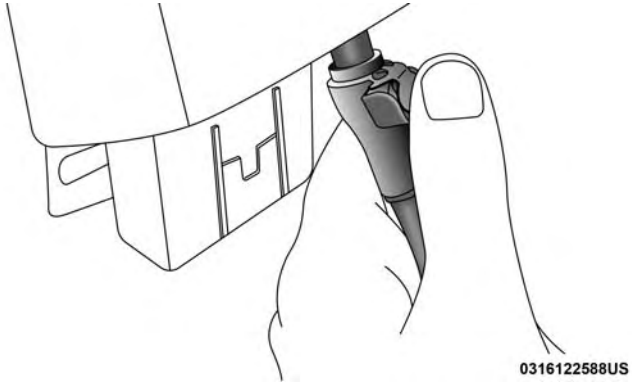


Push Tab Inward



Pull Wiring Harness To Separate

9. To remove the washer hose, push the release button on hose connector, and pull downward.



Release Button On Hose

10. Lower the rear window, and close the swing gate.
11. Remove the hard top from the vehicle. Place the hard top on a soft surface to prevent damage.

CAUTION!
The removal of the Freedom Top requires four adults located on each corner. Failure to follow this caution could damage the Freedom Top.

Rear Hard Top Installation

NOTE: If the door frames are installed from soft top usage, they must be removed prior to installation of the hard top. Refer to "Door Frame" in this section for installation procedures.

1. Inspect the hard top seals for damage and replace if necessary.
2. Install the hard top using the same steps for removal in reverse order.

Make sure that the hard top is sitting flush with the body at the sides and check to ensure that there is a uniform gap between the lift glass and hard top.

NOTE:

- The Torx fasteners that attach the hard top to the body should be torqued to 88 in lb +/- 22 in lb (10 N·m +/- 2.5 N·m) using the provided #50 Torx head driver and ratchet.

DOOR FRAME

WARNING!

- **Do not drive your vehicle on public roads with the door frame(s) removed as you will lose the protection that they can provide. This procedure is furnished for use during off-road operation only.**
- **Do not drive your vehicle on public roads with the doors removed as you will lose the protection that they can provide. This procedure is furnished for use during off-road operation only.**

CAUTION!

Failure to follow these cautions may cause interior water damage, stains or mildew:

- **Opening a door or lowering a window while the top is wet may allow water to drip into the vehicle's interior.**
- **Careless handling and storage of the removable door frame(s) may damage the seals, causing water to leak into the vehicle's interior.**

(Continued)

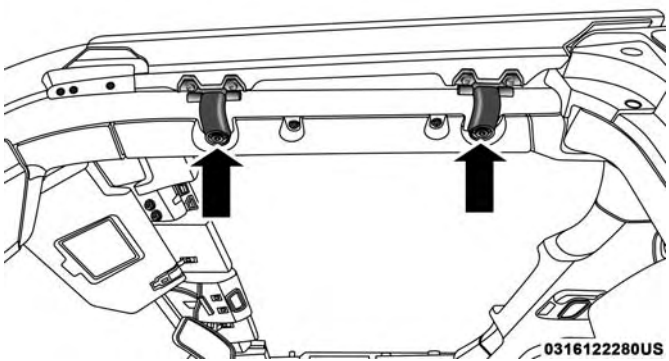
CAUTION! *(Continued)*

- **The door frame(s) must be positioned properly to ensure sealing. Improper installation can cause water to leak into the vehicle's interior.**

Door Frame Removal

NOTE: In four door models, the rear door frames must be removed first, followed by the front door frames.

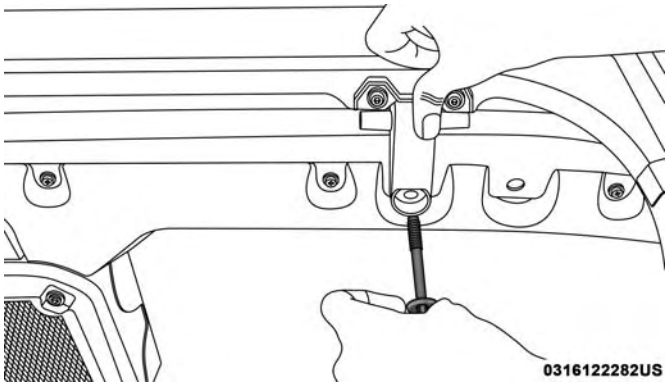
1. Using the provided #40 Torx head driver and ratchet, loosen the Torx screws located on the underside of each door frame (two per door).



Door Frame Screw Locations

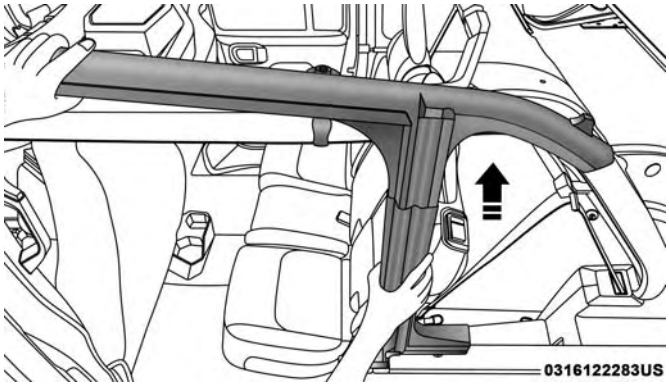
2. Once all the way loosened, remove the screws by pulling downward.

NOTE: Screws will not fall out once completely loose, as they are held in place by an internal mechanism.



Remove Screws From Below Frame

3. Lift the frame upward, removing it from the vehicle.



Step Three

4. Store screws in a secure location.
5. Repeat procedure on the front door frame (four door models).

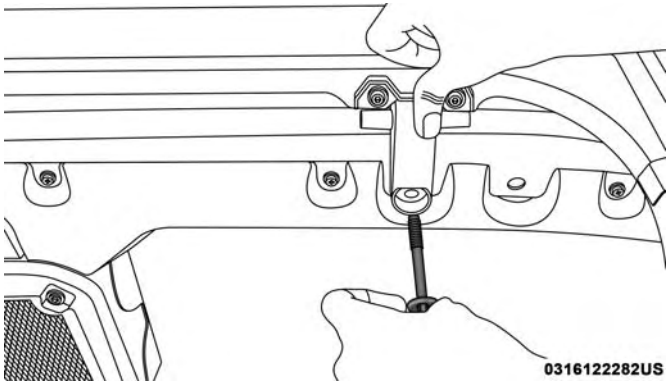
WARNING!

- **Do not drive your vehicle on public roads with the door frame(s) removed as you will lose the protection that they can provide. This procedure is furnished for use during off-road operation only.**
- **Do not drive your vehicle on public roads with the doors removed as you will lose the protection that they can provide. This procedure is furnished for use during off-road operation only.**

Door Frame Installation Four Door Models — If Equipped

1. Install the front door rail first.
2. Carefully place the front door rail in the rubber seal at the top of the windshield, and line up the holes for the Torx head screws (two for each door).

3. Swing the frame bracket around the side of the rail, and insert the screws from underneath. Tighten with #40 Torx head driver until they are snug, being careful not to cross-thread the screws or overtighten.

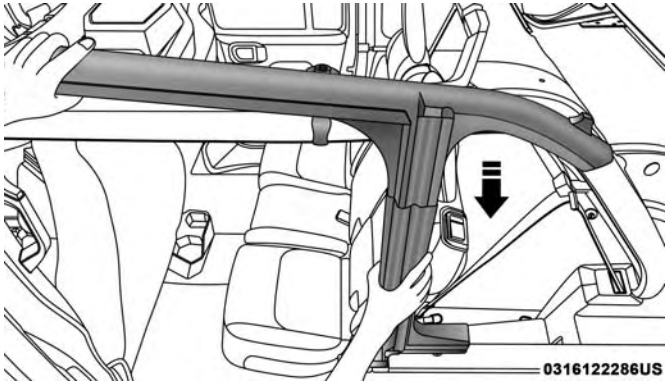


Step Three

CAUTION!

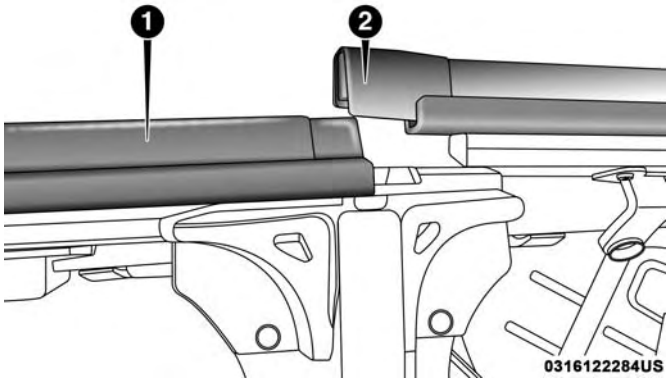
Do not overtighten the screws. You can strip the screws if they are overtightened.

4. Set the rear door frame pin into the hole on top of the body side, just behind the rear door opening.



Step Four

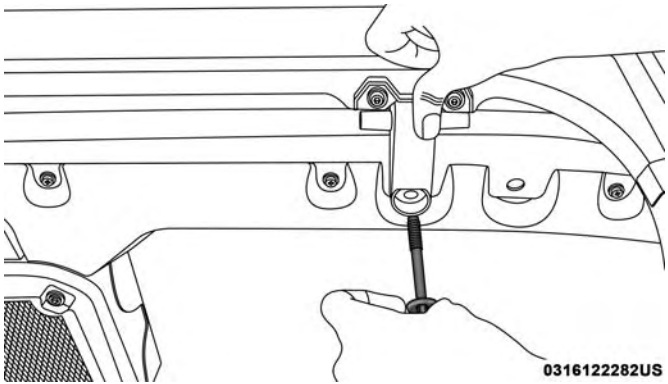
5. Carefully position the top of the door frame onto the rear of the front door rail, making sure rubber seals lay flat. Ensure the seals are installed correctly to avoid water leaks.



Position Of Frame Above Door

1 — Front Door Rail
2 — Rear Door Frame

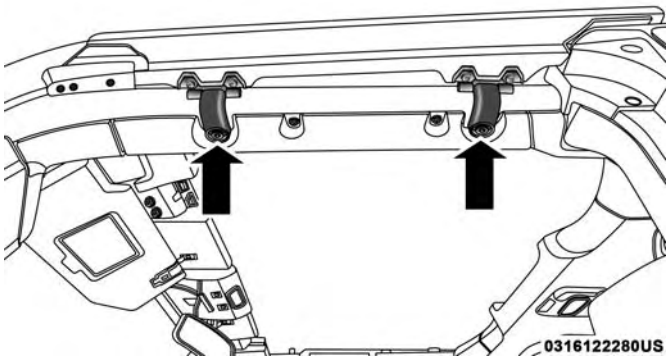
6. Swing the frame bracket around the side of the rail, and insert the screws from underneath. Tighten with #40 Torx head driver until they are snug, being careful not to cross-thread the screws or overtighten.



Step Six

Door Frame Installation Two Door Models — If Equipped

1. Carefully place the front door rail in the rubber seal at the top of the windshield, and line up the holes for the Torx head screws (two for each door).
2. Swing the frame bracket around the side of the rail, and insert the screws from underneath. Tighten with #40 Torx head driver until they are snug, being careful not to cross-thread the screws or overtighten.



Step Two

CAUTION!

Do not overtighten the screws. You can strip the screws if they are overtightened.

SOFT TOP TWO DOOR MODELS — IF EQUIPPED

WARNING!

- **Do not drive the vehicle with the rear window up/removed unless the quarter windows are also removed. Dangerous exhaust gases could enter the vehicle causing harm to the driver and passengers.**
- **The fabric quarter windows and fabric top are designed only for protection against the elements. Do not rely on them to contain occupants within the vehicle or to protect against injury during an accident. Remember, always wear seat belts.**
- **Make sure hands and fingers are clear of all pinch points when installing and removing the soft tops. The lift assist mechanism and side bows may cause serious injury if fingers or hands get caught in between.**

CAUTION!

The soft top is not designed to carry any additional loads such as roof racks, spare tires, building, hunting, or camping supplies, and/or luggage, etc. Also, it was not designed as a structural member of the vehicle and, thus, cannot properly carry any additional loads other than environmental (rain, snow, etc.).

If the temperature is below 72°F (24°C) and/or the top has been folded down for a period of time, the top will appear to have shrunk when you raise it, making it difficult to put up. This is caused by a natural contraction of the vinyl coating on the fabric top.

Place the vehicle in a warm area. Pull steadily on the top fabric. The vinyl will stretch back to its original size and the top can then be installed. **If the temperature is 41°F (5°C) or below, do not attempt to put the top down or roll the rear or side curtains.**

CAUTION!

- **Do not run a fabric top through an automatic car wash. Window scratches and wax build up may result.**
- **Do not lower the top when the temperature is below 41°F (5°C). Damage to the top may result.**
- **Do not move your vehicle until the top has been either fully attached to the windshield frame, or fully lowered.**
- **Do not lower the top with the windows installed. Window and top damage may occur.**
- **Refer to "Appearance Care For Fabric Top Models" in "Bodywork" in "Servicing And Maintenance" for further information. It contains important information on cleaning and caring for your vehicle's fabric top.**
- **Do not use any tools (screwdrivers, etc.) to pry or force any of the clamps, clips, or retainers securing the soft top. Do not force or pry the soft top framework when opening or closing. Damage to the top may result.**

Failure to follow these cautions may cause interior water damage, stains or mildew on the top material:

- **It is recommended that the top be free of water prior to opening it. Operating the top, opening a door or**

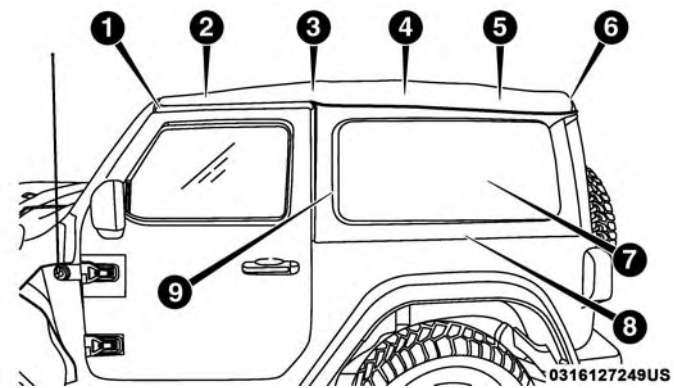
(Continued)

CAUTION! ***(Continued)***

lowering a window while the top is wet may allow water to drip into the vehicle's interior.

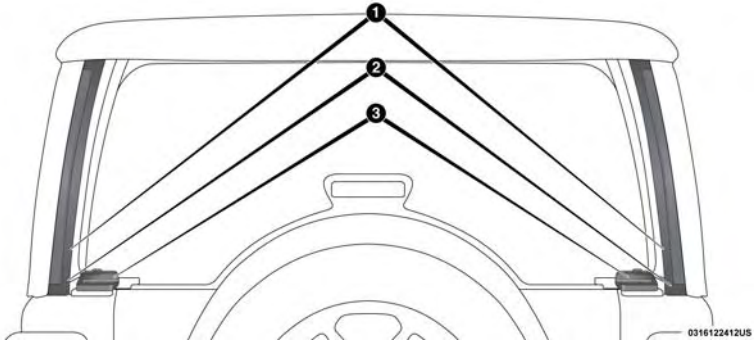
- **Careless handling and storage of the soft top may damage the seals, causing water to leak into the vehicle's interior.**
- **The soft top must be positioned properly to ensure sealing. Improper installation can cause water to leak into the vehicle's interior.**

Lowering The Soft Top



Side View Top And Components

1 — #1 Bow
2 — #2 Bow
3 — #3 Bow
4 — #4 Bow
5 — #5 Bow
6 — #6 Bow
7 — Rear Quarter Window
8 — Lower Window Retainer
9 — Front Window Retainer



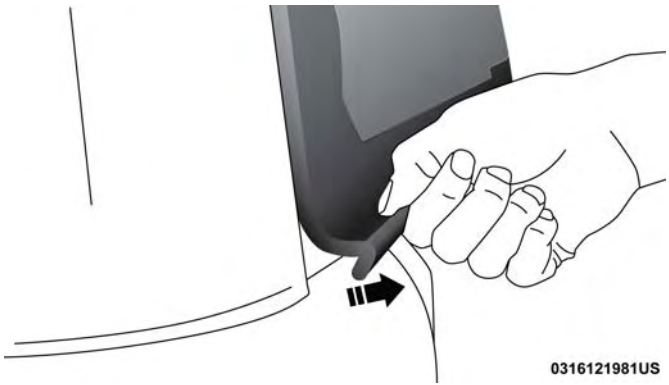
Rear View Top And Components

1 — Rear Window Retainer Attachment Points
2 — Quarter Window Pillars
3 — Swing Gate Bar Retainers

NOTE: The rear window and rear quarter windows **must** be removed before lowering the soft top to prevent damage to the top. Clean the side and rear windows before removal to assist in preventing scratching during removal of the soft top. If the plastic retainers are difficult to operate due to road dust, etc., clean them with a mild soap solution and a small brush. Cleaning products are available through an authorized dealer.

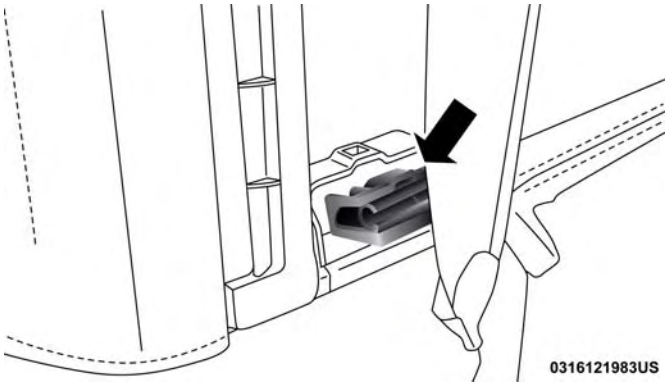
Remove The Rear Window:

1. With the swing gate open, remove the rear window's plastic retainers from the lower right and left corners.



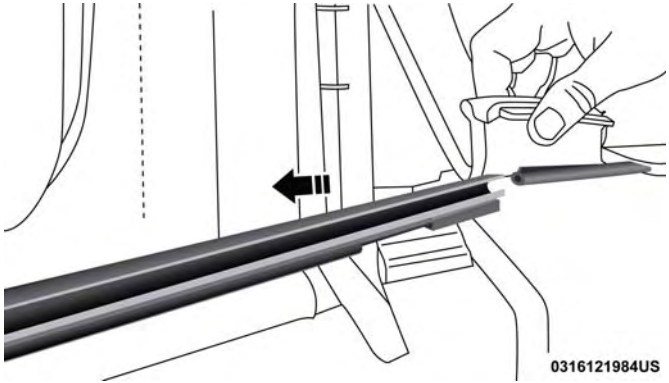
Step One

2. Grasp the swing gate bar, rotate it outward and upward releasing it from both the right and left retainers.



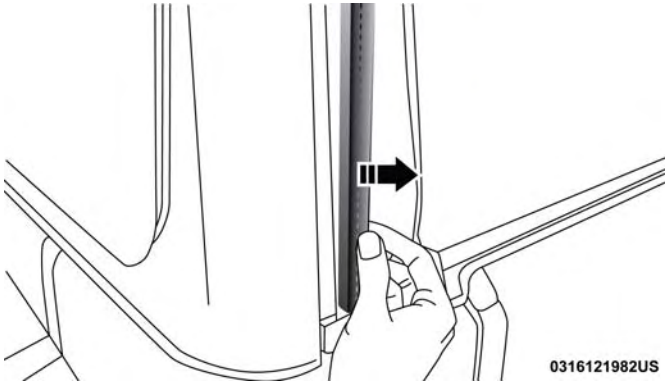
Step Two (Left Side Shown)

3. While holding the window in place, slide the tailgate bar to the left separating it from the rear window. Store in soft window bag, or a safe location.



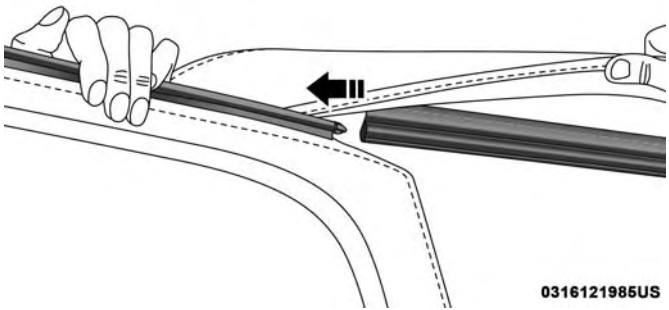
Step Three

4. Remove the plastic retainers from both quarter window pillars.



Step Four

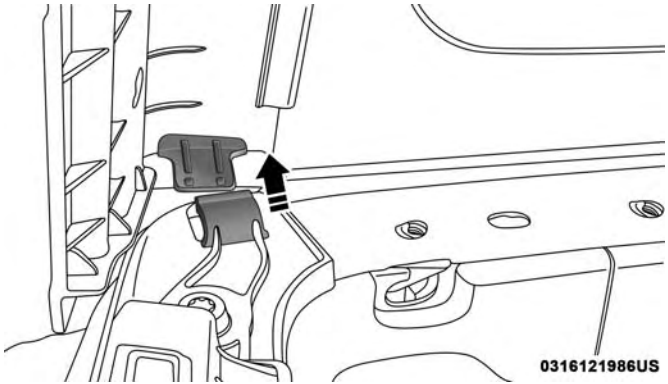
5. While keeping the rear window level, slide to the left until it is completely separate from its retainer. **Do not pull downward while removing the rear window. Damage to the retainer could result.**



Step Five

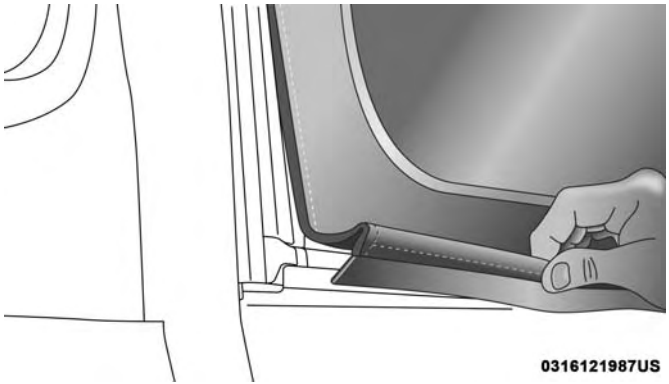
Remove The Right And Left Quarter Windows:

1. Through the rear opening, push the bottom corner outward and release tab from the bottom of the window pillar.



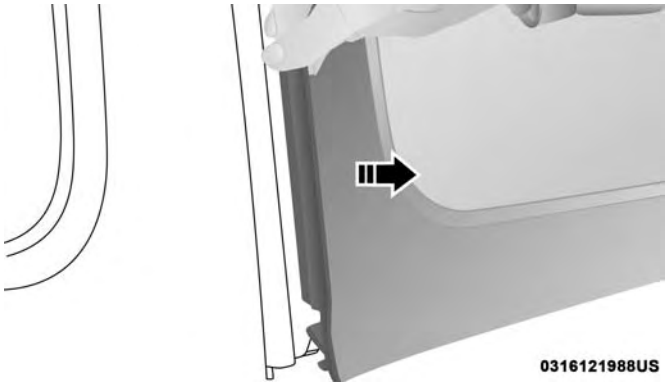
Step One

2. Starting at the rear of the vehicle, remove plastic retainer from along the bottom of the window moving toward the front of the vehicle.



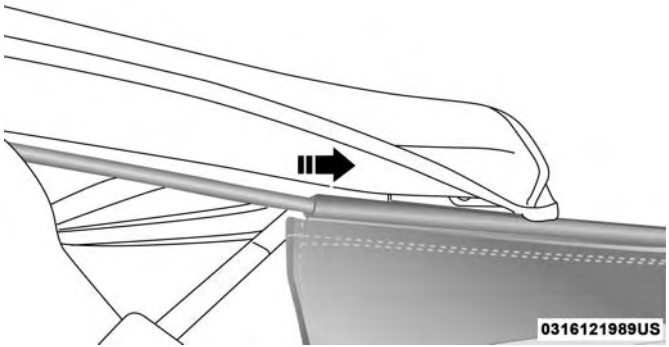
Step Two

3. Remove plastic retainer from bottom to top of the window.



Step Three

4. While keeping the window level, slide rearward until it is completely separate from its retainer. **Do not pull downward while removing the window. Damage to the retainer could result.**

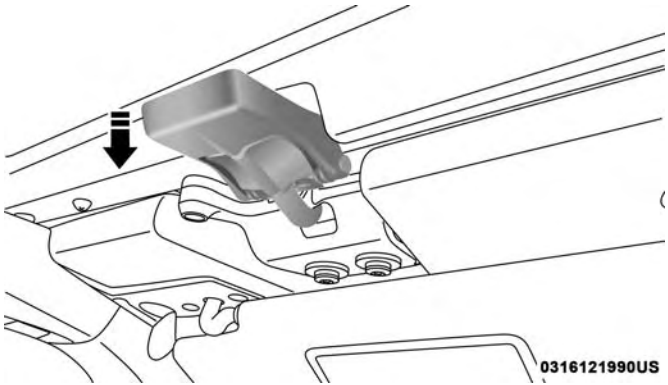


Step Four

5. Store in soft window bag or a safe location.

Lowering The Soft Top Into Sunrider Position

1. After removing the rear window and quarter panel windows, move to the front of the vehicle.
2. Fold both sun visors forward against the windshield.
3. Release the header latches from the crossbar by pulling the handle downward. Make sure the hook is disengaged from its receiver.



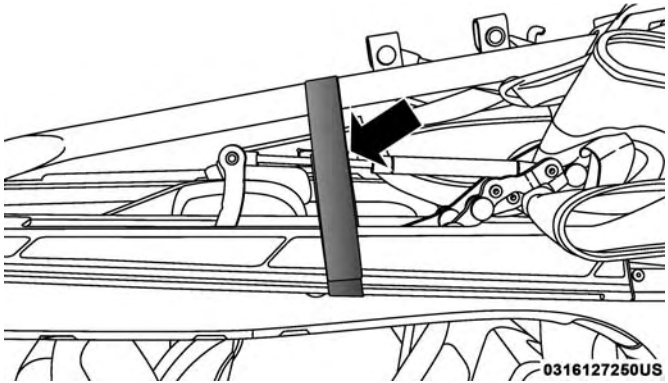
Step Three

4. From both the driver and passenger sides, lift up on the #1 Bow of the soft top to start the operation.

Step Four

5. Move to the side of the vehicle and use the side link to fold the soft top rearward into the Sunrider position.

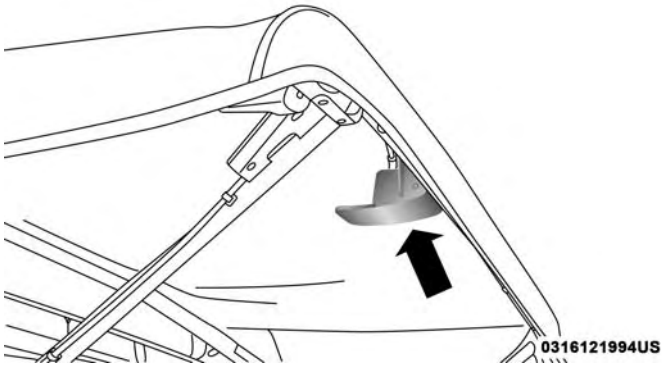
NOTE: If leaving the soft top in the Sunrider position, secure the top by using the two velcro straps provided in the center console.



Secured Top When In Sunrider Position

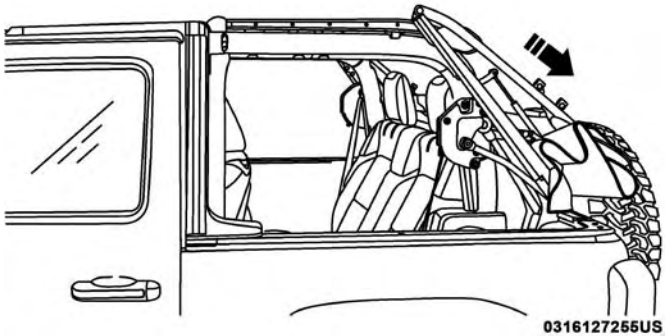
Lowering The Soft Top Into Fully Lowered Position

1. From the Sunrider position, remove straps if previously secured and move to the rear of the vehicle.
2. Locate the Sunrider latch beneath the #6 Bow of the soft top on the driver's side.



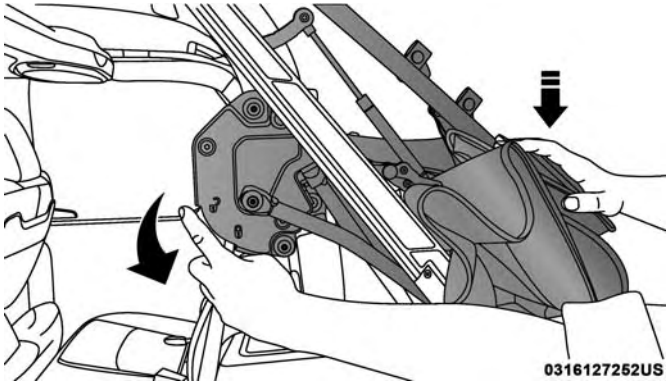
Sunrider Latch Beneath #6 Bow

3. Pull the latch downward to release the top, and allow the soft top to slide rearward freely in the guide tracks to the stowed position.

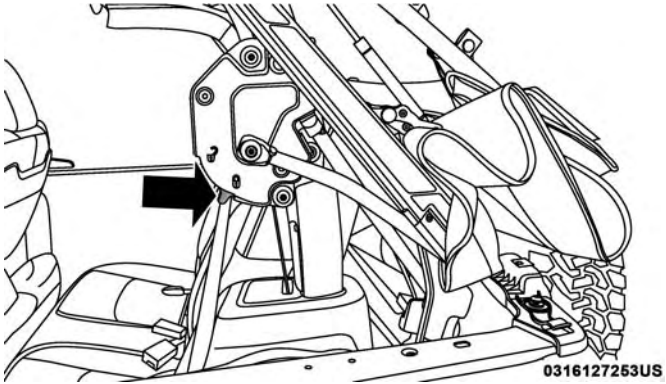


Step Three

4. While pushing downward slightly on the folded soft top, slide the lock lever on the driver and passenger side lift assist mechanisms to the “lock” position.



Step Four



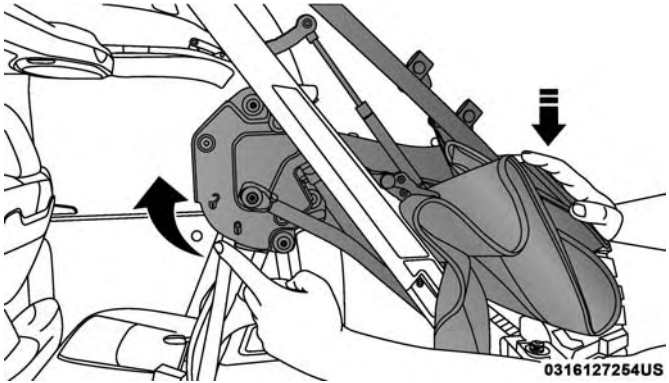
Lock Position

5. Once the lock is in the “lock” position, push downward on each side of the folded soft top to ensure it is secure. An audible “click” may be heard.

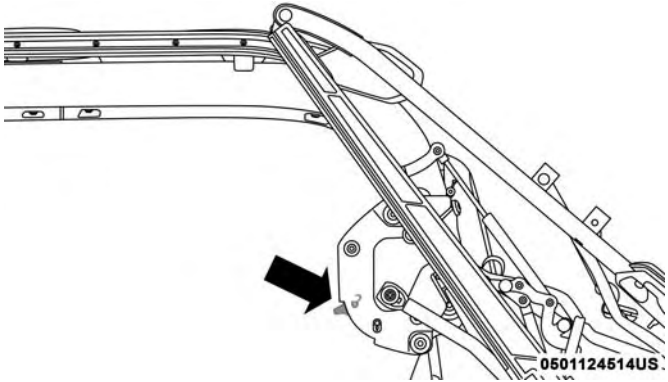
Raising The Soft Top

Raising The Soft Top From The Fully Lowered Position

1. While pushing down on the rear of the top, slide the lock lever on the driver and passenger side Lift Assist Mechanisms to the "unlock" position.

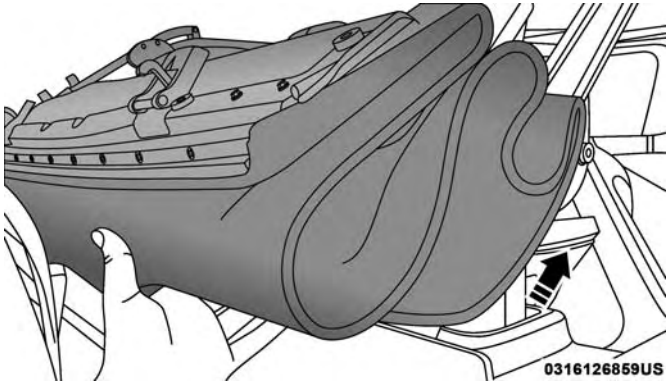


Push Down While Unlocking



Unlocked Position

2. Push up and forward from the #5 Bow along the guide track until it locks into the Sunrider position with an audible “click”.



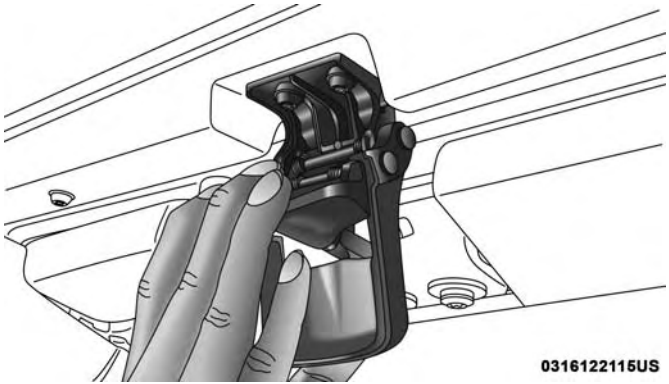
Step Two

3. Gently pull rearward on the #6 Bow to ensure the top is locked in the Sunrider position.

4. Using the side link, lift and push the soft top toward the front of the vehicle guiding the top into the closed position.

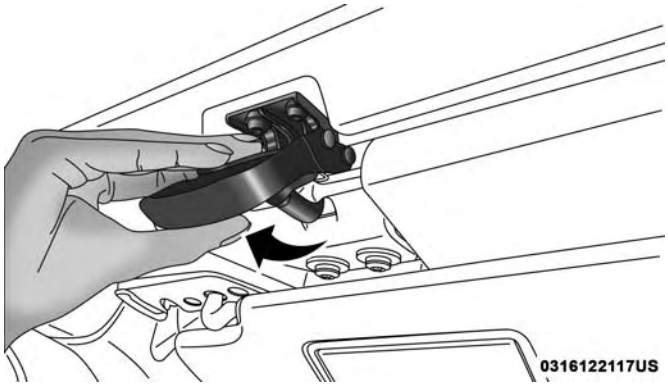
Lower Top Into Closed Position

5. From inside the vehicle, pull the handle on the header latch downward to engage the hook into its receiver. Repeat on the other side.



Step Five

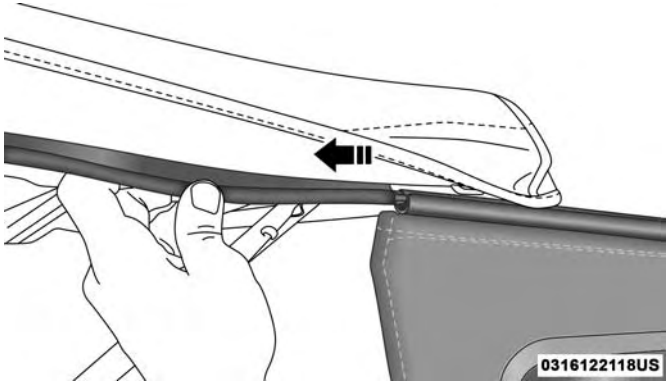
6. Pull the handle back upward while squeezing the latch plate, locking the latch into place.



Step Six

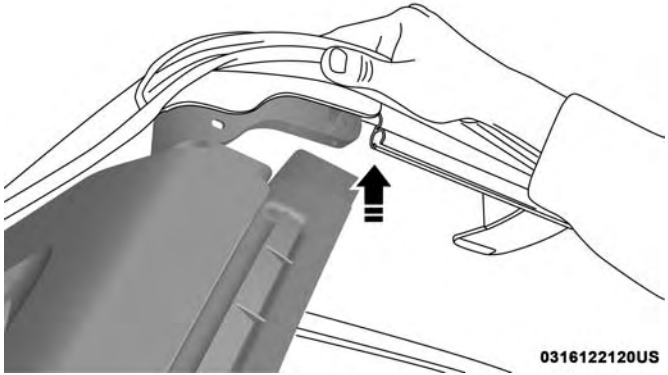
Install The Right And Left Quarter Windows

1. From the rear of the vehicle, guide the top of the window into the retainer and slide forward while keeping the window level. Repeat on the other side.

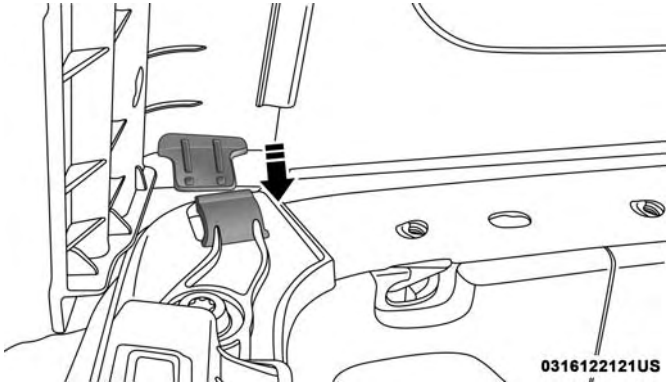


Step One

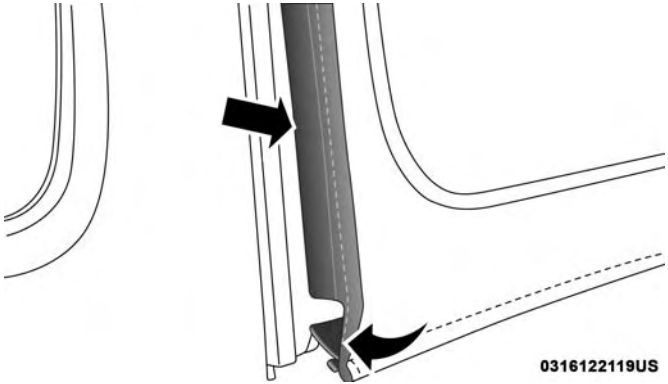
2. Place the top of the quarter window pillar into the top cover, and insert the bottom tab into the clip.



Step Two



Step Two

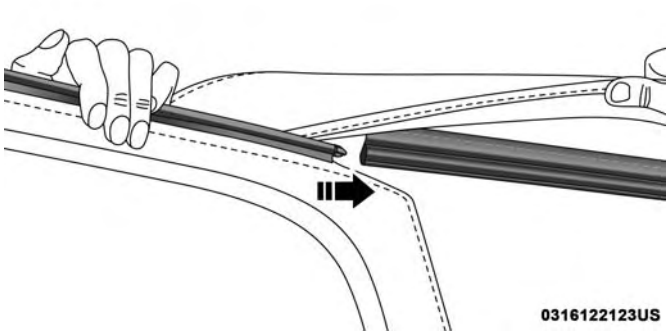


Step Three

3. Engage the plastic retainers along the bottom of the quarter window and up the front of the window. Repeat on the other side.

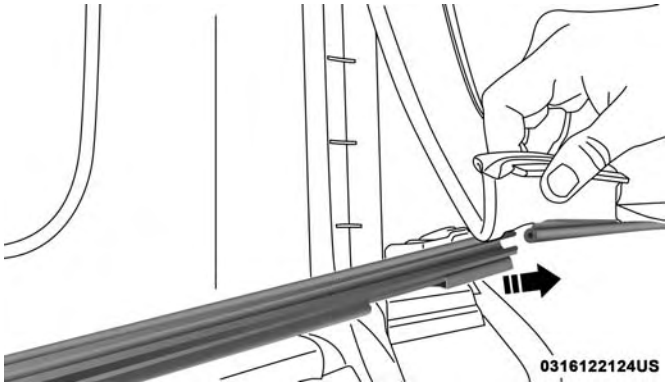
Install The Rear Window

1. Guide the rear window into the retainer from left to right while keeping the window level.



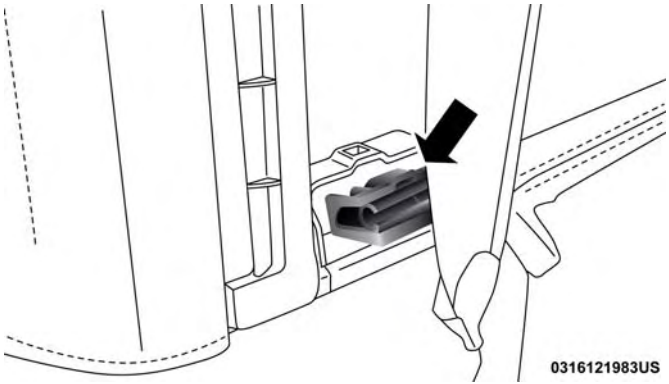
Step One

2. Insert the tailgate bar into the retainers at the bottom of the window from left to the right.



Step Two

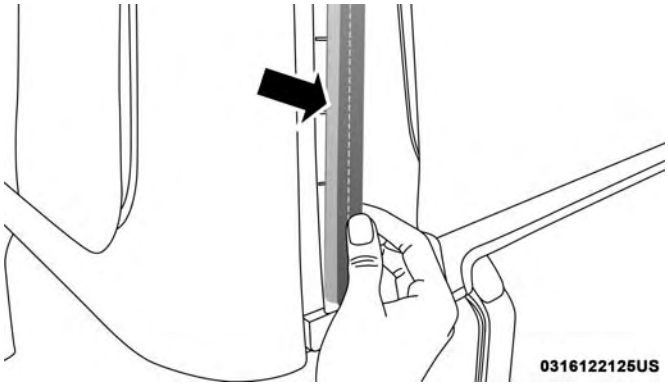
3. Rotate the swing gate bar into the left and right side retainers.



Step Three

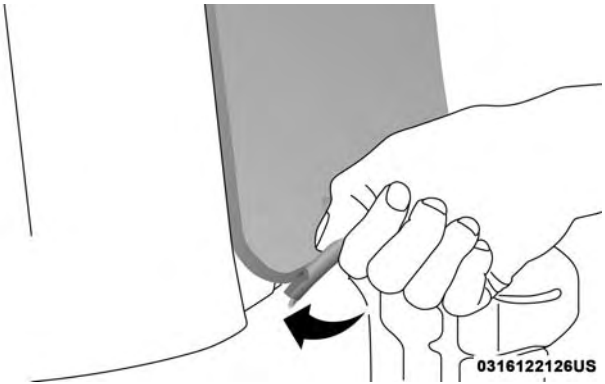
4. Line up the rear window to the **passenger side** quarter window first, and engage the plastic retainers.

5. Repeat with the driver's side quarter window.



Step Five

6. Engage the rear window retainers in the lower right and left corners.



Step Six

SOFT TOP FOUR DOOR MODELS — IF EQUIPPED

WARNING!

- **Do not drive the vehicle with the rear window up/removed unless the quarter windows are also removed. Dangerous exhaust gases could enter the vehicle causing harm to the driver and passengers.**

(Continued)

WARNING! *(Continued)*

- **The fabric quarter windows and fabric top are designed only for protection against the elements. Do not rely on them to contain occupants within the vehicle or to protect against injury during an accident. Remember, always wear seat belts.**
- **Make sure hands and fingers are clear of all pinch points when installing and removing the soft tops. The lift assist mechanism and side bows may cause serious injury if fingers or hands get caught in between.**

CAUTION!

The soft top is not designed to carry any additional loads such as roof racks, spare tires, building, hunting, or camping supplies, and/or luggage, etc. Also, it was not designed as a structural member of the vehicle and, thus, cannot properly carry any additional loads other than environmental (rain, snow, etc.).

If the temperature is below 72°F (24°C) and/or the top has been folded down for a period of time, the top will appear to have shrunk when you raise it, making it difficult to put up. This is caused by a natural contraction of the vinyl coating on the fabric top.

Place the vehicle in a warm area. Pull steadily on the top fabric. The vinyl will stretch back to its original size and the top can then be installed. **If the temperature is 41°F (5°C) or below, do not attempt to put the top down or roll the rear or side curtains.**

CAUTION!

- **Do not run a fabric top through an automatic car wash. Window scratches and wax build up may result.**
- **Do not lower the top when the temperature is below 41°F (5°C). Damage to the top may result.**
- **Do not move your vehicle until the top has been either fully attached to the windshield frame, or fully lowered.**
- **Do not lower the top with the windows installed. Window and top damage may occur.**

(Continued)

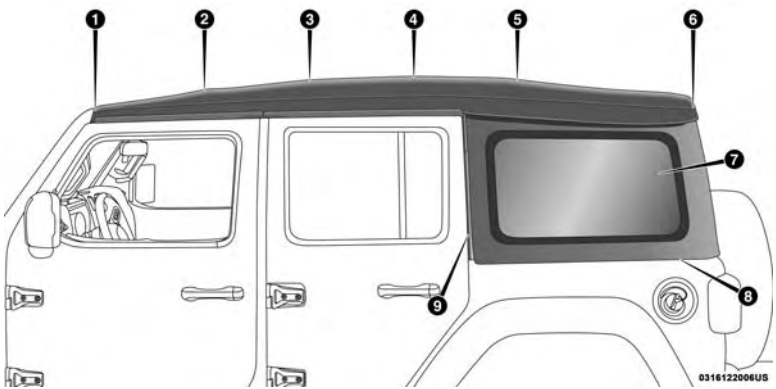
CAUTION! *(Continued)*

- **Refer to "Appearance Care For Fabric Top Models" in "Bodywork" in "Servicing And Maintenance" for further information. It contains important information on cleaning and caring for your vehicle's fabric top.**
- **Do not use any tools (screwdrivers, etc.) to pry or force any of the clamps, clips, or retainers securing the soft top. Do not force or pry the soft top framework when opening or closing. Damage to the top may result.**

Failure to follow these cautions may cause interior water damage, stains or mildew on the top material:

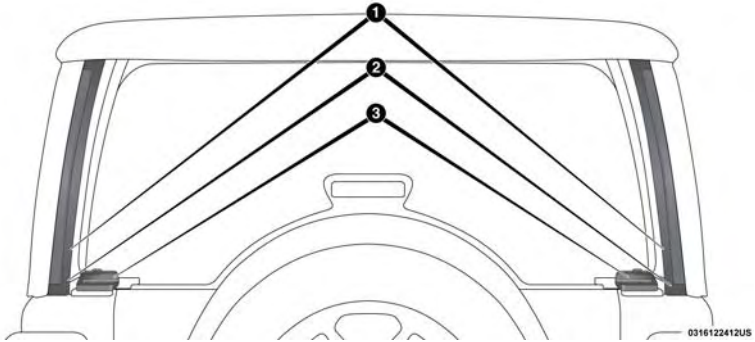
- **It is recommended that the top be free of water prior to opening it. Operating the top, opening a door or lowering a window while the top is wet may allow water to drip into the vehicle's interior.**
- **Careless handling and storage of the soft top may damage the seals, causing water to leak into the vehicle's interior.**
- **The soft top must be positioned properly to ensure sealing. Improper installation can cause water to leak into the vehicle's interior.**

Lowering The Soft Top



Side View Top And Components

1 — #1 Bow
2 — #2 Bow
3 — #3 Bow
4 — #4 Bow
5 — #5 Bow
6 — #6 Bow
7 — Rear Quarter Window
8 — Lower Window Retainer
9 — Front Window Retainer



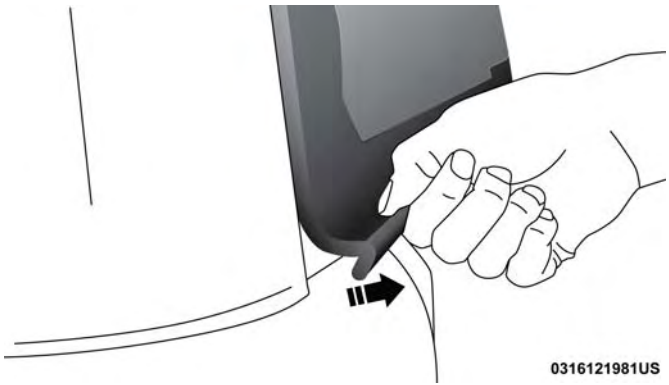
Rear View Top And Components

1 — Rear Window Retainer Attachment Points
2 — Quarter Window Pillars
3 — Swing Gate Bar Retainers

NOTE: The rear window and rear quarter windows **must** be removed before lowering the soft top to prevent damage to the top. Clean side and rear windows before removal to assist in preventing scratching during removal of the soft top. If the plastic retainers are difficult to operate due to road dust, etc., clean them with a mild soap solution and a small brush. Cleaning products are available through your authorized dealer.

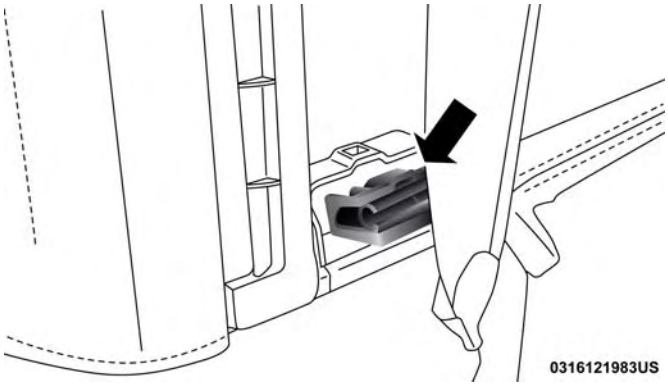
Remove The Rear Window:

1. With the swing gate open, remove the rear window's plastic retainers from the lower right and left corners.



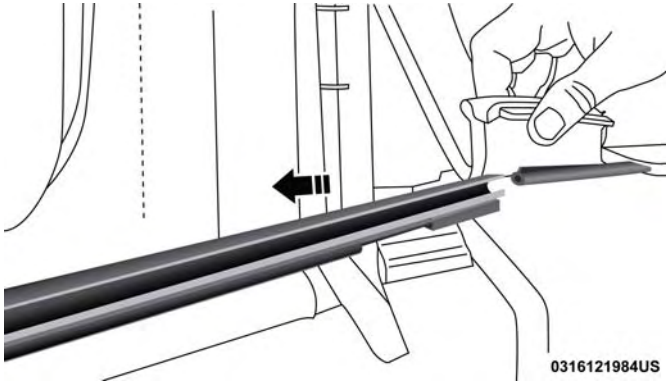
Step One

2. Grasp the swing gate bar, rotate it outward and upward releasing it from both the right and left retainers.



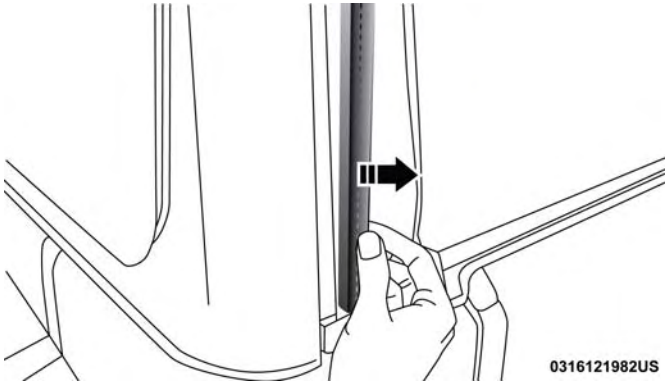
Step Two (Left Side Shown)

3. While holding the window in place, slide the tailgate bar to the left separating it from the rear window. Store in soft window bag, or a safe location.



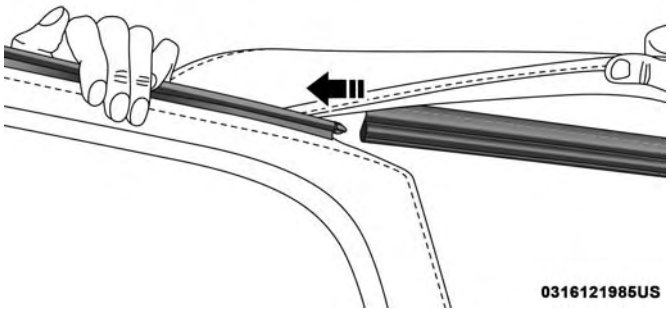
Step Three

4. Remove the plastic retainers from both quarter window pillars.



Step Four

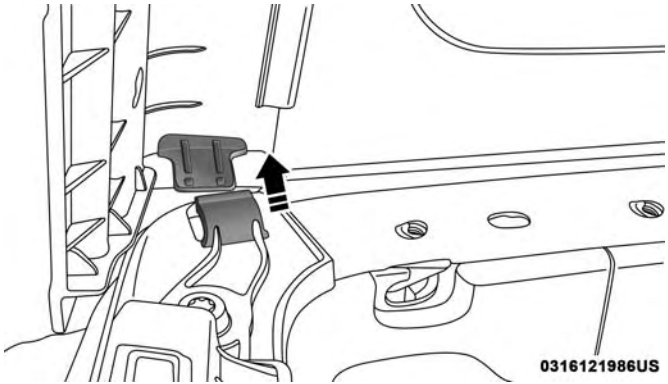
5. While keeping the rear window level, slide to the left until it is completely separate from its retainer. **Do not pull downward while removing the rear window. Damage to the retainer could result.**



Step Five

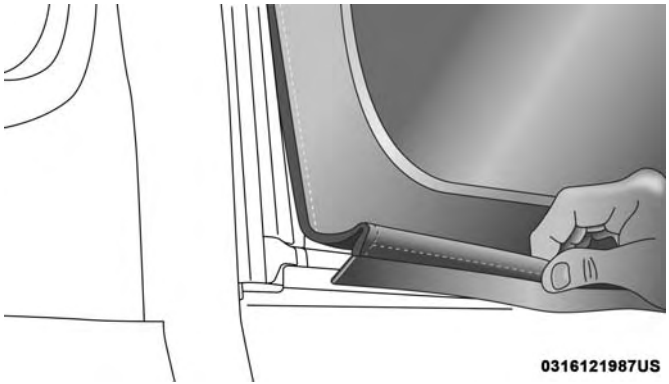
Remove The Right And Left Quarter Windows:

1. Through the rear opening, push the bottom corner outward and release tab from the bottom of the window pillar.



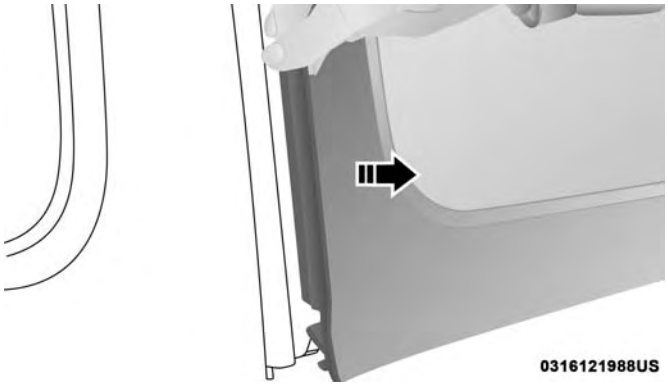
Step One

2. Starting at the rear of the vehicle, remove plastic retainer from along the bottom of the window moving toward the front of the vehicle.



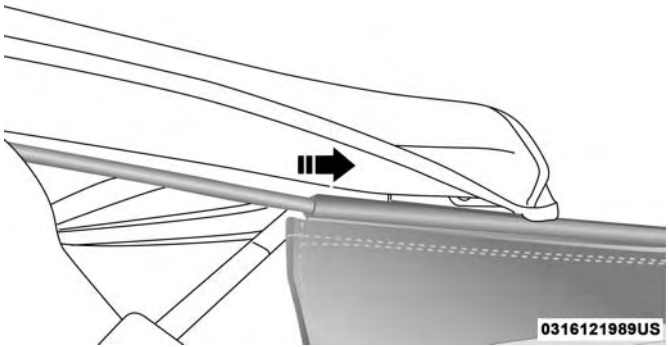
Step Two

3. Remove plastic retainer from the bottom to the top of the front window.



Step Three

4. While keeping the window level, slide rearward until it is completely separate from its retainer. **Do not pull downward while removing the window. Damage to the retainer could result.**

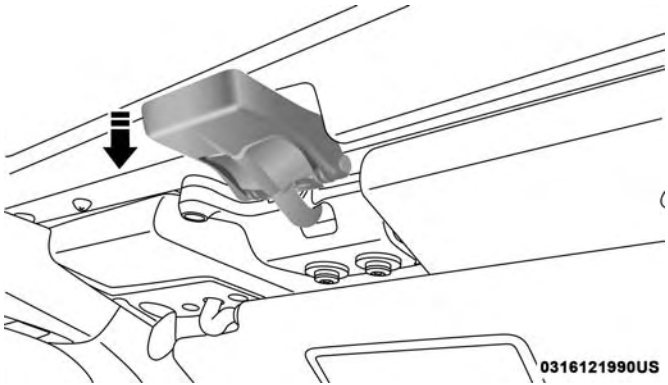


Step Four

5. Store in soft window bag or a safe location.

Lowering The Soft Top Into Sunrider Position

1. After removing the rear window and quarter panel windows, move to the front of the vehicle.
2. Fold both sun visors forward against the windshield.
3. Release the header latches from the crossbar by pulling the handle downward. Make sure the hook is disengaged from its receiver.



Step Three

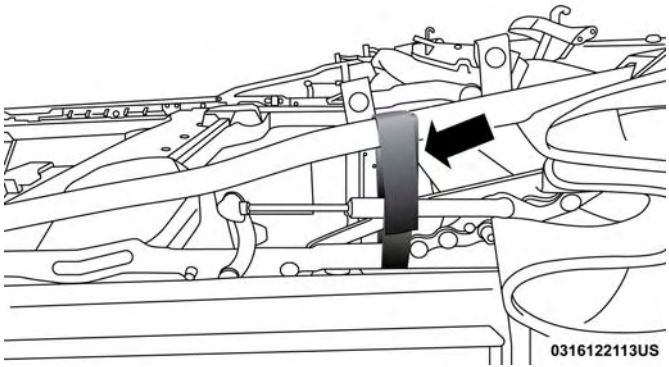
4. From both the driver and passenger sides, lift up on the #1 Bow of the soft top to start the operation.

Step Four

5. Move to the side of the vehicle and use the side link to fold the soft top rearward into the Sunrider position.

Step Five

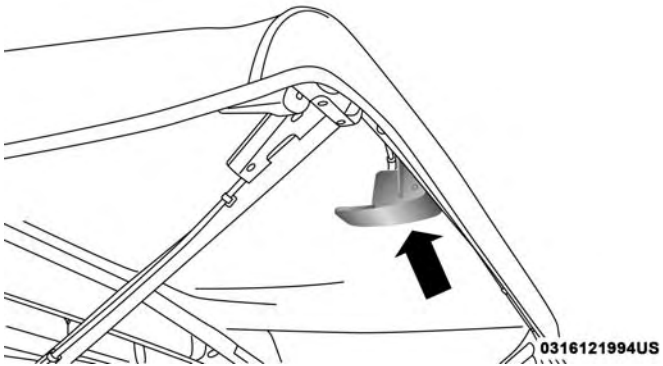
NOTE: If leaving the soft top in the Sunrider position, secure the top by using the two velcro straps provided in the center console.



Secured Top When In Sunrider Position

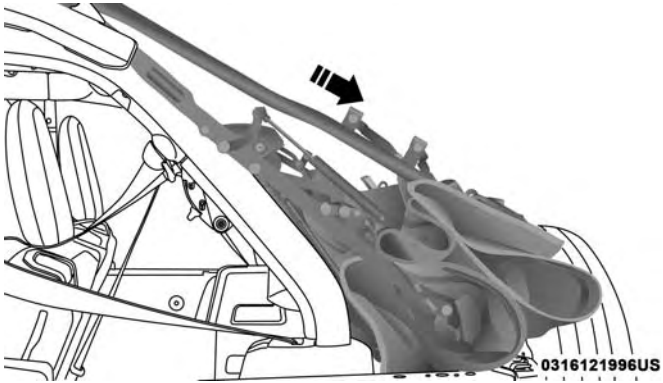
Lowering The Soft Top Into Fully Lowered Position

1. From the Sunrider position, remove straps if previously secured and move to the rear of the vehicle.
2. Locate the Sunrider latch beneath the #6 Bow of the soft top on the driver's side.



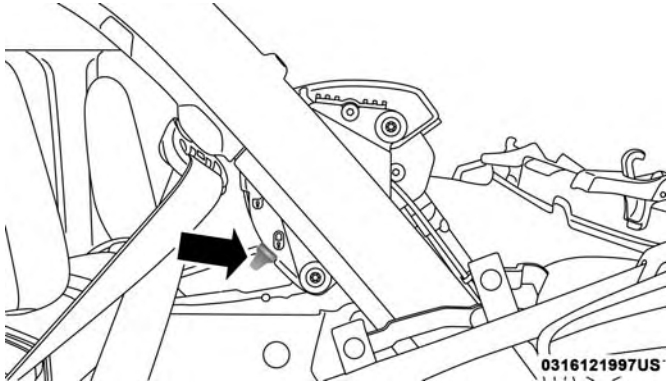
Sunrider Latch Beneath #6 Bow

3. Pull the latch to release the top, and allow the soft top to slide rearward freely in the guide tracks to the stowed position.



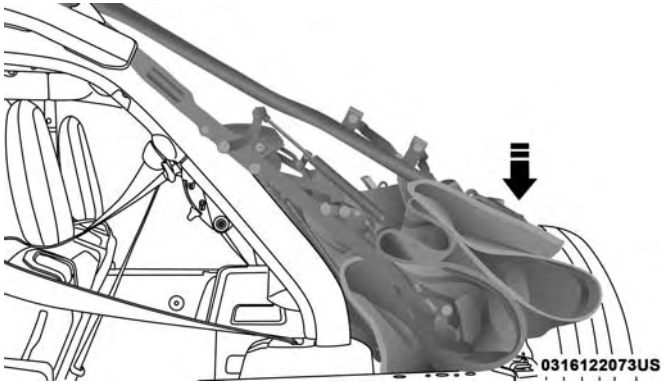
Step Three

4. While pushing downward slightly on the folded soft top, slide the lock lever on the driver and passenger side lift assist mechanisms to the "lock" position.



Step Four (Locked Position)

5. Once the lock is in the “lock” position, push downward on each side of the folded soft top to ensure it is secure. An audible “click” may be heard.

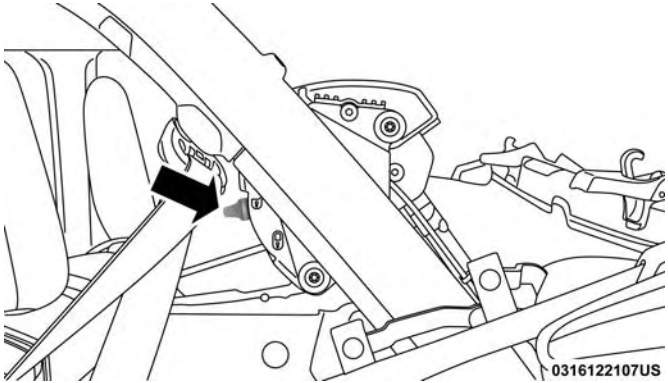


Step Five

Raising The Soft Top

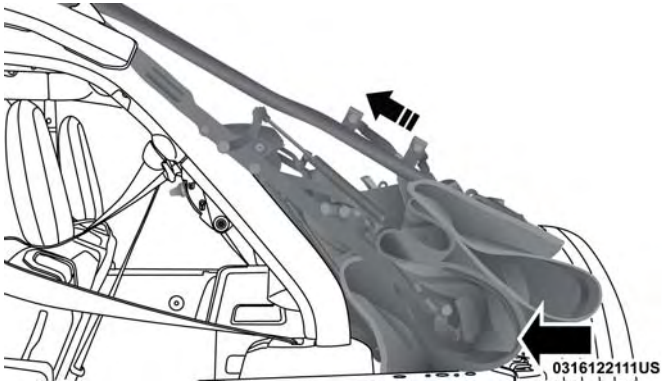
Raising The Soft Top From The Fully Lowered Position

1. While pushing down on the rear of the top, slide the lock lever on the driver and passenger side Lift Assist Mechanisms to the “unlock” position.



Unlocked Position

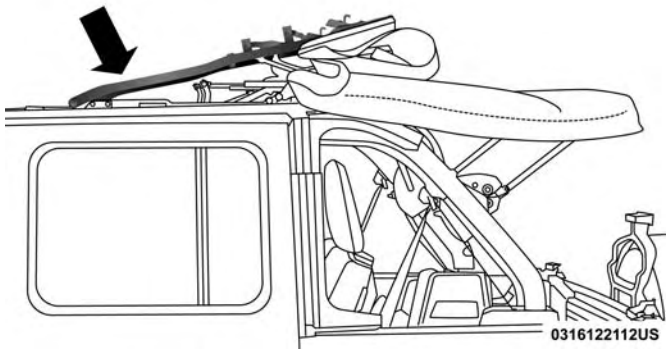
2. Push up and forward from the #5 Bow along the guide track until it locks into the Sunrider position with an audible “click”.



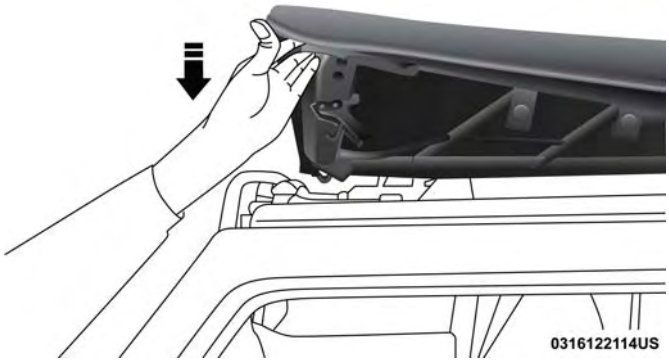
Step Two

3. Gently pull rearward on the #6 Bow to ensure the top is locked in the Sunrider position.

4. Using the side link, lift and push the soft top toward the front of the vehicle manually guiding the top into the closed position.

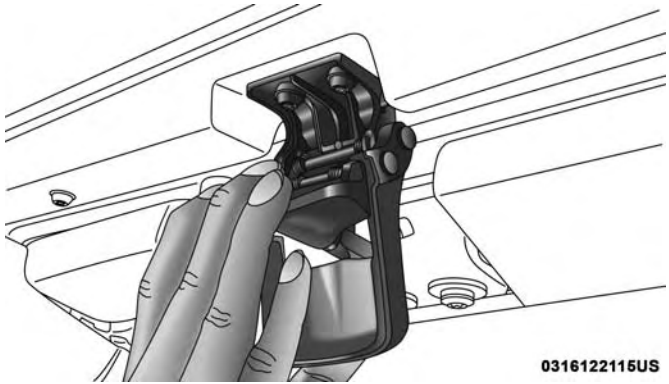


Lift From Side Link



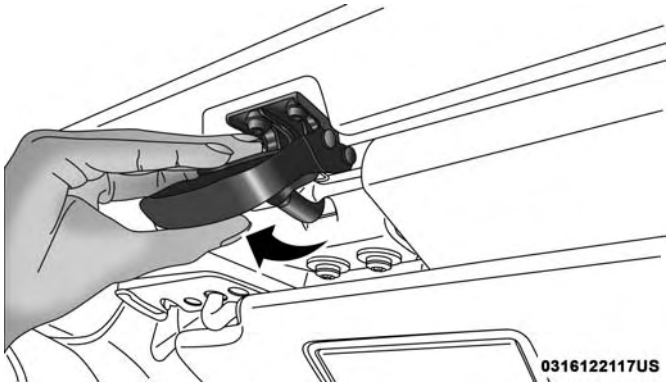
Lower Top Into Closed Position

5. From inside the vehicle, pull the handle on the header latch downward to engage the hook into its receiver. Repeat on the other side.



Step Five

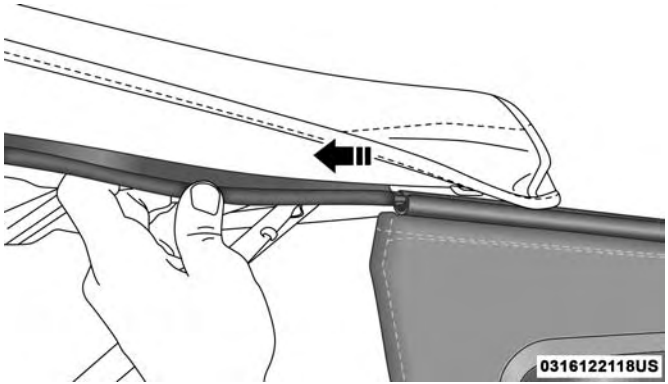
6. Pull the handle back upward while squeezing the hook, locking the latch into place.



Step Six

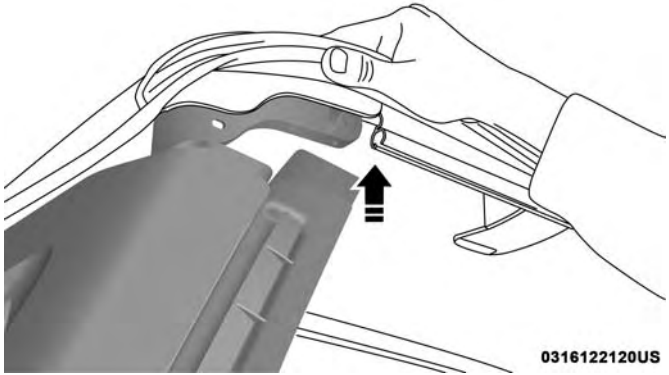
Install The Right And Left Quarter Windows

1. From the rear of the vehicle, guide the top of the window into the retainer and slide forward while keeping the window level. Repeat on the other side.

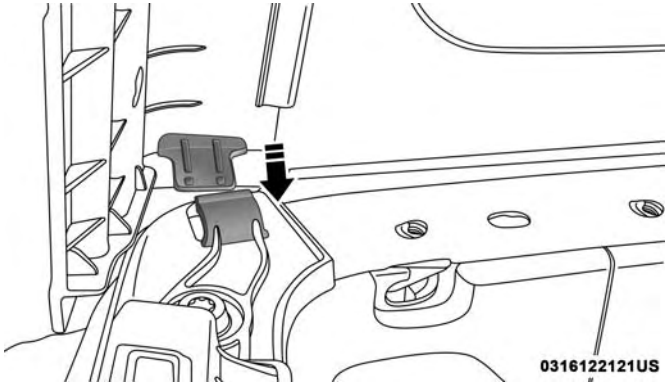


Step One

2. Place the top of the quarter window pillar into the top cover, and insert the bottom tab into the clip.

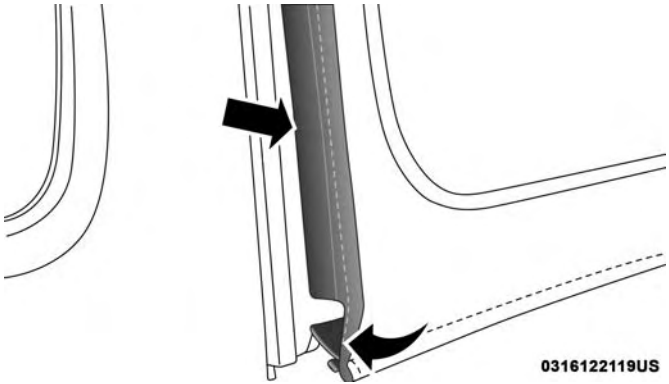


Step Two



Step Two

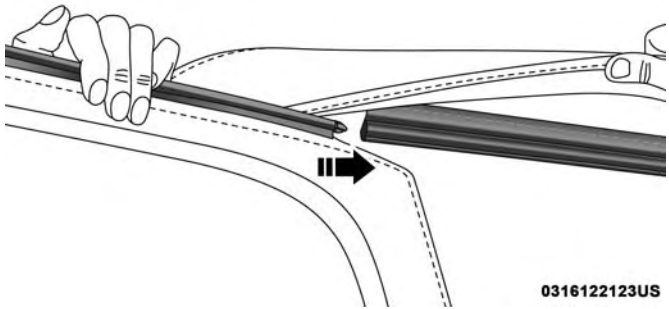
3. Engage the plastic retainers along the bottom of the quarter window and up the front of the window. Repeat on the other side.



Step Three

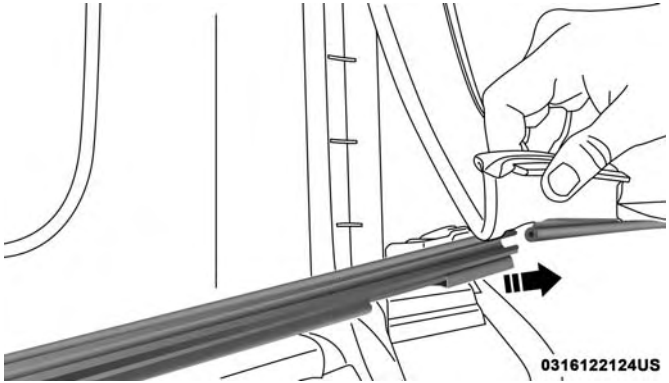
Install The Rear Window

1. Guide the rear window into the retainer from left to right while keeping the window level.



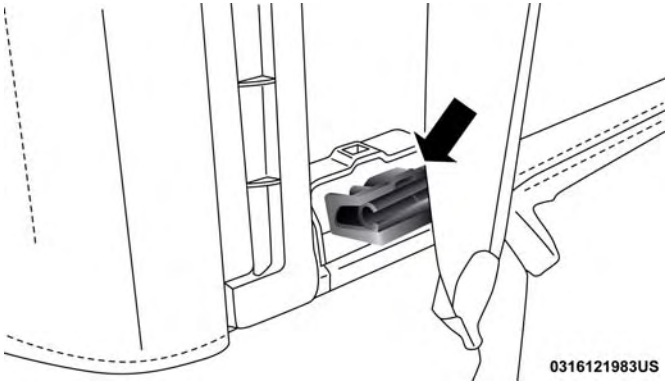
Step One

2. Insert the tailgate bar into the retainers at the bottom of the window from left to the right.



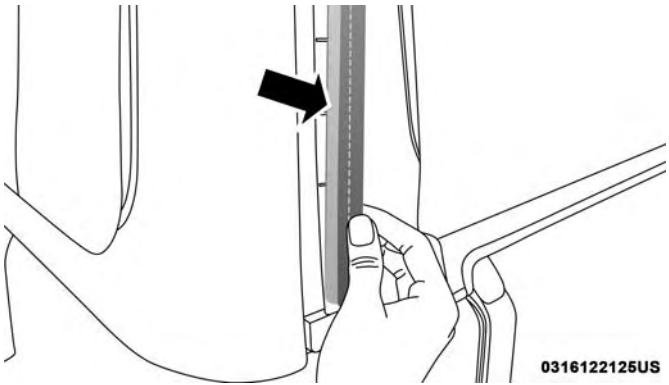
Step Two

3. Rotate the swing gate bar into the left and right side retainers.



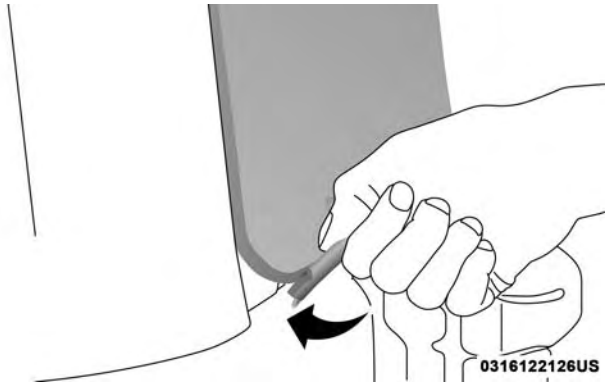
Step Three

4. Line up the rear window to the **passenger side** quarter window first, and engage the plastic retainers.
5. Repeat with the driver's side quarter window.



Step Five

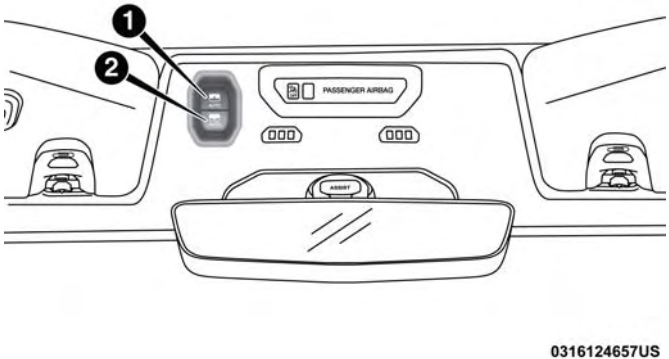
6. Engage the rear window retainers in the lower right and left corners.



Step Six

POWER SLIDING TOP — IF EQUIPPED

If your vehicle is equipped with a Power Sliding Top, the control switch can be found on the front trim panel, to the right of the driver's side sun visor.



Power Sliding Top Control Switch

1 — Open Switch
2 — Close Switch

NOTE:

- The Power Top is non-removable. If desired, the rear quarter windows can be removed and stored in provided storage bags. Refer to "Quarter Window Removal" in this section for further information.
- The Power Top will not open in temperatures below –4°F (-20°C). However, if it is opened at a higher temperature, it can be closed at temperatures above –40°F (-40°C).
- The Power Top will not operate at vehicle speeds above 60 mph (96 km/h).

WARNING!

- **Never leave children unattended in a vehicle, or with access to an unlocked vehicle. Never leave the key fob in or near the vehicle, or in a location accessible to children. Do not leave the ignition of a vehicle equipped with Keyless Enter-N-Go in the ACC or ON/RUN mode. Occupants, particularly unattended children, can become entrapped by the power top while operating the power top switch. Such entrapment may result in serious injury or death.**

(Continued)

WARNING! ***(Continued)***

- **In a collision, there is a greater risk of being thrown from a vehicle with an open power top. You could also be seriously injured or killed. Always fasten your seat belt properly and make sure all passengers are also properly secured.**
- **Do not allow small children to operate the power top. Never allow your fingers, other body parts, or any object, to project through the power top opening. Injury may result.**

Opening The Power Top

Express Mode

Push the open switch and release it within one-half second. The power top will open automatically to the open position. This is called "Express Open". During Express Open operation, any movement of the open switch will stop the power top.

Manual Mode

To open the power top manually, push and hold the open switch. The power top will stop automatically at the open position. Any release of the switch will stop the movement. The power top will remain in a partially opened position until the switch is pushed and held again.

Closing The Power Top

Express Mode

Push the close switch and release it within one-half second. The power top will close fully and stop automatically. This is called "Express Close". During Express Close operation, any movement of the switch will stop the power top.

Manual Mode

To close the power top manually, push and hold the close switch. The power top will move forward and automatically stop at the fully closed position. Any release of the switch will stop the movement. The power top will remain in a partially closed position until the switch is pushed and held again.

Wind Buffeting

Wind buffeting can be described as the perception of pressure on the ears or a helicopter-type sound in the ears. Your vehicle may exhibit wind buffeting with the windows down, or the power top in certain open or partially open

positions. This is a normal occurrence and can be minimized. If the buffeting occurs with the rear windows open, then open the front and rear windows together to minimize the buffeting. If the buffeting occurs with the power top open, adjust the power top opening to minimize the buffeting or open any window.

Pinch Protect Feature

This feature will detect an obstruction in the opening of the power top during Express Close operation. If an obstruction in the path of the power top is detected, the power top will automatically retract. Remove the obstruction if this occurs. Next, push the close switch and release to Express Close.

WARNING!

There is no anti-pinch protection when the power top is almost closed. To avoid personal injury be sure to clear your arms, hands, fingers and all objects from the top's path before closing.

NOTE: If three consecutive power top close attempts result in Pinch Protect reversals, Pinch Protect will disable and the power top must be closed in Manual Mode.

Power Top Maintenance

Use only a non-abrasive cleaner and a soft cloth to clean the quarter window glass panel.

Refer to "Bodywork" in Servicing And Maintenance" for further information. It contains important information on cleaning and caring for your vehicle.

Ignition Off Operation

The power top switch can remain active in Accessory Delay for up to approximately 10 minutes after the vehicle's ignition is placed to the Off position. Opening either front door will cancel this feature.

NOTE: Ignition Off time is programmable through the Uconnect System. Refer to "Uconnect Settings/Customer Programmable Features" in "Multimedia" for further information.

Relearn Procedure

For vehicles equipped with a power top, there is a relearn procedure that allows you to calibrate the power top when the "Express Mode" stops working. To reset the power top, follow these steps:

1. Place the ignition in the RUN position.

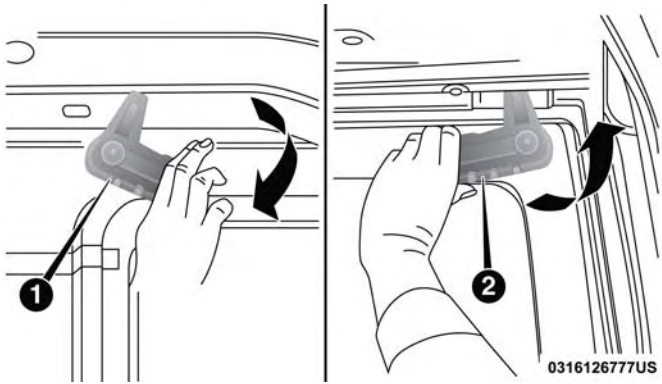
2. Ensure the power top is in the fully closed position.
3. Push and hold the Close switch for 10 seconds. This will put the power top into calibration mode.
4. Continue holding down the close button while the top goes fully open and then back to fully close.
5. Once the power top has stopped in the fully closed position, release the close button. The power top is now reset and ready to use.

NOTE: If the close button is released anytime during the relearning process, the relearn may not be complete, and the procedure must be repeated.

Rear Quarter Window Removal

On vehicles equipped with a Power Sliding Top, the rear quarter windows can be removed. To remove these windows, follow the procedure below:

1. Open the swing gate, and lift the rear window.
2. Open both side doors nearest the quarter windows.
3. Locate the rear quarter window latches (one on each window) on the interior of the windows.
4. Rotate the left hand side latch **clockwise** to release.
5. Rotate the right hand side latch **counterclockwise** to release.

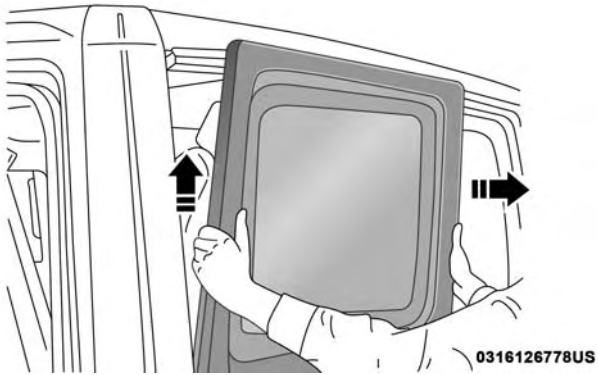


Rear Quarter Window Release Latches

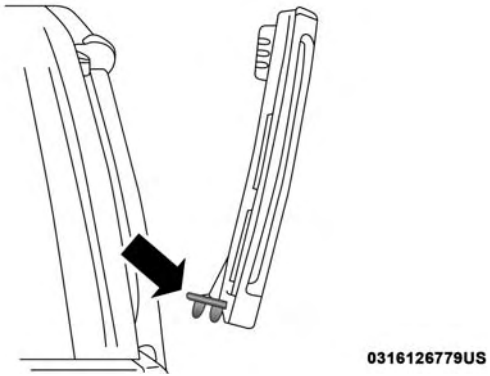
1 — Rotate Left Handle Clockwise
2 — Rotate Right Handle Counterclockwise

6. From the outside of the vehicle, lift each window upward and away from the vehicle.

NOTE: Do not pull down or apply any weight to the windows after the latches are released. Damage could result to the pins holding the windows in place.



Lift Quarter Window Upward And Outward



Quarter Window Pins Location

7. Store the rear quarter windows in the provided storage bag and keep in a safe location, or securely fasten the bag to the rear seat.

FOLDING WINDSHIELD

The fold-down windshield on your vehicle is a structural element that can provide some protection in some accidents. The windshield also provides some protection against weather, road debris and intrusion of small branches and other objects.

Do not drive your vehicle on-road with the windshield down, as you lose the protection this structural element can provide.

If required for certain off-road uses, the windshield can be folded down. However, the protection afforded by the windshield is then lost. If you fold down the windshield, drive slowly and cautiously. It is recommended that the speed of the vehicle be limited to 10 mph (16 km/h), with low range operation preferred if you are driving off-road with the windshield folded down.

Raise the windshield as soon as the task that required its removal is completed and before you return to on-road driving. Both you and your passengers should wear seat belts at all times, on-road and off-road, regardless of whether the windshield is raised or folded down.

Outside rearview mirrors are mounted on the doors. If you choose to remove the doors, see an authorized dealer for a replacement cowl-mounted outside mirror. Federal law requires outside mirrors on vehicles for on-road use.

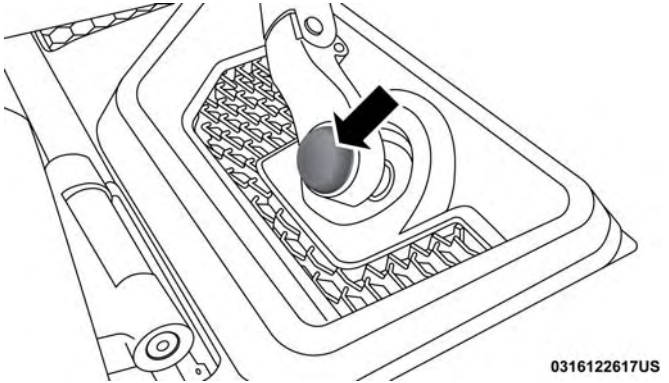
WARNING!

Carefully follow these warnings to help protect against personal injury:

- **Do not drive your vehicle on-road with the windshield down.**
- **Do not drive your vehicle unless the windshield is securely fastened, either up or down.**
- **Eye protection, such as goggles, should be worn at all times when the windshield is down.**
- **Be sure that you carefully follow the instructions for raising the windshield. Make sure that the folding windshield, windshield wipers, side bars, and all associated hardware and fasteners are correctly and tightly assembled before driving your vehicle. Failure to follow these instructions may prevent your vehicle from providing you and your passengers' protection in some accidents.**
- **If you remove the doors, store them outside the vehicle. In the event of an accident, a loose door may cause personal injury.**

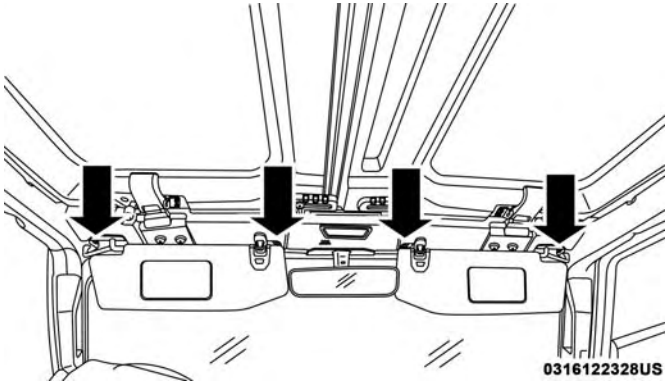
Lowering The Windshield

1. Lower the soft top or remove the hard top following the instructions in this manual.
2. Manually remove the protective caps over the windshield wiper hex bolts.



Protective Cap Over Wiper Bolt

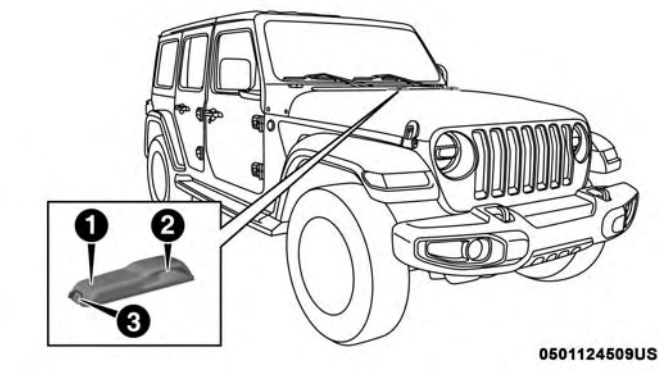
3. Using the provided 15mm socket, remove the two hex bolts and remove the wiper arms.
4. Move to the inside of the vehicle and lower both sun visors.
5. Using the provided #40 Torx head driver, remove the four Torx screws located along the interior of the windshield.



Interior Torx Screw Locations

NOTE: Store all of the mounting bolts in their original threaded holes and tighten for safekeeping.

6. Lower the windshield gently until it contacts the footman loop bumpers (if equipped).



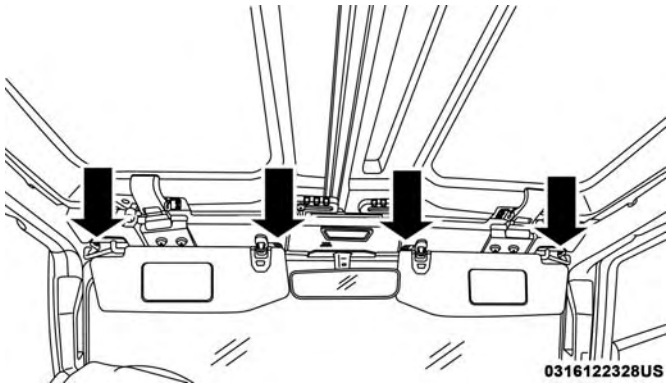
Footman Loop Bumpers

1 — Bumper
2 — Footman Loop
3 — Washer Nozzle

7. Secure the windshield by passing a cinch strap through the footman loops on either side of the hood and on the windshield frame. Tighten the strap to secure the windshield in place.

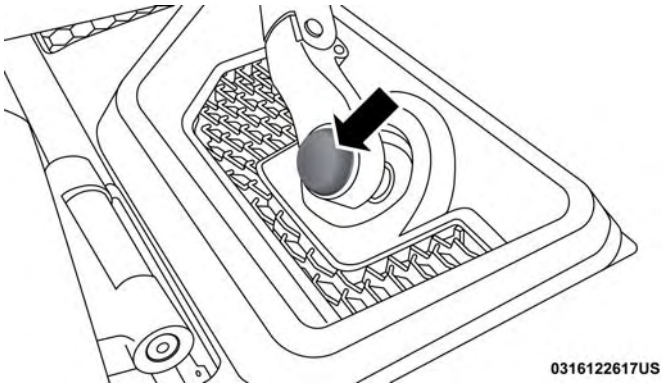
Raising The Windshield

1. Release the strap that secured the windshield in the lowered position.
2. Raise the windshield.
3. Using the provided #40 Torx head driver, reinstall the four Torx screws located along the interior of the windshield. Secure them until they are snug, being careful not to cross-thread the screws or overtighten.



Interior Torx Screw Locations

4. Reinstall the windshield wiper arms and using the provided 15mm socket, reinstall the two hex bolts securing the wiper arms. Secure them until they are snug, careful not to over tighten.
5. Replace the protective caps over the wiper arm hex bolts and push gently until they snap into place.

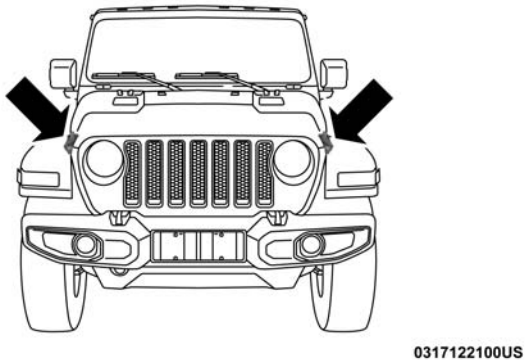


Protective Cap Over Wiper Bolt

HOOD

Opening The Hood

Release both the hood latches.



Hood Latch Locations

Raise the hood and locate the safety latch, located in the middle of the hood opening. Push the safety latch to the left side of the vehicle, to open the hood. You may have to push down slightly on the hood before pushing the safety latch. Insert the support rod into the slot on the hood.

Closing The Hood

To close the hood, remove the support rod from the hood panel and place it in the retaining clip. Lower the hood slowly. Secure both of the hood latches.

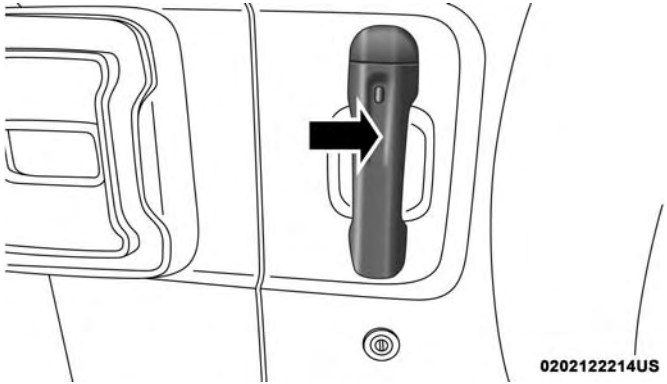
WARNING!

Be sure the hood is fully latched before driving your vehicle. If the hood is not fully latched, it could open when the vehicle is in motion and block your vision. Failure to follow this warning could result in serious injury or death.

REAR SWING GATE

The rear swing gate can be unlocked by using the key, Remote Keyless Entry key fob, by activating the power door lock switches located on the front doors, or grabbing the handle if equipped with Keyless Enter-N-Go.

To open the swing gate, pull on the gate handle.



Swing Gate Handle

NOTE: Close the rear flip-up window before attempting to close the swing gate (hard top models only).

WARNING!

Driving with the flip-up window open can allow poisonous exhaust gases into your vehicle. You and your passengers could be injured by these fumes. Keep the flip-up window closed when you are operating the vehicle.

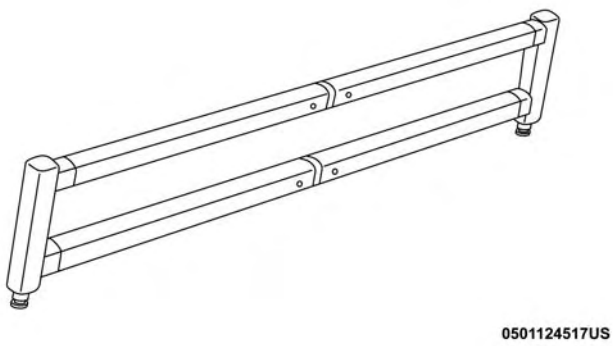
CAUTION!

Do not push on rear wiper blade when closing the rear flip-up window, as damage to the blade will result.

Cargo Area Features

Trail Rail Cargo Organizer — If Equipped

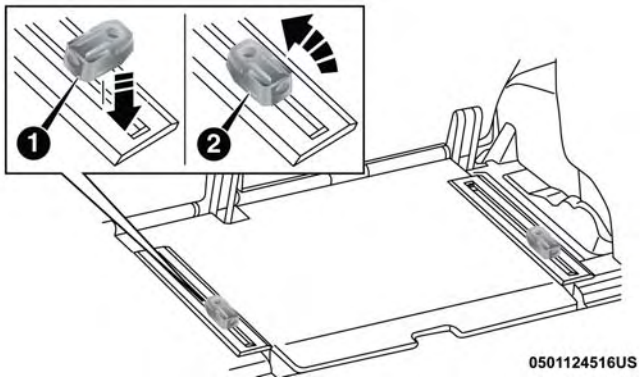
If your vehicle is equipped with the Trail Rail system, a rail will be found built into the floor on either side of the cargo area. An organizer bar fits into slides in the rail to create an adjustable barrier.



Trail Rail Organizer Bar

To install the adjustable slide, proceed as follows:

1. Place the slide into the rail while in the horizontal position. Then rotate the slide 90 degrees into the vertical position, securing it into the rail. Repeat on the other side.

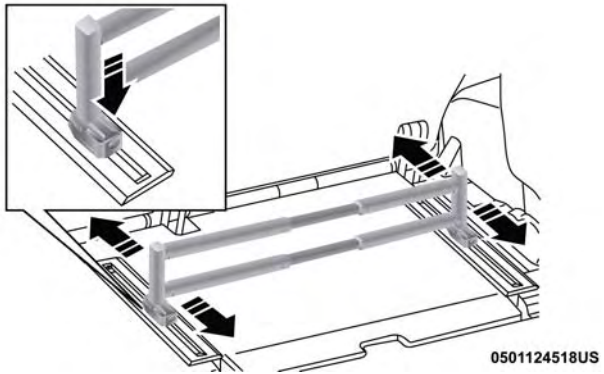


Installing Adjustable Slides

1 — Place In Rail Horizontally
2 — Rotate 90° To Lock In Place

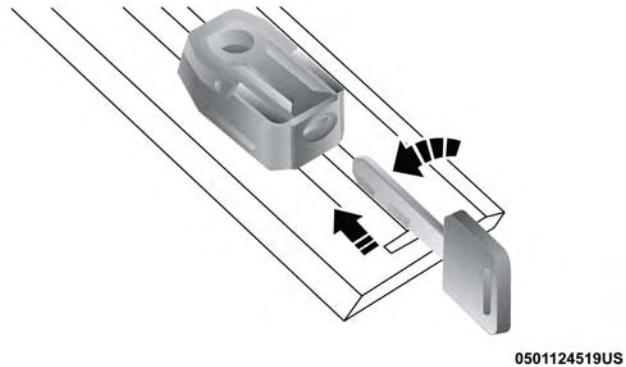
2. Lower the organizer bar into the holes on the top of each slide, locking them in place.

3. Adjust the bar to the desired position by sliding the bar up or down the rails.



Lower Bar Into Slides — Slide To Adjust

4. To lock the slides in place, using your auxiliary key from your key fob, insert the key into the keyhole on the rearward end of the slide and turn to lock.

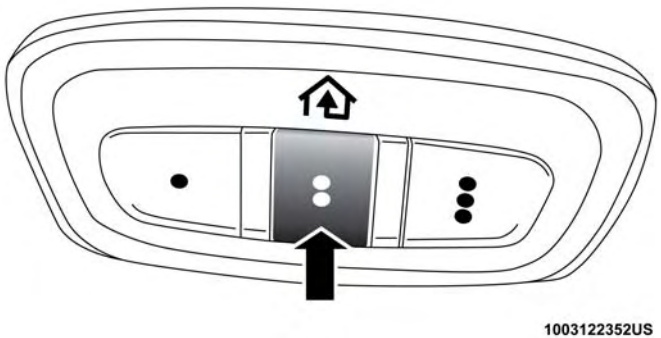


Use Auxiliary Key To Lock Slides

GARAGE DOOR OPENER — IF EQUIPPED

HomeLink replaces up to three hand-held transmitters that operate devices such as garage door openers, motorized gates, lighting or home security systems. The HomeLink unit is powered by your vehicle's 12 Volt battery.

The HomeLink buttons, located on the overhead console, designate the three different HomeLink channels. The HomeLink indicator is located above the center button.



HomeLink Buttons/Overhead Console

NOTE: HomeLink is disabled when the Vehicle Security Alarm is active.

Before You Begin Programming HomeLink

Be sure that your vehicle is parked outside of the garage before you begin programming.

For more efficient programming and accurate transmission of the radio-frequency signal it is recommended that a new battery be placed in the hand-held transmitter of the device that is being programmed to the HomeLink system.

To erase the channels, place the ignition in the ON/RUN position, and push and hold the two outside HomeLink buttons (I and III) for up to 20 seconds or until the orange indicator flashes.

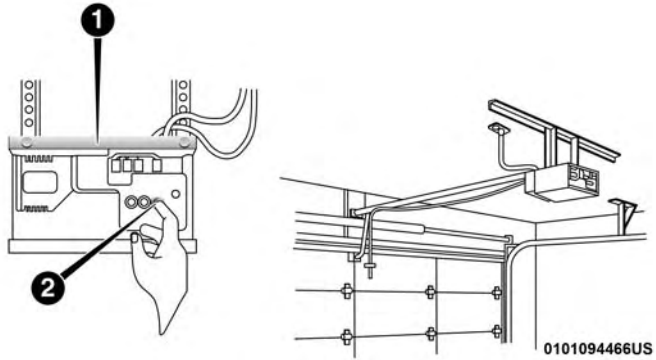
NOTE:

- Erasing all channels should only be performed when programming HomeLink for the first time. Do not erase channels when programming additional buttons.
- If you have any problems, or require assistance, please call toll-free 1-800-355-3515 or, on the Internet at HomeLink.com for information or assistance.

Programming A Rolling Code

For programming garage door openers that were manufactured after 1995. These garage door openers can be identified by the "LEARN" or "TRAIN" button located where the hanging antenna is attached to the garage door opener.

NOTE: It is NOT the button that is normally used to open and close the door. The name and color of the button may vary by manufacturer.



Training The Garage Door Opener

1 — Door Opener
2 — Training Button

1. Place the ignition in the ON/RUN position.
2. Place the hand-held transmitter 1 to 3 inches (3 to 8 cm) away from the HomeLink button you wish to program while keeping the HomeLink indicator light in view.
3. Push and hold the HomeLink button you want to program while you push and hold the hand-held transmitter button.

4. Continue to hold both buttons and observe the indicator light. The HomeLink indicator will flash slowly and then rapidly after HomeLink has received the frequency signal from the hand-held transmitter. Release both buttons after the indicator light changes from slow to rapid.
5. At the garage door opener motor (in the garage), locate the "LEARN" or "TRAINING" button. This can usually be found where the hanging antenna wire is attached to the garage door opener/device motor. Firmly push and release the "LEARN" or "TRAINING" button. On some garage door openers/devices there may be a light that blinks when the garage door opener/device is in the LEARN/TRAIN mode.

NOTE: You have 30 seconds in which to initiate the next step after the LEARN button has been pushed.

6. Return to the vehicle and push the programmed HomeLink button twice (holding the button for two seconds each time). If the garage door opener/device activates, programming is complete.

NOTE: If the garage door opener/device does not activate, push the button a third time (for two seconds) to complete the training.

To program the remaining two HomeLink buttons, repeat each step for each remaining button. DO NOT erase the channels.

Reprogramming A Single HomeLink Button (Rolling Code)

To reprogram a channel that has been previously trained, follow these steps:

1. Cycle the ignition to the ON/RUN position.
2. Push and hold the desired HomeLink button until the indicator light begins to flash after 20 seconds. Do not release the button.
3. Without releasing the button proceed with "Programming A Rolling Code" step 2 and follow all remaining steps."

Programming A Non-Rolling Code

For programming Garage Door Openers manufactured before 1995.

1. Cycle the ignition to the ON/RUN position.
2. Place the hand-held transmitter 1 to 3 inches (3 to 8 cm) away from the HomeLink button you wish to program while keeping the HomeLink indicator light in view.

3. Press and hold the HomeLink button you want to program while you press and hold the hand-held transmitter button.
4. Continue to hold both buttons and observe the indicator light. The HomeLink indicator will flash slowly and then rapidly after HomeLink has received the frequency signal from the hand-held transmitter. Release both buttons after the indicator light changes from slow to rapid.
5. Press and hold the programmed HomeLink button and observe the indicator light.
   - If the indicator light stays on constantly, programming is complete and the garage door/device should activate when the HomeLink button is pressed.
   - To program the two remaining HomeLink buttons, repeat each step for each remaining button. DO NOT erase the channels.

Reprogramming A Single HomeLink Button (Non-Rolling Code)

To reprogram a channel that has been previously trained, follow these steps:

1. Cycle the ignition to the ON/RUN position.
2. Press and hold the desired HomeLink button until the indicator light begins to flash after 20 seconds. Do not release the button.
3. Without releasing the button, proceed with "Programming A Non-Rolling Code" step 2 and follow all remaining steps.

Canadian/Gate Operator Programming

For programming transmitters in Canada/United States that require the transmitter signals to "time-out" after several seconds of transmission.

Canadian radio frequency laws require transmitter signals to time-out (or quit) after several seconds of transmission – which may not be long enough for HomeLink to pick up the signal during programming. Similar to this Canadian law, some U.S. gate operators are designed to time-out in the same manner.

It may be helpful to unplug the device during the cycling process to prevent possible overheating of the garage door or gate motor.

1. Cycle the ignition to the ON/RUN position.

2. Place the hand-held transmitter 1 to 3 inches (3 to 8 cm) away from the HomeLink button you wish to program while keeping the HomeLink indicator light in view.
3. Continue to press and hold the HomeLink button, while you press and release ("cycle") your hand-held transmitter every two seconds until HomeLink has successfully accepted the frequency signal. The indicator light will flash slowly and then rapidly when fully trained.
4. Watch for the HomeLink indicator to change flash rates. When it changes, it is programmed. It may take up to 30 seconds or longer in rare cases. The garage door may open and close while you are programming.
5. Press and hold the programmed HomeLink button and observe the indicator light.

NOTE:

- If the indicator light stays on constantly, programming is complete and the garage door/device should activate when the HomeLink button is pressed.
- To program the two remaining HomeLink buttons, repeat each step for each remaining button. DO NOT erase the channels.

If you unplugged the garage door opener/device for programming, plug it back in at this time.

Reprogramming A Single HomeLink Button (Canadian/ Gate Operator)

To reprogram a channel that has been previously trained, follow these steps:

1. Cycle the ignition to the ON/RUN position.
2. press and hold the desired HomeLink button until the indicator light begins to flash after 20 seconds. Do not release the button.
3. Without releasing the button, proceed with "Canadian/ Gate Operator Programming" step 2 and follow all remaining steps.

Using HomeLink

To operate, push and release the programmed HomeLink button. Activation will now occur for the programmed device (i.e. garage door opener, gate operator, security system, entry door lock, home/office lighting, etc.). The hand-held transmitter of the device may also be used at any time.

Security

It is advised to erase all channels before you sell or turn in your vehicle.

To do this, push and hold the two outside buttons for 20 seconds until the orange indicator flashes. Note that all channels will be erased. Individual channels cannot be erased.

The HomeLink Universal Transceiver is disabled when the Vehicle Security Alarm is active.

Troubleshooting Tips

If you are having trouble programming HomeLink, here are some of the most common solutions:

- Replace the battery in the Garage Door Opener hand-held transmitter.
- Push the LEARN button on the Garage Door Opener to complete the training for a Rolling Code.
- Did you unplug the device for programming and remember to plug it back in?

If you have any problems, or require assistance, please call toll-free 1-800-355-3515 or, on the Internet at HomeLink.com for information or assistance.

WARNING!

- **Vehicle exhaust contains carbon monoxide, a dangerous gas. Do not run your vehicle in the garage while programming the transceiver. Exhaust gas can cause serious injury or death.**
- **Your motorized door or gate will open and close while you are programming the universal transceiver. Do not program the transceiver if people, pets or other objects are in the path of the door or gate. Only use this transceiver with a garage door opener that has a "stop and reverse" feature as required by Federal safety standards. This includes most garage door opener models manufactured after 1982. Do not use a garage door opener without these safety features. Call toll-free 1-800-355-3515 or, on the Internet at HomeLink.com for safety information or assistance.**

General Information

The following regulatory statement applies to all Radio Frequency (RF) devices equipped in this vehicle:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

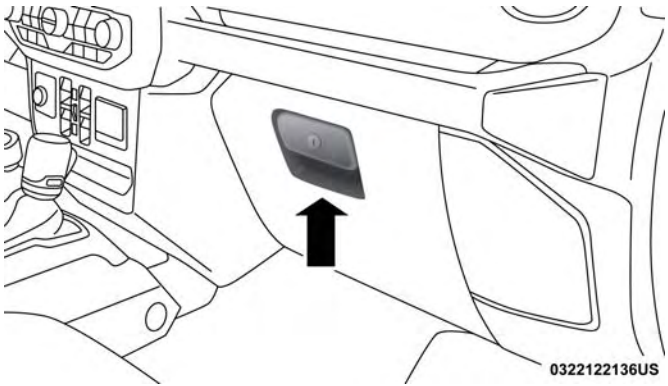
INTERNAL EQUIPMENT

Storage

Glove Compartment

The glove compartment is located on the passenger side of the instrument panel.

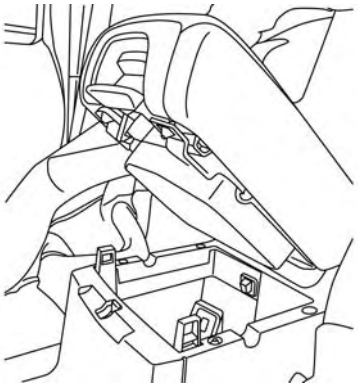
To open the glove compartment, pull the release handle.



Glove Compartment

Console Storage Compartment

To lock or unlock the storage compartment, insert the ignition key and turn. To open the storage compartment, pull up on the latch and lift the cover.

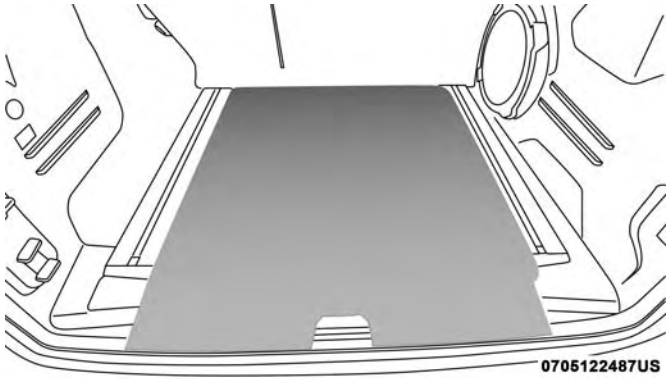


Center Console

Rear Storage Compartment — If Equipped

The rear cargo area storage compartment is located underneath the load floor.

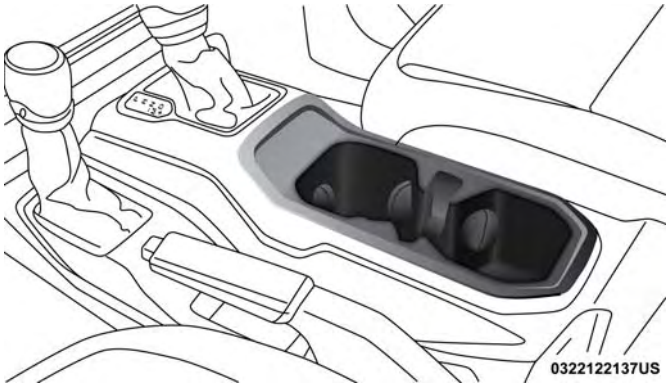
To access the storage compartment, lift up on the cover cutout at the rear of the cargo area.



Rear Storage Cover

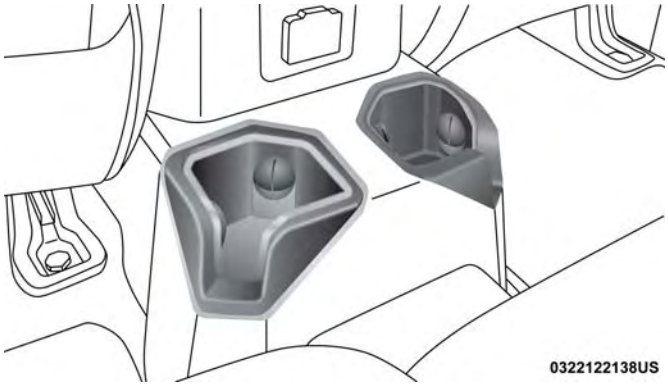
Cupholders

The front cupholders are located in the center console.



Front Cupholders

The rear cupholders are located on the back of the center console, near the floor.



Rear Cupholders

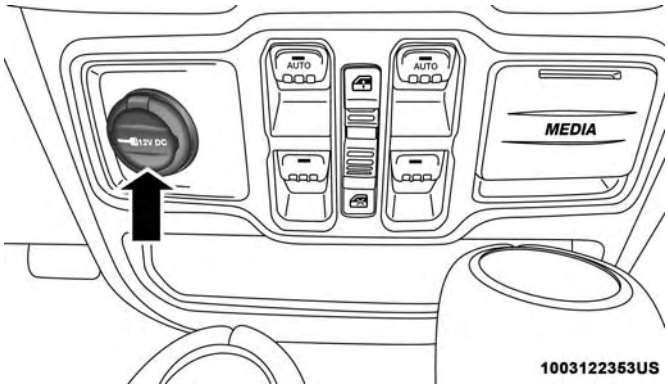
There are also cupholders located in the rear seat armrest, if equipped.

Rear Seat Armrest Cupholders

Electrical Power Outlets

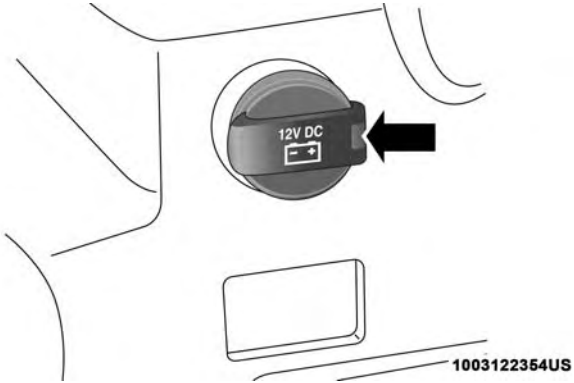
There are two 12 Volt (13 Amp) auxiliary power outlets that can provide power for accessories designed for use with the standard power outlet adapters.

The front power outlet is located in the center of the instrument panel below the climate controls, and is powered from the ignition switch. Power is available when the ignition switch is in the ON or ACC position.

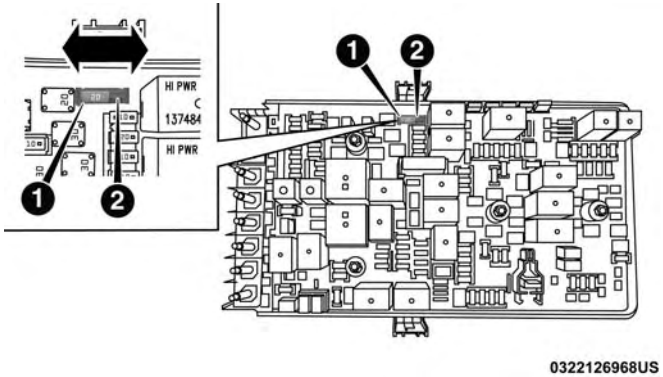


Front Power Outlet

On vehicles equipped with a rear subwoofer, there is a second power outlet located in the rear cargo area and is powered directly from the vehicle battery.



Rear Cargo Power Outlet



Power Outlets Fuse Locations

1 — F81 Fuse 20A Yellow Rear Power Outlet (battery powered at all times)
2 — F91 Fuse 20A Yellow Rear Power Outlet (powered when the ignition switch is in the ON or ACC position)

CAUTION!

- Do not exceed the maximum power of 160 Watts (13 Amps) at 12 Volts. If the 160 Watt (13 Amp) power rating is exceeded the fuse protecting the system will need to be replaced.
- Power outlets are designed for accessory plugs only. Do not insert any other object in the power outlets as this will damage the outlet and blow the fuse. Improper use of the power outlet can cause damage not covered by your New Vehicle Limited Warranty.

WARNING!

To avoid serious injury or death:

- Do not insert any objects into the receptacles.
- Do not touch with wet hands.
- Close the lid when not in use.
- If this outlet is mishandled, it may cause an electric shock and failure.

CAUTION!

- Many accessories that can be plugged in draw power from the vehicle's battery, even when not in use (i.e., cellular phones, etc.). Eventually, if plugged in long enough, the vehicle's battery will discharge sufficiently to degrade battery life and/or prevent the engine from starting.
- Accessories that draw higher power (i.e., coolers, vacuum cleaners, lights, etc.), will degrade the battery even more quickly. Only use these intermittently and with greater caution.
- After the use of high power draw accessories, or long periods of the vehicle not being started (with accessories still plugged in), the vehicle must be driven a sufficient length of time to allow the alternator to recharge the vehicle's battery.
- Power outlets are designed for accessory plugs only. Do not hang any type of accessory or accessory bracket from the plug. Improper use of the power outlet can cause damage.

Power Inverter — If Equipped

There is a 115 or 230 Volt, 150 Watt inverter outlet located on the back of the center console to convert DC current to AC current. This outlet can power cellular phones, electronics and other low power devices requiring power up to 150 Watts. Certain high-end video game consoles will exceed this power limit, as will most power tools.

Power Inverter

The power inverter is designed with built-in overload protection. If the power rating of 150 Watts is exceeded, the power inverter will automatically shut down. Once the electrical device has been removed from the outlet, the inverter should automatically reset. If the power rating exceeds approximately 170 Watts, the power inverter may have to be reset manually.

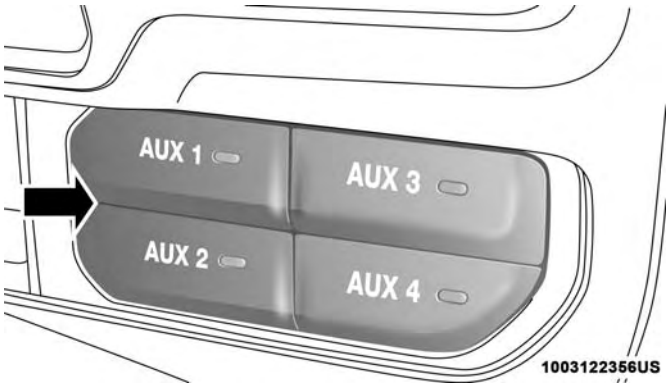
WARNING!

To avoid serious injury or death:

- **Do not insert any objects into the receptacles.**
- **Do not touch with wet hands.**
- **Close the lid when not in use.**
- **If this outlet is mishandled, it may cause an electric shock and failure.**

Auxiliary Switches — If Equipped

Four auxiliary switches located in the lower switch bank of the instrument panel can be used to power various electrical devices. You have the ability to configure the functionality of the auxiliary switches via the Uconnect settings. All switches can be configured for setting the switch type operation to latching or momentary, power source of either battery or ignition, and ability to hold last state across key cycles.

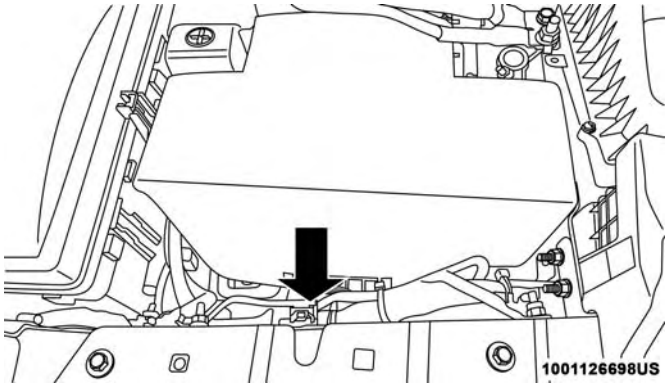


Auxiliary Switches

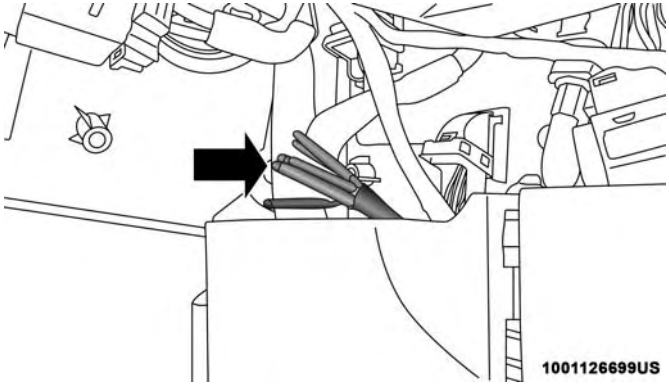
NOTE: Holding last state conditions are met when switch type is set to latching and power source is set to ignition.

For more information, refer to "Uconnect Settings" in Multimedia."

The auxiliary switches control relays that power four blunt cut wires located in the interior passenger outboard foot well area and on the right side of the engine compartment near the battery.



Auxiliary Switch Connections – Under Hood



Auxiliary Switch Connections – Passenger Side Panel

In addition to the four auxiliary switch wires, a fused battery wire and ignition wire are also located in the interior, in the passenger outboard foot well area.

A kit of splices and heat shrink tubing are provided with the auxiliary switches to aid in the connection/installation of your electrical devices.

ROOF LUGGAGE RACK — IF EQUIPPED

NOTE: Roof rack applications are for Hard Top models **ONLY**.

The load carried on the roof, when equipped with a luggage rack, must not exceed 100 lbs (45 kg), this includes the weight of the crossbars, and it should be uniformly distributed over the cargo area.

Crossbars should always be used whenever cargo is placed on the roof rack. Check the straps frequently to be sure that the load remains securely attached.

NOTE: Crossbars can be purchased at an authorized dealer through Mopar parts.

External racks do not increase the total load carrying capacity of the vehicle. Be sure that the total occupant and luggage load inside the vehicle, plus the load on the luggage rack, do not exceed the maximum vehicle load capacity.

WARNING!

Cargo must be securely tied down before driving your vehicle. Improperly secured loads can fly off the vehicle, particularly at high speeds, resulting in personal injury or property damage. Follow the roof rack cautions when carrying cargo on your roof rack.

CAUTION!

- **To avoid damage to the roof rack and vehicle, do not exceed the maximum roof rack load capacity. Always distribute heavy loads as evenly as possible and secure the load appropriately.**
- **Long loads, which extend over the windshield, such as wood panels or surfboards, should be secured to both the front and rear of the vehicle.**
- **Place a blanket or other protection between the surface of the roof and the load.**

(Continued)

CAUTION! ***(Continued)***

- **Travel at reduced speeds and turn corners carefully when carrying large or heavy loads on the roof rack. Wind forces, due to natural causes or nearby truck traffic, can add sudden upward loads. This is especially true on large flat loads and may result in damage to the cargo or your vehicle.**
- **Load should always be secured to cross bars first, with tie down loops used as additional securing points if needed. Tie loops are intended as supplementary tie down points only. Do not use ratcheting mechanisms with the tie loops. Check the straps frequently to be sure that the load remains securely attached.**

GETTING TO KNOW YOUR INSTRUMENT PANEL

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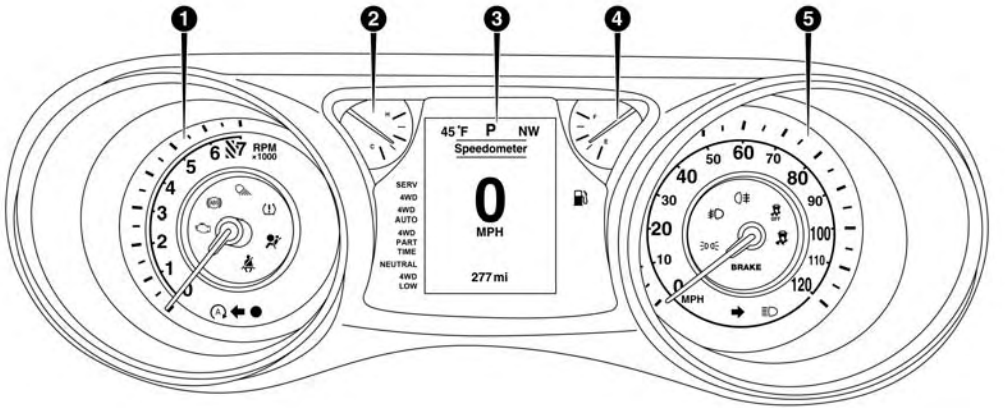
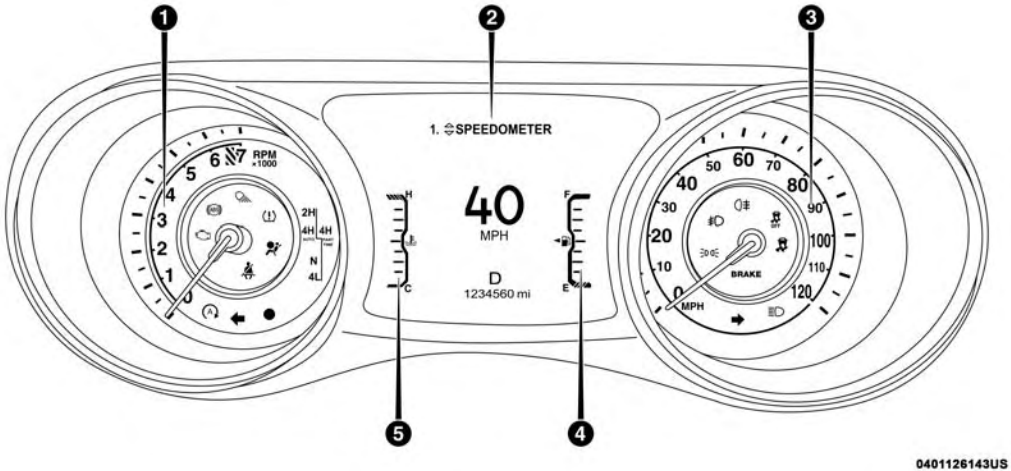
INSTRUMENT CLUSTER



Base Instrument Cluster



Premium Instrument Cluster

Instrument Cluster Descriptions

Base Instrument Cluster Descriptions

1. **Tachometer**
   - Indicates the engine speed in revolutions per minute (RPM x 1000).

CAUTION!

Do not operate the engine with the tachometer pointer in the red area. Engine damage will occur.

2. **Temperature Gauge**
   - The temperature gauge shows engine coolant temperature. Any reading within the normal range indicates that the engine cooling system is operating satisfactorily.
   - The gauge pointer will likely indicate a higher temperature when driving in hot weather, up mountain grades, or when towing a trailer. It should not be allowed to exceed the upper limits of the normal operating range.

WARNING!

A hot engine cooling system is dangerous. You or others could be badly burned by steam or boiling coolant. You may want to call your authorized dealer for service if your vehicle overheats.

CAUTION!

Driving with a hot engine cooling system could damage your vehicle. If the temperature gauge reads "H" pull over and stop the vehicle. Idle the vehicle with the air conditioner turned off until the pointer drops back into the normal range. If the pointer remains on the "H", turn the engine off immediately and call your authorized dealer for service.

3. **Instrument Cluster Display**
   - The instrument cluster display features a driver-interactive display. Refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.

4. **Fuel Gauge**
   - The pointer shows the level of fuel in the fuel tank when the ignition switch is in the ON/RUN position.
   - The fuel pump symbol points to the side of the vehicle where the fuel filler door is located.
5. **Speedometer**
   - Indicates vehicle speed.

Premium Instrument Cluster Descriptions

1. **Tachometer**
   - Indicates the engine speed in revolutions per minute (RPM x 1000).

CAUTION!

Do not operate the engine with the tachometer pointer in the red area. Engine damage will occur.

2. **Instrument Cluster Display**
   - The instrument cluster display features a driver-interactive display. Refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.
3. **Speedometer**
   - Indicates vehicle speed.
4. **Fuel Gauge**
   - The pointer shows the level of fuel in the fuel tank when the ignition switch is in the ON/RUN position.
   - The fuel pump symbol points to the side of the vehicle where the fuel filler door is located.
5. **Temperature Gauge**
   - The temperature gauge shows engine coolant temperature. Any reading within the normal range indicates that the engine cooling system is operating satisfactorily.
   - The gauge pointer will likely indicate a higher temperature when driving in hot weather, up mountain grades, or when towing a trailer. It should not be allowed to exceed the upper limits of the normal operating range.

WARNING!

A hot engine cooling system is dangerous. You or others could be badly burned by steam or boiling coolant. You may want to call your authorized dealer for service if your vehicle overheats.

CAUTION!

Driving with a hot engine cooling system could damage your vehicle. If the temperature gauge reads "H" pull over and stop the vehicle. Idle the vehicle with the air conditioner turned off until the pointer drops back into the normal range. If the pointer remains on the "H", turn the engine off immediately and call your authorized dealer for service.

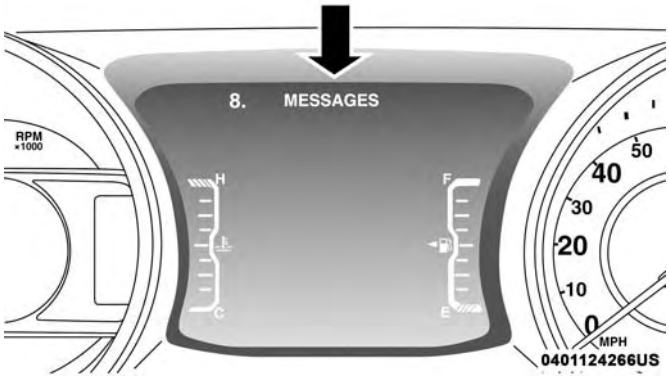
INSTRUMENT CLUSTER DISPLAY

Your vehicle may be equipped with an instrument cluster display, which offers useful information to the driver. With the ignition in the STOP/OFF mode, opening/closing of a door will activate the display for viewing, and display the total miles, or kilometers, in the odometer. Your instrument cluster display is designed to display important information about your vehicle's systems and features. Using a driver interactive display located on the instrument panel, your instrument cluster display can show you how systems are working and give you warnings when they aren't. The steering wheel mounted controls allow you to scroll through and enter the main menus and submenus. You can access the specific information you want and make selections and adjustments.

Instrument Cluster Display Location And Controls

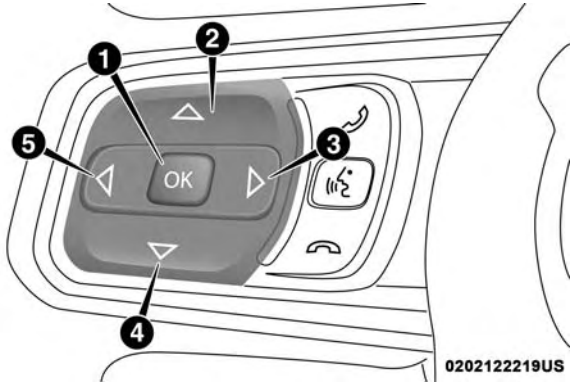
The instrument cluster display is located in the center of the instrument cluster.

3.5 Inch Instrument Cluster Display Location



7.0 Inch Instrument Cluster Display Location

The system allows the driver to select information by pushing the following buttons mounted on the steering wheel:



Instrument Cluster Display Control Buttons

1 — OK Button
2 — Up Arrow Button
3 — Right Arrow Button
4 — Down Arrow Button
5 — Left Arrow Button

- ***Up Arrow Button***

△ Push and release the **up** arrow button to scroll upward through the Main Menu items.

- *Down Arrow Button*

Push and release the **down** arrow button to scroll downward through the Main Menu items.

- *Right Arrow Button*

Push and release the **right** arrow button to access the information screens or submenu screens of a main menu item.

- *Left Arrow Button*

Push and release the **left** arrow button to access the information screens or submenu screens of a main menu item.

- *OK Button*

Push the **OK** button to access/select the information screens or submenu screens of a Main Menu item. Push and hold the **OK** arrow button for one second to reset displayed/selected features that can be reset.

The Main Menu items consists of the following:

- Speedometer
- Vehicle Info
- Off Road— If Equipped
- Fuel Economy
- Trip Info
- Stop/Start — If Equipped
- Audio
- Messages
- Screen Setup

Oil Change Reset

Your vehicle is equipped with an engine oil change indicator system. The "Oil Change Required" message will display in the instrument cluster display for five seconds after a single chime has sounded, to indicate the next scheduled oil change interval. The engine oil change indicator system is duty cycle based, which means the engine oil change interval may fluctuate, dependent upon your personal driving style.

Unless reset, this message will continue to display each time you cycle the ignition to the ON/RUN position. To turn off the message temporarily, push and release the **OK** button. To reset the oil change indicator system (after performing the scheduled maintenance), refer to the following procedure.

Oil Life Reset

1. Without pushing the brake pedal, push and release the ENGINE START/STOP button and place the ignition to the ON/RUN position (do not start the engine).
2. Navigate to "Oil Life" submenu in "Vehicle Info" in the instrument cluster display.
3. Push and hold the **OK** button until the gauge resets to 100%.

Secondary Method For Oil Change Reset Procedure

1. Without pushing the brake pedal, push and release the ENGINE START/STOP button and place the ignition to the ON/RUN position (do not start the engine).
2. Fully press the accelerator pedal, slowly, three times within ten seconds.
3. Without pushing the brake pedal, push and release the ENGINE START/STOP button once to return the ignition to the OFF/LOCK position.

NOTE: If the indicator message illuminates when you start the vehicle, the oil change indicator system did not reset. If necessary, repeat this procedure.

Instrument Cluster Display Menu Items

NOTE: The instrument cluster display menu items display in the center of the instrument cluster. Menu items may vary depending on your vehicle features.

Speedometer

Push and release the **up** or **down** arrow button until the speedometer menu icon is displayed in the instrument cluster display. Push and release the **OK** button to toggle between MPH and km/h.

Vehicle Info

Push and release the **up** or **down** arrow button until the Vehicle Info menu icon is displayed in the instrument cluster display. Push and release the **left** or **right** arrow button to scroll through the information submenus and push and release the **OK** button to select or reset the resettable submenus.

• Tire Pressure	• Coolant Temperature
• Transmission Temperature — Automatic Transmission Only	• Oil Pressure
• Oil Temperature	• Oil Life
• Battery Voltage	

Off Road

Push and release the up or down arrow button until the Off Road menu icon is displayed in the instrument cluster display. Push and release the left or right arrow button to scroll through the information submenus.

- Drivetrain
- Front Wheel Angle: displays the graphical and numerical value of calculated average front wheel angle from the steering wheel orientation.
- Transfer Case Lock Status: displays ″Lock″ graphic only during 4WD High, 4WD High Part Time, 4WD Low status.
- Axle Lock And Sway Bar Status (If Equipped): displays front and rear or rear only axle locker graphic, and sway bar connection graphic with text message (connected or disconnected).
- Pitch And Roll
  - Displays the pitch and roll of the vehicle in the graphic with the angle number on the screen.

NOTE: When vehicle speed becomes too high to display the pitch and roll, "- -" will display in place of the numbers, and the graphic will be greyed out.

Fuel Economy

Push and release the **up** or **down** arrow button until the Fuel Economy icon is highlighted in the instrument cluster display. Push and hold the **OK** button to reset average fuel economy feature.

Toggle left or right to select a display with or without Current Fuel Economy Information.

- Range – The display shows the estimated distance (mi or km) that can be traveled with the fuel remaining in the tank. When the Range value is less than 10 miles, the Range display will change to a "LOW" message. Adding a significant amount of fuel to the vehicle will turn off the "LOW" message and a new Range value will display. Range cannot be reset through the **OK** button.

NOTE: Significant changes in driving style or vehicle loading will greatly affect the actual drivable distance of the vehicle, regardless of the Range displayed value.

- Average – The display shows the average fuel economy (MPG, L/100 km, or km/L) since the last reset.
- Current – This display shows the current fuel economy (MPG, L/100 km, km/L) while driving.

Trip Info

Push and release the **up** or **down** arrow button until the Trip icon/title is highlighted in the instrument cluster display, then push and release the **left** or **right** arrow button to select Trip A or Trip B.

The Trip A and Trip B information will display the following:

- Distance
- Average Fuel Economy
- Elapsed Time

Hold the **OK** button to reset all the information.

Stop/Start — If Equipped

Push and release the **up** or **down** arrow button until the Stop/Start icon/title is highlighted in the instrument cluster display. The screen will display the Stop/Start status.

Audio

Push and release the **up** or **down** arrow button until the Audio Menu icon/title is highlighted in the instrument cluster display. This menu will display the audio source information, including the Song name, Artist name, and audio source with an accompanying graphic.

- **Phone Call Status**

When a call is incoming, a Phone Call Status pop-up will display on the screen. The pop-up will remain until the phone is answered or ignored.

NOTE: The call status will temporarily replace the previous media source information displayed on the screen. When the pop-up is no longer displayed, the display will return to the last used screen.

Messages

Push and release the **up** or **down** arrow button until the Messages Menu item is highlighted. This feature shows the number of stored warning messages. Pushing the **right** arrow button will allow you to see what the stored messages are.

When no messages are present, main menu icon will be a closed envelope, and “No Stored Messages” will display.

Screen Setup

Push and release the **up** or **down** arrow button until the Screen Setup Menu Icon/Title is highlighted in the instrument cluster display. Push and release the **OK** button to enter the sub-menus and follow the prompts on the screen as needed. The Screen Setup feature allows you to change what information is displayed in the instrument cluster as well as the location that information is displayed.

Screen Setup Driver Selectable Items

Upper Left

- None
- Compass (default setting)
- Outside Temp
- Time
- Range To Empty
- Average MPG
- Current MPG
- Trip A Distance
- Trip B Distance

Center

- None
- Compass
- Outside Temp
- Time
- Range to Empty
- Average MPG
- Current MPG
- Trip A Distance
- Trip B Distance
- Audio
- Speedometer
- Menu Title (default setting)

Upper Right

- None
- Compass
- Outside Temp (default setting)
- Time
- Range To Empty
- Average MPG
- Current MPG
- Trip A Distance
- Trip B Distance

Gear Display — If Equipped

- Full (default setting)
- Single

Current Gear

- On
- Off (default setting)

Odometer — If Equipped

- Show (default setting)
- Hide

Favorite Menus

- Speedometer
- Vehicle Info
- Off Road – If Equipped (show/hide)
- Fuel Economy (show/hide)
- Trip Info (Show/Hide)
- Stop/Start
- Audio (show/hide)
- Messages
- Screen Setup

Defaults (Restores All Settings To Default Settings)

- Cancel
- Restore

The menu with (show/hide) means user can press **OK** button to choose show or hide this menu on the instrument cluster display.

Battery Saver On/Battery Saver Mode Message — Electrical Load Reduction Actions — If Equipped

This vehicle is equipped with an Intelligent Battery Sensor (IBS) to perform additional monitoring of the electrical system and status of the vehicle battery.

In cases when the IBS detects charging system failure, or the vehicle battery conditions are deteriorating, electrical load reduction actions will take place to extend the driving time and distance of the vehicle. This is done by reducing power to or turning off non-essential electrical loads.

Load reduction is only active when the engine is running. It will display a message if there is a risk of battery depletion to the point where the vehicle may stall due to lack of electrical supply, or will not restart after the current drive cycle.

When load reduction is activated, the message "Battery Saver On" or "Battery Saver Mode" will appear in the instrument cluster display.

These messages indicate the vehicle battery has a low state of charge and continues to lose electrical charge at a rate that the charging system cannot sustain.

NOTE:

- The charging system is independent from load reduction. The charging system performs a diagnostic on the charging system continuously.
- If the Battery Charge Warning Light is on it may indicate a problem with the charging system. Refer to "Battery Charge Warning Light" in "Warning Lights And Messages" located in "Getting To Know Your Instrument Panel" for further information.

The electrical loads that may be switched off (if equipped), and vehicle functions which can be effected by load reduction:

- Heated Seat/Vented Seats/Heated Wheel
- Rear Defroster And Heated Mirrors
- HVAC System
- 150W Power Inverter System
- Audio and Telematics System

Loss of the battery charge may indicate one or more of the following conditions:

- The charging system cannot deliver enough electrical power to the vehicle system because the electrical loads are larger than the capability of charging system. The charging system is still functioning properly.
- Turning on all possible vehicle electrical loads (e.g. HVAC to max settings, exterior and interior lights, overloaded power outlets +12V, 150W, USB ports) during certain driving conditions (city driving, towing, frequent stopping).
- Installing options like additional lights, upfitter electrical accessories, audio systems, alarms and similar devices.
- Unusual driving cycles (short trips separated by long parking periods).
- The vehicle was parked for an extended period of time (weeks, months).
- The battery was recently replaced and was not charged completely.
- The battery was discharged by an electrical load left on when the vehicle was parked.

- The battery was used for an extended period with the engine not running to supply radio, lights, chargers, +12V portable appliances like vacuum cleaner's, game consoles and similar devices.

What to do when an electrical load reduction action message is present ("Battery Saver On" or "Battery Saver Mode")

During a trip:

- Reduce power to unnecessary loads if possible:
  - Turn off redundant lights (interior or exterior)
  - Check what may be plugged in to power outlets +12V, 150W, USB ports
  - Check HVAC settings (blower, temperature)
  - Check the audio settings (volume)

After a trip:

- Check if any aftermarket equipment was installed (additional lights, upfitter electrical accessories, audio systems, alarms) and review specifications if any (load and Ignition Off Draw currents).
- Evaluate the latest driving cycles (distance, driving time and parking time).
- The vehicle should have service performed if the message is still present during consecutive trips and the evaluation of the vehicle and driving pattern did not help to identify the cause.

WARNING LIGHTS AND MESSAGES

The warning/indicator lights will illuminate in the instrument panel together with a dedicated message and/or acoustic signal when applicable. These indications are indicative and precautionary and as such must not be considered as exhaustive and/or alternative to the information contained in the Owner's Manual, which you are advised to read carefully in all cases. Always refer to the information in this chapter in the event of a failure indication. All active telltales will display first if applicable. The system check menu may appear different based upon equipment options and current vehicle status. Some telltales are optional and may not appear.

Red Warning Lights

— Air Bag Warning Light

This light indicates a fault with the air bag, and will turn on for four to eight seconds as a bulb check when the ignition is placed in the ON/RUN or ACC/ON/RUN position. This light will illuminate with a single chime when a fault

with the air bag has been detected, it will stay on until the fault is cleared. If the light is either not on during startup, stays on, or turns on while driving, have the system inspected at an authorized dealer as soon as possible.

BRAKE — Brake Warning Light

This light monitors various brake functions, including brake fluid level and parking brake application. If the brake light turns on it may indicate that the parking brake is applied, that the brake fluid level is low, or that there is a problem with the anti-lock brake system reservoir.

If the light remains on when the parking brake has been disengaged, and the fluid level is at the full mark on the master cylinder reservoir, it indicates a possible brake hydraulic system malfunction or that a problem with the Brake Booster has been detected by the Anti-Lock Brake System (ABS) / Electronic Stability Control (ESC) system. In this case, the light will remain on until the condition has been corrected. If the problem is related to the brake booster, the ABS pump will run when applying the brake, and a brake pedal pulsation may be felt during each stop.

The dual brake system provides a reserve braking capacity in the event of a failure to a portion of the hydraulic system. A leak in either half of the dual brake system is indicated by the Brake Warning Light, which will turn on when the brake fluid level in the master cylinder has dropped below a specified level.

The light will remain on until the cause is corrected.

NOTE: The light may flash momentarily during sharp cornering maneuvers, which change fluid level conditions. The vehicle should have service performed, and the brake fluid level checked.

If brake failure is indicated, immediate repair is necessary.

WARNING!

Driving a vehicle with the red brake light on is dangerous. Part of the brake system may have failed. It will take longer to stop the vehicle. You could have a collision. Have the vehicle checked immediately.

Vehicles equipped with the Anti-Lock Brake System (ABS) are also equipped with Electronic Brake Force Distribution (EBD). In the event of an EBD failure, the Brake Warning Light will turn on along with the ABS Light. Immediate repair to the ABS system is required.

Operation of the Brake Warning Light can be checked by turning the ignition switch from the OFF position to the

ON/RUN position. The light should illuminate for approximately two seconds. The light should then turn off unless the parking brake is applied or a brake fault is detected. If the light does not illuminate, have the light inspected by your authorized dealer.

The light also will turn on when the parking brake is applied with the ignition switch in the ON/RUN position.

NOTE: This light shows only that the parking brake is applied. It does not show the degree of brake application.

— Battery Charge Warning Light

This light illuminates when the battery is not charging properly. If it stays on while the engine is running, there may be a malfunction with the charging system. Contact your authorized dealer as soon as possible.

This indicates a possible problem with the electrical system or a related component.

— Door Open Warning Light

This indicator will illuminate when a door is ajar/open and not fully closed.

NOTE: If the vehicle is moving, there will also be a single chime.

— Electric Power Steering Fault Warning Light

This light will turn on when there's a fault with the EPS (Electric Power Steering) system. Refer to "Power Steering" in "Starting And Operating" for further information.

WARNING!

Continued operation with reduced assist could pose a safety risk to yourself and others. Service should be obtained as soon as possible.

— Electronic Throttle Control (ETC) Warning Light

This light informs you of a problem with the Electronic Throttle Control (ETC) system. If a problem is detected while the vehicle is running, the light will either stay on or flash depending on the nature of the problem. Cycle the ignition when the vehicle is safely and completely stopped and the transmission is placed in the PARK position. The light should turn off. If the light remains on with the vehicle running, your vehicle will usually be drivable; however, see an authorized dealer for service as soon as possible.

NOTE: This light may turn on if the accelerator and brake pedals are pressed at the same time.

If the light continues to flash when the vehicle is running, immediate service is required and you may experience reduced performance, an elevated/rough idle, or engine stall and your vehicle may require towing. The light will come on when the ignition is placed in the ON/RUN or ACC/ON/RUN position and remain on briefly as a bulb check. If the light does not come on during starting, have the system checked by an authorized dealer.

— Engine Coolant Temperature Warning Light

This light warns of an overheated engine condition. If the engine coolant temperature is too high, this indicator will illuminate and a single chime will sound. If the temperature reaches the upper limit, a continuous chime will be sound for four minutes or until the engine is able to cool: whichever comes first.

If the light turns on while driving, safely pull over and stop the vehicle. If the A/C system is on, turn it off. Also, shift the transmission into NEUTRAL and idle the vehicle. If the temperature reading does not return to normal, turn the engine off immediately and call for service. Refer to “If Your Engine Overheats” in “In Case Of Emergency” for further information.

— Hood Open Warning Light

This indicator will illuminate when the hood is ajar/open and not fully closed.

NOTE: If the vehicle is moving, there will also be a single chime.

— Oil Pressure Warning Light

This light indicates low engine oil pressure. If the light turns on while driving, stop the vehicle and shut off the engine as soon as possible. A chime will sound when this light turns on.

Do not operate the vehicle until the cause is corrected. This light does not indicate how much oil is in the engine. The engine oil level must be checked under the hood.

— Oil Temperature Warning Light

This telltale indicates engine oil temperature is high. If the light turns on while driving, stop the vehicle and shut off the engine as soon as possible. Wait for oil temperature to return to normal levels.

— Seat Belt Reminder Warning Light

This light indicates when the driver or passenger seat belt is unbuckled. When the ignition is first placed in the ON/RUN or ACC/ON/RUN position and if the driver's seat belt is unbuckled, a chime will sound and the light will turn on. When driving, if the driver or front passenger seat belt remains unbuckled, the Seat Belt Reminder Light will flash or remain on continuously and a chime will sound. Refer to "Occupant Restraints Systems" in "Safety" for further information.

— Swing Gate Open Warning Light

This indicator will turn when the swing gate is open.

NOTE: If the vehicle is moving, there will also be a single chime.

— Transmission Temperature Warning Light — If Equipped

This light indicates high transmission fluid temperature. This may occur with strenuous usage such as trailer towing. If this light turns on, stop the vehicle and run the engine at idle or slightly faster, with the transmission in PARK or NEUTRAL, until the light turns off. Once the light turns off, you may continue to drive normally.

WARNING!

If you continue operating the vehicle when the Transmission Temperature Warning Light is illuminated you could cause the fluid to boil over, come in contact with hot engine or exhaust components and cause a fire.

CAUTION!

Continuous driving with the Transmission Temperature Warning Light illuminated will eventually cause severe transmission damage or transmission failure.

— Vehicle Security Warning Light — If Equipped

This light will flash at a fast rate for approximately 15 seconds when the vehicle security alarm is arming, and then will flash slowly until the vehicle is disarmed.

Yellow Warning Lights

— Anti-Lock Brake (ABS) Warning Light

This light monitors the Anti-Lock Brake System (ABS). The light will turn on when the ignition is placed in the ON/RUN or ACC/ON/RUN position and may stay on for as long as four seconds.

If the ABS light remains on or turns on while driving, then the Anti-Lock portion of the brake system is not functioning and service is required as soon as possible. However, the conventional brake system will continue to operate normally, assuming the Brake Warning Light is not also on.

If the ABS light does not turn on when the ignition is placed in the ON/RUN or ACC/ON/RUN position, have the brake system inspected by an authorized dealer.

— Electronic Stability Control (ESC) Active Warning Light — If Equipped

This light will indicate when the Electronic Stability Control system is Active. The "ESC Indicator Light" in the instrument cluster will come on when the ignition is placed in the ON/RUN or ACC/ON/RUN position, and when ESC is activated. It should go out with the engine running. If the "ESC Indicator Light" comes on continuously with the engine running, a malfunction has been detected in the ESC system. If this light remains on after several ignition cycles, and the vehicle has been driven several miles (kilometers) at speeds greater than 30 mph (48 km/h), see your authorized dealer as soon as possible to have the problem diagnosed and corrected.

- The "ESC Off Indicator Light" and the "ESC Indicator Light" come on momentarily each time the ignition is placed in the ON/RUN or ACC/ON/RUN position.
- The ESC system will make buzzing or clicking sounds when it is active. This is normal; the sounds will stop when ESC becomes inactive.
- This light will come on when the vehicle is in an ESC event.

— Electronic Stability Control (ESC) Off Warning Light — If Equipped

This light indicates the Electronic Stability Control (ESC) is off.

Each time the ignition is turned to ON/RUN or ACC/ON/RUN, the ESC system will be on, even if it was turned off previously.

— Loose Fuel Filler Cap Warning Light — If Equipped

This light will illuminate when the fuel filler cap is loose. Properly close the filler cap to disengage the light. If the light does not turn off, please see your authorized dealer.

— Low Fuel Warning Light

When the fuel level reaches approximately 2.0 gal (7.5 L), this light will turn on and a chime will sound. The light will remain on until fuel is added.

— Low Washer Fluid Warning Light — If Equipped

This indicator will illuminate when the windshield washer fluid is low.

— Engine Check/Malfunction Indicator Warning Light (MIL)

The Engine Check/Malfunction Indicator Light (MIL) is a part of an Onboard Diagnostic System called OBD II that monitors engine and automatic transmission control systems. The light will illuminate when the ignition is in the ON/RUN position before engine start. If the bulb does not come on when turning the ignition switch from OFF to ON/RUN, have the condition checked promptly.

Certain conditions, such as a loose or missing gas cap, poor quality fuel, etc., may illuminate the light after engine start. The vehicle should be serviced if the light stays on through several typical driving styles. In most situations, the vehicle will drive normally and will not require towing.

When the engine is running, the MIL may flash to alert serious conditions that could lead to immediate loss of power or severe catalytic converter damage. The vehicle should be serviced as soon as possible if this occurs.

WARNING!

A malfunctioning catalytic converter, as referenced above, can reach higher temperatures than in normal operating conditions. This can cause a fire if you drive slowly or park over flammable substances such as dry plants, wood, cardboard, etc. This could result in death or serious injury to the driver, occupants or others.

CAUTION!

Prolonged driving with the Malfunction Indicator Light (MIL) on could cause damage to the vehicle control system. It also could affect fuel economy and driveability. If the MIL is flashing, severe catalytic converter damage and power loss will soon occur. Immediate service is required.

SERV 4WD — Service 4WD Warning Light — If Equipped

If the light stays on or comes on during driving, it means that the 4WD system is not functioning properly and that service is required. We recommend you drive to the nearest service center and have the vehicle serviced immediately.

— Service Stop/Start System Warning Light — If Equipped

This telltale will turn on to indicate the Stop/Start system is not functioning properly and service is required. Contact your authorized dealer for service.

— Speed Control Fault Warning Light

This telltale will illuminate to indicate the Speed Control System is not functioning properly and service is required. Contact your authorized dealer.

SWAY BAR — Sway Bar Fault Warning Light

This light will illuminate when there is a fault in the sway bar disconnect system.

— Tire Pressure Monitoring System (TPMS) Warning Light

The warning light switches on and a message is displayed to indicate that the tire pressure is lower than the recommended value and/or that slow pressure loss is occurring. In these cases, optimal tire duration and fuel consumption may not be guaranteed.

Should one or more tires be in the condition mentioned above, the display will show the indications corresponding to each tire in sequence.

CAUTION!

Do not continue driving with one or more flat tires as handling may be compromised. Stop the vehicle, avoiding sharp braking and steering. If a tire puncture occurs, repair immediately using the dedicated tire repair kit and contact your authorized dealer as soon as possible.

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists. When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

CAUTION!

The TPMS has been optimized for the original equipment tires and wheels. TPMS pressures and warning have been established for the tire size equipped on your vehicle. Undesirable system operation or sensor

(Continued)

CAUTION! *(Continued)*

damage may result when using replacement equipment that is not of the same size, type, and/or style. Aftermarket wheels can cause sensor damage. Using aftermarket tire sealants may cause the Tire Pressure Monitoring System (TPMS) sensor to become inoperable. After using an aftermarket tire sealant it is recommended that you take your vehicle to your authorized dealer to have your sensor function checked.

Yellow Indicator Lights

4H / 4WD — 4WD Indicator Light — If Equipped

This light alerts the driver that the vehicle is in the four-wheel drive mode, and the front and rear driveshafts are mechanically locked together forcing the front and rear wheels to rotate at the same speed.

4L / 4WD LOW — 4WD Low Indicator Light — If Equipped

This light alerts the driver that the vehicle is in the four-wheel drive LOW mode. The front and rear driveshafts are mechanically locked together forcing the front and rear wheels to rotate at the same speed. Low range provides a greater gear reduction ratio to provide increased torque at the wheels.

4H PART TIME / 4WD PART TIME — 4WD Part Time Indicator Light — If Equipped

This light alerts the driver that the vehicle is in the four-wheel drive part time mode, and the front and rear driveshafts are mechanically locked together forcing the front and rear wheels to rotate at the same speed.

— Active Speed Limiter Fault Indicator Light — If Equipped

This light will turn on when there is a fault detected with the Active Speed Limiter.

— Axle Locker Fault Indicator Light

This light indicates when the front and/or rear axle locker fault has been detected.

— Front/Rear Axle Lock Indicator Light

This light indicates when the front, rear, or both axles have been locked. The telltale will display the lock icon either on the front, rear, or both axles to indicate the current lock status.

N / NEUTRAL — Neutral Indicator Light — If Equipped

This light alerts the driver that the vehicle is in the neutral mode.

— Rear Axle Lock Indicator Light

This light indicates when the rear axle lock has been activated.

SWAY BAR — Sway Bar Indicator Light — If Equipped

This indicator will illuminate when the front sway bar is disconnected.

4H AUTO — 4WD Auto Indicator Light — If Equipped

This light alerts the driver that the vehicle is in the four-wheel drive auto mode. The system will provide power to all four wheels and shift the power between the front and rear axles as needed. This will provide maximum traction in dry and slippery conditions.

White Indicator Lights

2H — Two Wheel Drive High Indicator Light — If Equipped With a Premium Cluster

This light alerts the driver that the vehicle is in the two wheel drive high mode.

— Active Speed Limiter ON Indicator Light — If Equipped With A Premium Instrument Cluster

This light will turn on when the Active Speed Limiter is on, but not set.

— Active Speed Limiter SET Indicator Light — If Equipped With A Base Instrument Cluster

This light will turn on when the Active Speed Limiter is on and set to a specific speed.

— Hill Descent Control (HDC) Indicator Light — If Equipped

This indicator shows when the Hill Descent Control (HDC) feature is turned on. The lamp will be on solid when HDC is armed. HDC can only be armed when the transfer case is in the “4WD LOW” position and the vehicle speed is less then 30 mph (48 km/h). If these conditions are not met while attempting to use the HDC feature, the HDC indicator light will flash on/off.

55 — Set Speed Warning Light — If Equipped

When Set Speed Warning is turned on, the speed warning telltale will illuminate in the instrument cluster with a number matching the set speed. When the set speed is exceeded, a single chime will sound along with pop up message of speed warning exceeded. When the set speed is exceeded by 1.8 mph (3 km/h) or more, the indication will light up yellow and flash along with a continuous chime (up to ten seconds or until the speed is no longer exceeded). Speed Warning can be turned on and off in the

instrument cluster display, for further information refer to "Instrument Cluster Display Menu Items" in "Getting To Know Your Instrument Panel."

The number "55" is only an example of a speed that can be set.

— Cruise Control Ready Indicator Light — If Equipped With A Premium Instrument Cluster

This light will turn on when the speed control has been turned on, but not set. Refer to "Speed Control — If Equipped" in "Starting And Operating" for further information.

Green Indicator Lights

4H AUTO — 4WD Auto Indicator Light — If Equipped

This light alerts the driver that the vehicle is in the four-wheel drive auto mode. The system will provide power to all four wheels and shift the power between the front and rear axles as needed. This will provide maximum traction in dry and slippery conditions.

— Active Speed Limiter SET Indicator Light — If Equipped With A 7.0 Instrument Cluster Display

This light will turn on when the Active Speed Limiter is on and set to a specific speed.

— Cruise Control Set Indicator Light — If Equipped

This light will turn on when the speed control is set to the desired speed. Refer to "Speed Control" in "Starting And Operating" for further information.

— Front Fog Indicator Light — If Equipped

This indicator will illuminate when the front fog lights are on.

— Park/Headlight On Indicator Light

This indicator will illuminate when the park lights or headlights are turned on.

— Stop/Start Active Indicator Light — If Equipped

This telltale will illuminate when the Stop/Start function is in "Autostop" mode.

— Turn Signal Indicator Lights

When the left or right turn signal is activated, the turn signal indicator will flash independently and the corresponding exterior turn signal lamps will flash. Turn signals can be activated when the multifunction lever is moved down (left) or up (right).

NOTE:

- A continuous chime will sound if the vehicle is driven more than 1 mile (1.6 km) with either turn signal on.
- Check for an inoperative outside light bulb if either indicator flashes at a rapid rate.

Blue Indicator Lights

— High Beam Indicator Light

This indicator shows that the high beam headlights are on. With the low beams activated, push the multifunction lever forward (toward the front of the vehicle) to turn on the high beams. Pull the multifunction lever rearward (toward the rear of the vehicle) to turn off the high beams. If the high beams are off, pull the lever toward you for a temporary high beam on, "flash to pass" scenario.

Gray Indicator Lights

— Cruise Control Ready Indicator Light — If Equipped With Base Instrument Cluster

This light will turn on when the speed control has been turned on, but not set. Refer to "Speed Control — If Equipped" in "Starting And Operating" for further information.

— Active Speed Limiter ON Indicator Light — If Equipped With A Base Instrument Cluster

This light will turn on when the Active Speed Limiter is on, but not set.

ONBOARD DIAGNOSTIC SYSTEM — OBD II

Your vehicle is equipped with a sophisticated Onboard Diagnostic system called OBD II. This system monitors the performance of the emissions, engine, and transmission control systems. When these systems are operating properly, your vehicle will provide excellent performance and fuel economy, as well as engine emissions well within current government regulations.

If any of these systems require service, the OBD II system will turn on the Malfunction Indicator Light (MIL). It will also store diagnostic codes and other information to assist your service technician in making repairs. Although your vehicle will usually be drivable and not need towing, see an authorized dealer for service as soon as possible.

CAUTION!

- **Prolonged driving with the MIL on could cause further damage to the emission control system. It could also affect fuel economy and driveability. The vehicle must be serviced before any emissions tests can be performed.**
- **If the MIL is flashing while the vehicle is running, severe catalytic converter damage and power loss will soon occur. Immediate service is required.**

Onboard Diagnostic System (OBD II) Cybersecurity

Your vehicle is required to have an Onboard Diagnostic system (OBD II) and a connection port to allow access to information related to the performance of your emissions controls. Authorized service technicians may need to access this information to assist with the diagnosis and service of your vehicle and emissions system.

WARNING!

- **ONLY an authorized service technician should connect equipment to the OBD II connection port in order to diagnose or service your vehicle.**

(Continued)

WARNING! ***(Continued)***

- **If unauthorized equipment is connected to the OBD II connection port, such as a driver-behavior tracking device, it may:**
  - **Be possible that vehicle systems, including safety related systems, could be impaired or a loss of vehicle control could occur that may result in an accident involving serious injury or death.**
  - **Access, or allow others to access, information stored in your vehicle systems, including personal information.**

For further information, refer to “Cybersecurity” in “Multimedia”.

EMISSIONS INSPECTION AND MAINTENANCE PROGRAMS

In some localities, it may be a legal requirement to pass an inspection of your vehicle’s emissions control system. Failure to pass could prevent vehicle registration.

For states that require an Inspection and Maintenance (I/M), this check verifies the “Malfunction Indicator Light (MIL)” is functioning and is not on when the engine is running, and that the OBD II system is ready for testing.

Normally, the OBD II system will be ready. The OBD II system may **not** be ready if your vehicle was recently serviced, recently had a dead battery or a battery replacement. If the OBD II system should be determined not ready for the I/M test, your vehicle may fail the test.

Your vehicle has a simple ignition actuated test, which you can use prior to going to the test station. To check if your vehicle's OBD II system is ready, you must do the following:

1. Cycle the ignition switch to the ON position, but do not crank or start the engine.

NOTE: If you crank or start the engine, you will have to start this test over.

2. As soon as you cycle the ignition switch to the ON position, you will see the "Malfunction Indicator Light (MIL)" symbol come on as part of a normal bulb check.
3. Approximately 15 seconds later, one of two things will happen:

- The MIL will flash for about ten seconds and then return to being fully illuminated until you turn OFF the ignition or start the engine. This means that your vehicle's OBD II system is **not ready** and you should **not** proceed to the I/M station.
- The MIL will not flash at all and will remain fully illuminated until you place the ignition in the off position or start the engine. This means that your vehicle's OBD II system is **ready** and you can proceed to the I/M station.

If your OBD II system is **not ready,** you should see an authorized dealer or repair facility. If your vehicle was recently serviced or had a battery failure or replacement, you may need to do nothing more than drive your vehicle as you normally would in order for your OBD II system to update. A recheck with the above test routine may then indicate that the system is **now ready**.

Regardless of whether your vehicle's OBD II system is ready or not, if the MIL is illuminated during normal vehicle operation you should have your vehicle serviced before going to the I/M station. The I/M station can fail your vehicle because the MIL is on with the engine running.

SAFETY

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SAFETY FEATURES

Anti-Lock Brake System (ABS)

The Anti-Lock Brake System (ABS) provides increased vehicle stability and brake performance under most braking conditions. The system automatically prevents wheel lock, and enhances vehicle control during braking.

The ABS performs a self-check cycle to ensure that the ABS is working properly each time the vehicle is started and driven. During this self-check, you may hear a slight clicking sound as well as some related motor noises.

ABS is activated during braking when the system detects one or more wheels begin to lock. Road conditions such as ice, snow, gravel, bumps, railroad tracks, loose debris, or panic stops may increase the likelihood of ABS activation(s).

You also may experience the following when ABS activates:

- The ABS motor noise (it may continue to run for a short time after the stop).
- The clicking sound of solenoid valves.
- Brake pedal pulsations.
- A slight drop of the brake pedal at the end of the stop.

These are all normal characteristics of ABS.

WARNING!

- **The ABS contains sophisticated electronic equipment that may be susceptible to interference caused by improperly installed or high output radio transmitting equipment. This interference can cause possible loss of anti-lock braking capability. Installation of such equipment should be performed by qualified professionals.**
- **Pumping of the Anti-Lock Brakes will diminish their effectiveness and may lead to a collision. Pumping makes the stopping distance longer. Just press firmly on your brake pedal when you need to slow down or stop.**
- **The ABS cannot prevent the natural laws of physics from acting on the vehicle, nor can it increase braking or steering efficiency beyond that afforded by the condition of the vehicle brakes and tires or the traction afforded.**
- **The ABS cannot prevent collisions, including those resulting from excessive speed in turns, following another vehicle too closely, or hydroplaning.**

(Continued)

WARNING! ***(Continued)***

- **The capabilities of an ABS equipped vehicle must never be exploited in a reckless or dangerous manner that could jeopardize the user's safety or the safety of others.**

ABS is designed to function with the OEM tires. Modification may result in degraded ABS performance.

Anti-Lock Brake Warning Light

The yellow "Anti-Lock Brake Warning Light" will turn on when the ignition is turned to the ON/RUN mode and may stay on for as long as four seconds.

If the "Anti-Lock Brake Warning Light" remains on or comes on while driving, it indicates that the anti-lock portion of the brake system is not functioning and that service is required. However, the conventional brake system will continue to operate normally if the "Brake System Warning Light" is not on.

If the "Anti-Lock Brake Warning Light" is on, the brake system should be serviced as soon as possible to restore the benefits of anti-lock brakes. If the "Anti-Lock Brake Warning Light" does not come on when the ignition is turned to the ON/RUN mode, have the light repaired as soon as possible.

Electronic Brake Control System

Your vehicle is equipped with an advanced Electronic Brake Control system (EBC). This system includes Electronic Brake Force Distribution (EBD), Anti-Lock Brake System (ABS), Brake Assist System (BAS), Hill Start Assist (HSA), Traction Control System (TCS), Electronic Stability Control (ESC), and Electronic Roll Mitigation (ERM). These systems work together to enhance both vehicle stability and control in various driving conditions.

Your vehicle may also be equipped with Trailer Sway Control (TSC), Ready Alert Braking (RAB), Rain Brake Support (RBS), Dynamic Steering Torque (DST), and Hill Descent Control (HDC).

Electronic Brake Force Distribution (EBD)

This function manages the distribution of the braking torque between the front and rear axles by limiting braking pressure to the rear axle. This is done to prevent overslip of the rear wheels to avoid vehicle instability, and to prevent the rear axle from entering ABS before the front axle.

Brake System Warning Light

The red "Brake System Warning Light" will turn on when the ignition is turned to the ON/RUN mode and may stay on for as long as four seconds.

If the “Brake System Warning Light” remains on or comes on while driving, it indicates that the brake system is not functioning properly and that immediate service is required. If the “Brake System Warning Light” does not come on when the ignition is turned to the ON/RUN mode, have the light repaired as soon as possible.

Brake Assist System (BAS)

The BAS is designed to optimize the vehicle’s braking capability during emergency braking maneuvers. The system detects an emergency braking situation by sensing the rate and amount of brake application and then applies optimum pressure to the brakes. This can help reduce braking distances. The BAS complements the anti-lock brake system (ABS). Applying the brakes very quickly results in the best BAS assistance. To receive the benefit of the system, you must apply continuous braking pressure during the stopping sequence, (do not “pump” the brakes). Do not reduce brake pedal pressure unless braking is no longer desired. Once the brake pedal is released, the BAS is deactivated.

WARNING!

The Brake Assist System (BAS) cannot prevent the natural laws of physics from acting on the vehicle, nor can it increase the traction afforded by prevailing road conditions. BAS cannot prevent collisions, including those resulting from excessive speed in turns, driving on very slippery surfaces, or hydroplaning. The capabilities of a BAS-equipped vehicle must never be exploited in a reckless or dangerous manner, which could jeopardize the user’s safety or the safety of others.

Hill Start Assist (HSA)

The HSA system is designed to mitigate roll back from a complete stop while on an incline. If the driver releases the brake while stopped on an incline, HSA will continue to hold the brake pressure for a short period. If the driver does not apply the throttle before this time expires, the system will release brake pressure and the vehicle will roll down the hill as normal.

The following conditions must be met in order for HSA to activate:

- The feature must be enabled.
- The vehicle must be stopped.
- Park brake must be off.
- Driver door must be closed. (If the doors are attached, then the door must be closed. If the doors are detached then the driver's seatbelt must be buckled.)
- The vehicle must be on a sufficient grade.
- The gear selection must match vehicle uphill direction (i.e., vehicle facing uphill is in forward gear; vehicle backing uphill is in REVERSE gear).
- HSA will work in REVERSE gear and all forward gears. The system will not activate if the transmission is in PARK or NEUTRAL. For vehicles equipped with a manual transmission, if the clutch is pressed, HSA will remain active.

WARNING!

There may be situations where the Hill Start Assist (HSA) will not activate and slight rolling may occur, such as on minor hills or with a loaded vehicle, or while pulling a trailer. HSA is not a substitute for active driving involvement. It is always the driver's responsibility to be attentive to distance to other vehicles, people, and objects, and most importantly brake operation to ensure safe operation of the vehicle under all road conditions. Your complete attention is always required while driving to maintain safe control of your vehicle. Failure to follow these warnings can result in a collision or serious personal injury.

Disabling And Enabling HSA

This feature can be turned on or turned off. To change the current setting, refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.

Towing With HSA

HSA will also provide assistance to mitigate roll back while towing a trailer.

WARNING!

- **If you use a trailer brake controller with your trailer, the trailer brakes may be activated and deactivated with the brake switch. If so, there may not be enough brake pressure to hold both the vehicle and the trailer on a hill when the brake pedal is released. In order to avoid rolling down an incline while resuming acceleration, manually activate the trailer brake or apply more vehicle brake pressure prior to releasing the brake pedal.**
- **HSA is not a parking brake. Always apply the parking brake fully when exiting your vehicle. Also, be certain to place the transmission in PARK.**
- **Failure to follow these warnings can result in a collision or serious personal injury.**

Traction Control System (TCS)

This system monitors the amount of wheel spin of each of the driven wheels. If wheel spin is detected, the TCS may apply brake pressure to the spinning wheel(s) and/or reduce engine power to provide enhanced acceleration and stability. A feature of the TCS, Brake Limited Differential (BLD), functions similar to a limited slip differential and controls the wheel spin across a driven axle. If one wheel on a driven axle is spinning faster than the other, the system will apply the brake of the spinning wheel. This will allow more engine torque to be applied to the wheel that is not spinning. BLD may remain enabled even if TCS and ESC are in a reduced mode.

Electronic Stability Control (ESC)

This system enhances directional control and stability of the vehicle under various driving conditions. ESC corrects for oversteering or understeering of the vehicle by applying the brake of the appropriate wheel(s) to assist in counteracting the oversteer or understeer condition. Engine power may also be reduced to help the vehicle maintain the desired path.

ESC uses sensors in the vehicle to determine the vehicle path intended by the driver and compares it to the actual path of the vehicle. When the actual path does not match the intended path, ESC applies the brake of the appropriate wheel to assist in counteracting the oversteer or understeer condition.

- Oversteer — when the vehicle is turning more than appropriate for the steering wheel position.
- Understeer — when the vehicle is turning less than appropriate for the steering wheel position.

The "ESC Activation/Malfunction Indicator Light" located in the instrument cluster will start to flash as soon as the ESC system becomes active. The "ESC Activation/Malfunction Indicator Light" also flashes when the TCS is active. If the "ESC Activation/Malfunction Indicator Light" begins to flash during acceleration, ease up on the accelerator and apply as little throttle as possible. Be sure to adapt your speed and driving to the prevailing road conditions.

WARNING!

- **Electronic Stability Control (ESC) cannot prevent the natural laws of physics from acting on the vehicle, nor can it increase the traction afforded by prevailing road conditions. ESC cannot prevent accidents, including those resulting from excessive speed in turns, driving on very slippery surfaces, or hydroplaning. ESC also cannot prevent accidents resulting from loss of vehicle control due to inappropriate driver input for the conditions. Only a safe, attentive, and skillful driver can prevent accidents. The capabilities of an ESC equipped vehicle must never be exploited in a reckless or dangerous manner which could jeopardize the user's safety or the safety of others.**
- **Vehicle modifications, or failure to properly maintain your vehicle, may change the handling characteristics of your vehicle, and may negatively affect the performance of the ESC system. Changes to the steering system, suspension, braking system, tire type and size or wheel size may adversely affect ESC performance. Improperly inflated and unevenly worn tires may also degrade ESC performance. Any vehicle modification or poor vehicle maintenance**

(Continued)

WARNING! *(Continued)*

that reduces the effectiveness of the ESC system can increase the risk of loss of vehicle control, vehicle rollover, personal injury and death.

ESC Operating Modes

NOTE: Depending upon model and mode of operation, the ESC system may have multiple operating modes.

ESC On

This is the normal operating mode for the ESC. Whenever the vehicle is started, the ESC system will be in this mode. This mode should be used for most driving conditions. Alternate ESC modes should only be used for specific reasons as noted in the following paragraphs.

Partial Off

The "Partial Off" mode is intended for times when a more spirited driving experience is desired. This mode may modify TCS and ESC thresholds for activation, which allows for more wheel spin than normally allowed. This mode may be useful if the vehicle becomes stuck.

To enter the "Partial Off" mode, momentarily push the "ESC Off" switch and the "ESC Off Indicator Light" will illuminate. To turn the ESC on again, momentarily push the "ESC Off" switch and the "ESC Off Indicator Light" will turn off.

NOTE: For vehicles with multiple partial ESC modes a momentary button push will toggle the ESC mode. Multiple momentary button pushed may be required to return to ESC On.

WARNING!

- **When in "Partial Off" mode, the TCS functionality of ESC, (except for the limited slip feature described in the TCS section), has been disabled and the "ESC Off Indicator Light" will be illuminated. When in "Partial Off" mode, the engine power reduction feature of TCS is disabled, and the enhanced vehicle stability offered by the ESC system is reduced.**
- **Trailer Sway control (TSC) is disabled when the ESC system is in the "Partial Off" mode.**

Full Off — If Equipped

This mode is intended for off-highway or off-road use only and should not be used on any public roadways. In this mode, TCS and ESC features are turned OFF. To enter the "Full Off" mode, push and hold the "ESC Off" switch for five seconds while the vehicle is stopped with the engine running. After five seconds, a chime will sound, the "ESC Off Indicator Light" will illuminate, and the "ESC OFF" message will display in the instrument cluster. To turn ESC ON again, momentarily push the "ESC Off" switch.

NOTE: System may switch from ESC "Full Off" to "Partial Off" mode when vehicle exceeds a predetermined speed. When the vehicle speed slows below the predetermined speed the system will return to ESC "Full Off".

ESC modes may also be affected by drive modes if so equipped.

WARNING!

- **In the ESC "Full Off" mode, the engine torque reduction and stability features are disabled. Therefore, enhanced vehicle stability offered by the ESC system is unavailable. In an emergency evasive maneuver, the ESC system will not engage to assist in maintaining stability. ESC "Full Off" mode is intended for off-highway or off-road use only.**
- **With the ESC switched off, the enhanced vehicle stability offered by ESC is unavailable. In an emergency evasive maneuver, the ESC system will not engage to assist in maintaining stability. ESC "Full Off" mode is only intended for off-highway or off-road use.**
- **The Electronic Stability Control (ESC) cannot prevent the natural laws of physics from acting on the vehicle, nor can it increase the traction afforded by prevailing road conditions. ESC cannot prevent all accidents, including those resulting from excessive speed in turns, driving on very slippery surfaces, or hydroplaning. ESC also cannot prevent collisions.**

ESC Activation/Malfunction Indicator Light And ESC OFF Indicator Light

The "ESC Activation/Malfunction Indicator Light" in the instrument cluster will come on when the ignition is turned to the ON mode. It should go out with the engine running. If the "ESC Activation/Malfunction Indicator Light" comes on continuously with the engine running, a malfunction has been detected in the ESC system. If this light remains on after several ignition cycles, and the vehicle has been driven several miles (kilometers) at speeds greater than 30 mph (48 km/h), see your authorized dealer as soon as possible to have the problem diagnosed and corrected.

The "ESC Activation/Malfunction Indicator Light" (located in the instrument cluster) starts to flash as soon as the tires lose traction and the ESC system becomes active. The "ESC Activation/Malfunction Indicator Light" also flashes when TCS is active. If the "ESC Activation/Malfunction Indicator Light" begins to flash during acceleration, ease up on the accelerator and apply as little throttle as possible. Be sure to adapt your speed and driving to the prevailing road conditions.

NOTE:

- The "ESC Activation/Malfunction Indicator Light" and the "ESC OFF Indicator Light" come on momentarily each time the ignition is turned ON.
- Each time the ignition is turned ON, the ESC system will be on even if it was turned off previously.
- The ESC system will make buzzing or clicking sounds when it is active. This is normal; the sounds will stop when ESC becomes inactive following the maneuver that caused the ESC activation.

The "ESC OFF Indicator Light" indicates the customer has elected to have the Electronic Stability Control (ESC) in a reduced mode.

Electronic Roll Mitigation (ERM)

This system anticipates the potential for wheel lift by monitoring the driver's steering wheel input and the speed of the vehicle. When ERM determines that the rate of change of the steering wheel angle and vehicle's speed are sufficient to potentially cause wheel lift, it then applies the appropriate brake and may also reduce engine power to lessen the chance that wheel lift will occur. ERM can only reduce the chance of wheel lift occurring during severe or

evasive driving maneuvers; it cannot prevent wheel lift due to other factors, such as road conditions, leaving the roadway, or striking objects or other vehicles.

NOTE: ERM is disabled anytime the ESC is in "Full Off" mode (if equipped). Refer to "Electronic Stability Control (ESC)" in this section for a complete explanation of the available ESC modes.

WARNING!

Many factors, such as vehicle loading, road conditions and driving conditions, influence the chance that wheel lift or rollover may occur. ERM cannot prevent all wheel lift or roll overs, especially those that involve leaving the roadway or striking objects or other vehicles. The capabilities of an ERM-equipped vehicle must never be exploited in a reckless or dangerous manner which could jeopardize the user's safety or the safety of others.

Trailer Sway Control (TSC)

TSC uses sensors in the vehicle to recognize an excessively swaying trailer and will take the appropriate actions to attempt to stop the sway. TSC will become active automatically once an excessively swaying trailer is recognized.

NOTE: TSC cannot stop all trailers from swaying. Always use caution when towing a trailer and follow the trailer tongue weight recommendations. Refer to "Trailer Towing" in "Starting And Operating" for further information.

When TSC is functioning, the "ESC Activation/ Malfunction Indicator Light" will flash, the engine power may be reduced and you may feel the brakes being applied to individual wheels to attempt to stop the trailer from swaying. TSC is disabled when the ESC system is in the "Partial Off" or "Full Off" modes.

WARNING!

If TSC activates while driving, slow the vehicle down, stop at the nearest safe location, and adjust the trailer load to eliminate trailer sway.

Ready Alert Braking (RAB)

Ready Alert Braking may reduce the time required to reach full braking during emergency braking situations. It anticipates when an emergency braking situation may occur by monitoring how fast the throttle is released by the driver. The EBC will prepare the brake system for a panic stop.

Rain Brake Support (RBS)

Rain Brake Support may improve braking performance in wet conditions. It will periodically apply a small amount of brake pressure to remove any water buildup on the front brake rotors. It functions when the windshield wipers are in LO or HI speed. When Rain Brake Support is active, there is no notification to the driver and no driver interaction is required.

Dynamic Steering Torque (DST)

Dynamic Steering Torque is a feature of the ESC and Electric Power Steering (EPS) modules that provides torque at the steering wheel for certain driving conditions in which the ESC module is detecting vehicle instability. The torque that the steering wheel receives is only meant to help the driver realize optimal steering behavior in order to reach/maintain vehicle stability. The only notification the driver receives that the feature is active is the torque applied to the steering wheel.

NOTE: The DST feature is only meant to help the driver realize the correct course of action through small torques on the steering wheel, which means the effectiveness of the DST feature is highly dependent on the driver's sensitivity and overall reaction to the applied torque. It is very important to realize that this feature will not steer the vehicle, meaning the driver is still responsible for steering the vehicle.

Hill Descent Control (HDC) — If Equipped

HDC is intended for low speed off road driving while in 4WD Low Range. HDC maintains vehicle speed while descending hills during various driving situations. HDC controls vehicle speed by actively controlling the brakes.

HDC has three states:

1. Off (feature is not enabled and will not activate).
2. Enabled (feature is enabled and ready but activation conditions are not met, or driver is actively overriding with brake or throttle application).
3. Active (feature is enabled and actively controlling vehicle speed).

Enabling HDC

HDC is enabled by pushing the HDC switch, but the following conditions must also be met to enable HDC:

- Driveline is in 4WD Low Range
- Vehicle speed is below 5 mph (8 km/h).
- Parking brake is released.
- Driver door is closed. (If doors are attached, then door must be closed. if doors are detached, then driver seatbelt must be buckled.)

Activating HDC

Once HDC is enabled it will activate automatically if driven down a grade of sufficient magnitude. The set speed for HDC is selectable by the driver, and can be adjusted by using the gear shift +/-. The following summarizes the HDC set speeds:

HDC Target Set Speeds

- P = No set speed. HDC may be enabled but will not activate
- R = 0.6 mph (1 km/h)
- N = 1.2 mph (2 km/h)
- D = 0.6 mph (1 km/h)
- 1st = 0.6 mph (1 km/h)
- 2nd = 1.2 mph (2 km/h)
- 3rd = 1.8 mph (3 km/h)
- 4th = 2.5 mph (4 km/h)
- 5th = 3.1 mph (5 km/h)
- 6th = 3.7 mph (6 km/h)
- 7th = 4.3 mph (7 km/h)
- 8th = 5.0 mph (8 km/h)
- 9th = 5.6 mph (9 km/h) – If Equipped

NOTE: During HDC the +/- shifter input is used for HDC target speed selection, but will not affect the gear chosen by the transmission. When actively controlling HDC the transmission will shift appropriately for the driver-selected set speed and corresponding driving conditions.

Driver Override

The driver may override HDC activation with throttle or brake application at anytime.

Deactivating HDC

HDC will be deactivated but remain available if any of the following conditions occur:

- Driver overrides HDC set speed with throttle or brake application.
- Vehicle speed exceeds 20 mph (32 km/h) but remains below 40 mph (64 km/h).
- Vehicle is on a downhill grade of insufficient magnitude, is on level ground, or is on an uphill grade.
- Vehicle is shifted to park.

Disabling HDC

HDC will be deactivated and disabled if any of the following conditions occur:

- The driver pushes the HDC switch.
- The driveline is shifted out of 4WD Low Range.
- The parking brake is applied.
- Driver door opens (Driver door opens if doors are attached or driver seatbelt is unbuckled if doors are detached).
- The vehicle is driven greater than 20 mph (32 km/h) for greater than 70 seconds.
- The vehicle is driven greater than 40 mph (64 km/h) (HDC exits immediately).
- HDC detects excessive brake temperature.

Feedback To The Driver

The instrument cluster has an HDC icon and the HDC switch has an LED icon, which offers feedback to the driver about the state HDC is in.

- The cluster icon and switch lamp will illuminate and remain on solid when HDC is enabled or activated. This is the normal operating condition for HDC.
- The cluster icon and switch lamp will flash for several seconds then extinguish when the driver pushes the HDC switch but enable conditions are not met.
- The cluster icon and switch lamp will flash for several seconds then extinguish when HDC disables due to excess speed.

- The cluster icon and switch lamp will flash when HDC deactivates due to overheated brakes. The flashing will stop and HDC will activate again once the brakes have cooled sufficiently.

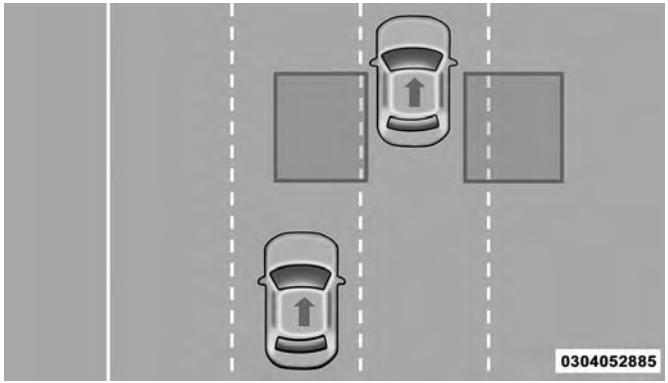
WARNING!

HDC is only intended to assist the driver in controlling vehicle speed when descending hills. The driver must remain attentive to the driving conditions and is responsible for maintaining a safe vehicle speed.

AUXILIARY DRIVING SYSTEMS

Blind Spot Monitoring (BSM) — If Equipped

The Blind Spot Monitoring (BSM) system uses two radar-based sensors, located inside the taillights, to detect highway licensable vehicles (automobiles, trucks, motorcycles, etc.) that enter the blind spot zones from the rear/front/side of the vehicle.



Rear Detection Zones

When the vehicle is started, the BSM warning light will momentarily illuminate in both outside rear view mirrors to let the driver know that the system is operational. The BSM system sensors operate when the vehicle is in any forward gear or REVERSE and enters stand-by mode when the vehicle is in PARK.

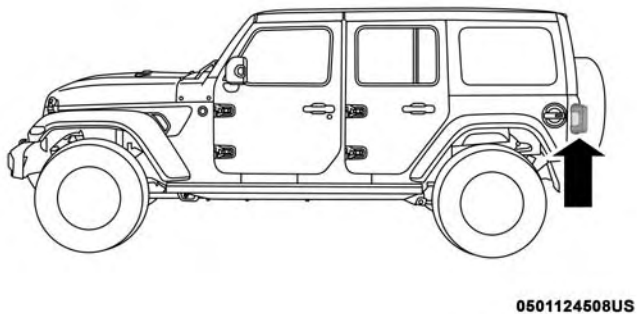
The BSM detection zone covers approximately one lane width on both sides of the vehicle 12 ft (3.8 m). The zone length starts at the outside rear view mirror and extends approximately 10 ft (3 m) beyond the rear bumper of the vehicle. The BSM system monitors the detection zones on

both sides of the vehicle when the vehicle speed reaches approximately 6 mph (10 km/h) or higher and will alert the driver of vehicles in these areas.

NOTE:

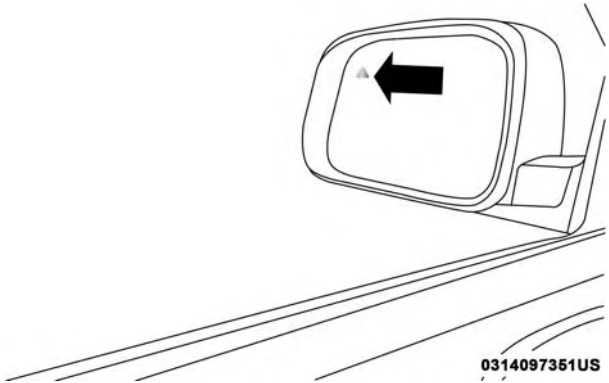
- The BSM system DOES NOT alert the driver about rapidly approaching vehicles that are outside the detection zones.
- The BSM system detection zone DOES NOT change if your vehicle is towing a trailer. Therefore, visually verify the adjacent lane is clear for both your vehicle and trailer before making a lane change. If the trailer or other object (i.e., bicycle, sports equipment) extends beyond the side of your vehicle, this may result in the BSM warning light remaining illuminated the entire time the vehicle is in a forward gear.
- The Blind Spot Monitoring (BSM) system may experience drop outs (blinking on and off) of the side mirror Warning Indicator lamps when a motorcycle or any small object remains at the side of the vehicle for extended periods of time (more than a couple of seconds).

The area on taillights, where the radar sensors are located, must remain free of snow, ice, and dirt/road contamination so that the BSM system can function properly. Do not block the taillights where the radar sensors are located with foreign objects (bumper stickers, bicycle racks, etc.).



BSM Radar Location (Driver Side Shown)

The BSM system notifies the driver of objects in the detection zones by illuminating the BSM warning light located in the outside mirrors in addition to sounding an audible (chime) alert and reducing the radio volume. Refer to “Modes Of Operation” for further information.

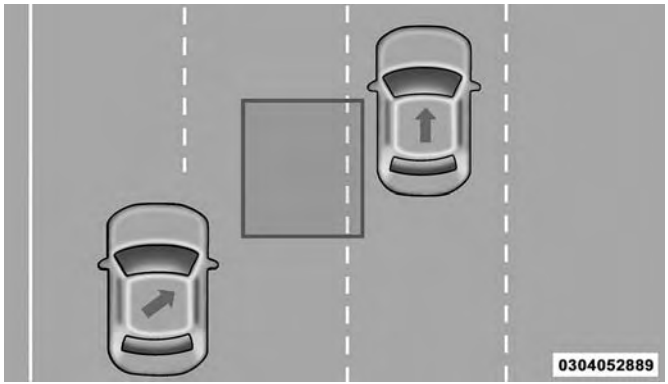


Warning Light Location

The BSM system monitors the detection zone from three different entry points (side, rear, front) while driving to see if an alert is necessary. The BSM system will issue an alert during these types of zone entries.

Entering From The Side

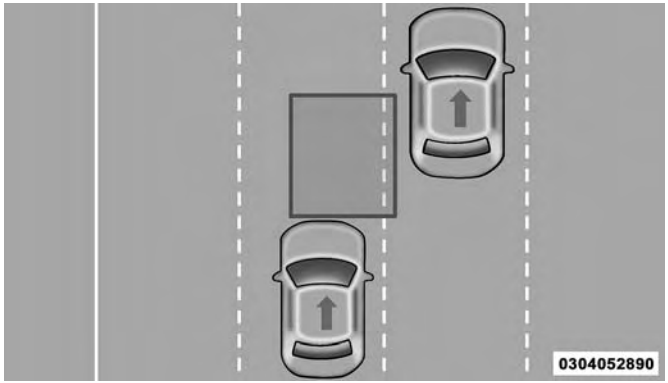
Vehicles that move into your adjacent lanes from either side of the vehicle.



Side Monitoring

Entering From The Rear

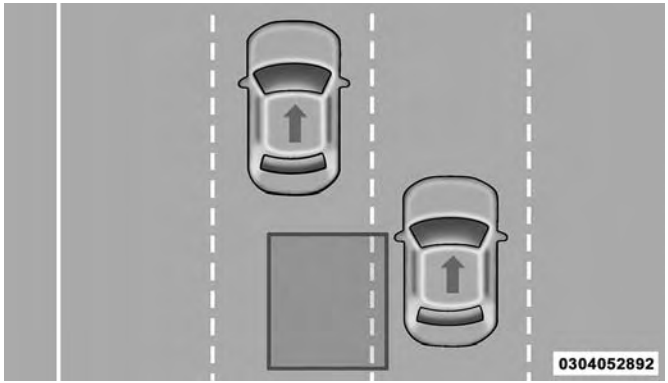
Vehicles that come up from behind your vehicle on either side and enter the rear detection zone with a relative speed of less than 30 mph (48 km/h).



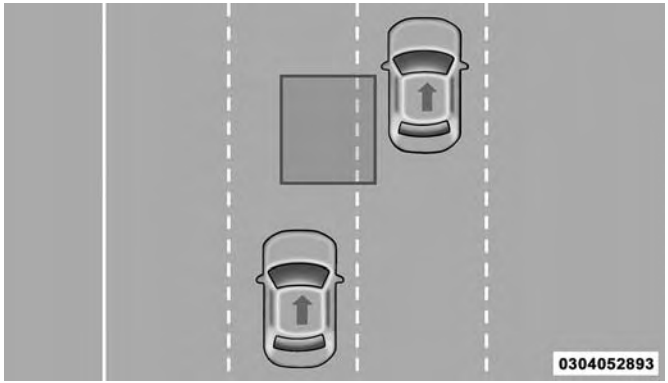
Rear Monitoring

Overtaking Traffic

If you pass another vehicle slowly with a relative speed less than 15 mph (24 km/h) and the vehicle remains in the blind spot for approximately 1.5 seconds, the warning light will be illuminated. If the difference in speed between the two vehicles is greater than 15 mph (24 km/h), the warning light will not illuminate.

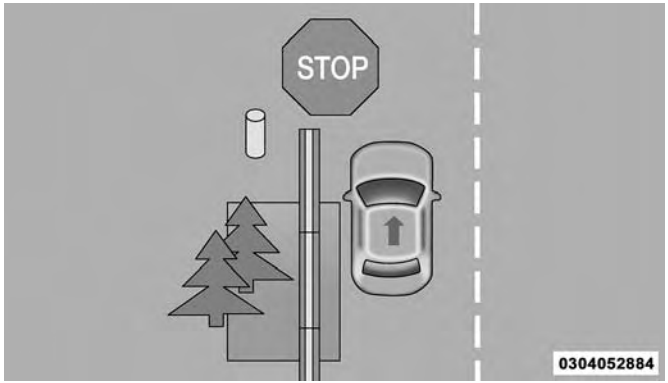


Overtaking/Approaching



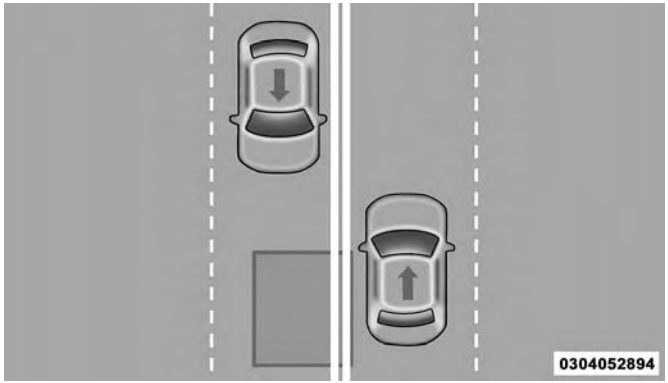
Overtaking/Passing

The BSM system is designed not to issue an alert on stationary objects such as guardrails, posts, walls, foliage, berms, etc. However, occasionally the system may alert on such objects. This is normal operation and your vehicle does not require service.



Stationary Objects

The BSM system will not alert you of objects that are traveling in the opposite direction of the vehicle in adjacent lanes.



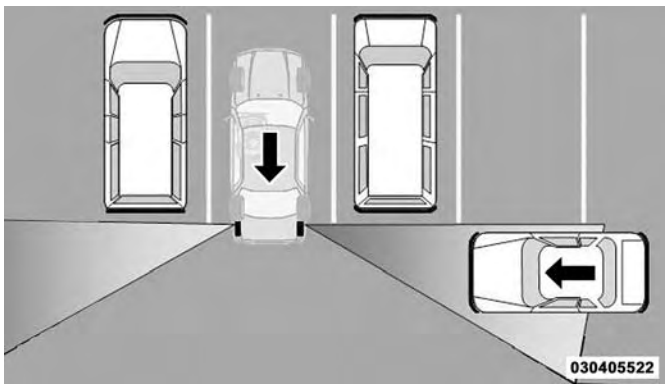
Opposing Traffic

WARNING!

The Blind Spot Monitoring system is only an aid to help detect objects in the blind spot zones. The BSM system is not designed to detect pedestrians, bicyclists, or animals. Even if your vehicle is equipped with the BSM system, always check your vehicle's mirrors, glance over your shoulder, and use your turn signal before changing lanes. Failure to do so can result in serious injury or death.

Rear Cross Path (RCP)

The Rear Cross Path (RCP) feature is intended to aid the driver when backing out of parking spaces where their vision of oncoming vehicles may be blocked. Proceed slowly and cautiously out of the parking space until the rear end of the vehicle is exposed. The RCP system will then have a clear view of the cross traffic and if an oncoming vehicle is detected, alert the driver.



RCP Detection Zones

RCP monitors the rear detection zones on both sides of the vehicle, for objects that are moving toward the side of the vehicle with a minimum speed of approximately 3 mph (5 km/h), to objects moving a maximum of approximately 20 mph (32 km/h), such as in parking lot situations.

NOTE: In a parking lot situation, oncoming vehicles can be obscured by vehicles parked on either side. If the sensors are blocked by other structures or vehicles, the system will not be able to alert the driver.

When RCP is on and the vehicle is in REVERSE, the driver is alerted using both the visual and audible alarms, including reducing the radio volume.

WARNING!

Rear Cross Path Detection (RCP) is not a back up aid system. It is intended to be used to help a driver detect an oncoming vehicle in a parking lot situation. Drivers must be careful when backing up, even when using RCP. Always check carefully behind your vehicle, look behind you, and be sure to check for pedestrians, animals, other vehicles, obstructions, and blind spots before backing up. Failure to do so can result in serious injury or death.

Modes Of Operation

Three selectable modes of operation are available in the Uconnect System. Refer to "Uconnect Settings" in "Multimedia" for further information.

Blind Spot Alert Lights Only

When operating in Blind Spot Alert mode, the BSM system will provide a visual alert in the appropriate side view mirror based on a detected object. However, when the system is operating in Rear Cross Path (RCP) mode, the system will respond with both visual and audible alerts when a detected object is present. Whenever an audible alert is requested, the radio is muted.

Blind Spot Alert Lights/Chime

When operating in Blind Spot Alert Lights/Chime mode, the BSM system will provide a visual alert in the appropriate side view mirror based on a detected object. If the turn signal is then activated, and it corresponds to an alert present on that side of the vehicle, an audible chime will also be sounded. Whenever a turn signal and detected object are present on the same side at the same time, both the visual and audible alerts will be issued. In addition to the audible alert the radio (if on) will also be muted.

NOTE: Whenever an audible alert is requested by the BSM system, the radio is also muted.

When the system is in RCP, the system shall respond with both visual and audible alerts when a detected object is present. Whenever an audible alert is requested, the radio is also muted. Turn/hazard signal status is ignored; the RCP state always requests the chime.

Blind Spot Alert Off

When the BSM system is turned off there will be no visual or audible alerts from either the BSM or RCP systems.

NOTE: The BSM system will store the current operating mode when the vehicle is shut off. Each time the vehicle is started the previously stored mode will be recalled and used.

General Information

The following regulatory statement applies to all Radio Frequency (RF) devices equipped in this vehicle:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Tire Pressure Monitor System (TPMS)

The Tire Pressure Monitor System (TPMS) will warn the driver of a low tire pressure based on the vehicle recommended cold placard pressure.

The tire pressure will vary with temperature by approximately 1 psi (7 kPa) for every 12°F (6.5°C). This means that when the outside temperature decreases, the tire pressure will decrease. Tire pressure should always be set based on cold inflation tire pressure. This is defined as the tire pressure after the vehicle has not been driven for at least three hours, or driven less than 1 mile (1.6 km) after a three hour period. The cold tire inflation pressure must not exceed the maximum inflation pressure molded into the tire sidewall. Refer to "Tires" in "Servicing And Maintenance" for information on how to properly inflate the vehicle's tires. The tire pressure will also increase as the vehicle is driven. This is normal and there should be no adjustment for this increased pressure.

The TPMS will warn the driver of a low tire pressure if the tire pressure falls below the low-pressure warning limit for any reason, including low temperature effects and natural pressure loss through the tire.

The TPMS will continue to warn the driver of low tire pressure as long as the condition exists, and will not turn off until the tire pressure is at or above the recommended cold placard pressure. Once the low tire pressure warning (Tire Pressure Monitoring Telltale Light) illuminates, you must increase the tire pressure to the recommended cold placard pressure in order for the Tire Pressure Monitoring Telltale Light to turn off.

NOTE: When filling warm tires, the tire pressure may need to be increased up to an additional 4 psi (30 kPa) above the recommended cold placard pressure in order to turn the Tire Pressure Monitoring Telltale Light off.

The system will automatically update and the Tire Pressure Monitoring Telltale Light will turn off once the system receives the updated tire pressures. The vehicle may need to be driven for up to 20 minutes above 15 mph (24 km/h) in order for the TPMS to receive this information.

For example, your vehicle may have a recommended cold (parked for more than three hours) placard pressure of 33 psi (227 kPa). If the ambient temperature is 68°F (20°C)

and the measured tire pressure is 28 psi (193 kPa), a temperature drop to 20°F (-7°C) will decrease the tire pressure to approximately 24 psi (165 kPa). This tire pressure is low enough to turn on the Tire Pressure Monitoring Telltale Light. Driving the vehicle may cause the tire pressure to rise to approximately 28 psi (193 kPa), but the Tire Pressure Monitoring Telltale Light will still be on. In this situation, the Tire Pressure Monitoring Telltale Light will turn off only after the tires are inflated to the vehicle's recommended cold placard pressure value.

NOTE: When filling warm tires, the tire pressure may need to be increased up to an additional 4 psi (30 kPa) above the recommended cold placard pressure in order to turn the Tire Pressure Monitoring Telltale Light off.

CAUTION!

- **The TPMS has been optimized for the original equipment tires and wheels. TPMS pressures and warning have been established for the tire size equipped on your vehicle. Undesirable system operation or sensor damage may result when using replacement equipment that is not of the same size,**

(Continued)

CAUTION! ***(Continued)***

type, and/or style. The TPM sensor is not designed for use on aftermarket wheels, and may contribute to a poor overall system performance. Customers are encouraged to use OEM wheels to assure TPMS feature operation.

- **Using aftermarket tire sealants may cause the Tire Pressure Monitoring System (TPMS) sensor to become inoperable. After using an aftermarket tire sealant it is recommended that you take your vehicle to an authorized dealer to have your sensor function checked.**
- **After inspecting or adjusting the tire pressure always reinstall the valve stem cap. This will prevent moisture and dirt from entering the valve stem, which could damage the TPMS sensor.**

NOTE:

- The TPMS is not intended to replace normal tire care and maintenance, or to provide warning of a tire failure or condition.
- The TPMS should not be used as a tire pressure gauge while adjusting your tire pressure.

- Driving on a significantly underinflated tire causes the tire to overheat and can lead to tire failure. Underinflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.
- The TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure using an accurate tire pressure gauge, even if underinflation has not reached the level to trigger illumination of the Tire Pressure Monitoring Telltale Light.
- Seasonal temperature changes will affect tire pressure, and the TPMS will monitor the actual tire pressure in the tire.

System Operation

The Tire Pressure Monitor System (TPMS) uses wireless technology with wheel rim mounted electronic sensors to monitor tire pressure levels. Sensors, mounted to each wheel as part of the valve stem, transmit tire pressure readings to the receiver module.

Tire Pressure Monitoring Display

NOTE: It is particularly important for you to check the tire pressure in all of the tires on your vehicle monthly and to maintain the proper pressure.

The TPMS consists of the following components:

- Receiver module
- Four tire pressure monitoring sensors
- Various tire pressure monitoring system messages, which display in the instrument cluster
- Tire pressure monitoring telltale light

Tire Pressure Monitoring Low Pressure Warnings

The Tire Pressure Monitoring Telltale Light will illuminate in the instrument cluster and a chime will sound when tire pressure is low in one or more of the four active road tires. In addition, the instrument cluster will display a ″Tire Low″ message for a minimum of five seconds, an ″Inflate to XX″ message and a graphic showing the pressure values of each tire with the low tire pressure values in a different color.

Tire Pressure Monitoring Low Pressure Warning

Should this occur, you should stop as soon as possible and inflate the tires with low pressure (those in a different color in the instrument cluster graphic) to the vehicle's recommended cold placard pressure value as shown in the ″Inflate to XX″ message. Once the system receives the updated tire pressures, the system will automatically update, the pressure values in the graphic display in the instrument cluster will return to their original color, and the Tire Pressure Monitoring Telltale Light will turn off.

NOTE: When filling warm tires, the tire pressure may need to be increased up to an additional 4 psi (30 kPa) above the recommended cold placard pressure in order to turn the Tire Pressure Monitoring Telltale Light off.
The vehicle may need to be driven for up to 20 minutes above 15 mph (24 km/h) in order for the TPMS to receive this information.

Service TPMS Warning

When a system fault is detected, the Tire Pressure Monitoring Telltale Light will flash on and off for 75 seconds and then remain on solid. The system fault will also sound a chime. In addition, the instrument cluster will display a ″SERVICE TIRE PRESSURE SYSTEM″ message for a minimum of five seconds and then display dashes (- -) in place of the pressure value to indicate which sensor is not being received.

If the ignition key is cycled, this sequence will repeat, providing the system fault still exists. If the system fault no longer exists, the Tire Pressure Monitoring Telltale Light will no longer flash, and the "SERVICE TIRE PRESSURE SYSTEM" message will no longer display, and a pressure value will display in place of the dashes. A system fault can occur due to any of the following:

- Jamming due to electronic devices or driving next to facilities emitting the same radio frequencies as the TPMS sensors.
- Installing some form of aftermarket window tinting that affects radio wave signals.
- Lots of snow or ice around the wheels or wheel housings.
- Using tire chains on the vehicle.
- Using wheels/tires not equipped with TPMS sensors.

Vehicles With Compact Spare or Non-Matching Full Size Spare

1. The compact spare tire or non-matching full size does not have a tire pressure monitoring sensor. Therefore, the TPMS will not monitor the pressure in the compact spare tire.
2. If you install the compact or non-matching full size spare tire in place of a road tire that has a pressure below the low-pressure warning limit, upon the next ignition key cycle, the TPMS Telltale Light will remain on and a chime will sound. In addition, the graphic in the instrument cluster will still display a different color pressure value and an "Inflate to XX" message.
3. After driving the vehicle for up to 20 minutes above 15 mph (24 km/h), the TPMS Telltale Light will flash on and off for 75 seconds and then remain on solid. In addition, the instrument cluster will display a "Service Tire Pressure System" message for five seconds and then display dashes (- -) in place of the pressure value.
4. For each subsequent ignition key cycle, a chime will sound, the TPMS Telltale Light will flash on and off for 75 seconds and then remain on solid, and the instrument cluster will display a "SERVICE TIRE PRESSURE SYSTEM" message for five seconds and then display dashes (- -) in place of the pressure value.
5. Once you repair or replace the original road tire and reinstall it on the vehicle in place of the compact spare or non-matching full size, the TPMS will update automatically. In addition, the TPMS Telltale Light will turn off and the graphic in the instrument cluster will display a

new pressure value instead of dashes (- -), as long as no tire pressure is below the low-pressure warning limit in any of the four active road tires. The vehicle may need to be driven for up to 20 minutes above 15 mph (24 km/h) in order for the TPMS to receive this information.

Vehicles With a Full Size Matching Spare

1. If your vehicle is equipped with a matching full-size spare wheel and tire assembly, it has a tire pressure monitoring sensor, and can be monitored by the Tire Pressure Monitoring System (TPMS) when swapped with a low pressure road tire.
2. In the event that the matching full-size spare tire is swapped with a low pressure road tire, the next ignition switch cycle will still show the Tire Pressure Monitoring Telltale Light to be on, a chime to sound, an Inflate to XX message to appear in the instrument cluster, and the graphic display will still show the low tire pressure value in a different color.
3. Driving the vehicle for up to 20 minutes above 15 mph (24 km/h) will turn off the Tire Pressure Monitoring Telltale Light as long as none of road tires are below the low pressure warning threshold.

TPMS Deactivation — If Equipped

The TPMS can be deactivated if replacing all four wheel and tire assemblies (road tires) with wheel and tire assemblies that do not have TPMS sensors, such as when installing winter wheel and tire assemblies on your vehicle.

To deactivate the TPMS, first replace all four wheel and tire assemblies (road tires) with tires not equipped with Tire Pressure Monitoring (TPM) Sensors. Then, drive the vehicle for 20 minutes above 15 mph (24 km/h). The TPMS will chime, the TPM Telltale Light will flash on and off for 75 seconds and then remain on. The instrument cluster will display the “SERVICE TIRE PRESSURE SYSTEM” message and then display dashes (--) in place of the pressure values.

Beginning with the next ignition cycle, the TPMS will no longer chime or display the “SERVICE TIRE PRESSURE SYSTEM” message in the instrument cluster but dashes (--) will remain in place of the pressure values.

To reactivate the TPMS, replace all four wheel and tire assemblies (road tires) with tires equipped with TPMS sensors. Then, drive the vehicle for up to 20 minutes above 15 mph (24 km/h). The TPMS will chime, the TPM Telltale Light will flash on and off for 75 seconds and then turn off. The instrument cluster will display the “SERVICE TIRE PRESSURE SYSTEM” message and then display pressure

values in place of the dashes. On the next ignition cycle the "SERVICE TIRE PRESSURE SYSTEM" message will no longer be displayed as long as no system fault exists.

General Information

The following regulatory statement applies to all radio frequency (RF) devices equipped in this vehicle:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

OCCUPANT RESTRAINT SYSTEMS

Some of the most important safety features in your vehicle are the restraint systems:

Occupant Restraint Systems Features

- Seat Belt Systems
- Supplemental Restraint Systems (SRS) Air Bags
- Child Restraints

Some of the safety features described in this section may be standard equipment on some models, or may be optional equipment on others. If you are not sure, ask your authorized dealer.

Important Safety Precautions

Please pay close attention to the information in this section. It tells you how to use your restraint system properly, to keep you and your passengers as safe as possible.

Here are some simple steps you can take to minimize the risk of harm from a deploying air bag:

1. Children 12 years old and under should always ride buckled up in a vehicle with a rear seat.
2. If a child from 2 to 12 years old (not in a rear-facing child restraint) must ride in the front passenger seat, move the

seat as far back as possible and use the proper child restraint (refer to "Child Restraints" in this section for further information).

3. Children that are not big enough to wear the vehicle seat belt properly (refer to "Child Restraints" in this section for further information) should be secured in a vehicle with a rear seat in child restraints or belt-positioning booster seats. Older children who do not use child restraints or belt-positioning booster seats should ride properly buckled up in a vehicle with a rear seat.
4. Never allow children to slide the shoulder belt behind them or under their arm.
5. You should read the instructions provided with your child restraint to make sure that you are using it properly.
6. All occupants should always wear their lap and shoulder belts properly.
7. The driver and front passenger seats should be moved back as far as practical to allow the front air bags room to inflate.
8. Do not lean against the door or window. If your vehicle has side air bags, and deployment occurs, the side air bags will inflate forcefully into the space between occupants and the door and occupants could be injured.
9. If the air bag system in this vehicle needs to be modified to accommodate a disabled person, refer to the "Customer Assistance" section for customer service contact information.

WARNING!

- **Never place a rear-facing child restraint in front of an air bag. A deploying passenger front air bag can cause death or serious injury to a child 12 years or younger, including a child in a rear-facing child restraint.**
- **Only use a rear-facing child restraint in a vehicle with a rear seat.**

Seat Belt Systems

Buckle up even though you are an excellent driver, even on short trips. Someone on the road may be a poor driver and could cause a collision that includes you. This can happen far away from home or on your own street.

Research has shown that seat belts save lives, and they can reduce the seriousness of injuries in a collision. Some of the worst injuries happen when people are thrown from the

vehicle. Seat belts reduce the possibility of ejection and the risk of injury caused by striking the inside of the vehicle. Everyone in a motor vehicle should be belted at all times.

Enhanced Seat Belt Use Reminder System (BeltAlert)

Driver and Passenger BeltAlert (if equipped)

BeltAlert is a feature intended to remind the driver and outboard front seat passenger (if equipped with outboard front passenger seat BeltAlert) to buckle their seat belts. The Belt Alert feature is active whenever the ignition switch is in the START or ON/RUN position.

Initial Indication

If the driver is unbuckled when the ignition switch is first in the START or ON/RUN position, a chime will signal for a few seconds. If the driver or outboard front seat passenger (if equipped with outboard front passenger seat BeltAlert) is unbuckled when the ignition switch is first in the START or ON/RUN position the Seat Belt Reminder Light will turn on and remain on until both outboard front seat belts are buckled. The outboard front passenger seat BeltAlert is not active when an outboard front passenger seat is unoccupied.

BeltAlert Warning Sequence

The BeltAlert warning sequence is activated when the vehicle is moving above a specified vehicle speed range and the driver or outboard front seat passenger is unbuckled (if equipped with outboard front passenger seat BeltAlert) (the outboard front passenger seat BeltAlert is not active when the outboard front passenger seat is unoccupied). The BeltAlert warning sequence starts by blinking the Seat Belt Reminder Light and sounding an intermittent chime. Once the BeltAlert warning sequence has completed, the Seat Belt Reminder Light will remain on until the seat belts are buckled. The BeltAlert warning sequence may repeat based on vehicle speed until the driver and occupied outboard front seat passenger seat belts are buckled. The driver should instruct all occupants to buckle their seat belts.

Change of Status

If the driver or outboard front seat passenger (if equipped with outboard front passenger seat BeltAlert) unbuckles their seat belt while the vehicle is traveling, the BeltAlert warning sequence will begin until the seat belts are buckled again.

The outboard front passenger seat BeltAlert is not active when the outboard front passenger seat is unoccupied. BeltAlert may be triggered when an animal or other items are placed on the outboard front passenger seat or when the seat is folded flat (if equipped). It is recommended that pets be restrained in the rear seat (if equipped) in pet harnesses or pet carriers that are secured by seat belts, and cargo is properly stowed.

BeltAlert can be activated or deactivated by your authorized dealer. FCA US LLC does not recommend deactivating BeltAlert.

NOTE: If BeltAlert has been deactivated and the driver or outboard front seat passenger (if equipped with outboard front passenger seat BeltAlert) is unbuckled the Seat Belt Reminder Light will turn on and remain on until the driver and outboard front seat passenger seat belts are buckled.

Lap/Shoulder Belts

All seating positions in your vehicle are equipped with lap/shoulder belts.

The seat belt webbing retractor will lock only during very sudden stops or collisions. This feature allows the shoulder part of the seat belt to move freely with you under normal conditions. However, in a collision the seat belt will lock and reduce your risk of striking the inside of the vehicle or being thrown out of the vehicle.

WARNING!

- **Relying on the air bags alone could lead to more severe injuries in a collision. The air bags work with your seat belt to restrain you properly. In some collisions, the air bags won't deploy at all. Always wear your seat belt even though you have air bags.**
- **In a collision, you and your passengers can suffer much greater injuries if you are not properly buckled up. You can strike the interior of your vehicle or other passengers, or you can be thrown out of the vehicle. Always be sure you and others in your vehicle are buckled up properly.**
- **It is dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed.**
- **Do not allow people to ride in any area of your vehicle that is not equipped with seats and seat belts.**
- **Be sure everyone in your vehicle is in a seat and using a seat belt properly. Occupants, including the**

(Continued)

WARNING! *(Continued)*

driver, should always wear their seat belts whether or not an air bag is also provided at their seating position to minimize the risk of severe injury or death in the event of a crash.

- Wearing your seat belt incorrectly could make your injuries in a collision much worse. You might suffer internal injuries, or you could even slide out of the seat belt. Follow these instructions to wear your seat belt safely and to keep your passengers safe, too.
- Two people should never be belted into a single seat belt. People belted together can crash into one another in a collision, hurting one another badly. Never use a lap/shoulder belt or a lap belt for more than one person, no matter what their size.

WARNING!

- A lap belt worn too high can increase the risk of injury in a collision. The seat belt forces won't be at the strong hip and pelvic bones, but across your abdomen. Always wear the lap part of your seat belt as low as possible and keep it snug.

(Continued)

WARNING! *(Continued)*

- A twisted seat belt may not protect you properly. In a collision, it could even cut into you. Be sure the seat belt is flat against your body, without twists. If you can't straighten a seat belt in your vehicle, take it to your authorized dealer immediately and have it fixed.
- A seat belt that is buckled into the wrong buckle will not protect you properly. The lap portion could ride too high on your body, possibly causing internal injuries. Always buckle your seat belt into the buckle nearest you.
- A seat belt that is too loose will not protect you properly. In a sudden stop, you could move too far forward, increasing the possibility of injury. Wear your seat belt snugly.
- A seat belt that is worn under your arm is dangerous. Your body could strike the inside surfaces of the vehicle in a collision, increasing head and neck injury. A seat belt worn under the arm can cause internal injuries. Ribs aren't as strong as shoulder bones. Wear the seat belt over your shoulder so that your strongest bones will take the force in a collision.

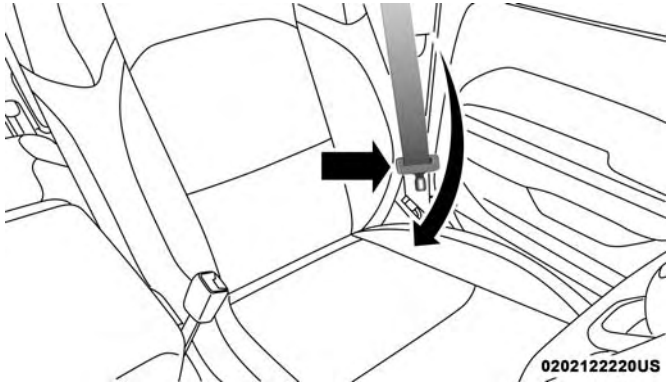
(Continued)

WARNING! ***(Continued)***

- **A shoulder belt placed behind you will not protect you from injury during a collision. You are more likely to hit your head in a collision if you do not wear your shoulder belt. The lap and shoulder belt are meant to be used together.**
- **A frayed or torn seat belt could rip apart in a collision and leave you with no protection. Inspect the seat belt system periodically, checking for cuts, frays, or loose parts. Damaged parts must be replaced immediately. Do not disassemble or modify the seat belt system. Seat belt assemblies must be replaced after a collision.**

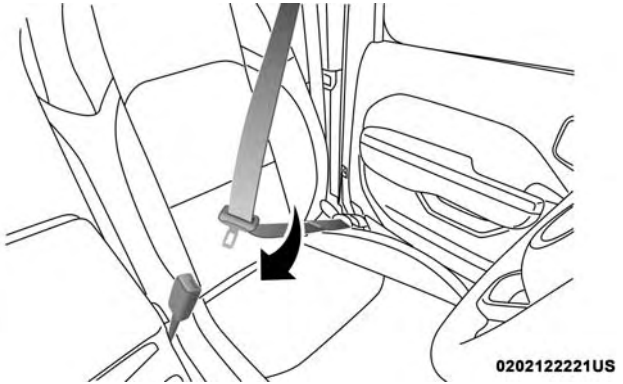
Lap/Shoulder Belt Operating Instructions

1. Enter the vehicle and close the door. Sit back and adjust the seat.
2. The seat belt latch plate is above the back of the front seat, and next to your arm in the rear seat (for vehicles equipped with a rear seat). Grasp the latch plate and pull out the seat belt. Slide the latch plate up the webbing as far as necessary to allow the seat belt to go around your lap.



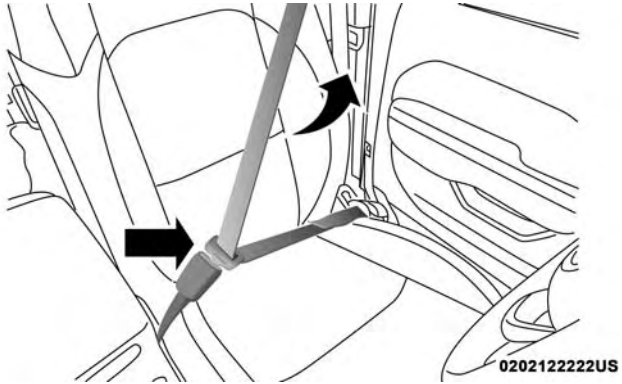
Pulling Out The Latch Plate

3. When the seat belt is long enough to fit, insert the latch plate into the buckle until you hear a “click.”



Inserting Latch Plate Into Buckle

4. Position the lap belt so that it is snug and lies low across your hips, below your abdomen. To remove slack in the lap belt portion, pull up on the shoulder belt. To loosen the lap belt if it is too tight, tilt the latch plate and pull on the lap belt. A snug seat belt reduces the risk of sliding under the seat belt in a collision.



Positioning The Lap Belt

5. Position the shoulder belt across the shoulder and chest with minimal, if any slack so that it is comfortable and not resting on your neck. The retractor will withdraw any slack in the shoulder belt.
6. To release the seat belt, push the red button on the buckle. The seat belt will automatically retract to its stowed position. If necessary, slide the latch plate down the webbing to allow the seat belt to retract fully.

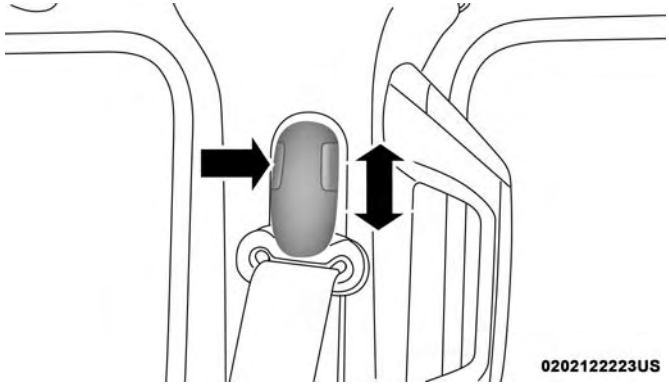
Lap/Shoulder Belt Untwisting Procedure

Use the following procedure to untwist a twisted lap/shoulder belt.

1. Position the latch plate as close as possible to the anchor point.
2. At about 6 to 12 inches (15 to 30 cm) above the latch plate, grasp and twist the seat belt webbing 180 degrees to create a fold that begins immediately above the latch plate.
3. Slide the latch plate upward over the folded webbing. The folded webbing must enter the slot at the top of the latch plate.
4. Continue to slide the latch plate up until it clears the folded webbing and the seat belt is no longer twisted.

Adjustable Upper Shoulder Belt Anchorage

In the driver and front passenger seats, the top of the shoulder belt can be adjusted upward or downward to position the seat belt away from your neck. Push or squeeze the anchorage button to release the anchorage, and move it up or down to the position that serves you best.



Adjustable Upper Anchorage

As a guide, if you are shorter than average, you will prefer the shoulder belt anchorage in a lower position, and if you are taller than average, you will prefer the shoulder belt anchorage in a higher position. After you release the anchorage button, try to move it up or down to make sure that it is locked in position.

NOTE: The adjustable upper shoulder belt anchorage is equipped with an Easy Up feature. This feature allows the shoulder belt anchorage to be adjusted in the upward position without pushing or squeezing the release button. To verify the shoulder belt anchorage is latched, pull downward on the shoulder belt anchorage until it is locked into position.

WARNING!

- **Wearing your seat belt incorrectly could make your injuries in a collision much worse. You might suffer internal injuries, or you could even slide out of the seat belt. Follow these instructions to wear your seat belt safely and to keep your passengers safe, too.**
- **Position the shoulder belt across the shoulder and chest with minimal, if any slack so that it is comfortable and not resting on your neck. The retractor will withdraw any slack in the shoulder belt.**
- **Misadjustment of the seat belt could reduce the effectiveness of the safety belt in a crash.**

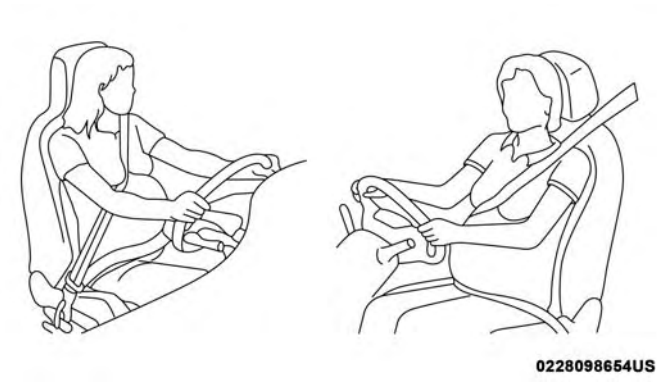
Seat Belt Extender

If a seat belt is not long enough to fit properly, even when the webbing is fully extended and the adjustable upper shoulder belt anchorage (if equipped) is in its lowest position, your authorized dealer can provide you with a Seat Belt Extender. The Seat Belt Extender should be used only if the existing seat belt is not long enough. When the Seat Belt Extender is not required for a different occupant, it must be removed.

WARNING!

- **ONLY use a Seat Belt Extender if it is physically required in order to properly fit the original seat belt system. DO NOT USE the Seat Belt Extender if, when worn, the distance between the front edge of the Seat Belt Extender buckle and the center of the occupant's body is LESS than 6 inches.**
- **Using a Seat Belt Extender when not needed can increase the risk of serious injury or death in a collision. Only use the Seat Belt Extender when the lap belt is not long enough and only use in the recommended seating positions. Remove and store the Seat Belt Extender when not needed.**

Seat Belts And Pregnant Women



Pregnant Women And Seat Belts

Seat belts must be worn by all occupants including pregnant women: the risk of injury in the event of an accident is reduced for the mother and the unborn child if they are wearing a seat belt.

Position the lap belt snug and low below the abdomen and across the strong bones of the hips. Place the shoulder belt across the chest and away from the neck. Never place the shoulder belt behind the back or under the arm.

Seat Belt Pretensioner

The front seat belt system is equipped with pretensioning devices that are designed to remove slack from the seat belt in the event of a collision. These devices may improve the performance of the seat belt by removing slack from the seat belt early in a collision. Pretensioners work for all size occupants, including those in child restraints.

NOTE: These devices are not a substitute for proper seat belt placement by the occupant. The seat belt still must be worn snugly and positioned properly.

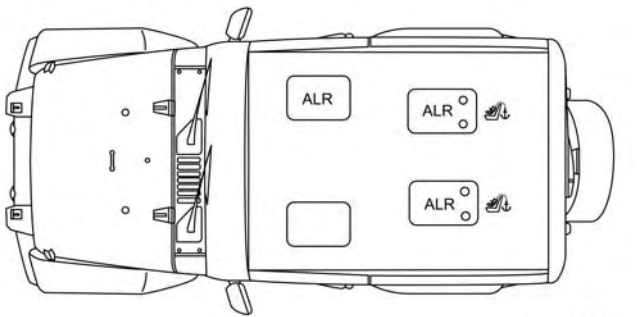
The pretensioners are triggered by the Occupant Restraint Controller (ORC). Like the air bags, the pretensioners are single use items. A deployed pretensioner or a deployed air bag must be replaced immediately.

Energy Management Feature

The front seat belt system is equipped with an Energy Management feature that may help further reduce the risk of injury in the event of a collision. The seat belt system has a retractor assembly that is designed to release webbing in a controlled manner.

Switchable Automatic Locking Retractor (ALR)

The seat belts in the passenger seating positions are equipped with a Switchable Automatic Locking Retractor (ALR) which is used to secure a child restraint system. For additional information, refer to "Installing Child Restraints Using The Vehicle Seat Belt" under the "Child Restraints" section of this manual. The figure below illustrates the locking feature for each seating position.



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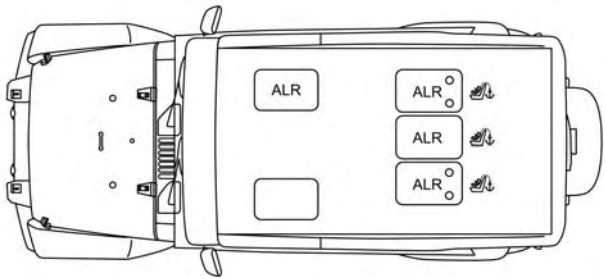
ALR — Switchable Automatic Locking Retractor (Two-Door Models)



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ALR — Switchable Automatic Locking Retractor (Four-Door Models)

If the passenger seating position is equipped with an ALR and is being used for normal usage, only pull the seat belt webbing out far enough to comfortably wrap around the occupant's mid-section so as to not activate the ALR. If the ALR is activated, you will hear a clicking sound as the seat belt retracts. Allow the webbing to retract completely in this case and then carefully pull out only the amount of webbing necessary to comfortably wrap around the occupant's mid-section. Slide the latch plate into the buckle until you hear a "click."

In Automatic Locking Mode, the shoulder belt is automatically pre-locked. The seat belt will still retract to remove any slack in the shoulder belt. Use the Automatic Locking Mode anytime a child restraint is installed in a seating position that has a seat belt with this feature. Children 12 years old and under should always be properly restrained in a vehicle with a rear seat.

WARNING!

- **Never place a rear-facing child restraint in front of an air bag. A deploying passenger front air bag can cause death or serious injury to a child 12 years or younger, including a child in a rear-facing child restraint.**
- **Only use a rear-facing child restraint in a vehicle with a rear seat.**

How To Engage The Automatic Locking Mode

1. Buckle the combination lap and shoulder belt.
2. Grasp the shoulder portion and pull downward until the entire seat belt is extracted.
3. Allow the seat belt to retract. As the seat belt retracts, you will hear a clicking sound. This indicates the seat belt is now in the Automatic Locking Mode.

How To Disengage The Automatic Locking Mode

Unbuckle the combination lap/shoulder belt and allow it to retract completely to disengage the Automatic Locking Mode and activate the vehicle sensitive (emergency) locking mode.

WARNING!

- **The seat belt assembly must be replaced if the switchable Automatic Locking Retractor (ALR) feature or any other seat belt function is not working properly when checked according to the procedures in the Service Manual.**
- **Failure to replace the seat belt assembly could increase the risk of injury in collisions.**
- **Do not use the Automatic Locking Mode to restrain occupants who are wearing the seat belt or children who are using booster seats. The locked mode is only used to install rear-facing or forward-facing child restraints that have a harness for restraining the child.**

Supplemental Restraint Systems (SRS)

Some of the safety features described in this section may be standard equipment on some models, or may be optional equipment on others. If you are not sure, ask your authorized dealer.

The air bag system must be ready to protect you in a collision. The Occupant Restraint Controller (ORC) monitors the internal circuits and interconnecting wiring associated with the electrical Air Bag System Components. Your vehicle may be equipped with the following Air Bag System Components:

Air Bag System Components

- Occupant Restraint Controller (ORC)
- Air Bag Warning Light
- Steering Wheel and Column
- Instrument Panel
- Knee Impact Bolsters
- Driver and Front Passenger Air Bags
- Seat Belt Buckle Switch
- Supplemental Side Air Bags
- Front and Side Impact Sensors
- Seat Belt Pretensioners
- Seat Track Position Sensors
- Occupant Classification System

Air Bag Warning Light

The ORC monitors the readiness of the electronic parts of the air bag system whenever the ignition switch is in the START or ON/RUN position. If the ignition switch is in the OFF position or in the ACC position, the air bag system is not on and the air bags will not inflate.

The ORC contains a backup power supply system that may deploy the air bag system even if the battery loses power or it becomes disconnected prior to deployment.

The ORC turns on the Air Bag Warning Light in the instrument panel for approximately four to eight seconds for a self-check when the ignition switch is first in the ON/RUN position. After the self-check, the Air Bag Warning Light will turn off. If the ORC detects a malfunction in any part of the system, it turns on the Air Bag Warning Light, either momentarily or continuously. A single chime will sound to alert you if the light comes on again after initial startup.

The ORC also includes diagnostics that will illuminate the instrument panel Air Bag Warning Light if a malfunction is detected that could affect the air bag system. The diagnostics also record the nature of the malfunction. While the air bag system is designed to be maintenance free, if any of the following occurs, have an authorized dealer service the air bag system immediately.

- The Air Bag Warning Light does not come on during the four to eight seconds when the ignition switch is first in the ON/RUN position.
- The Air Bag Warning Light remains on after the four to eight-second interval.
- The Air Bag Warning Light comes on intermittently or remains on while driving.

NOTE: If the speedometer, tachometer, or any engine related gauges are not working, the Occupant Restraint Controller (ORC) may also be disabled. In this condition the air bags may not be ready to inflate for your protection. Have an authorized dealer service the air bag system immediately.

WARNING!

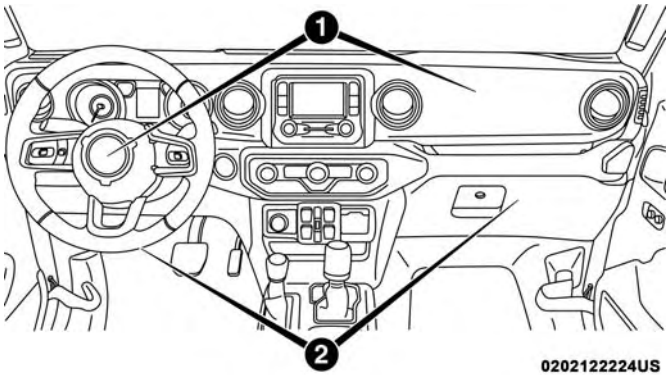
Ignoring the Air Bag Warning Light in your instrument panel could mean you won't have the air bag system to protect you in a collision. If the light does not come on as a bulb check when the ignition is first turned on, stays on after you start the vehicle, or if it comes on as you drive, have an authorized dealer service the air bag system immediately.

Redundant Air Bag Warning Light

If a fault with the Air Bag Warning Light is detected, which could affect the Supplemental Restraint System (SRS), the Redundant Air Bag Warning Light will illuminate on the instrument panel. The Redundant Air Bag Warning Light will stay on until the fault is cleared. In addition, a single chime will sound to alert you that the Redundant Air Bag Warning Light has come on and a fault has been detected. If the Redundant Air Bag Warning Light comes on intermittently or remains on while driving have an authorized dealer service the vehicle immediately. For additional information regarding the Redundant Air Bag Warning Light refer to "Getting To Know Your Instrument Panel" section of this manual.

Front Air Bags

This vehicle has front air bags and lap/shoulder belts for both the driver and front passenger. The front air bags are a supplement to the seat belt restraint systems. The driver front air bag is mounted in the center of the steering wheel. The passenger front air bag is mounted in the instrument panel, above the glove compartment. The words "SRS AIRBAG" or "AIRBAG" are embossed on the air bag covers.



Front Air Bag/Knee Impact Bolster Locations

1 — Driver And Passenger Front Air Bags
2 — Driver And Passenger Knee Impact Bolsters

WARNING!

- **Being too close to the steering wheel or instrument panel during front air bag deployment could cause serious injury, including death. Air bags need room to inflate. Sit back, comfortably extending your arms to reach the steering wheel or instrument panel.**
- **Never place a rear-facing child restraint in front of an air bag. A deploying passenger front air bag can cause death or serious injury to a child 12 years or younger, including a child in a rear-facing child restraint.**
- **Only use a rear-facing child restraint in a vehicle with a rear seat.**

Driver And Passenger Front Air Bag Features

The Advanced Front Air Bag system has multistage driver and front passenger air bags. This system provides output appropriate to the severity and type of collision as determined by the Occupant Restraint Controller (ORC), which may receive information from the front impact sensors (if equipped) or other system components.

The first stage inflator is triggered immediately during an impact that requires air bag deployment. A low energy output is used in less severe collisions. A higher energy output is used for more severe collisions.

This vehicle may be equipped with a driver and/or front passenger seat belt buckle switch that detects whether the driver or front passenger seat belt is buckled. The seat belt buckle switch may adjust the inflation rate of the Advanced Front Air Bags.

This vehicle may be equipped with driver and/or front passenger seat track position sensors that may adjust the inflation rate of the Advanced Front Air Bags based upon seat position.

This vehicle has an Occupant Classification System ("OCS") in the front passenger seat. The OCS is designed to activate or deactivate the Passenger Advanced Front Air Bag depending on the occupant's seated weight. It is designed to deactivate the Passenger Advanced Front Air Bag for an unoccupied seat and for occupants whose seated weight classifies them in a category other than a properly seated adult. This could be a child, teenager, or even an adult.

The Passenger Air Bag Disable ("PAD") Indicator Light (an amber light located on the overhead sports bar) tells the driver and front passenger when the Passenger Advanced Front Air Bag is deactivated. The PAD Indicator Light illuminates the words "PASSENGER AIR BAG OFF" to show that the Passenger Advanced Front Air Bag will not deploy during a collision.

NOTE: When the front passenger seat is empty or when very light objects are placed on the seat, the Passenger Advanced Front Air Bag will not deploy even though the Passenger Air Bag Disable (PAD) System Indicator Light is NOT illuminated.

WARNING!

- **No objects should be placed over or near the air bag on the instrument panel or steering wheel because any such objects could cause harm if the vehicle is in a collision severe enough to cause the air bag to inflate.**
- **Do not put anything on or around the air bag covers or attempt to open them manually. You may damage the air bags and you could be injured because the air**

(Continued)

WARNING! ***(Continued)***

bags may no longer be functional. The protective covers for the air bag cushions are designed to open only when the air bags are inflating.

- **Relying on the air bags alone could lead to more severe injuries in a collision. The air bags work with your seat belt to restrain you properly. In some collisions, air bags won't deploy at all. Always wear your seat belts even though you have air bags.**

Front Air Bag Operation

Front Air Bags are designed to provide additional protection by supplementing the seat belts. Front air bags are not expected to reduce the risk of injury in rear, side, or rollover collisions. The front air bags will not deploy in all frontal collisions, including some that may produce substantial vehicle damage — for example, some pole collisions, truck underrides, and angle offset collisions.

On the other hand, depending on the type and location of impact, front air bags may deploy in crashes with little vehicle front-end damage but that produce a severe initial deceleration.

Because air bag sensors measure vehicle deceleration over time, vehicle speed and damage by themselves are not good indicators of whether or not an air bag should have deployed.

Seat belts are necessary for your protection in all collisions, and also are needed to help keep you in position, away from an inflating air bag.

When the ORC detects a collision requiring the front air bags, it signals the inflator units. A large quantity of non-toxic gas is generated to inflate the front air bags.

The steering wheel hub trim cover and the upper right side of the instrument panel separate and fold out of the way as the air bags inflate to their full size. The front air bags fully inflate in less time than it takes to blink your eyes. The front air bags then quickly deflate while helping to restrain the driver and front passenger.

Occupant Classification System (OCS) — Front Passenger Seat

The OCS is part of a Federally regulated safety system for this vehicle. It is designed to activate or deactivate the Passenger Advanced Front Air Bag depending on the occupant's seated weight. It is designed to deactivate the Passenger Advanced Front Air Bag for an unoccupied seat

and for occupants whose seated weight classifies them in a category other than a properly seated adult. This could be a child, teenager, or even an adult.

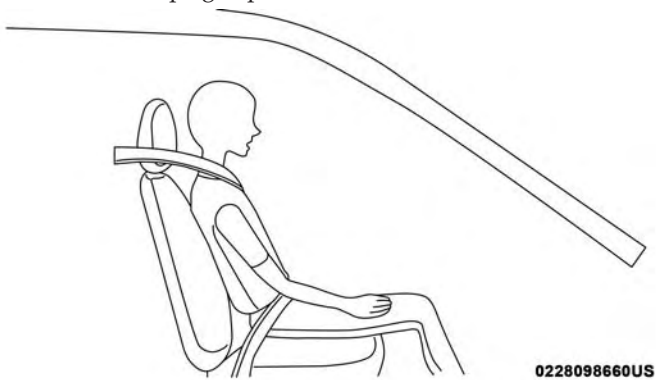
The Occupant Classification System (OCS) Consists Of The Following:

- Occupant Restraint Controller (ORC)
- Occupant Classification Module (OCM) and Sensor located in the front passenger seat
- Passenger Air Bag Disabled (PAD) Indicator Light – an amber light located on the overhead sports bar
- Air Bag Warning Light
- Passenger Seat Belt

Occupant Classification Module (OCM) And Sensor

The Occupant Classification Module (OCM) is located underneath the front passenger seat. The Sensor is located beneath the passenger seat cushion foam. Any weight on the seat will be sensed by the Sensor. The OCM uses input from the Sensor to determine the front passenger's most probable classification. The OCM communicates this information to the ORC. The ORC uses the classification to determine whether it should activate or deactivate the Passenger Advanced Front Air Bag. In order for the OCS to operate as designed, it is important for the front passenger to be seated properly and properly wearing the seat belt. Properly seated passengers are:

- Sitting upright.
- Facing forward.
- Sitting in the center of the seat with their feet comfortably on or near the floor.
- Sitting with their back against the seat back and the seat back in an upright position.



Seated Properly

The OCS may deactivate the deployment of the Passenger Advanced Front Air Bag if the OCS estimates that:

- The front passenger seat is unoccupied or has very light objects in it.
- The front passenger seat is occupied by a rear-facing child restraint.
- The front passenger seat is occupied by a child, including a child seated in a forward-facing child restraint or booster seat.
- The front passenger seat is occupied by a small passenger, including a child or small adult.
- The front passenger is not properly seated or his or her weight is taken off of the seat for a period of time.

Passenger Air Bag Disable (PAD) System		
Front Passenger Seat Occupant Status	**Front Passenger Advanced Air Bag Disabled Indicator Light ("PAD") Status**	**Front Passenger Air Bag Status**
Unoccupied seat* Unbuckled	NOT ILLUMINATED	DEACTIVATED
Unoccupied seat*Buckled	"PASSENGER AIR BAG OFF"	DEACTIVATED
Grocery bags, heavy briefcases, and other relatively light objects	"PASSENGER AIR BAG OFF"	DEACTIVATED
Rear-facing child restraint**	"PASSENGER AIR BAG OFF"	DEACTIVATED

Passenger Air Bag Disable (PAD) System		
Front Passenger Seat Occupant Status	**Front Passenger Advanced Air Bag Disabled Indicator Light ("PAD") Status**	**Front Passenger Air Bag Status**
Child, including a child in a forward-facing child restraint or booster seat**	"PASSENGER AIR BAG OFF"	DEACTIVATED
Small adult	"PASSENGER AIR BAG OFF"	DEACTIVATED
Properly seated adult	NOT ILLUMINATED	ACTIVATED

* When the front passenger seat is empty or when very light objects are placed on the seat and the seat belt is unbuckled, the Passenger Advanced Front Air Bag will not deploy even though the PAD System Indicator Light is NOT illuminated.

** It is possible for a child to be classified as an adult, allowing the deployment of the Passenger Advanced Front Air Bag. Never allow children to ride in the front passenger seat and never install a child restraint system, including a rear-facing child restraint, in the front passenger seat.

WARNING!

- **Never place a rear-facing child restraint in front of an air bag. A deploying passenger front air bag can cause death or serious injury to a child 12 years or younger, including a child in a rear-facing child restraint.**
- **Only use a rear-facing child restraint in a vehicle with a rear seat.**
- **Children 12 years or younger should always ride buckled up in a vehicle with a rear seat.**

Passenger Advanced Front Air Bag Disabled (PAD) Indicator Light

The Passenger Advanced Front Air Bag Disabled (PAD) Indicator Light (an amber light located on the overhead sports bar) tells the driver and front passenger when the Passenger Advanced Front Air Bag is deactivated. The PAD Indicator light illuminates the words "PASSENGER AIR BAG OFF" to show that the Passenger Advanced Front Air Bag will not deploy during a collision. When the front passenger seat is empty or when very light objects are

placed on the seat and the seat belt is unbuckled, the Passenger Advanced Front Air Bag will not deploy even though the PAD indicator light is NOT illuminated.

The PAD indicator light should not be illuminated when an adult passenger is properly seated in the front passenger seat. The driver and adult passenger should verify that the PAD Indicator Light is not illuminated when an adult is riding in the front passenger seat. If an adult is not seated properly, the Passenger Advanced Front Air Bag may deactivate and the PAD Indicator Light will be illuminated.

The PAD Indicator Light should be illuminated and the Passenger Advanced Front Air Bag should be deactivated for most properly seated and restrained children in the passenger seat and for most properly installed child restraint systems. However, under certain conditions, even with a properly installed child restraint system, the PAD Indicator Light may not be illuminated, even though the Passenger Advanced Front Air Bag is deactivated. This can occur if the child restraint is lighter than the lightest weight necessary to illuminate the PAD Indicator Light. **NEVER** assume the Passenger Advanced Front Air Bag is deactivated unless the PAD Indicator Light is illuminated with the words "PASSENGER AIR BAG OFF."

NOTE: If the seat belt is buckled for an empty seat, the PAD Indicator Light will illuminate.

If The Pad Indicator Light Is Illuminated For An Adult Passenger:

If an adult passenger is seated in the front passenger seat and the PAD Indicator Light is illuminated, the passenger may be sitting improperly. Follow the steps below to allow the OCS to detect the adult passenger's seated weight to activate the Passenger Advanced Front Air Bag:

1. Turn off the vehicle and have the adult passenger step out of the vehicle.
2. Remove any extra materials from the passenger seat, such as cushions, pads, seat covers, seat massagers, blankets, extra clothing, etc.
3. Place the seatback in the full upright position.
4. Have the adult passenger sit in the center of the seat, with the passenger's feet comfortably on or near the floor, and with their back against the seatback.
5. Restart the vehicle and have the passenger remain in this seated position for two to three minutes after restarting the vehicle.

WARNING!

- **If the PAD Indicator Light remains illuminated for an adult passenger, have an authorized dealer service the air bag system immediately. Failure to do so may cause serious injury or death. If the PAD Indicator Light is illuminated with the words "PASSENGER AIR BAG OFF," the Passenger Advanced Front Air Bag will not deploy in the event of a collision.**
- **Never place a rear-facing child restraint in front of an air bag. A deploying passenger front air bag can cause death or serious injury to a child 12 years or younger, including a child in a rear-facing child restraint.**
- **Only use a rear-facing child restraint in a vehicle with a rear seat.**
- **Children 12 years or younger should always ride buckled up in a vehicle with a rear seat.**

Lighter Weight Passengers (Including Small Adults)

When a lighter weight passenger, including a small adult, occupies the passenger seat, the Passenger Advanced Front Air Bag may be deactivated. Therefore, the Passenger Advanced Front Air Bag may or may not be activated for a lighter weight passenger, including a small adult (depending on size) who is seated in the passenger seat. This does not mean that the OCS is working improperly.

The driver and passenger must always use the PAD Indicator Light as a determination of whether the Passenger Advanced Front Air Bag is activated or deactivated. If the PAD Indicator Light is illuminated with the words "PASSENGER AIR BAG OFF" when an adult is in the front passenger seat, have the passenger reposition his or her body in the seat until the PAD Indicator Light goes out.

If the PAD Indicator Light is illuminated with the words "PASSENGER AIR BAG OFF" the Passenger Advanced Front Air Bag will not inflate in the event of a collision.

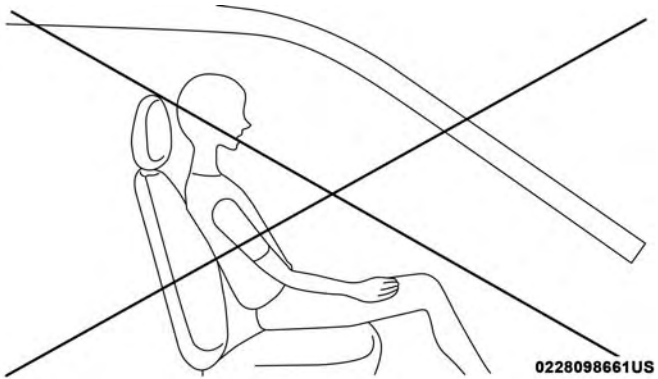
Do Not Decrease OR Increase The Front Passenger's Seated Weight On The Front Passenger Seat

The front passenger's seated weight must be properly positioned on the front passenger seat. Failure to do so may result in serious injury or death. The OCS determines the most probable classification of the occupant that it detects. The OCS will detect the front passenger's decreased or increased seated weight, which may result in deactivation or activation of the Passenger Advanced Front Air Bag in a collision. This does not mean that the OCS is working

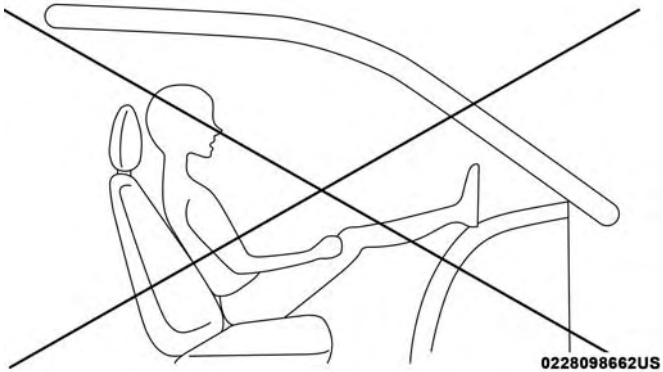
improperly. Decreasing the front passenger's seated weight on the front passenger seat may result in deactivation of the Passenger Advanced Front Air Bag causing serious injury or death. Increasing the front passenger's seated weight on the front passenger seat may result in activation of the Passenger Advanced Front Air Bag. Examples of improper front passenger seating include:

- The front passenger's weight is transferred to another part of the vehicle (like the door, arm rest or instrument panel).
- The front passenger leans forward, sideways, or turns to face the rear of the vehicle.
- The front passenger's seatback is not in the full upright position.
- The front passenger carries or holds an object while seated (e.g., backpack, box, etc.).
- Objects are lodged under the front passenger seat.
- Objects are lodged between the front passenger seat and center console.
- Accessories that may change the seated weight on the front passenger seat are attached to the front passenger seat.
- Anything that may decrease or increase the front passenger's seated weight.

The OCS determines the front passenger's most probable classification. If an occupant in the front passenger seat is seated improperly, the occupant may provide an output signal to the OCS that is different from the occupant's properly seated weight input, for example:



Not Seated Properly



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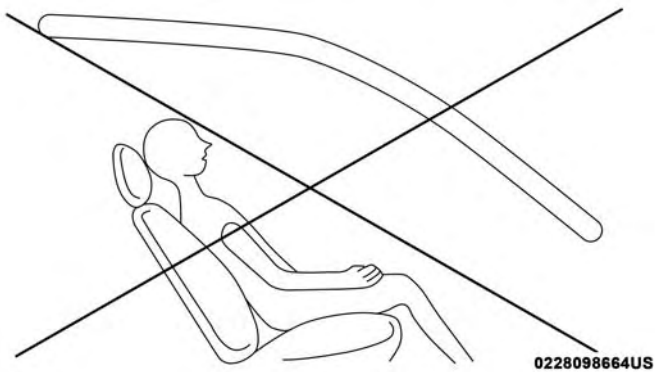
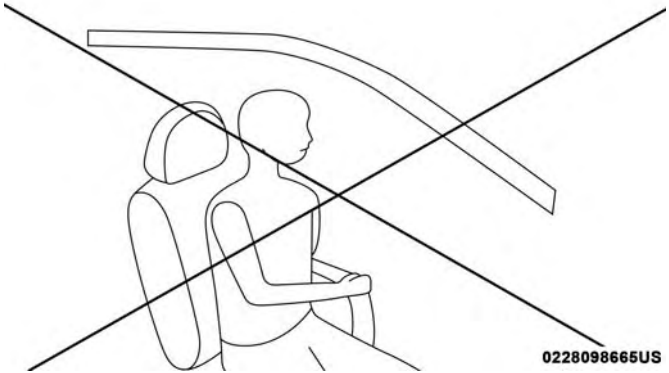


Not Seated Properly



Not Seated Properly

WARNING!

- **If a child restraint system, child, small teenager or adult in the front passenger seat is seated improperly, the occupant may provide an output signal to the OCS that is different from the occupant's properly seated weight input. This may result in serious injury or death in a collision.**

(Continued)

WARNING! ***(Continued)***

- **Always wear your seat belt and sit properly, with the seatback in an upright position, your back against the seatback, sitting upright, facing forward, in the center of the seat, with your feet comfortably on or near the floor.**
- **Do not carry or hold any objects (e.g., backpacks, boxes, etc.) while seated in the front passenger seat. Holding an object may provide an output signal to the OCS that is different than the occupant's properly seated weight input, which may result in serious injury or death in a collision.**

The Air Bag Warning Light will illuminate whenever the OCS is unable to classify the front passenger seat status.

A malfunction in the OCS may affect the operation of the air bag system. If the Air Bag Warning Light does not come on, or stays on after you start the vehicle, or it comes on as you drive, take the vehicle to an authorized dealer for service immediately.

WARNING!

- **Ignoring the Air Bag Warning Light in your instrument panel could mean you won't have the air bags to protect you in a collision. If the light does not come on as a bulb check when the ignition is first turned on, stays on after you start the vehicle, or if it comes on as you drive, have an authorized dealer service the air bag system immediately.**
- **Placing an object on the floor under the front passenger seat may prevent the OCS from working properly, which may result in serious injury or death in a collision. Do not place any objects on the floor under the front passenger seat.**
- **If there is a fault present in the OCS, both the PAD Indicator Light and the Air Bag Warning Light will illuminate to show that the Passenger Advanced Front Air Bag is deactivated. Should this occur, the Passenger Advanced Front Air Bag will remain deactivated until the fault is cleared. This indicates that you should take the vehicle to an authorized dealer for service immediately.**

The passenger seat assembly contains critical OCS components that may affect Passenger Advanced Front Air Bag inflation. In order for the OCS to properly classify the seated weight of a front seat passenger, the OCS components must function as designed. Do not make any modifications to the front passenger seat components, assembly, or to the seat cover. If the seat, trim cover, or cushion needs service for any reason, take the vehicle to your authorized dealer. Only FCA US LLC approved seat accessories may be used.

The following requirements must be strictly followed:

- Do not modify the front passenger seat assembly or components in any way.
- Do not use prior or future model year seat covers or cushions not designated by FCA US LLC for the specific model being repaired. Always use the correct seat cover and cushion specified for the vehicle.
- Do not replace the seat cover or cushion with an aftermarket seat cover or cushion.
- Do not add a secondary seat cover or mat.

- At no time should any Supplemental Restraint System (SRS) component or SRS related component or fastener be modified or replaced with any part except those which are approved by FCA US LLC.

WARNING!

- **Unapproved modifications or service procedures to the passenger seat assembly, its related components, seat cover, or cushion may inadvertently change the air bag deployment in case of a frontal collision. This could result in death or serious injury to the front passenger if the vehicle is involved in a collision. A modified vehicle may not comply with required Federal Motor Vehicle Safety Standards (FMVSS) and/or Canadian Motor Vehicle Safety Standards (CMVSS).**
- **If it is necessary to modify the air bag system for persons with disabilities, contact your authorized dealer.**

Knee Impact Bolsters

The Knee Impact Bolsters help protect the knees of the driver and front passenger, and position the front occupants for improved interaction with the front air bags.

WARNING!

- **Do not drill, cut, or tamper with the knee impact bolsters in any way.**
- **Do not mount any accessories to the knee impact bolsters such as alarm lights, stereos, citizen band radios, etc.**

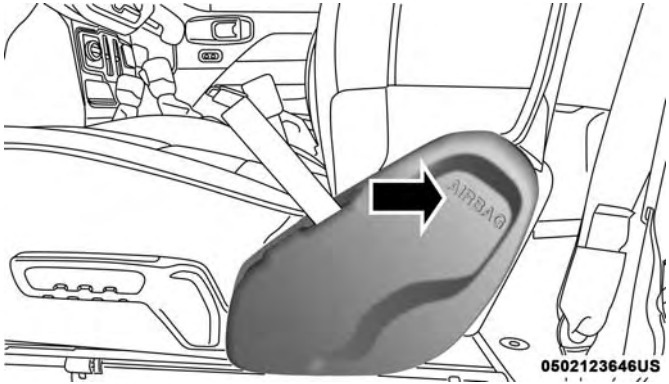
Supplemental Side Air Bags

Supplemental Seat-Mounted Side Air Bags (SABs)

This vehicle is equipped with Supplemental Seat-Mounted Side Air Bags (SABs).

Supplemental Seat-Mounted Side Air Bags (SABs) are located in the outboard side of the front seats. The SABs are marked with a “SRS AIRBAG” or “AIRBAG” label sewn into the outboard side of the seats.

The SABs may help to reduce the risk of occupant injury during certain side impacts, in addition to the injury reduction potential provided by the seat belts and body structure.



Supplemental Seat-Mounted Side Air Bag Location

When the SAB deploys, it opens the seam on the outboard side of the seatback's trim cover. The inflating SAB deploys through the seat seam into the space between the occupant and the door. The SAB moves at a very high speed and with such a high force that it could injure occupants if they are not seated properly, or if items are positioned in the area where the SAB inflates. Children are at an even greater risk of injury from a deploying air bag.

WARNING!

Do not use accessory seat covers or place objects between you and the Side Air Bags; the performance could be adversely affected and/or objects could be pushed into you, causing serious injury.

Side Impacts

The Side Air Bags are designed to activate in certain side impacts. The Occupant Restraint Controller (ORC) determines whether the deployment of the Side Air Bags in a particular impact event is appropriate, based on the severity and type of collision. The side impact sensors aid the ORC in determining the appropriate response to impact events. The system is calibrated to deploy the Side Air Bags on the impact side of the vehicle during impacts that require Side Air Bag occupant protection. In side impacts, the Side Air Bags deploy independently; a left side impact deploys the left Side Air Bags only and a right-side impact deploys the right Side Air Bags only. Vehicle damage by itself is not a good indicator of whether or not Side Air Bags should have deployed.

The Side Air Bags will not deploy in all side collisions, including some collisions at certain angles, or some side collisions that do not impact the area of the passenger compartment. The Side Air Bags may deploy during angled or offset frontal collisions where the front air bags deploy.

Side Air Bags are a supplement to the seat belt restraint system. Side Air Bags deploy in less time than it takes to blink your eyes.

WARNING!

- **Occupants, including children, who are up against or very close to Side Air Bags can be seriously injured or killed. Occupants, including children, should never lean on or sleep against the door, side windows, or area where the side air bags inflate, even if they are in an infant or child restraint.**
- **Seat belts (and child restraints where appropriate) are necessary for your protection in all collisions. They also help keep you in position, away from an inflating Side Air Bag. To get the best protection from the Side Air Bags, occupants must wear their seat belts properly and sit upright with their backs**

(Continued)

WARNING! *(Continued)*

against the seats. Children must be properly restrained in a child restraint or booster seat that is appropriate for the size of the child.

WARNING!

- **Side Air Bags need room to inflate. Do not lean against the door or window. Sit upright in the center of the seat.**
- **Being too close to the Side Air Bags during deployment could cause you to be severely injured or killed.**
- **Relying on the Side Air Bags alone could lead to more severe injuries in a collision. The Side Air Bags work with your seat belt to restrain you properly. In some collisions, Side Air Bags won't deploy at all. Always wear your seat belt even though you have Side Air Bags.**

NOTE: Air bag covers may not be obvious in the interior trim, but they will open during air bag deployment.

Air Bag System Components

NOTE: The Occupant Restraint Controller (ORC) monitors the internal circuits and interconnecting wiring associated with electrical Air Bag System Components listed below:

- Occupant Restraint Controller (ORC)
- Air Bag Warning Light
- Steering Wheel and Column
- Instrument Panel
- Knee Impact Bolsters
- Driver and Front Passenger Air Bags
- Seat Belt Buckle Switch
- Supplemental Side Air Bags
- Front and Side Impact Sensors
- Seat Belt Pretensioners
- Seat Track Position Sensors
- Occupant Classification System

If A Deployment Occurs

The front air bags are designed to deflate immediately after deployment.

NOTE: Front and/or side air bags will not deploy in all collisions. This does not mean something is wrong with the air bag system.

If you do have a collision which deploys the air bags, any or all of the following may occur:

- The air bag material may sometimes cause abrasions and/or skin reddening to the occupants as the air bags deploy and unfold. The abrasions are similar to friction rope burns or those you might get sliding along a carpet or gymnasium floor. They are not caused by contact with chemicals. They are not permanent and normally heal quickly. However, if you haven't healed significantly within a few days, or if you have any blistering, see your doctor immediately.
- As the air bags deflate, you may see some smoke-like particles. The particles are a normal by-product of the process that generates the non-toxic gas used for air bag inflation. These airborne particles may irritate the skin, eyes, nose, or throat. If you have skin or eye irritation, rinse the area with cool water. For nose or throat

irritation, move to fresh air. If the irritation continues, see your doctor. If these particles settle on your clothing, follow the garment manufacturer's instructions for cleaning.

Do not drive your vehicle after the air bags have deployed. If you are involved in another collision, the air bags will not be in place to protect you.

WARNING!

Deployed air bags and seat belt pretensioners cannot protect you in another collision. Have the air bags, seat belt pretensioners, and the seat belt retractor assemblies replaced by an authorized dealer immediately. Also, have the Occupant Restraint Controller System serviced as well.

NOTE:

- Air bag covers may not be obvious in the interior trim, but they will open during air bag deployment.
- After any collision, the vehicle should be taken to an authorized dealer immediately.

Enhanced Accident Response System

In the event of an impact, if the communication network remains intact, and the power remains intact, depending on the nature of the event, the ORC will determine whether to have the Enhanced Accident Response System perform the following functions:

- Cut off fuel to the engine.
- Flash hazard lights as long as the battery has power or until the hazard light button is pressed. The hazard lights can be deactivated by pressing the hazard light button.
- Turn on the interior lights, which remain on as long as the battery has power or for 15 minutes from the intervention of the Enhanced Accident Response System.
- Unlock the power door locks.
- Turn off the Gasoline Fuel Pump Heater (if equipped) or the Diesel Fuel Filter Heater (if equipped).
- Turn off the HVAC Blower Motor.
- Close the HVAC Circulation Door.

Enhanced Accident Response System Reset Procedure

In order to reset the Enhanced Accident Response System functions after an event, the ignition switch must be changed from ignition START or ON/RUN to ignition OFF. Carefully check the vehicle for fuel leaks in the engine compartment and on the ground near the engine compartment and fuel tank before resetting the system and starting the engine.

Maintaining Your Air Bag System

WARNING!

- **Modifications to any part of the air bag system could cause it to fail when you need it. You could be injured if the air bag system is not there to protect you. Do not modify the components or wiring, including adding any kind of badges or stickers to the steering wheel hub trim cover or the upper right side of the instrument panel. Do not modify the front bumper, vehicle body structure, or add aftermarket side steps or running boards.**

(Continued)

WARNING! *(Continued)*

- **It is dangerous to try to repair any part of the air bag system yourself. Be sure to tell anyone who works on your vehicle that it has an air bag system.**
- **Do not attempt to modify any part of your air bag system. The air bag may inflate accidentally or may not function properly if modifications are made. Take your vehicle to an authorized dealer for any air bag system service. If your seat, including your trim cover and cushion, needs to be serviced in any way (including removal or loosening/tightening of seat attachment bolts), take the vehicle to your authorized dealer. Only manufacturer approved seat accessories may be used. If it is necessary to modify the air bag system for persons with disabilities, contact your authorized dealer.**

Event Data Recorder (EDR)

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics

and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur.

NOTE: EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

Child Restraints

Everyone in your vehicle needs to be buckled up at all times, including babies and children. Every state in the United States, and every Canadian province, requires that small children ride in proper restraint systems. This is the law, and you can be prosecuted for ignoring it.

Children 12 years or younger should ride properly buckled up in a rear seat, if available. According to crash statistics, children are safer when properly restrained in the rear seats rather than in the front.

WARNING!

In a collision, an unrestrained child can become a projectile inside the vehicle. The force required to hold even an infant on your lap could become so great that you could not hold the child, no matter how strong you are. The child and others could be badly injured or killed. Any child riding in your vehicle should be in a proper restraint for the child's size.

There are different sizes and types of restraints for children from newborn size to the child almost large enough for an adult safety belt. Always check the child seat Owner's Manual to make sure you have the correct seat for your child. Carefully read and follow all the instructions and warnings in the child restraint Owner's Manual and on all the labels attached to the child restraint.

Before buying any restraint system, make sure that it has a label certifying that it meets all applicable Safety Standards. You should also make sure that you can install it in the vehicle where you will use it.

NOTE:

- For additional information, refer to www.safercar.gov/parents/index.htm or call: 1–888–327–4236
- Canadian residents should refer to Transport Canada's website for additional information: http://www.tc.gc.ca/eng/motorvehiclesafety/safedrivers-childsafety-index-53.htm

Summary Of Recommendations For Restraining Children In Vehicles

	Child Size, Height, Weight Or Age	Recommended Type Of Child Restraint
Infants and Toddlers	Children who are two years old or younger and who have not reached the height or weight limits of their child restraint	Either an Infant Carrier or a Convertible Child Restraint, facing rearward in the rear seat of the vehicle
Small Children	Children who are at least two years old or who have outgrown the height or weight limit of their rear-facing child restraint	Forward-Facing Child Restraint with a five-point Harness, facing forward in the rear seat of the vehicle
Larger Children	Children who have outgrown their forward-facing child restraint, but are too small to properly fit the vehicle's seat belt	Belt Positioning Booster Seat and the vehicle seat belt, seated in the rear seat of the vehicle
Children Too Large for Child Restraints	Children 12 years old or younger, who have outgrown the height or weight limit of their booster seat	Vehicle Seat Belt, seated in the rear seat of the vehicle

Infant And Child Restraints

Safety experts recommend that children ride rear-facing in the vehicle until they are two years old or until they reach either the height or weight limit of their rear-facing child restraint. Two types of child restraints can be used rear-facing: infant carriers and convertible child seats.

The infant carrier is only used rear-facing in the vehicle. It is recommended for children from birth until they reach the weight or height limit of the infant carrier. Convertible child seats can be used either rear-facing or forward-facing in the vehicle. Convertible child seats often have a higher weight limit in the rear-facing direction than infant carriers do, so they can be used rear-facing by children who have outgrown their infant carrier but are still less than at least two years old. Children should remain rear-facing until they reach the highest weight or height allowed by their convertible child seat.

WARNING!

- **Never place a rear-facing child restraint in front of an air bag. A deploying passenger front air bag can cause death or serious injury to a child 12 years or younger, including a child in a rear-facing child restraint.**

(Continued)

WARNING! *(Continued)*

- **Only use a rear-facing child restraint in a vehicle with a rear seat.**

Older Children And Child Restraints

Children who are two years old or who have outgrown their rear-facing convertible child seat can ride forward-facing in the vehicle. Forward-facing child seats and convertible child seats used in the forward-facing direction are for children who are over two years old or who have outgrown the rear-facing weight or height limit of their rear-facing convertible child seat. Children should remain in a forward-facing child seat with a harness for as long as possible, up to the highest weight or height allowed by the child seat.

All children whose weight or height is above the forward-facing limit for the child seat should use a belt-positioning booster seat until the vehicle's seat belts fit properly. If the child cannot sit with knees bent over the vehicle's seat cushion while the child's back is against the seatback, they should use a belt-positioning booster seat. The child and belt-positioning booster seat are held in the vehicle by the seat belt.

WARNING!

- **Improper installation can lead to failure of an infant or child restraint. It could come loose in a collision. The child could be badly injured or killed. Follow the child restraint manufacturer's directions exactly when installing an infant or child restraint.**
- **After a child restraint is installed in the vehicle, do not move the vehicle seat forward or rearward because it can loosen the child restraint attachments. Remove the child restraint before adjusting the vehicle seat position. When the vehicle seat has been adjusted, reinstall the child restraint.**
- **When your child restraint is not in use, secure it in the vehicle with the seat belt or LATCH anchorages, or remove it from the vehicle. Do not leave it loose in the vehicle. In a sudden stop or accident, it could strike the occupants or seatbacks and cause serious personal injury.**

Children Too Large For Booster Seats

Children who are large enough to wear the shoulder belt comfortably, and whose legs are long enough to bend over the front of the seat when their back is against the seatback, should use the seat belt in a rear seat. Use this simple 5-step test to decide whether the child can use the vehicle's seat belt alone:

1. Can the child sit all the way back against the back of the vehicle seat?
2. Do the child's knees bend comfortably over the front of the vehicle seat – while the child is still sitting all the way back?
3. Does the shoulder belt cross the child's shoulder between their neck and arm?
4. Is the lap part of the belt as low as possible, touching the child's thighs and not the stomach?
5. Can the child stay seated like this for the whole trip?

If the answer to any of these questions was "no," then the child still needs to use a booster seat in this vehicle. If the child is using the lap/shoulder belt, check seat belt fit periodically and make sure the seat belt buckle is latched. A child's squirming or slouching can move the belt out of position. If the shoulder belt contacts the face or neck, move the child closer to the center of the vehicle, or use a booster seat to position the seat belt on the child correctly.

WARNING!

Never allow a child to put the shoulder belt under an arm or behind their back. In a crash, the shoulder belt will not protect a child properly, which may result in serious injury or death. A child must always wear both the lap and shoulder portions of the seat belt correctly.

Recommendations For Attaching Child Restraints

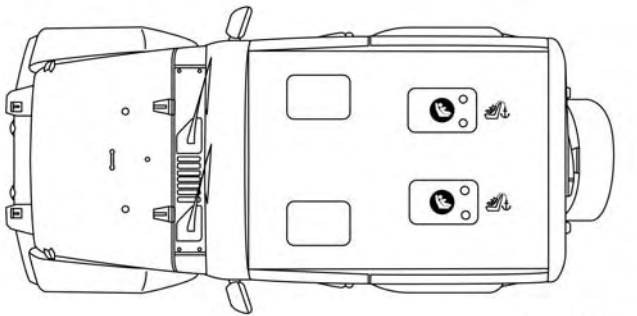
Restraint Type	Combined Weight of the Child + Child Restraint	Use Any Attachment Method Shown With An "X" Below			
		LATCH – Lower Anchors Only	Seat Belt Only	LATCH – Lower Anchors + Top Tether Anchor	Seat Belt + Top Tether Anchor
Rear-Facing Child Restraint	Up to 65 lbs (29.5 kg)	X	X		
Rear-Facing Child Restraint	More than 65 lbs (29.5 kg)		X		
Forward-Facing Child Restraint	Up to 65 lbs (29.5 kg)			X	X
Forward-Facing Child Restraint	More than 65 lbs (29.5 kg)				X

Lower Anchors And Tethers For CHildren (LATCH) Restraint System

LATCH Label

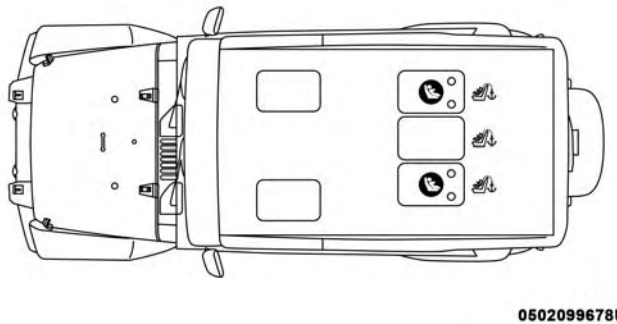
Your vehicle is equipped with the child restraint anchorage system called LATCH, which stands for Lower Anchors and Tethers for CHildren. The LATCH system has three vehicle anchor points for installing LATCH-equipped child seats. There are two lower anchorages located at the back of the seat cushion where it meets the seatback and one top tether anchorage located behind the seating position. These anchorages are used to install LATCH-equipped child seats without using the vehicle's seat belts. Some seating positions may have a top tether anchorage but no lower anchorages. In these seating positions, the seat belt must be used with the top tether anchorage to install the child restraint. Please see the following table for more information.

LATCH Positions For Installing Child Restraints In This Vehicle



LATCH Positions (Two-Door Models)

Lower Anchorage Symbol (2 Anchorages Per Seating Position)
Top Tether Anchorage Symbol



LATCH Positions (Four-Door Models)

Lower Anchorage Symbol (2 Anchorages Per Seating Position)
Top Tether Anchorage Symbol

Frequently Asked Questions About Installing Child Restraints With LATCH		
What is the weight limit (child's weight + weight of the child restraint) for using the LATCH anchorage system to attach the child restraint?	65 lbs (29.5 kg)	Use the LATCH anchorage system until the combined weight of the child and the child restraint is 65 lbs (29.5 kg). Use the seat belt and tether anchor instead of the LATCH system once the combined weight is more than 65 lbs (29.5 kg).
Can the LATCH anchorages and the seat belt be used together to attach a rear-facing or forward-facing child restraint?	No	Do not use the seat belt when you use the LATCH anchorage system to attach a rear-facing or forward-facing child restraint. Booster seats may be attached to the LATCH anchorages if allowed by the booster seat manufacturer. See your booster seat owner's manual for more information.

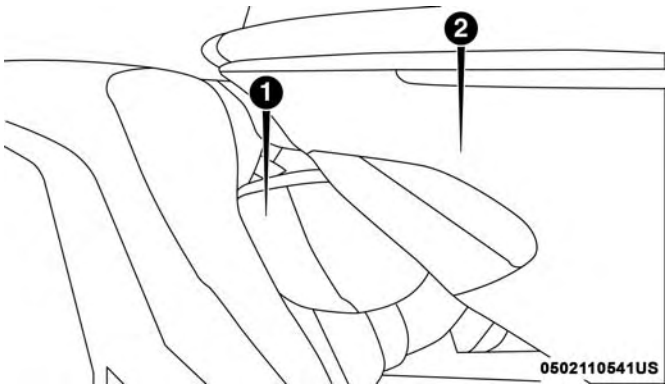
Frequently Asked Questions About Installing Child Restraints With LATCH		
Can a child seat be installed in the center position using the inner LATCH lower anchorages?	Two Door Models- No Four Door Models - Yes	Four Door Only: You can install child restraints with flexible lower anchors in the center position. The inner anchorages are 18.5 inches (484 mm) apart. Do not install child restraints with rigid lower anchors in the center position.
Can two child restraints be attached using a common lower LATCH anchorage?	No	Never “share” a LATCH anchorage with two or more child restraints. If the center position does not have dedicated LATCH lower anchorages, use the seat belt to install a child seat in the center position next to a child seat using the LATCH anchorages in an outboard position.

Frequently Asked Questions About Installing Child Restraints With LATCH		
Can the rear-facing child restraint touch the back of the front passenger seat?	Yes	The child seat may touch the back of the front passenger seat if the child restraint manufacturer also allows contact. See your child restraint owner's manual for more information.
Can the head restraints be removed?	Two Door Models- No Four Door Models - Yes	Two Door Models — None Four Door Models — Center only

NOTE: If the folding, non-adjustable head restraint interferes with the installation of the child restraint, the head restraint may be folded and the child seat installed in front of it.

WARNING!

Always make sure the head restraint is in its upright position when the seat is to be used by an occupant who is not in a child restraint. Sitting in a seat with the head restraint in its lowered position could result in serious injury or death in a collision.

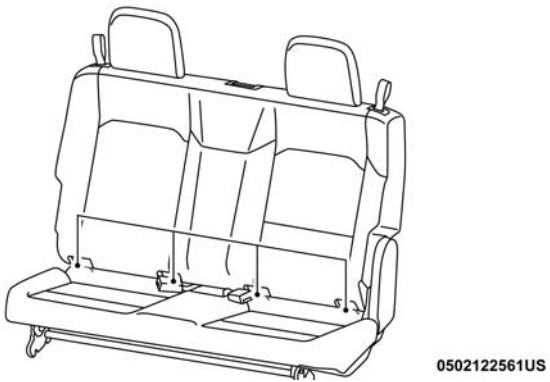


Car Seat With Head Restraint Folded

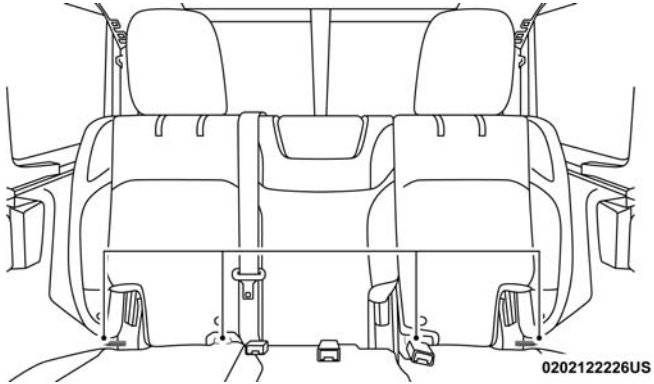
1 — Folded Headrest
2 — Child Restraint

Locating The LATCH Anchorages

The lower anchorages are round bars that are found at the rear of the seat cushion where it meets the seatback, below the anchorage symbols on the seatback. They are just visible when you lean into the rear seat to install the child restraint. You will easily feel them if you run your finger along the gap between the seatback and seat cushion.



LATCH Anchorages (Two-Door Models)

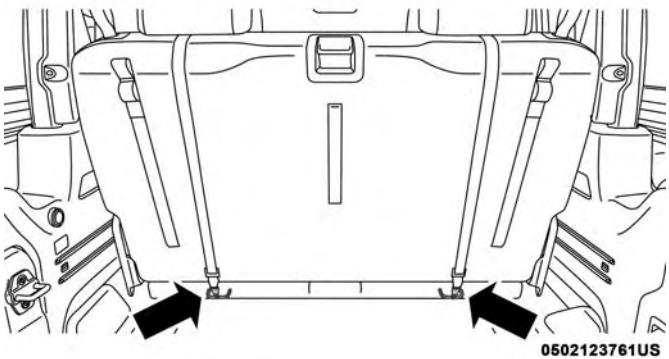


LATCH Anchorages (Four-Door Models)

Locating The Upper Tether Anchorages

Two-Door Models:

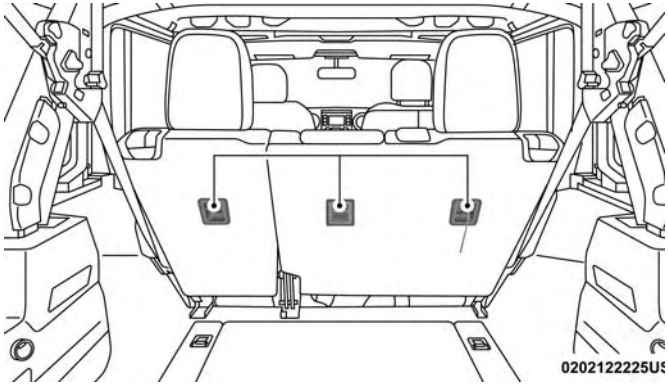
There are tether strap anchorages behind each rear seating position located on the back of the seat, near the floor.



Tether Strap Anchorages (Two-Door Models)

Four-Door Models:

There are tether strap anchorages behind each rear seating position located on the back of the seat.



Tether Strap Anchorages (Four-Door Models)

LATCH-compatible child restraint systems will be equipped with a rigid bar or a flexible strap on each side. Each will have a hook or connector to attach to the lower anchorage and a way to tighten the connection to the anchorage. Forward-facing child restraints and some rear-facing child restraints will also be equipped with a tether strap. The tether strap will have a hook at the end to attach to the top tether anchorage and a way to tighten the strap after it is attached to the anchorage.

Center Seat LATCH

Two-Door Models:

WARNING!

This vehicle does not have a center seating position. Do not use the center lower LATCH anchorages to install a child seat in the center of the back seat.

Four-Door Models:

Do not install child restraints with rigid lower attachments in the center seating position. Only install this type of child restraint in the outboard seating positions. Child restraints with flexible, webbing mounted lower attachments can be installed in any rear seating position.

WARNING!

Never use the same lower anchorage to attach more than one child restraint. If you are installing LATCH-compatible child restraints next to each other, you must use the seat belt for the center position. You can then use either the LATCH anchors or the vehicle's seat belt for installing child seats in the outboard positions.

(Continued)

WARNING! ***(Continued)***

Please refer to "Installing The LATCH-Compatible Child Restraint System" for typical installation instructions.

Always follow the directions of the child restraint manufacturer when installing your child restraint. Not all child restraint systems will be installed as described here.

To Install A LATCH-Compatible Child Restraint

If the selected seating position has a Switchable Automatic Locking Retractor (ALR) seat belt, stow the seat belt, following the instructions below. See the section "Installing Child Restraints Using the Vehicle Seat Belt" to check what type of seat belt each seating position has.

1. Loosen the adjusters on the lower straps and on the tether strap of the child seat so that you can more easily attach the hooks or connectors to the vehicle anchorages.
2. Place the child seat between the lower anchorages for that seating position. For some second row seats, you may need to recline the seat and / or raise the head restraint to get a better fit. If the rear seat can be moved forward and rearward in the vehicle, you may wish to

move it to its rear-most position to make room for the child seat. You may also move the front seat forward to allow more room for the child seat.

3. Attach the lower hooks or connectors of the child restraint to the lower anchorages in the selected seating position.
4. If the child restraint has a tether strap, connect it to the top tether anchorage. See the section "Installing Child Restraints Using the Top Tether Anchorage" for directions to attach a tether anchor.
5. Tighten all of the straps as you push the child restraint rearward and downward into the seat. Remove slack in the straps according to the child restraint manufacturer's instructions.
6. Test that the child restraint is installed tightly by pulling back and forth on the child seat at the belt path. It should not move more than 1 inch (25.4 mm) in any direction.

How To Stow An Unused Switchable-ALR (ALR) Seat Belt:

When using the LATCH attaching system to install a child restraint, stow all ALR seat belts that are not being used by other occupants or being used to secure child restraints. An unused belt could injure a child if they play with it and accidentally lock the seat belt retractor. Before installing a child restraint using the LATCH system, buckle the seat belt behind the child restraint and out of the child's reach. If the buckled seat belt interferes with the child restraint installation, instead of buckling it behind the child restraint, route the seat belt through the child restraint belt path and then buckle it. Do not lock the seat belt. Remind all children in the vehicle that the seat belts are not toys and that they should not play with them.

WARNING!

- **Improper installation of a child restraint to the LATCH anchorages can lead to failure of the restraint. The child could be badly injured or killed. Follow the child restraint manufacturer's directions exactly when installing an infant or child restraint.**

(Continued)

WARNING! *(Continued)*

- **Child restraint anchorages are designed to withstand only those loads imposed by correctly-fitted child restraints. Under no circumstances are they to be used for adult seat belts, harnesses, or for attaching other items or equipment to the vehicle.**

Installing Child Restraints Using The Vehicle Seat Belt

Child restraint systems are designed to be secured in vehicle seats by lap belts or the lap belt portion of a lap/shoulder belt.

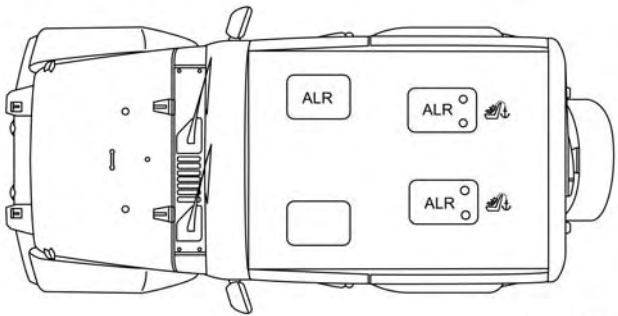
WARNING!

- **Improper installation or failure to properly secure a child restraint can lead to failure of the restraint. The child could be badly injured or killed.**
- **Follow the child restraint manufacturer's directions exactly when installing an infant or child restraint.**

The seat belts in the passenger seating positions are equipped with a Switchable Automatic Locking Retractor (ALR) that is designed to keep the lap portion of the seat belt tight around the child restraint so that it is not necessary to use a locking clip. The ALR retractor can be "switched" into a locked mode by pulling all of the webbing out of the retractor and then letting the webbing retract back into the retractor. If it is locked, the ALR will make a clicking noise while the webbing is pulled back into the retractor. Refer to the "Automatic Locking Mode" description in "Switchable Automatic Locking Retractors (ALR)" under "Occupant Restraint Systems" for additional information on ALR.

Please see the table below and the following sections for more information.

Lap/Shoulder Belt Systems For Installing Child Restraints In This Vehicle



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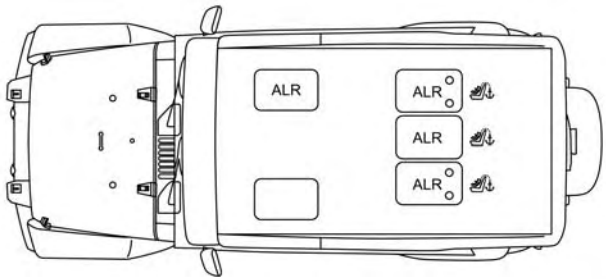
Automatic Locking Retractor Locations (Two-Door Models)

ALR = Switchable Automatic Locking Retractor
Top Tether Anchorage Symbol



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Automatic Locking Retractor Locations (Four-Door Models)

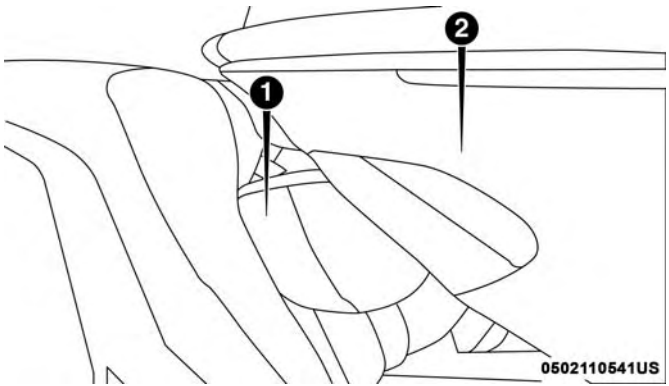
ALR = Switchable Automatic Locking Retractor
Top Tether Anchorage Symbol

Frequently Asked Questions About Installing Child Restraints With Seat Belts		
What is the weight limit (child's weight + weight of the child restraint) for using the Tether Anchor with the seat belt to attach a forward facing child restraint?	Weight limit of the Child Restraint	Always use the tether anchor when using the seat belt to install a forward facing child restraint, up to the recommended weight limit of the child restraint.
Can the rear-facing child restraint touch the back of the front passenger seat?	Yes	Contact between the front passenger seat and the child restraint is allowed, if the child restraint manufacturer also allows contact.
Can the head restraints be removed?	Two Door Models- No Four Door Models - Yes	Two Door — None Four Door — Center Only
Can the buckle stalk be twisted to tighten the seat belt against the belt path of the child restraint?	No	Do not twist the buckle stalk in a seating position with an ALR retractor.

NOTE: If the folding, non-adjustable head restraint interferes with the installation of the child restraint, the head restraint may be folded and the child seat installed in front of it.

WARNING!

Always make sure the head restraint is in its upright position when the seat is to be used by an occupant who is not in a child restraint. Sitting in a seat with the head restraint in its lowered position could result in serious injury or death in a collision.



Car Seat With Head Restraint Folded

1 — Folded Headrest
2 — Child Restraint

Installing A Child Restraint With A Switchable Automatic Locking Retractor (ALR):

Child restraint systems are designed to be secured in vehicle seats by lap belts or the lap belt portion of a lap/shoulder belt.

WARNING!

- **Improper installation or failure to properly secure a child restraint can lead to failure of the restraint. The child could be badly injured or killed.**
- **Follow the child restraint manufacturer's directions exactly when installing an infant or child restraint.**

1. Place the child seat in the center of the seating position. For some second row seats, you may need to recline the seat and/or raise the head restraint to get a better fit. If the rear seat can be moved forward and rearward in the vehicle, you may wish to move it to its rear-most position to make room for the child seat. You may also move the front seat forward to allow more room for the child seat.
2. Pull enough of the seat belt webbing from the retractor to pass it through the belt path of the child restraint. Do not twist the belt webbing in the belt path.

3. Slide the latch plate into the buckle until you hear a "click."
4. Pull on the webbing to make the lap portion tight against the child seat.
5. To lock the seat belt, pull down on the shoulder part of the belt until you have pulled all the seat belt webbing out of the retractor. Then, allow the webbing to retract back into the retractor. As the webbing retracts, you will hear a clicking sound. This means the seat belt is now in the Automatic Locking mode.
6. Try to pull the webbing out of the retractor. If it is locked, you should not be able to pull out any webbing. If the retractor is not locked, repeat step 5.
7. Finally, pull up on any excess webbing to tighten the lap portion around the child restraint while you push the child restraint rearward and downward into the vehicle seat.
8. If the child restraint has a top tether strap and the seating position has a top tether anchorage, connect the tether strap to the anchorage and tighten the tether strap. See the section "Installing Child Restraints Using the Top Tether Anchorage" for directions to attach a tether anchor.
9. Test that the child restraint is installed tightly by pulling back and forth on the child seat at the belt path. It should not move more than 1 inch (25.4 mm) in any direction.

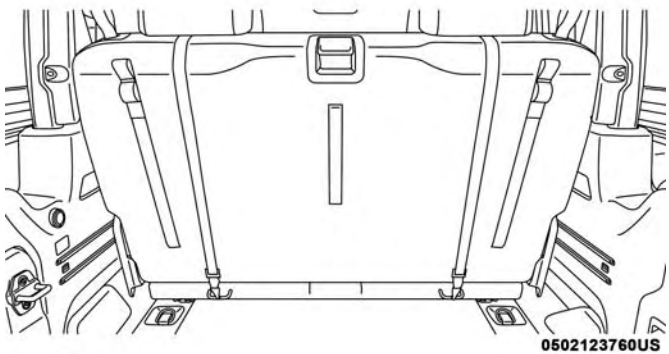
Any seat belt system will loosen with time, so check the belt occasionally, and pull it tight if necessary.

Installing Child Restraints Using The Top Tether Anchorage

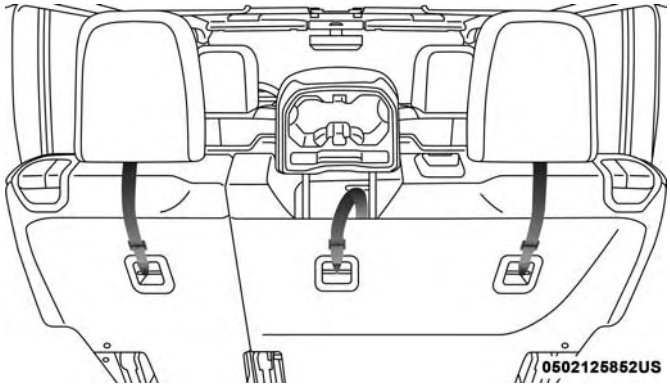
WARNING!

Do not attach a tether strap for a rear-facing car seat to any location in front of the car seat, including the seat frame or a tether anchorage. Only attach the tether strap of a rear-facing car seat to the tether anchorage that is approved for that seating position, located behind the top of the vehicle seat. See the section "Lower Anchors and Tethers for CHildren (LATCH) Restraint System" for the location of approved tether anchorages in your vehicle.

1. Look behind the seating position where you plan to install the child restraint to find the tether anchorage. You may need to move the seat forward to provide better access to the tether anchorage. If there is no top tether anchorage for that seating position, move the child restraint to another position in the vehicle if one is available.
2. Route the tether strap to provide the most direct path for the strap between the anchor and the child seat. If your vehicle is equipped with adjustable rear head restraints, raise the head restraint, and where possible, route the tether strap under the head restraint and between the two posts. If not possible, lower the head restraint and pass the tether strap around the outboard side of the head restraint.



Tether Strap Mounting (Two-Door Models)



Tether Strap Mounting
(Four-Door Models With Center Armrest)

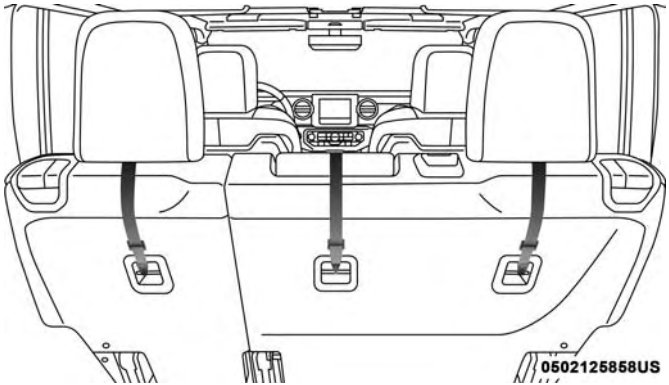
3. Attach the tether strap hook of the child restraint to the top tether anchorage as shown in the diagram.
4. Remove slack in the tether strap according to the child restraint manufacturer's instructions.

WARNING!

- **An incorrectly anchored tether strap could lead to increased head motion and possible injury to the child. Use only the anchorage position directly behind the child seat to secure a child restraint top tether strap.**
- **If your vehicle is equipped with a split rear seat, make sure the tether strap does not slip into the opening between the seatbacks as you remove slack in the strap.**

Center Tether Attachment — Four-Door Without Center Armrest

1. Lower the adjustable center head restraint to the full down position.
2. Route the tether strap over the seatback and head restraint.



Tether Strap Mounting
(Four-Door Models Without Center Armrest)

3. Attach the tether strap hook of the child restraint to the center tether anchorage located on the back of the seat.
4. Remove slack in the tether strap according to the child restraint manufacturer's instructions.

Transporting Pets

Air Bags deploying in the front seat could harm your pet. An unrestrained pet will be thrown about and possibly injured, or injure a passenger during panic braking or in a collision.

Pets should be restrained in the rear seat in pet harnesses or pet carriers that are secured by seat belts.

SAFETY TIPS

Transporting Passengers

NEVER TRANSPORT PASSENGERS IN THE CARGO AREA.

WARNING!

- **Do not leave children or animals inside parked vehicles in hot weather. Interior heat build-up may cause serious injury or death.**
- **It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed.**
- **Do not allow people to ride in any area of your vehicle that is not equipped with seats and seat belts.**
- **Be sure everyone in your vehicle is in a seat and using a seat belt properly.**

Exhaust Gas

WARNING!

Exhaust gases can injure or kill. They contain carbon monoxide (CO), which is colorless and odorless. Breathing it can make you unconscious and can eventually poison you. To avoid breathing (CO), follow these safety tips:

- **Do not run the engine in a closed garage or in confined areas any longer than needed to move your vehicle in or out of the area.**
- **If you are required to drive with the trunk/liftgate/ rear doors open, make sure that all windows are closed and the climate control BLOWER switch is set at high speed. DO NOT use the recirculation mode.**
- **If it is necessary to sit in a parked vehicle with the engine running, adjust your heating or cooling controls to force outside air into the vehicle. Set the blower at high speed.**

The best protection against carbon monoxide entry into the vehicle body is a properly maintained engine exhaust system.

Whenever a change is noticed in the sound of the exhaust system, when exhaust fumes can be detected inside the vehicle, or when the underside or rear of the vehicle is damaged, have a competent mechanic inspect the complete exhaust system and adjacent body areas for broken, damaged, deteriorated, or mispositioned parts. Open seams or loose connections could permit exhaust fumes to seep into the passenger compartment. In addition, inspect the exhaust system each time the vehicle is raised for lubrication or oil change. Replace as required.

Safety Checks You Should Make Inside The Vehicle

Seat Belts

Inspect the seat belt system periodically, checking for cuts, frays, and loose parts. Damaged parts must be replaced immediately. Do not disassemble or modify the system.

Front seat belt assemblies must be replaced after a collision. Rear seat belt assemblies must be replaced after a collision if they have been damaged (i.e., bent retractor, torn webbing, etc.). If there is any question regarding seat belt or retractor condition, replace the seat belt.

Air Bag Warning Light

The Air Bag warning light will turn on for four to eight seconds as a bulb check when the ignition switch is first turned to ON/RUN. If the light is either not on during starting, stays on, or turns on while driving, have the system inspected at an authorized dealer as soon as possible. This light will illuminate with a single chime when a fault with the Air Bag Warning Light has been detected, it will stay on until the fault is removed. If the light comes on intermittently or remains on while driving, have an authorized dealer service the vehicle immediately. Refer to "Occupant Restraint Systems" in "Safety" for further information.

Defroster

Check operation by selecting the defrost mode and place the blower control on high speed. You should be able to feel the air directed against the windshield. See your authorized dealer for service if your defroster is inoperable.

Floor Mat Safety Information

Always use floor mats designed to fit your vehicle. Only use a floor mat that does not interfere with the operation of the pedal assemblies. Only use a floor mat that is securely attached using the floor mat fasteners so it cannot slip out of position and interfere with the pedal assemblies or impair safe operation of your vehicle in other ways.

5

WARNING!

An improperly attached, damaged, folded, or stacked floor mat, or damaged floor mat fasteners may cause your floor mat to interfere with the accelerator, brake, or clutch pedals and cause a loss of vehicle control. To prevent SERIOUS INJURY or DEATH:

- **ALWAYS securely attach your floor mat using the floor mat fasteners. DO NOT install your floor mat upside down or turn your floor mat over. Lightly pull to confirm mat is secured using the floor mat fasteners on a regular basis.**
- **ALWAYS REMOVE THE EXISTING FLOOR MAT FROM THE VEHICLE before installing any other floor mat. NEVER install or stack an additional floor mat on top of an existing floor mat.**

(Continued)

WARNING! *(Continued)*

- **ONLY install floor mats designed to fit your vehicle. NEVER install a floor mat that cannot be properly attached and secured to your vehicle. If a floor mat needs to be replaced, only use a FCA approved floor mat for the specific make, model, and year of your vehicle.**
- **ONLY use the driver's side floor mat on the driver's side floor area. To check for interference, with the vehicle properly parked with the engine off, fully depress the accelerator, the brake, and the clutch pedal (if present) to check for interference. If your floor mat interferes with the operation of any pedal, or is not secure to the floor, remove the floor mat from the vehicle and place the floor mat in your trunk.**
- **ONLY use the passenger's side floor mat on the passenger's side floor area.**
- **ALWAYS make sure objects cannot fall or slide into the driver's side floor area when the vehicle is moving. Objects can become trapped under accelerator, brake, or clutch pedals and could cause a loss of vehicle control.**

(Continued)

WARNING! *(Continued)*

- **NEVER place any objects under the floor mat (e.g., towels, keys, etc.). These objects could change the position of the floor mat and may cause interference with the accelerator, brake, or clutch pedals.**
- **If the vehicle carpet has been removed and re-installed, always properly attach carpet to the floor and check the floor mat fasteners are secure to the vehicle carpet. Fully depress each pedal to check for interference with the accelerator, brake, or clutch pedals then re-install the floor mats.**
- **It is recommended to only use mild soap and water to clean your floor mats. After cleaning, always check your floor mat has been properly installed and is secured to your vehicle using the floor mat fasteners by lightly pulling mat.**

Periodic Safety Checks You Should Make Outside The Vehicle

Tires

Examine tires for excessive tread wear and uneven wear patterns. Check for stones, nails, glass, or other objects lodged in the tread or sidewall. Inspect the tread for cuts and cracks. Inspect sidewalls for cuts, cracks, and bulges. Check the wheel nuts for tightness. Check the tires (including spare) for proper cold inflation pressure.

Lights

Have someone observe the operation of brake lights and exterior lights while you work the controls. Check turn signal and high beam indicator lights on the instrument panel.

Door Latches

Check for proper closing, latching, and locking.

Fluid Leaks

Check area under vehicle after overnight parking for fuel, coolant, oil, or other fluid leaks. Also, if gasoline fumes are detected or if fuel, or brake fluid leaks are suspected. The cause should be located and corrected immediately.

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STARTING THE ENGINE

Before starting your vehicle, adjust your seat, adjust both inside and outside mirrors, and fasten your seat belts.

WARNING!

- **When exiting the vehicle, always remove the key fob from the ignition and lock your vehicle.**
- **Never leave children alone in a vehicle, or with access to an unlocked vehicle.**
- **Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child or others could be seriously or fatally injured. Children should be warned not to touch the parking brake, brake pedal or the gear selector.**
- **Do not leave the key fob in or near the vehicle, or in a location accessible to children. A child could operate power windows, other controls, or move the vehicle.**
- **Do not leave children or animals inside parked vehicles in hot weather. Interior heat build-up may cause serious injury or death.**

Manual Transmission — If Equipped

Apply the parking brake, place the gear selector in NEUTRAL, and press the clutch pedal before starting the vehicle. This vehicle is equipped with a clutch interlocking ignition system. It will not start unless the clutch pedal is pressed to the floor.

Four-Wheel Drive Models Only

In 4L mode, this vehicle will start regardless of whether or not the clutch pedal is pressed to the floor. This feature enhances off-road performance by allowing the vehicle to start when in 4L without having to press the clutch pedal. The “4WD Low Indicator Light” will illuminate when the transfer case has been shifted into this mode.

Automatic Transmission — If Equipped

Start the vehicle with the gear selector in the PARK position (vehicle can also be started in NEUTRAL). Apply the brake before shifting to any driving range.

Normal Starting

To Turn On The Engine Using The ENGINE START/ STOP Button

1. The transmission must be in PARK or NEUTRAL.
2. Press and hold the brake pedal while pushing the ENGINE START/STOP button once.
3. The system takes over and attempts to start the vehicle. If the vehicle fails to start, the starter will disengage automatically after 10 seconds.
4. If you wish to stop the cranking of the engine prior to the engine starting, push the button again.

NOTE: Normal starting of either a cold or a warm engine is obtained without pumping or pressing the accelerator pedal.

To Turn Off The Engine Using ENGINE START/STOP Button

1. Place the gear selector in PARK, then push and release the ENGINE START/STOP button.
2. The ignition will return to the OFF mode.
3. If the gear selector is not in PARK (with vehicle stopped) and the ENGINE START/STOP button is pushed once, the transmission will automatically select PARK and the engine will turn off, however the ignition will remain in the ACC mode (NOT the OFF mode). Never leave a vehicle out of the PARK position, or it could roll.
4. If the gear selector is in NEUTRAL, and the vehicle speed is below 5 mph (8 km/h), pushing the START/ STOP button once will turn the engine off. The ignition will remain in the ACC mode.
5. If the vehicle speed is above 5 mph (8 km/h), the ENGINE START/STOP button must be held for two seconds (or three short pushes in a row) to turn the engine off. The ignition will remain in the ACC mode (NOT the OFF mode) if the engine is turned off when the transmission is not in PARK.

NOTE: The system will automatically time out and the ignition will cycle to the OFF mode after 30 minutes of inactivity if the ignition is left in the ACC or RUN (engine not running) mode and the transmission is in PARK.

ENGINE START/STOP Button Functions — With Driver's Foot OFF The Brake Pedal (In PARK Or NEUTRAL Position)

The ENGINE START/STOP button operates similar to an ignition switch. It has three modes: OFF, ACC, and RUN. To change the ignition modes without starting the vehicle and use the accessories, follow these steps:

1. Starting with the ignition in the OFF mode,
2. Push the ENGINE START/STOP button once to place the ignition to the ACC mode (instrument cluster will display "ACC"),
3. Push the ENGINE START/STOP button a second time to place the ignition to the RUN mode (instrument cluster will display "ON/RUN"),
4. Push the ENGINE START/STOP button a third time to return the ignition to the OFF mode (instrument cluster will display "OFF").

AutoPark

AutoPark is a supplemental feature to assist in placing the vehicle in PARK should the situations on the following pages occur. It is a back up system and should not be relied upon as the primary method by which the driver shifts the vehicle into PARK.

The conditions under which AutoPark will engage are outlined on the following pages.

WARNING!

- **Driver inattention could lead to failure to place the vehicle in PARK. ALWAYS DO A VISUAL CHECK that your vehicle is in PARK by verifying that a solid (not blinking) "P" is indicated in the instrument cluster display and on the gear selector. If the "P" indicator is blinking, your vehicle is not in PARK. As an added precaution, always apply the parking brake when exiting the vehicle.**
- **AutoPark is a supplemental feature. It is not designed to replace the need to shift your vehicle into PARK. It is a back up system and should not be relied upon as the primary method by which the driver shifts the vehicle into PARK.**

If the vehicle is not in PARK and the driver turns off the engine, the vehicle may AutoPark.

AutoPark will engage when all of these conditions are met:

- Vehicle is equipped with an 8-speed transmission
- Drivers door is ajar or in conditions where driver door is removed an additional trigger would be if the driver is off the seat (seat pad sensor detects driver missing).
- Vehicle is not in PARK
- Vehicle Speed is 0 mph (0 km/h)
- Ignition switched from RUN to OFF

NOTE: For Keyless Go equipped vehicles, The engine will turn off and the ignition switch will change to ACC mode. After 30 minutes the ignition switches to OFF automatically, unless the driver turns the ignition switch OFF.

If the vehicle is not in PARK and the driver exits the vehicle with the engine running, the vehicle may AutoPark.

AutoPark will engage when all of these conditions are met:

- Vehicle is equipped with an 8-speed transmission
- Drivers door is ajar or in conditions where driver door is removed an aditional trigger would be if the driver is off the seat (seat pad sensor detects driver missing).
- Vehicle is not in PARK
- Driver's door is removed
- Vehicle speed is 1.2 MPH (2.0 km/h) or less
- Driver's seat belt is unbuckled
- Driver's door is ajar
- Brake Pedal is not depressed

The MESSAGE " **AutoPark Engaged Shift to P then Shift to Gear**" will display in the instrument cluster.

NOTE: In some cases the ParkSense graphic will be displayed in the instrument cluster. In these cases, the shifter must be returned to "P" to select desired gear.

If the driver shifts into PARK while moving, the vehicle may AutoPark.

AutoPark will engage **ONLY** when vehicle speed is 1.2 MPH (2.0 km/h) or less.

The MESSAGE " **Vehicle Speed is Too High to Shift to P**" will be displayed in the instrument cluster if vehicle speed is above 1.2 MPH (2.0 km/h).

WARNING!

If vehicle speed is above 1.2 MPH (2.0 km/h), the transmission will default to NEUTRAL until the vehicle speed drops below 1.2 MPH (1.9 km). A vehicle left in the NEUTRAL position can roll. As an added precaution, always apply the parking brake when exiting the vehicle.

4WD LOW

AutoPark will be disabled when operating the vehicle in 4WD LOW.

The MESSAGE " **AutoPark Disabled**" will be displayed in the instrument cluster.

Additional customer warnings will be given when both of these conditions are met:

- Vehicle is not in PARK
- Driver's Door is ajar

The MESSAGE " **AutoPark Not Engaged**" will be displayed in the instrument cluster. A warning chime will continue until you shift the vehicle into PARK or the Driver's Door is closed.

ALWAYS DO A VISUAL CHECK that your vehicle is in PARK by looking for the "P" in the instrument cluster display and on the shifter. As an added precaution, always apply the parking brake when exiting the vehicle.

Extreme Cold Weather (Below –22°F Or –30°C)

To ensure reliable starting at these temperatures, use of an externally powered electric engine block heater (available from your authorized dealer) is recommended.

If Engine Fails To Start

WARNING!

- **Never pour fuel or other flammable liquid into the throttle body air inlet opening in an attempt to start the vehicle. This could result in flash fire causing serious personal injury.**
- **Do not attempt to push or tow your vehicle to get it started. Vehicles equipped with an automatic transmission cannot be started this way. Unburned fuel could enter the catalytic converter and once the engine has started, ignite and damage the converter and vehicle.**

(Continued)

WARNING! *(Continued)*

- **If the vehicle has a discharged battery, booster cables may be used to obtain a start from a booster battery or the battery in another vehicle. This type of start can be dangerous if done improperly. Refer to "Jump-Starting Procedure" in "In Case Of Emergency" for further information.**

After Starting

The idle speed is controlled automatically, and it will decrease as the engine warms up.

ENGINE BLOCK HEATER — IF EQUIPPED

The engine block heater warms the engine, and permits quicker starts in cold weather. Connect the cord to a standard 110-115 Volt AC electrical outlet with a grounded, three-wire extension cord.

The engine block heater must be plugged in at least one hour to have an adequate warming effect on the engine.

The engine block heater cord is found under the hood bundled in front of the battery tray.

WARNING!

Remember to disconnect the engine block heater cord before driving. Damage to the 110-115 Volt AC electrical cord could cause electrocution.

ENGINE BREAK-IN RECOMMENDATIONS

A long break-in period is not required for the engine and drivetrain (transmission and axle) in your vehicle.

Drive moderately during the first 300 miles (500 km). After the initial 60 miles (100 km), speeds up to 50 or 55 mph (80 or 90 km/h) are desirable.

While cruising, brief full-throttle acceleration within the limits of local traffic laws contributes to a good break-in. Wide-open throttle acceleration in low gear can be detrimental and should be avoided.

The engine oil installed in the engine at the factory is a high-quality energy conserving type lubricant. Oil changes should be consistent with anticipated climate conditions under which vehicle operations will occur. For the recommended viscosity and quality grades, refer to "Dealer Service" in "Servicing And Maintenance".

CAUTION!

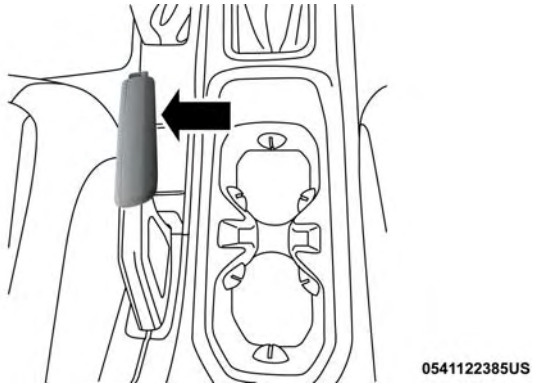
Never use Non-Detergent Oil or Straight Mineral Oil in the engine or damage may result.

NOTE: A new engine may consume some oil during its first few thousand miles (kilometers) of operation. This should be considered a normal part of the break-in and not interpreted as a problem.

PARKING BRAKE

Before exiting the vehicle, make sure that the parking brake is fully applied. Also, be certain to leave an automatic transmission in PARK, or manual transmission in REVERSE or FIRST gear.

The parking brake lever is located in the center console. To apply the parking brake, pull the lever up as firmly as possible. To release the parking brake, pull the lever up slightly, push the center button, then lower the lever completely.



Parking Brake Lever

When the parking brake is applied with the ignition switch ON, the "Brake Warning Light" in the instrument cluster will illuminate.

NOTE:

- When the parking brake is applied and the automatic transmission is placed in gear, the "Brake Warning Light" will flash. If vehicle speed is detected, a chime will sound to alert the driver. Fully release the parking brake before attempting to move the vehicle.

- This light only shows that the parking brake is applied. It does not show the degree of brake application.

When parking on a hill, it is important to turn the front wheels toward the curb on a downhill grade and away from the curb on an uphill grade. For vehicles equipped with an automatic transmission, apply the parking brake before placing the gear selector in PARK, otherwise the load on the transmission locking mechanism may make it difficult to move the gear selector out of PARK. The parking brake should always be applied whenever the driver is not in the vehicle.

WARNING!

- **Never use the PARK position on an automatic transmission as a substitute for the parking brake. Always apply the parking brake fully when parked to guard against vehicle movement and possible injury or damage.**
- **When exiting the vehicle, always remove the key fob from the ignition and lock your vehicle.**

(Continued)

WARNING! ***(Continued)***

- **Never leave children alone in a vehicle, or with access to an unlocked vehicle. Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child or others could be seriously or fatally injured. Children should be warned not to touch the parking brake, brake pedal or the gear selector.**
- **Do not leave the key fob in or near the vehicle, or in a location accessible to children. A child could operate power windows, other controls, or move the vehicle.**
- **Be sure the parking brake is fully disengaged before driving; failure to do so can lead to brake failure and a collision.**
- **Always fully apply the parking brake when leaving your vehicle or it may roll and cause damage or injury. Also, be certain to leave an automatic transmission in PARK, a manual transmission in REVERSE or first gear. Failure to do so may cause the vehicle to roll and cause damage or injury.**

CAUTION!

If the "Brake Warning Light" remains on with the parking brake released, a brake system malfunction is indicated. Have the brake system serviced by an authorized dealer immediately.

MANUAL TRANSMISSION — IF EQUIPPED

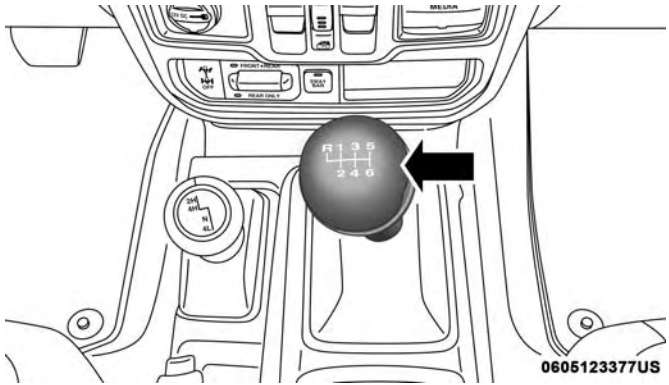
WARNING!

You or others could be injured if you leave the vehicle unattended without having the parking brake fully applied. The parking brake should always be applied when the driver is not in the vehicle, especially on an incline.

CAUTION!

Never drive with your foot resting on the clutch pedal, or attempt to hold the vehicle on a hill with the clutch pedal partially engaged, as this will cause abnormal wear on the clutch.

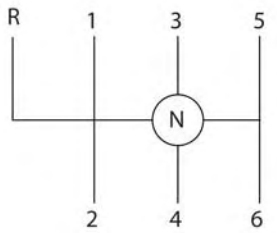
NOTE: During cold weather, you may experience increased effort in shifting until the transmission fluid warms up. This is normal.



Manual Transmission Shifter

To shift the gears, fully press the clutch pedal and place the gear selector into the desired gear position (the diagram for the engagement of the gears is displayed on the handle of the selector).

To engage REVERSE gear from the NEUTRAL position, lift the REVERSE ring, located below the knob and move the gear selector all the way left and then forward.



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Shift Pattern

Shifting

Fully press the clutch pedal before shifting gears. As you release the clutch pedal, lightly press the accelerator pedal.

You should always use first gear when starting from a standing position.

NOTE: A certain amount of noise from the transmission is normal. This noise can be most noticeable when the vehicle is idling in NEUTRAL with the clutch engaged (clutch pedal released), but it may also be heard when driving. The noise may also be more noticeable when the transmission is warm. This noise is normal and is not an indication of a problem with your clutch or transmission.

Recommended Vehicle Shift Speeds

To utilize your manual transmission efficiently for both fuel economy and performance, it should be upshifted as listed in recommended shift speed chart. Shift at the vehicle speeds listed for acceleration. When heavily loaded or pulling a trailer these recommended up-shift speeds may not apply.

Manual Transmission Shift Speeds in MPH (KM/H)						
Engine	Speeds	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
3.6L	Accel.	15 (24)	24 (39)	50 (80)	65 (104)	70 (112)
	Cruise	10 (16)	19 (31)	40 (64)	55 (88)	65 (105)

NOTE: Vehicle speeds shown in the chart above are for 2H and 4H only, vehicle speeds in 4L would be significantly less.

Downshifting

Moving from a high gear down to a lower gear is recommended to preserve brakes when driving down steep hills. In addition, downshifting at the right time provides better acceleration when you desire to resume speed. Downshift progressively. Do not skip gears to avoid overspeeding the engine and clutch.

NOTE: Above certain speeds downshifts may be blocked and not available.

WARNING!

Do not downshift for additional engine braking on a slippery surface. The drive wheels could lose their grip, and the vehicle could skid.

CAUTION!

- **Skipping gears and downshifting into lower gears at higher vehicle speeds can damage the engine and clutch systems, Any attempt to shift into lower gear with clutch pedal depressed may result damage to the clutch system. Shifting into lower gear and releasing the clutch may result in engine damage.**

(Continued)

CAUTION! *(Continued)*

- **When descending a hill, be very careful to downshift one gear at a time to prevent overspeeding the engine which can cause engine damage, and/or clutch damage, even if the clutch pedal is pressed. If transfer case is in low range the vehicle speeds to cause engine and clutch damage are significantly lower.**
- **Failure to follow the maximum recommended downshifting speeds may cause the engine damage and/or damage the clutch, even if the clutch pedal is pressed.**
- **Descending a hill in low range with clutch pedal depressed could result in clutch damage.**

Maximum Recommended Downshift Speeds

CAUTION!

Failure to follow the maximum recommended downshifting speeds may cause the engine to overspeed and/or damage the clutch disc, even if the clutch pedal is pressed.

Manual Transmission Downshift Speeds in MPH (KM/H)					
Gear Selection	6 to 5	5 to 4	4 to 3	3 to 2	2 to 1
Maximum Speed	80 (129)	70 (113)	50 (81)	30 (48)	15 (24)

NOTE: Vehicle speeds shown in the chart above are for 2H and 4H only, vehicle speeds in 4L would be significantly less.

AUTOMATIC TRANSMISSION — IF EQUIPPED

CAUTION!

Damage to the transmission may occur if the following precautions are not observed:

- **Shift into or out of PARK or REVERSE only after the vehicle has come to a complete stop.**
- **Do not shift between PARK, REVERSE, NEUTRAL, or DRIVE when the engine is above idle speed.**
- **Before shifting into any gear, make sure your foot is firmly pressing the brake pedal.**

NOTE: You must press and hold the brake pedal while shifting out of PARK.

WARNING!

- **Never use the PARK position as a substitute for the parking brake. Always apply the parking brake fully when exiting the vehicle to guard against vehicle movement and possible injury or damage.**
- **Your vehicle could move and injure you and others if it is not in PARK. Check by trying to move the transmission gear selector out of PARK with the**

(Continued)

WARNING! *(Continued)*

brake pedal released. Make sure the transmission is in PARK before exiting the vehicle.

- **The transmission may not engage PARK if the vehicle is moving. Always bring the vehicle to a complete stop before shifting to PARK, and verify that the transmission gear position indicator solidly indicates PARK (P) without blinking. Ensure that the vehicle is completely stopped, and the PARK position is properly indicated, before exiting the vehicle.**
- **It is dangerous to shift out of PARK or NEUTRAL if the engine speed is higher than idle speed. If your foot is not firmly pressing the brake pedal, the vehicle could accelerate quickly forward or in reverse. You could lose control of the vehicle and hit someone or something. Only shift into gear when the engine is idling normally and your foot is firmly pressing the brake pedal.**
- **Unintended movement of a vehicle could injure those in or near the vehicle. As with all vehicles, you should never exit a vehicle while the engine is running. Before exiting a vehicle, always come to a complete stop, then apply the parking brake, shift**

(Continued)

WARNING! ***(Continued)***

the transmission into PARK, and turn the ignition OFF. When the ignition is in the OFF mode, the transmission is locked in PARK, securing the vehicle against unwanted movement.

- **When exiting the vehicle, always make sure the ignition is in the OFF mode, remove the key fob from the vehicle, and lock the vehicle.**
- **Never leave children alone in a vehicle, or with access to an unlocked vehicle. Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child or others could be seriously or fatally injured. Children should be warned not to touch the parking brake, brake pedal or the transmission gear selector.**
- **Do not leave the key fob in or near the vehicle (or in a location accessible to children), and do not leave the ignition in the ACC or ON/RUN mode. A child could operate power windows, other controls, or move the vehicle.**

Ignition Park Interlock

This vehicle is equipped with an Ignition Park Interlock which requires the transmission to be in PARK before the ignition can be turned to the OFF mode. This helps the driver avoid inadvertently leaving the vehicle without placing the transmission in PARK. This system also locks the transmission in PARK whenever the ignition is in the OFF mode.

NOTE: The transmission is NOT locked in PARK when the ignition is in the ACC mode (even though the engine will be off). Ensure that the transmission is in PARK, and the ignition is OFF (not in ACC mode) before exiting the vehicle.

Brake/Transmission Shift Interlock System

This vehicle is equipped with a Brake Transmission Shift Interlock system (BTSI) that holds the transmission gear selector in PARK unless the brakes are applied. To shift the transmission out of PARK, the engine must be running and the brake pedal must be pressed. The brake pedal must also be pressed to shift from NEUTRAL into DRIVE or REVERSE when the vehicle is stopped or moving at low speeds.

Eight–Speed Automatic Transmission

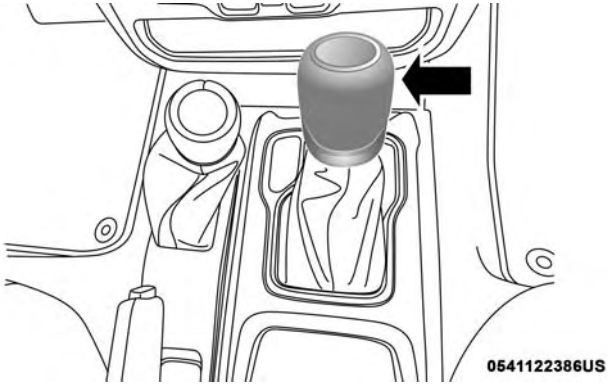
The transmission gear range (PRNDM) is displayed both beside the gear selector and in the instrument cluster. To select a gear range, press the lock button on the gear selector and move the selector rearward or forward. To shift the transmission out of PARK, the engine must be running and the brake pedal must be pressed. You must also press the brake pedal to shift from NEUTRAL into DRIVE or REVERSE when the vehicle is stopped or moving at low speeds. Select the DRIVE range for normal driving.

NOTE: In the event of a mismatch between the gear selector position and the actual transmission gear (for example, driver selects PARK while driving), the position indicator will blink continuously until the selector is returned to the proper position, or the requested shift can be completed.

The electronically-controlled transmission adapts its shift schedule based on driver inputs, along with environmental and road conditions. The transmission electronics are self-calibrating; therefore, the first few shifts on a new vehicle may be somewhat abrupt. This is a normal condition, and precision shifts will develop within a few hundred miles (kilometers).

Only shift from DRIVE to PARK or REVERSE when the accelerator pedal is released and the vehicle is stopped. Be sure to keep your foot on the brake pedal when shifting between these gears.

The transmission gear selector provides PARK, REVERSE, NEUTRAL, DRIVE and MANUAL (AutoStick) shift positions. Manual shifts can be made using the AutoStick shift control. Toggling the gear selector forward (-) or rearward (+) while in the MANUAL (AutoStick) position (beside the DRIVE position) will manually select the transmission gear, and will display the current gear in the instrument cluster. Refer to ″AutoStick″ in this section for further information.



Gear Selector

NOTE: If the gear selector cannot be moved to the PARK, REVERSE, or NEUTRAL position (when pushed forward), it is probably in the AutoStick (+/-) position (beside the DRIVE position). In AutoStick mode, the transmission gear (1, 2, 3, etc.) is displayed in the instrument cluster. Move the gear selector to the right (into the DRIVE [D] position) for access to PARK, REVERSE, and NEUTRAL.

Gear Ranges

Do not depress the accelerator pedal when shifting from PARK or NEUTRAL into another gear range.

NOTE: After selecting any gear range, wait a moment to allow the selected gear to engage before accelerating. This is especially important when the engine is cold.

PARK (P)

This range supplements the parking brake by locking the transmission. The engine can be started in this range. Never attempt to use PARK while the vehicle is in motion. Apply the parking brake when exiting the vehicle in this range.

When parking on a level surface, you may shift the transmission into PARK first, and then apply the parking brake.

When parking on a hill, apply the parking brake before shifting the transmission to PARK. As an added precaution, turn the front wheels toward the curb on a downhill grade and away from the curb on an uphill grade.

When exiting the vehicle, always:

- Apply the parking brake,
- Shift the transmission into PARK,
- Turn the ignition OFF and,
- Remove the key fob from the vehicle.

NOTE: On four-wheel drive vehicles be sure that the transfer case is in a drive position.

WARNING!

- **Never use the PARK position as a substitute for the parking brake. Always apply the parking brake fully when exiting the vehicle to guard against vehicle movement and possible injury or damage.**
- **Your vehicle could move and injure you and others if it is not in PARK. Check by trying to move the transmission gear selector out of PARK with the brake pedal released. Make sure the transmission is in PARK before exiting the vehicle.**
- **The transmission may not engage PARK if the vehicle is moving. Always bring the vehicle to a complete stop before shifting to PARK, and verify that the transmission gear position indicator solidly indicates PARK (P) without blinking. Ensure that the vehicle is completely stopped, and the PARK position is properly indicated, before exiting the vehicle.**
- **It is dangerous to shift out of PARK or NEUTRAL if the engine speed is higher than idle speed. If your foot is not firmly pressing the brake pedal, the**

(Continued)

WARNING! *(Continued)*

vehicle could accelerate quickly forward or in reverse. You could lose control of the vehicle and hit someone or something. Only shift into gear when the engine is idling normally and your foot is firmly pressing the brake pedal.

- **Unintended movement of a vehicle could injure those in or near the vehicle. As with all vehicles, you should never exit a vehicle while the engine is running. Before exiting a vehicle, always come to a complete stop, then apply the parking brake, shift the transmission into PARK, and turn the ignition OFF. When the ignition is in the OFF mode, the transmission is locked in PARK, securing the vehicle against unwanted movement.**
- **When exiting the vehicle, always make sure the ignition is in the OFF mode, remove the key fob from the vehicle, and lock the vehicle.**
- **Never leave children alone in a vehicle, or with access to an unlocked vehicle. Allowing children to be in a vehicle unattended is dangerous for a number of reasons. A child or others could be seriously or fatally injured. Children should be warned not to**

(Continued)

WARNING! *(Continued)*

touch the parking brake, brake pedal or the transmission gear selector.

- **Do not leave the key fob in or near the vehicle (or in a location accessible to children), and do not leave the ignition in the ACC or ON/RUN mode. A child could operate power windows, other controls, or move the vehicle.**

CAUTION!

- **Before moving the transmission gear selector out of PARK, you must start the engine, and also press the brake pedal. Otherwise, damage to the gear selector could result.**
- **DO NOT race the engine when shifting from PARK or NEUTRAL into another gear range, as this can damage the drivetrain.**

The following indicators should be used to ensure that you have properly engaged the transmission into the PARK position:

- When shifting into PARK, push the lock button on the gear selector and firmly move the selector all the way forward until it stops and is fully seated.
- Look at the transmission gear position display and verify that it indicates the PARK position (P), and is not blinking.
- With brake pedal released, verify that the gear selector will not move out of PARK.

NOTE: If the gear selector cannot be moved to the PARK position (when pushed forward), it is probably in the AutoStick (+/-) position (beside the DRIVE position). In AutoStick mode, the transmission gear (1, 2, 3, etc.) is displayed in the instrument cluster. Move the gear selector to the right (into the DRIVE [D] position) for access to PARK, REVERSE, and NEUTRAL.

REVERSE (R)

This range is for moving the vehicle backward. Shift into REVERSE only after the vehicle has come to a complete stop.

NEUTRAL (N)

Use this range when the vehicle is standing for prolonged periods with the engine running. Apply the parking brake and shift the transmission into PARK if you must exit the vehicle.

WARNING!

Do not coast in NEUTRAL and never turn off the ignition to coast down a hill. These are unsafe practices that limit your response to changing traffic or road conditions. You might lose control of the vehicle and have a collision.

CAUTION!

Towing the vehicle, coasting, or driving for any other reason with the transmission in NEUTRAL can cause severe transmission damage.
Refer to "Recreational Towing" in "Starting And Operating" and "Towing A Disabled Vehicle" in "In Case Of Emergency" for further information.

DRIVE (D)

This range should be used for most city and highway driving. It provides the smoothest upshifts and downshifts, and the best fuel economy. The transmission automatically upshifts through all forward gears. The DRIVE position provides optimum driving characteristics under all normal operating conditions.

When frequent transmission shifting occurs (such as when operating the vehicle under heavy loading conditions, in hilly terrain, traveling into strong head winds, or while towing a heavy trailer), use the AutoStick shift control (refer to "AutoStick" in this section for further information) to select a lower gear. Under these conditions, using a lower gear will improve performance and extend transmission life by reducing excessive shifting and heat buildup.

During extremely cold temperatures (-22°F [-30°C] or below), transmission operation may be modified depending on engine and transmission temperature as well as vehicle speed. Normal operation will resume once the transmission temperature has risen to a suitable level.

MANUAL (M)

The MANUAL (M, +/-) position (beside the DRIVE position) enables full manual control of transmission shifting (also known as AutoStick mode; refer to "AutoStick" in this section for further information). Toggling the gear selector forward (-) or rearward (+) while in the MANUAL (AutoStick) position will manually select the transmission gear, and will display the current gear in the instrument cluster.

Transmission Limp Home Mode

Transmission function is monitored electronically for abnormal conditions. If a condition is detected that could result in transmission damage, Transmission Limp Home Mode is activated. In this mode, the transmission may operate only in certain gears, or may not shift at all. Vehicle performance may be severely degraded and the engine may stall. In some situations, the transmission may not re-engage if the engine is turned off and restarted. The Malfunction Indicator Light (MIL) may be illuminated. A message in the instrument cluster will inform the driver of the more serious conditions, and indicate what actions may be necessary.

In the event of a momentary problem, the transmission can be reset to regain all forward gears by performing the following steps:

NOTE: In cases where the instrument cluster message indicates the transmission may not re-engage after engine shutdown, perform this procedure only in a desired location (preferably, at an authorized dealer).

1. Stop the vehicle.
2. Shift the transmission into PARK, if possible. If not, shift the transmission to NEUTRAL.
3. Push and hold the ignition switch until the engine turns OFF.
4. Wait approximately 30 seconds.
5. Restart the engine.
6. Shift into the desired gear range. If the problem is no longer detected, the transmission will return to normal operation.

NOTE: Even if the transmission can be reset, we recommend that you visit an authorized dealer at your earliest possible convenience. An authorized dealer has diagnostic equipment to assess the condition of your transmission.

If the transmission cannot be reset, authorized dealer service is required.

AutoStick

AutoStick is a driver-interactive transmission feature providing manual shift control, giving you more control of the vehicle. AutoStick allows you to maximize engine braking, eliminate undesirable upshifts and downshifts, and improve overall vehicle performance. This system can also provide you with more control during passing, city driving, cold slippery conditions, mountain driving, trailer towing, and many other situations.

Operation

To activate AutoStick mode, move the gear selector into the MANUAL (M) position (beside the DRIVE position). The current transmission gear will be displayed in the instrument cluster. In AutoStick mode, you can use the gear selector (in the MANUAL position) to manually shift the transmission. Tapping the gear selector forward (-) while in the MANUAL (M) position will downshift the transmission to the next lower gear. Tapping the selector rearward (+) will command an upshift.

In AutoStick mode, the transmission will shift up or down when (+/-) is manually selected by the driver unless an engine lugging or overspeed condition would result. It will remain in the selected gear until another upshift or downshift is chosen, except as described below.

- The transmission will automatically downshift as the vehicle slows (to prevent engine lugging) and will display the current gear.
- The transmission will automatically downshift to first gear when coming to a stop. After a stop, the driver should manually upshift (+) the transmission as the vehicle is accelerated.
- You can start out, from a stop, in first or second gear (or third gear, in 4LO range). Tapping (+) (at a stop) will allow starting in second gear. Starting out in second or third gear can be helpful in snowy or icy conditions.
- If a requested downshift would cause the engine to over-speed, that shift will not occur.
- The system will ignore attempts to upshift at too low of a vehicle speed.
- Holding the gear selector in the (-) position will downshift the transmission to the lowest gear possible at the current speed.
- Transmission shifting will be more noticeable when AutoStick is enabled.
- The system may revert to automatic shift mode if a fault or overheat condition is detected.

NOTE: When Hill Descent Control is enabled, AutoStick is not active.

To disengage AutoStick mode, return the gear selector to the DRIVE position. You can shift in or out of the AutoStick position at any time without taking your foot off the accelerator pedal.

WARNING!

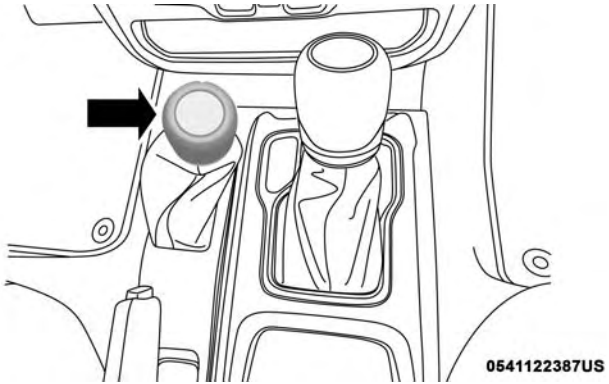
Do not downshift for additional engine braking on a slippery surface. The drive wheels could lose their grip and the vehicle could skid, causing a collision or personal injury.

FOUR–WHEEL DRIVE OPERATION

WARNING!

Failure to engage a transfer case position completely can cause transfer case damage or loss of power and vehicle control. You could have a collision. Do not drive the vehicle unless the transfer case is fully engaged.

Four-Position Transfer Case



Four-Wheel Drive Gear Selector

The transfer case provides four mode positions:

- 2H (Two-Wheel Drive High Range)
- 4H (Four-Wheel Drive High Range)
- N (Neutral)
- 4L (Four-Wheel Drive Low Range)

For additional information on the appropriate use of each transfer case mode position, see the information below:

2H

Rear Wheel Drive High Range — This range is for normal street and highway driving on dry, hard surfaced roads.

4H

Four-Wheel Drive High Range — This range maximizes torque to the front driveshaft, forcing the front and rear wheels to rotate at the same speed. This range provides additional traction for loose, slippery road surfaces only.

NEUTRAL (N)

Neutral — This range disengages both the front and rear driveshafts from the powertrain. To be used for flat towing behind another vehicle. Refer to "Recreational Towing" in "Starting And Operating" for further information.

4L

Four-Wheel Drive Low Range — This range provides low speed four-wheel drive. It maximizes torque to the front driveshaft, forcing the front and rear wheels to rotate at the same speed. This range provides additional traction and maximum pulling power for loose, slippery road surfaces only. Do not exceed 25 mph (40 km/h).

The transfer case is intended to be driven in the 2H position for normal street and highway conditions, such as hard-surfaced roads.

In the event that additional traction is required, the transfer case 4H and 4L positions can be used to lock the front and rear driveshafts together, forcing the front and rear wheels to rotate at the same speed. The 4H and 4L positions are intended for loose, slippery road surfaces only and not intended for normal driving. Driving in the 4H and 4L positions on hard-surfaced roads will cause increased tire wear and damage to the driveline components. Refer to "Shifting Procedures" in this section for further information on shifting into 4H or 4L.

The instrument cluster alerts the driver that the vehicle is in four-wheel drive, and the front and rear driveshafts are locked together. The light will illuminate when the transfer case is shifted into the 4H position.

When operating your vehicle in 4L, the engine speed will be approximately three times (four times for Rubicon models) that of the 2H or 4H positions at a given road speed. Take care not to overspeed the engine.

Proper operation of four-wheel drive vehicles depends on tires of equal size, type, and circumference on each wheel. Any difference will adversely affect shifting and cause damage to the transfer case.

Because four-wheel drive provides improved traction, there is a tendency to exceed safe turning and stopping speeds. Do not go faster than road conditions permit.

WARNING!

You or others could be injured or killed if you leave the vehicle unattended with the transfer case in the NEUTRAL (N) position without first fully engaging the parking brake. The transfer case NEUTRAL (N) position disengages both the front and rear driveshafts from the powertrain, and will allow the vehicle to roll, even if the automatic transmission is in PARK (or manual transmission is in gear). The parking brake should always be applied when the driver is not in the vehicle.

Shifting Procedures

2H To 4H Or 4H To 2H

Shifting between 2H and 4H can be made with the vehicle stopped or in motion. The preferred shifting speed would be 0 to 45 mph (72 km/h). With the vehicle in motion, the transfer case will engage/disengage faster if you momentarily release the accelerator pedal after completing the shift. Do not accelerate while shifting the transfer case. Apply a constant force when shifting the transfer case lever.

NOTE:

- Do not attempt to make a shift while only the front or rear wheels are spinning. The front and rear driveshaft speeds must be equal for the shift to take place. Shifting while only the front or rear wheels are spinning can cause damage to the transfer case.
- Delayed shifts out of four-wheel drive may be experienced due to uneven tire wear, low or uneven tire pressures, excessive vehicle loading, or cold temperatures.
- Shifting effort will increase with speed, this is normal.

During cold weather, you may experience increased effort in shifting until the transfer case fluid warms up. This is normal.

4H To 4L Or 4L To 4H

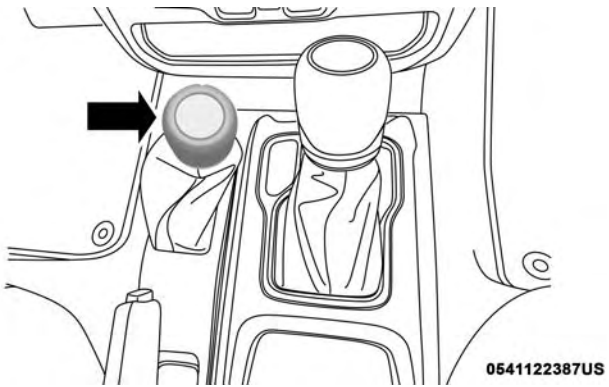
With the vehicle rolling at 2 to 3 mph (3 to 5 km/h), shift an automatic transmission into NEUTRAL (N), or press the clutch pedal on a manual transmission. While the vehicle is coasting at 2 to 3 mph (3 to 5 km/h), shift the transfer case lever firmly to the desired position. Do not pause with the transfer case in N (Neutral). Once the shift is completed, place the automatic transmission into DRIVE or release the clutch pedal on a manual transmission.

NOTE: Shifting into or out of 4L is possible with the vehicle completely stopped; however, difficulty may occur due to the mating teeth not being properly aligned. Several attempts may be required for clutch teeth alignment and shift completion to occur. The preferred method is with the vehicle rolling at 2 to 3 mph (3 to 5 km/h). Avoid attempting to engage or disengage 4L with the vehicle moving faster than 2 to 3 mph (3 to 5 km/h).

WARNING!

Failure to engage a transfer case position completely can cause transfer case damage or loss of power and vehicle control. You could have a collision. Do not drive the vehicle unless the transfer case is fully engaged.

Five-Position Transfer Case



Four-Wheel Drive Gear Selector

The transfer case provides five mode positions:

- 2H (Two-Wheel Drive High Range)
- 4H Auto (Four-Wheel Drive Auto High Range)
- 4H PT (Four-Wheel Drive Part Time High Range)
- N (Neutral)
- 4L (Four-Wheel Drive Low Range)

For additional information on the appropriate use of each transfer case mode position, see the information below:

2H

Rear Wheel Drive High Range — This range is for normal street and highway driving on dry, hard surfaced roads.

4H AUTO

Four-Wheel Drive Auto High Range — This range sends power to the front wheels. The four-wheel drive system will be automatically engaged when the vehicle senses a loss of traction. Additional traction for varying road conditions.

4H P-T

Four-Wheel Drive Part Time High Range — This range maximizes torque to the front driveshaft, forcing the front and rear wheels to rotate at the same speed. This range provides additional traction for loose, slippery road surfaces only.

NEUTRAL (N)

Neutral — This range disengages both the front and rear driveshafts from the powertrain. To be used for flat towing behind another vehicle. Refer to “Recreational Towing” in “Starting And Operating” for further information.

4L

Four-Wheel Drive Low Range — This range provides low speed four-wheel drive. It maximizes torque to the front driveshaft, forcing the front and rear wheels to rotate at the same speed. This range provides additional traction and maximum pulling power for loose, slippery road surfaces only. Do not exceed 25 mph (40 km/h).

This transfer case is designed to be driven in the two-wheel drive position (2WD) or four-wheel drive position (4WD AUTO) for normal street and highway conditions on dry hard surfaced roads). Driving the vehicle in 2WD will have greater fuel economy benefits as the front axle is not engaged in 2WD.

For variable driving conditions, the 4WD AUTO mode can be used. In this mode, the front axle is engaged, but the vehicle's power is sent to the rear wheels. Four-wheel drive will be automatically engaged when the vehicle senses a loss of traction. Because the front axle is engaged, this mode will result in lower fuel economy than the 2WD mode.

In the event that additional traction is required, the transfer case 4H and 4L positions can be used to lock the front and rear driveshafts together, forcing the front and rear wheels to rotate at the same speed. The 4H and 4L positions are intended for loose, slippery road surfaces only and not intended for normal driving. Driving in the 4H and 4L positions on hard-surfaced roads will cause increased tire wear and damage to the driveline components. Refer to "Shifting Procedures" in this section for further information on shifting into 4H or 4L.

The instrument cluster alerts the driver that the vehicle is in four-wheel drive, and the front and rear driveshafts are locked together. The light will illuminate when the transfer case is shifted into the 4H position.

When operating your vehicle in 4L, the engine speed will be approximately three times (four times for Rubicon models) that of the 2H or 4H positions at a given road speed. Take care not to overspeed the engine.

Proper operation of four-wheel drive vehicles depends on tires of equal size, type, and circumference on each wheel. Any difference will adversely affect shifting and cause damage to the transfer case.

Because four-wheel drive provides improved traction, there is a tendency to exceed safe turning and stopping speeds. Do not go faster than road conditions permit.

WARNING!

You or others could be injured or killed if you leave the vehicle unattended with the transfer case in the NEUTRAL (N) position without first fully engaging the parking brake. The transfer case NEUTRAL (N) position disengages both the front and rear driveshafts from the powertrain, and will allow the vehicle to roll, even if the automatic transmission is in PARK (or manual transmission is in gear). The parking brake should always be applied when the driver is not in the vehicle.

Shifting Procedures

2H To 4H Auto Or 4H Auto To 2H

Shifting between 2H and 4H Auto can be made with the vehicle stopped or in motion. The preferred shifting speed would be 0 to 45 mph (72 km/h). With the vehicle in motion, the transfer case will engage/disengage faster if you momentarily release the accelerator pedal after completing the shift. Do not accelerate while shifting the transfer case. Apply a constant force when shifting the transfer case lever.

2H/4H Auto To 4H Part Time Or 4H Part Time To 2H/4H Auto

Shifting between 2H/4H AUTO to 4H PART TIME can be made with the vehicle stopped or in motion. The preferred shifting speed would be 0 to 45 mph (72 km/h). With the vehicle in motion, the transfer case will engage/disengage faster if you momentarily release the accelerator pedal after completing the shift. Do not accelerate while shifting the transfer case. Apply a constant force when shifting the transfer case lever.

NOTE:

- Do not attempt to make a shift while only the front or rear wheels are spinning. The front and rear driveshaft speeds must be equal for the shift to take place. Shifting while only the front or rear wheels are spinning can cause damage to the transfer case.
- Delayed shifts out of four-wheel drive may be experienced due to uneven tire wear, low or uneven tire pressures, excessive vehicle loading, or cold temperatures.
- Shifting effort will increase with speed, this is normal.

During cold weather, you may experience increased effort in shifting until the transfer case fluid warms up. This is normal.

4H Part Time/4H Auto To 4L Or 4L To 4H Part Time/4H Auto

With the vehicle rolling at 2 to 3 mph (3 to 5 km/h), shift an automatic transmission into NEUTRAL (N), or press the clutch pedal on a manual transmission. While the vehicle is coasting at 2 to 3 mph (3 to 5 km/h), shift the transfer case lever firmly to the desired position. Do not pause with the

transfer case in N (Neutral). Once the shift is completed, place the automatic transmission into DRIVE or release the clutch pedal on a manual transmission.

NOTE: Shifting into or out of 4L is possible with the vehicle completely stopped; however, difficulty may occur due to the mating teeth not being properly aligned. Several attempts may be required for clutch teeth alignment and shift completion to occur. The preferred method is with the vehicle rolling at 2 to 3 mph (3 to 5 km/h). Avoid attempting to engage or disengage 4L with the vehicle moving faster than 2 to 3 mph (3 to 5 km/h).

WARNING!

Failure to engage a transfer case position completely can cause transfer case damage or loss of power and vehicle control. You could have a collision. Do not drive the vehicle unless the transfer case is fully engaged.

Trac-Lok Rear Axle — If Equipped

The Trac-Lok rear axle provides a constant driving force to both rear wheels and reduces wheel spin caused by the loss of traction at one driving wheel. If traction differs between the two rear wheels, the differential automatically proportions the usable torque by providing more torque to the wheel that has traction.

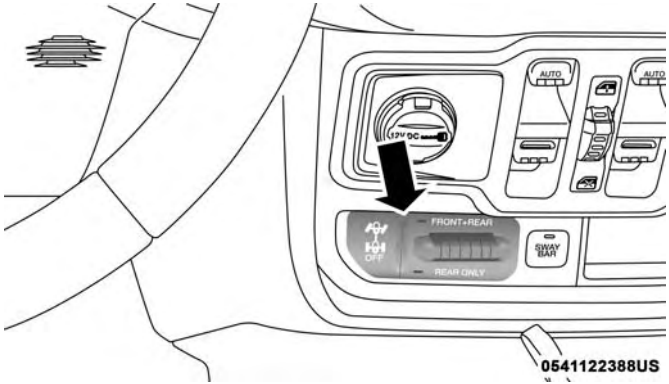
Trac-Lok is especially helpful during slippery driving conditions. With both rear wheels on a slippery surface, a slight application of the accelerator will supply maximum traction.

WARNING!

On vehicles equipped with a limited-slip differential, never run the engine with one rear wheel off the ground. The vehicle may drive through the rear wheel remaining on the ground and cause you to lose control of your vehicle.

Axle Lock (Tru-Lok) — Rubicon Models

The AXLE LOCK switch is located on the instrument panel (to the right of the steering column).



Axle Lock Switch Panel

This feature will only activate when the following conditions are met:

- Ignition in RUN position, vehicle in 4L (Low) range.
- Vehicle speed should be 10 mph (16 km/h) or less.
- Both right and left wheels on axle are at the same speed.

To activate the system, push the AXLE LOCK switch down to lock the rear axle only (the "REAR ONLY" will illuminate), push the switch up to lock the front axle and rear axle (the "FRONT + REAR" will illuminate). When the rear axle is locked, pushing the bottom of switch again will lock or unlock the front axle.

NOTE: The indicator lights will flash until the axles are fully locked or unlocked.

To unlock the axles, push the AXLE LOCK OFF button.

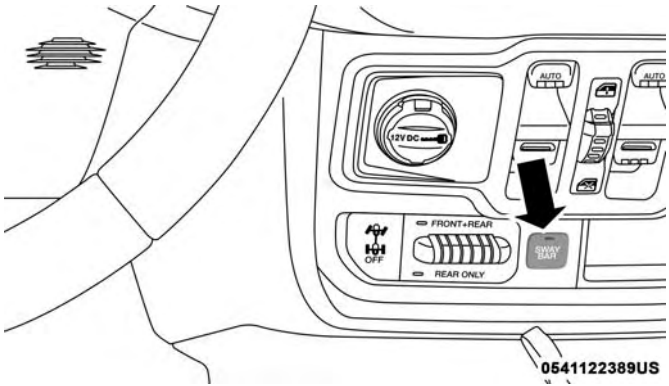
Axle lock will disengage if the vehicle is taken out of 4L (Low) range, or the ignition switch is turned to the OFF position.

The axle lock disengages at speeds above 30 mph (48 km/h), and will automatically re-lock once vehicle speed is less than 10 mph (16 km/h).

Electronic Sway Bar Disconnect — If Equipped

Your vehicle may be equipped with an electronic disconnecting stabilizer/sway bar. This system allows greater front suspension travel in off-road situations.

This system is controlled by the SWAY BAR switch located on the instrument panel (to the right of the steering column).



Sway Bar Switch

Push the SWAY BAR switch to activate the system. Push the switch again to deactivate the system. The "Sway Bar Indicator Light" (located in the instrument cluster) will illuminate when the bar is disconnected. The "Sway Bar Indicator Light" will flash during activation transition, or when activation conditions are not met. The stabilizer/sway bar should remain in on-road mode during normal driving conditions.

WARNING!

Ensure the stabilizer/sway bar is reconnected before driving on hard surfaced roads or at speeds above 18 mph (29 km/h); a disconnected stabilizer/sway bar may contribute to the loss of vehicle control, which could result in serious injury. Under certain circumstances, the front stabilizer/sway bar enhances vehicle stability and assists with vehicle control. The system monitors vehicle speed and will attempt to reconnect the stabilizer/sway bar at speeds over 18 mph (29 km/h). This is indicated by a flashing or solid "Sway Bar Indicator Light." Once vehicle speed is reduced below 14 mph (22 km/h), the system will once again attempt to return to off-road mode.

To disconnect the stabilizer/sway bar, shift to either 4H or 4L and push the SWAY BAR switch to obtain the off-road position. Refer to "Four-Wheel Drive Operation" in this section for further information. The "Sway Bar Indicator Light" will flash until the stabilizer/sway bar has been fully disconnected.

NOTE: The stabilizer/sway bar may be torque locked due to left and right suspension height differences. This condition is due to driving surface differences or vehicle loading. In order for the stabilizer/sway bar to disconnect/reconnect, the right and left halves of the bar must be aligned. This alignment may require that the vehicle be driven onto level ground or rocked from side to side.

To return to on-road mode, push the SWAY BAR switch again.

WARNING!

If the stabilizer/sway bar will not return to on-road mode, the "Sway Bar Indicator Light" will flash in the instrument cluster and vehicle stability may be reduced. Do not attempt to drive the vehicle over 18 mph (29 km/h). Driving faster than 18 mph (29 km/h) with a disconnected stabilizer/sway bar may contribute to the loss of vehicle control, which could result in serious injury.

ELECTRO-HYDRAULIC POWER STEERING

Your vehicle is equipped with an electro-hydraulic power steering system that will give you good vehicle response and increased ease of maneuverability in tight spaces. The system will vary its assist to provide light efforts while parking and good feel while driving. If the electro-hydraulic power steering system experiences a fault that prevents it from providing power steering assist, then the system will provide mechanical steering capability.

CAUTION!

Extreme steering maneuvers may cause the electrically driven pump to reduce or stop power steering assistance in order to prevent damage to the system. Normal operation will resume once the system is allowed to cool.

If the "SERVICE POWER STEERING" message and a flashing icon are displayed on the instrument cluster screen, it indicates that the vehicle needs to be taken to the dealer for service. It is likely the vehicle has lost power steering assistance. Refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.

If the "POWER STEERING HOT" message and an icon are displayed on the instrument cluster screen, it indicates that extreme steering maneuvers may have occurred, which caused an over temperature condition in the power steering system. You will lose power steering assistance momentarily until the over temperature condition no longer exists. Once driving conditions are safe, then pull over and let vehicle idle for a few moments until the light turns off. Refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.

NOTE:

- Even if power steering assistance is no longer operational, it is still possible to steer the vehicle. Under these conditions there will be a substantial increase in steering effort, especially at very low vehicle speeds and during parking maneuvers.
- If the condition persists, see your authorized dealer for service.

STOP/START SYSTEM — AUTOMATIC TRANSMISSION (IF EQUIPPED)

The Stop/Start function is developed to reduce fuel consumption. The system will stop the engine automatically during a vehicle stop if the required conditions are met. Releasing the brake pedal or pressing the accelerator pedal will automatically re-start the engine.

NOTE: It is recommended that the Start/Stop System be disabled during off-road use.

Automatic Mode

The Stop/Start feature is enabled after every normal customer engine start. At that time, the system will go into STOP/START READY and if all other conditions are met, can go into a STOP/START AUTOSTOP ACTIVE "Autostop" mode.

To Activate The Autostop Mode, The Following Must Occur:

- The system must be in STOP/START READY state. A STOP/START READY message will be displayed in the instrument cluster display within the Stop/Start section. Refer to "Instrument Cluster" in "Getting To Know Your Instrument Panel" for further information.
- The vehicle must be completely stopped.
- The shifter must be in a forward gear and the brake pedal depressed.

The engine will shut down, the tachometer will move to the zero position and the Stop/Start telltale will illuminate indicating you are in Autostop. Customer settings will be maintained upon return to an engine running condition.

Possible Reasons The Engine Does Not Autostop

Prior to engine shut down, the system will check many safety and comfort conditions to see if they are fulfilled. Detailed information about the operation of the Stop/Start system may be viewed in the instrument cluster display Stop/Start Screen. In the following situations, the engine will not stop:

- Driver's seat belt is not buckled.
- Driver's door is not closed.
- Battery temperature is too warm or cold.
- Battery charge is low.
- The vehicle is on a steep grade.
- Cabin heating or cooling is in process and an acceptable cabin temperature has not been achieved.
- HVAC is set to full defrost mode at a high blower speed.
- HVAC set to MAX A/C.
- Engine has not reached normal operating temperature.
- The transmission is not in a forward gear.

- Hood is open.
- Transfer case is in 4LO or Neutral
- Brake pedal is not pressed with sufficient pressure.

Other Factors Which Can Inhibit Autostop Include:

- Accelerator pedal input.
- Engine temp too high.
- Vehicle speed threshold not achieved from previous auto-stop (2 mph (3 km/h) BSG, 5 mph (8 km/h) ESS
- Steering angle beyond threshold.
- ACC is on and speed is set.
- Vehicle is at high altitude
- System fault present
- Low fuel is detected

It may be possible for the vehicle to be driven several times without the STOP/START system going into a STOP/START READY state under more extreme conditions of the items listed above.

To Start The Engine While In Autostop Mode

While in a forward gear, the engine will start when the brake pedal is released or the throttle pedal is depressed. The transmission will automatically re-engage upon engine re-start.

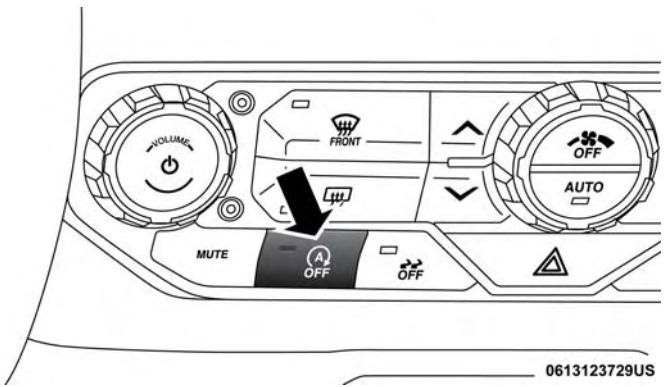
Conditions That Will Cause The Engine To Start Automatically While In Autostop Mode:

- The transmission selector is moved out of DRIVE.
- To maintain cabin temperature comfort.
- Actual cabin temperature is significantly different than temperature set on Auto HVAC.
- HVAC is set to full defrost mode.
- HVAC system temperature or fan speed is manually adjusted.
- Battery voltage drops too low.
- Low brake vacuum (e.g. after several brake pedal applications).

- STOP/START OFF switch is pushed.
- A STOP/START system error occurs.
- STOP/START AUTO STOP ACTIVE time exceeds 5 minutes.
- 4WD system is put into 4LO or Neutral mode.

To Manually Turn Off The Stop/Start System

1. Push the STOP/START OFF switch (located on the switch bank). The light on the switch will illuminate.



STOP/START Off Switch

2. The "STOP/START OFF" message will appear in instrument cluster display within the Stop/Start section. Refer to "Instrument Cluster" in "Getting To Know Your Instrument Panel" for further information.
3. At the next vehicle stop (after turning off the STOP/START system), the engine will not be stopped.
4. The STOP/START system will reset itself back to an ON condition every time the ignition is turned off and back on.

To Manually Turn On The Stop/Start System

Push the STOP/START OFF switch (located on the switch bank). The light on the switch will turn off.

System Malfunction

If there is a malfunction in the STOP/START system, the system will not shut down the engine. A "SERVICE STOP/START SYSTEM" message will appear in the instrument cluster display. Refer to "Instrument Cluster Display" in "Getting to Know Your Instrument Panel" for further information.

If the "SERVICE STOP/START SYSTEM" message appears in the instrument cluster display, have the system checked by an authorized dealer.

STOP/START SYSTEM — MANUAL TRANSMISSION (IF EQUIPPED)

The Stop/Start function is developed to reduce fuel consumption. The system will stop the engine automatically during a vehicle stop if the required conditions are met. Pressing the clutch pedal will automatically restart the vehicle.

NOTE: It is recommended that the Start/Stop System be disabled during off-road use.

Automatic Mode

The Stop/Start feature is enabled after every normal customer engine start. It will remain in STOP/START NOT READY until you drive forward with a vehicle speed greater than 5 mph (8 km/h). At that time, the system will go into STOP/START READY and if all other conditions are met, can go into an STOP/START AUTO STOP ACTIVE mode.

To Activate The STOP/START AUTO STOP ACTIVE Mode, The Following Must Occur:

- The system must be in STOP/START READY state. A STOP/START READY message will be displayed in the instrument cluster. Refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.
- Vehicle speed must be less 2 mph (3 km/h).
- The gear selector must be in the NEUTRAL position and the clutch pedal must be fully released

The engine will shut down, **the tachometer will fall to the Stop/Start position,** the STOP/START AUTO STOP ACTIVE message will appear, and the heater/air conditioning (HVAC) air flow will be reduced.

Possible Reasons The Engine Does Not Autostop

Prior to engine shut down, the system will check many safety and comfort conditions to see if they are fulfilled. In following situations the engine will not stop:

- Driver's seat belt is not buckled.
- Outside temperature is less than 10°F (–12°C) or greater than 109°F (43°C).

- Actual cabin temperature is significantly different than temperature set on Auto HVAC.
- HVAC is set to full defrost mode.
- Engine has not reached normal operating temperature.
- Battery discharged.
- When driving in REVERSE.
- Hood is open.
- Transfer case is in 4LO or Neutral
- Driver's seat is not occupied or driver door is open.
- Vehicle is at high altitude.
- The vehicle is on a steep grade.
- Forward Gear is engaged.
- System fault is present.
- Low fuel is detected.
- HVAC set to MAX A/C.

It may be possible for the vehicle to be driven several times without the STOP/START system going into a STOP/START READY state under more extreme conditions of the items listed above.

To Start The Engine While In Autostop Mode

When the gear selector is in NEUTRAL, the engine will start when the clutch pedal is pressed (does not require complete/full pedal press). The vehicle will go into STOP/START SYSTEM NOT READY mode until the vehicle speed is greater than 5 mph (8 km/h).

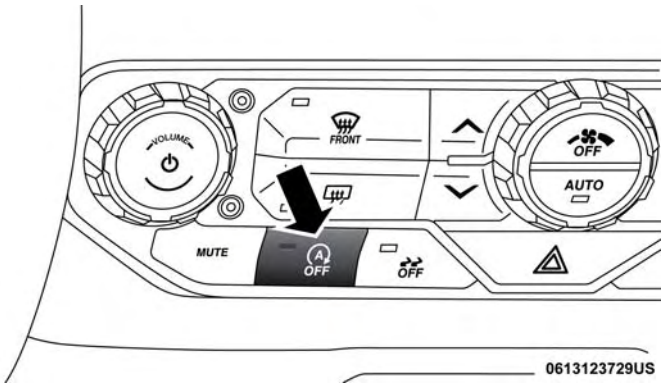
Conditions that will cause the engine to start automatically while in STOP/START AUTO STOP ACTIVE mode

The Engine Will Start Automatically When:

- Actual cabin temperature is significantly different than temperature set on Auto HVAC.
- HVAC is set to full defrost mode.
- STOP/START AUTO STOP ACTIVE time exceeds 5 minutes.
- Battery voltage drops too low.
- Low brake vacuum e.g. after several brake pedal applications.
- Vehicle is moving faster than 5 mph (8 km/h).
- STOP/START OFF switch is pressed.
- 4LO or Neutral (transfer case)

To Manually Turn Off The Start/Stop System

1. Push the STOP/START Off switch (located on the switch bank). The light on the switch will illuminate.



STOP/START Off Switch

2. The STOP/START OFF message will appear in the instrument cluster. Refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.
3. At the next vehicle stop (after turning off the STOP/START system), the engine will not be stopped.
4. If the STOP/START system is manually turned off, the engine can only be started and stopped by cycling the ignition switch
5. The STOP/START system will reset itself back to an ON condition every time the key is turned off and back on.

To Manually Turn On The Stop/Start System

Push the STOP/START OFF switch (located on the switch bank). The light on the switch will turn off.

System Malfunction

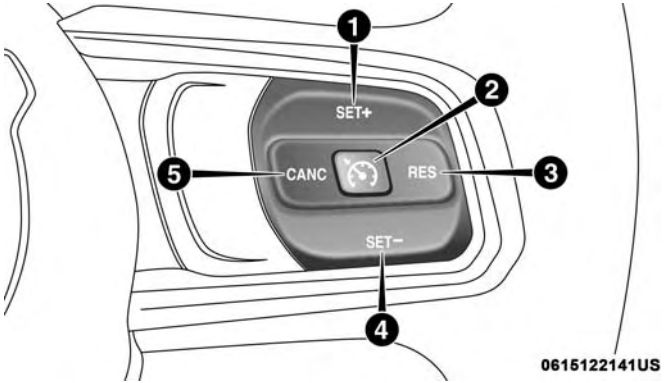
If there is a malfunction in the STOP/START system, the system will not shut down the engine. A "SERVICE STOP/START SYSTEM" message will appear in the instrument cluster display. Refer to "Instrument Cluster Display" in "Getting to Know Your Instrument Panel" for further information.

If the "SERVICE STOP/START SYSTEM" message appears in the instrument cluster display, have the system checked by an authorized dealer.

SPEED CONTROL — IF EQUIPPED

When engaged, the Speed Control takes over accelerator operations at speeds greater than 20 mph (32 km/h).

The Speed Control buttons are located on the right side of the steering wheel.



Speed Control Buttons

1 — SET+/Accel
2 — On/Off
3 — RES/Resume
4 — SET-/Decel
5 — CANC/Cancel

NOTE: In order to ensure proper operation, the Speed Control System has been designed to shut down if multiple Speed Control functions are operated at the same time. If this occurs, the Speed Control System can be reactivated by pushing the Speed Control On/Off button and resetting the desired vehicle set speed.

WARNING!

Speed Control can be dangerous where the system cannot maintain a constant speed. Your vehicle could go too fast for the conditions, and you could lose control and have an accident. Do not use Speed Control in heavy traffic or on roads that are winding, icy, snow-covered or slippery.

To Activate

Push the on/off button to activate the Speed Control. The cruise indicator light in the instrument cluster display will illuminate. To turn the system off, push the on/off button a second time. The cruise indicator light will turn off. The system should be turned off when not in use.

WARNING!

Leaving the Speed Control system on when not in use is dangerous. You could accidentally set the system or cause it to go faster than you want. You could lose control and have an accident. Always leave the system off when you are not using it.

To Set A Desired Speed

Turn the Speed Control on.

NOTE: The vehicle should be traveling at a steady speed and on level ground before pushing the SET (+) or SET (-) button.

When the vehicle has reached the desired speed, push the SET (+) or SET (-) button and release. Release the accelerator and the vehicle will operate at the selected speed.

To Vary The Speed Setting

To Increase Speed

When the Speed Control is set, you can increase speed by pushing the SET **(+)** button.

The driver's preferred units can be selected through the Uconnect system if equipped. Refer to "Uconnect Settings" in "Multimedia" for more information. The speed increment shown is dependent on the chosen speed unit of U.S. (mph) or Metric (km/h):

U.S. Speed (mph)

- Pushing the SET **(+)** button once will result in a 1 mph increase in set speed. Each subsequent tap of the button results in an increase of 1 mph.
- If the button is continually pushed, the set speed will continue to increase until the button is released, then the new set speed will be established.

Metric Speed (km/h)

- Pushing the SET **(+)** button once will result in a 1 km/h increase in set speed. Each subsequent tap of the button results in an increase of 1 km/h.
- If the button is continually pushed, the set speed will continue to increase until the button is released, then the new set speed will be established.

To Decrease Speed

When the Speed Control is set, you can decrease speed by pushing the SET **(-)** button.

The driver's preferred units can be selected through the Uconnect system if equipped. Refer to "Uconnect Settings" in "Multimedia" for more information. The speed increment shown is dependent on the chosen speed unit of U.S. (mph) or Metric (km/h):

U.S. Speed (mph)

- Pushing the SET **(-)** button once will result in a 1 mph decrease in set speed. Each subsequent tap of the button results in a decrease of 1 mph.
- If the button is continually pushed, the set speed will continue to decrease until the button is released, then the new set speed will be established.

Metric Speed (km/h)

- Pushing the SET **(-)** button once will result in a 1 km/h decrease in set speed. Each subsequent tap of the button results in a decrease of 1 km/h.
- If the button is continually pushed, the set speed will continue to decrease until the button is released, then the new set speed will be established.

To Accelerate For Passing

Press the accelerator as you would normally. When the pedal is released, the vehicle will return to the set speed.

To Resume Speed

To resume a previously set speed, push the RES button and release. Resume can be used at any speed above 20 mph (32 km/h).

To Deactivate

A soft tap on the brake pedal, pushing the CANC (cancel) button, or normal brake pressure while slowing the vehicle will deactivate the speed control without erasing the set speed from memory.

Pushing the on/off button or cycling the ignition to OFF, erases the set speed from memory.

Using Speed Control On Hills

The transmission may downshift on hills to maintain the vehicle set speed.

NOTE: The Speed Control system maintains speed up and down hills. A slight speed change on moderate hills is normal.

On steep hills, a greater speed loss or gain may occur so it may be preferable to drive without Speed Control.

WARNING!

Speed Control can be dangerous where the system cannot maintain a constant speed. Your vehicle could go too fast for the conditions, and you could lose control and have an accident. Do not use Speed Control in heavy traffic or on roads that are winding, icy, snow-covered or slippery.

PARKSENSE REAR PARK ASSIST — IF EQUIPPED

The ParkSense Rear Park Assist system provides visual and audible indications of the distance between the rear fascia and a detected obstacle when backing up, e.g. during a parking maneuver. Refer to "ParkSense System Usage Precautions" in this section for limitations of this system and recommendations.

ParkSense will retain the last system state (enabled or disabled) from the last ignition cycle when the ignition is changed to the ON/RUN position.

ParkSense can be active only when the gear selector is in REVERSE. If ParkSense is enabled at this gear selector position, the system will remain active until the vehicle speed is increased to approximately 7 mph (11 km/h) or above. When in REVERSE and above the system's operating speed, a warning will appear within the instrument cluster display indicating the vehicle speed is too fast. The system will become active again if the vehicle speed is decreased to speeds less than approximately 6 mph (9 km/h).

ParkSense Sensors

The four ParkSense sensors, located in the rear fascia/bumper, monitor the area behind the vehicle that is within the sensors' field of view. The sensors can detect obstacles from approximately 12 inches (30 cm) up to 79 inches (200 cm) from the rear fascia/bumper in the horizontal direction, depending on the location, type and orientation of the obstacle.

ParkSense Warning Display

The ParkSense Warning screen will only be displayed if "Sound and Display" is selected from the Customer - Programmable Features section of the Uconnect System. Refer to "Uconnect Settings" in "Multimedia" for further information.

The ParkSense Warning screen is located within the instrument cluster display. It provides visual warnings to indicate the distance between the rear fascia/bumper and the detected obstacle. Refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.

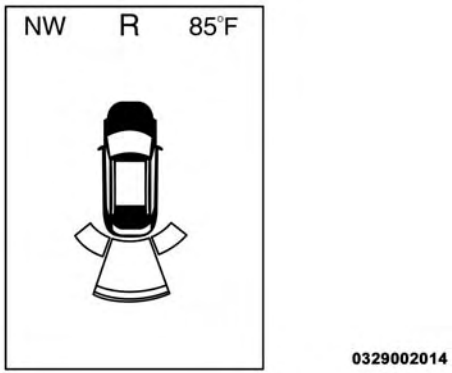
ParkSense Display

When the vehicle is in REVERSE, the instrument cluster display will show the park assist ready system status.

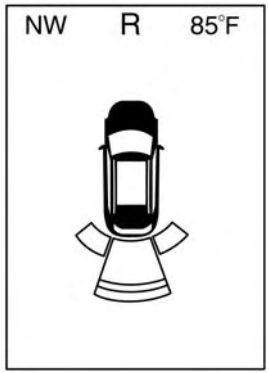
The system will indicate a detected obstacle by showing a single arc in one or more regions based on the obstacle's distance and location relative to the vehicle.

If an obstacle is detected in the center rear region, the display will show a single solid arc in the center rear region and will produce a one-half second tone. As the vehicle moves closer to the obstacle, the display will show the single arc moving closer to the vehicle and the sound tone will change from slow, to fast, to continuous.

If an obstacle is detected in the left and/or right rear region, the display will show a single flashing arc in the left and/or right rear region and will produce a fast sound tone. As the vehicle moves closer to the obstacle, the display will show the single arc moving closer to the vehicle and the tone will change from fast to continuous.



Single 1/2 Second Tone/Solid Arc



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Slow Tone/Solid Arc

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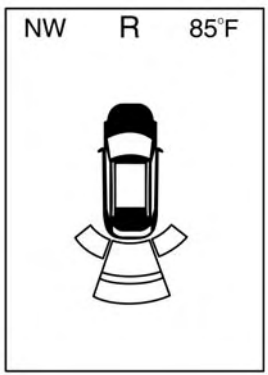
Fast Tone/Flashing Arc



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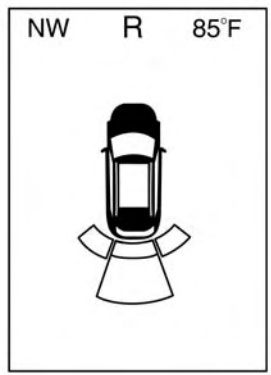
Slow Tone/Solid Arc



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Continuous Tone/Flashing Arc

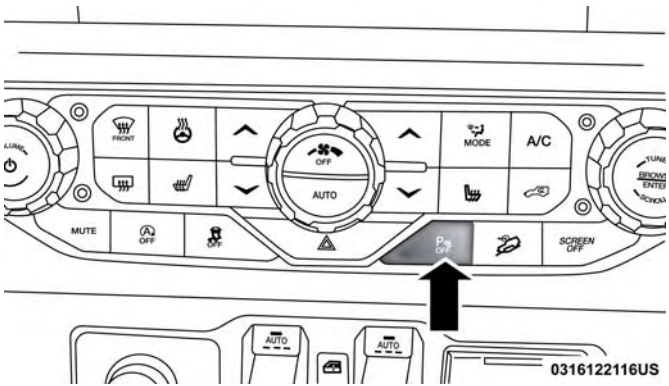
The vehicle is close to the obstacle when the warning display shows one flashing arc and sounds a continuous tone. The following chart shows the warning alert operation when the system is detecting an obstacle:

WARNING ALERTS							
Rear Distance (inches/cm)	Greater than 79 inches (200 cm)	79-59 inches (200-150 cm)	59-47 inches (150-120 cm)	47-39 inches (120-100 cm)	39-25 inches (100-65 cm)	25-12 inches (65-30 cm)	Less than 12 inches (30 cm)
Arcs — Left	None	None	None	None	None	2nd Flashing	1st Flashing
Arcs — Center	None	6th Solid	5th Solid	4th Solid	3rd Flashing	2nd Flashing	1st Flashing
Arcs — Right	None	None	None	None	None	2nd Flashing	1st Flashing
Audible Alert Chime	None	Single 1/2-Second Tone (for rear center only)	Slow (for rear center only)	Slow (for rear center only)	Fast (for rear center only)	Fast	Continuous
Radio Volume Reduced	No	Yes	Yes	Yes	Yes	Yes	Yes

NOTE: ParkSense will reduce the volume of the radio, if on, when the system is sounding an audio tone.

Enabling And Disabling ParkSense

ParkSense can be enabled and disabled with the ParkSense switch, located on the switch panel below the climate controls.



ParkSense Switch

When the ParkSense switch is pushed to disable the system, the instrument cluster display will show the "PARKSENSE OFF" message for approximately five seconds. Refer to "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information. When the gear selector is moved to REVERSE and the system is disabled, the instrument cluster display will show the "PARKSENSE OFF" message for as long as the vehicle is in REVERSE.

The ParkSense switch LED will be on when ParkSense is disabled or requires service. The ParkSense switch LED will be off when the system is enabled. If the ParkSense switch is pushed, and requires service, the ParkSense switch LED will blink momentarily, and then the LED will be on.

Service The ParkSense Rear Park Assist System

During vehicle start up, when the ParkSense Rear Park Assist System has detected a faulted condition, the instrument cluster display will actuate a single chime, once per ignition cycle, and it will display the "PARKSENSE UNAVAILABLE WIPE REAR SENSORS" or the "PARKSENSE UNAVAILABLE SERVICE REQUIRED" message. Refer to "Instrument Cluster Display". When the gear selector is moved to REVERSE and the system has detected a faulted condition, the instrument cluster display will show the "PARKSENSE UNAVAILABLE WIPE REAR SENSORS" or "PARKSENSE UNAVAILABLE SERVICE REQUIRED" message for as long as the vehicle is in REVERSE. Under this condition, ParkSense will not operate.

If "PARKSENSE UNAVAILABLE WIPE REAR SENSORS" appears in the instrument cluster display, make sure the outer surface and the underside of the rear fascia/bumper is clean and clear of snow, ice, mud, dirt or other obstruction and then cycle the ignition. If the message continues to appear, see an authorized dealer.

If "PARKSENSE UNAVAILABLE SERVICE REQUIRED" appears in the instrument cluster display, see an authorized dealer.

Cleaning The ParkSense System

Clean the Rear Park Assist sensors with water, car wash soap and a soft cloth. Do not use rough or hard cloths. In washing stations, clean sensors quickly keeping the vapor jet/high pressure washing nozzles at least 4 inches (10 cm) from the sensors. Do not scratch or poke the sensors. Otherwise, you could damage the sensors.

ParkSense System Usage Precautions

NOTE:

- Ensure that the rear bumper is free of snow, ice, mud, dirt and debris to keep the ParkSense system operating properly.
- Jackhammers, large trucks, and other vibrations could affect the performance of ParkSense.
- When you turn ParkSense OFF, the instrument cluster display will read "PARKSENSE OFF" Furthermore, once you turn ParkSense OFF, it remains off until you turn it on again, even if you cycle the ignition.
- ParkSense, when on, will reduce the volume of the radio when it is sounding a tone.
- Clean the ParkSense sensors regularly, taking care not to scratch or damage them. The sensors must not be covered with ice, snow, slush, mud, dirt or debris. Failure to do so can result in the system not working properly. The ParkSense system might not detect an obstacle behind the fascia/bumper, or it could provide a false indication that an obstacle is behind the fascia/bumper.
- Use the ParkSense switch to turn the ParkSense system OFF if objects such as bicycle carriers, trailer hitches, etc. are placed within 12 inches (30 cm) from the rear fascia/bumper. Failure to do so can result in the system misinterpreting a close object as a sensor problem, causing the "PARKSENSE UNAVAILABLE SERVICE REQUIRED" message to be displayed in the instrument cluster display.

- The operation of the rear sensors is automatically deactivated when the trailer's electric plug is inserted in the vehicle's tow hook socket. The rear sensors are automatically reactivated when the trailer's cable plug is removed.

WARNING!

- **Drivers must be careful when backing up even when using ParkSense. Always check carefully behind your vehicle, look behind you, and be sure to check for pedestrians, animals, other vehicles, obstructions, and blind spots before backing up. You are responsible for safety and must continue to pay attention to your surroundings. Failure to do so can result in serious injury or death.**
- **Before using ParkSense, it is strongly recommended that the ball mount and hitch ball assembly is disconnected from the vehicle when the vehicle is not used for towing. Failure to do so can result in injury or damage to vehicles or obstacles because the**

(Continued)

WARNING! *(Continued)*

hitch ball will be much closer to the obstacle than the rear fascia when the loudspeaker sounds the continuous tone. Also, the sensors could detect the ball mount and hitch ball assembly, depending on its size and shape, giving a false indication that an obstacle is behind the vehicle.

CAUTION!

- **ParkSense is only a parking aid and it is unable to recognize every obstacle, including small obstacles. Parking curbs might be temporarily detected or not detected at all. Obstacles located above or below the sensors will not be detected when they are in close proximity.**
- **The vehicle must be driven slowly when using ParkSense in order to be able to stop in time when an obstacle is detected. It is recommended that the driver looks over his/her shoulder when using ParkSense.**

PARKVIEW REAR BACK UP CAMERA

Your vehicle is equipped with the ParkView Rear Back Up Camera that allows you to see an on-screen image of the rear surroundings of your vehicle whenever the gear selector is put into REVERSE. The image will be displayed in the touchscreen display along with a caution note to "check entire surroundings" across the top of the screen. After five seconds this note will disappear. The ParkView camera is located on the rear of the vehicle in the center of the spare tire.

NOTE: The ParkView Rear Back Up Camera has programmable modes of operation that may be selected through the Uconnect System. Refer to "Uconnect Settings" in "Multimedia" for further information.

When the vehicle is shifted out of REVERSE (with camera delay turned off), the rear camera mode is exited and the previous screen appears again. When the vehicle is shifted out of REVERSE (with camera delay turned on), the camera image will continue to be displayed for up to ten seconds after shifting out of REVERSE unless the vehicle speed exceeds 8 mph (13 km/h), the vehicle is shifted into PARK or the vehicle's ignition is cycled to the OFF position.

When enabled, active guide lines are overlaid on the image to illustrate the width of the vehicle and its projected backup path based on the steering wheel position. A dashed center line overlay indicates the center of the vehicle to assist with parking or aligning to a hitch/receiver.

When enabled, fixed guide lines are overlaid on the image to illustrate the width of the vehicle.

Different colored zones indicate the distance to the rear of the vehicle.

The following table shows the approximate distances for each zone:

Zone	Distance To The Rear Of The Vehicle
Red	0 - 1 ft (0 - 30 cm)
Yellow	1 ft - 6.5 ft (30 cm - 2 m)
Green	6.5 ft or greater (2 m or greater)

WARNING!

Drivers must be careful when backing up even when using the ParkView Rear Back Up Camera. Always check carefully behind your vehicle, and be sure to check for pedestrians, animals, other vehicles, obstructions, or blind spots before backing up. You are responsible for the safety of your surroundings and must continue to pay attention while backing up. Failure to do so can result in serious injury or death.

CAUTION!

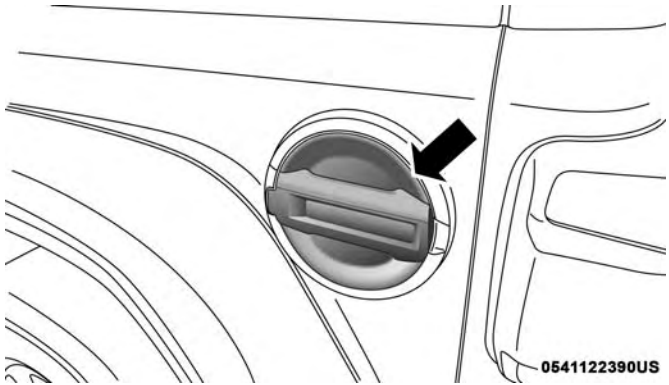
- **To avoid vehicle damage, ParkView should only be used as a parking aid. The ParkView camera is unable to view every obstacle or object in your drive path.**
- **To avoid vehicle damage, the vehicle must be driven slowly when using ParkView to be able to stop in time when an obstacle is seen. It is recommended that the driver look frequently over his/her shoulder when using ParkView.**

NOTE: If snow, ice, mud, or any foreign substance builds up on the camera lens, clean the lens, rinse with water, and dry with a soft cloth. Do not cover the lens.

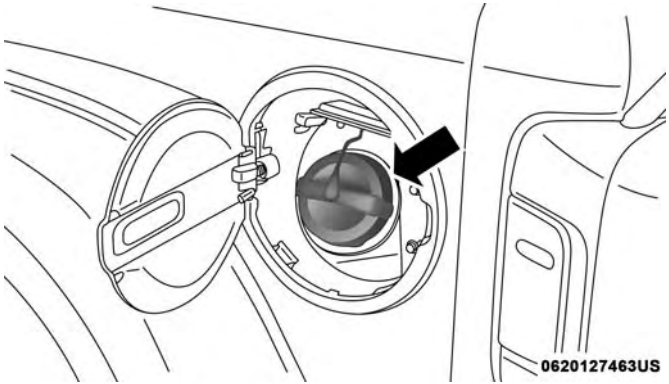
REFUELING THE VEHICLE

Fuel Filler Cap

The fuel filler cap is located on the driver's side of the vehicle. If the fuel filler cap is lost or damaged, be sure the replacement cap is the correct one for this vehicle.



Fuel Filler Door



Fuel Filler Cap

WARNING!

- **Never have any smoking materials lit in or near the vehicle when the gas cap is removed or the tank is being filled.**
- **Never add fuel when the engine is running. This is in violation of most state and federal fire regulations and may cause the MIL to turn on.**
- **A fire may result if gasoline is pumped into a portable container that is inside of a vehicle. You could be burned. Always place gas containers on the ground while filling.**

CAUTION!

- **Damage to the fuel system or emission control system could result from using an improper fuel filler cap. A poorly fitting cap could let impurities into the fuel system. Also, a poorly fitting aftermarket cap can cause the "Malfunction Indicator Light (MIL)" to illuminate, due to fuel vapors escaping from the system.**
- **To avoid fuel spillage and overfilling, do not "top off" the fuel tank after filling.**

NOTE:

- When the fuel nozzle "clicks" or shuts off, the fuel tank is full.
- Tighten the fuel filler cap about 1/4 turn until you hear one click. This is an indication that the cap is properly tightened.
- If the fuel filler cap is not tightened properly, the MIL will come on. Be sure the cap is tightened every time the vehicle is refueled.

Loose Fuel Filler Cap Message

After fuel has been added, the vehicle diagnostic system can determine if the fuel filler cap is possibly loose, improperly installed, or damaged. If the system detects a malfunction, the "gASCAP" message will display in the odometer display. Tighten the gas cap until a "clicking" sound is heard. This is an indication that the gas cap is properly tightened. Push the odometer reset button to turn the message off. If the problem persists, the message will appear the next time the vehicle is started. This might indicate a damaged cap. If the problem is detected twice in a row, the system will turn on the MIL. Resolving the problem will turn the MIL off.

VEHICLE LOADING

Certification Label

As required by National Highway Traffic Safety Administration regulations, your vehicle has a certification label affixed to the driver's side door or pillar.

This label contains the month and year of manufacture, Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating (GAWR) front and rear, and Vehicle Identification Number (VIN). A Month-Day-Hour (MDH) number is included on this label and indicates the Month, Day and Hour of manufacture. The bar code that appears on the bottom of the label is your VIN.

Gross Vehicle Weight Rating (GVWR)

The GVWR is the total permissible weight of your vehicle including driver, passengers, vehicle, options and cargo. The label also specifies maximum capacities of front and rear axle systems (GAWR). Total load must be limited so GVWR and front and rear GAWR are not exceeded.

Payload

The payload of a vehicle is defined as the allowable load weight a truck can carry, including the weight of the driver, all passengers, options and cargo.

Gross Axle Weight Rating (GAWR)

The GAWR is the maximum permissible load on the front and rear axles. The load must be distributed in the cargo area so that the GAWR of each axle is not exceeded.

Each axle GAWR is determined by the components in the system with the lowest load carrying capacity (axle, springs, tires or wheels). Heavier axles or suspension

components sometimes specified by purchasers for increased durability does not necessarily increase the vehicle's GVWR.

Tire Size

The tire size on the Vehicle Certification Label represents the actual tire size on your vehicle. Replacement tires must be equal to the load capacity of this tire size.

Rim Size

This is the rim size that is appropriate for the tire size listed.

Inflation Pressure

This is the cold tire inflation pressure for your vehicle for all loading conditions up to full GAWR.

Curb Weight

The curb weight of a vehicle is defined as the total weight of the vehicle with all fluids, including vehicle fuel, at full capacity conditions, and with no occupants or cargo loaded into the vehicle. The front and rear curb weight values are determined by weighing your vehicle on a commercial scale before any occupants or cargo are added.

Loading

The actual total weight and the weight of the front and rear of your vehicle at the ground can best be determined by weighing it when it is loaded and ready for operation.

The entire vehicle should first be weighed on a commercial scale to insure that the GVWR has not been exceeded. The weight on the front and rear of the vehicle should then be determined separately to be sure that the load is properly distributed over the front and rear axle. Weighing the vehicle may show that the GAWR of either the front or rear axles has been exceeded but the total load is within the specified GVWR. If so, weight must be shifted from front to rear or rear to front as appropriate until the specified weight limitations are met. Store the heavier items down low and be sure that the weight is distributed equally. Stow all loose items securely before driving.

Improper weight distributions can have an adverse effect on the way your vehicle steers and handles and the way the brakes operate.

CAUTION!

Do not load your vehicle any heavier than the GVWR or the maximum front and rear GAWR. If you do, parts on your vehicle can break, or it can change the way your vehicle handles. This could cause you to lose control. Also overloading can shorten the life of your vehicle.

TRAILER TOWING

In this section you will find safety tips and information on limits to the type of towing you can reasonably do with your vehicle. Before towing a trailer, carefully review this information to tow your load as efficiently and safely as possible.

To maintain the New Vehicle Limited Warranty coverage, follow the requirements and recommendations in this manual concerning vehicles used for trailer towing.

Common Towing Definitions

The following trailer towing related definitions will assist you in understanding the following information:

Gross Vehicle Weight Rating (GVWR)

The GVWR is the total allowable weight of your vehicle. This includes driver, passengers, cargo and tongue weight. The total load must be limited so that you do not exceed the GVWR. Refer to "Vehicle Loading/Vehicle Certification Label" in "Starting And Operating" for further information.

Gross Trailer Weight (GTW)

The GTW is the weight of the trailer plus the weight of all cargo, consumables and equipment (permanent or temporary) loaded in or on the trailer in its "loaded and ready for operation" condition.

The recommended way to measure GTW is to put your fully loaded trailer on a vehicle scale. The entire weight of the trailer must be supported by the scale.

Gross Combination Weight Rating (GCWR)

The GCWR is the total permissible weight of your vehicle and trailer when weighed in combination.

Gross Axle Weight Rating (GAWR)

The GAWR is the maximum capacity of the front and rear axles. Distribute the load over the front and rear axles evenly. Make sure that you do not exceed either front or

rear GAWR. Refer to "Vehicle Loading/Vehicle Certification Label" in "Starting And Operating" for further information.

WARNING!

It is important that you do not exceed the maximum front or rear GAWR. A dangerous driving condition can result if either rating is exceeded.

Tongue Weight (TW)

The tongue weight is the downward force exerted on the hitch ball by the trailer. You must consider this as part of the load on your vehicle.

Frontal Area

The frontal area is the maximum height multiplied by the maximum width of the front of a trailer.

Trailer Sway Control – If Equipped

The trailer sway control is a telescoping link that can be installed between the hitch receiver and the trailer tongue. It typically provides adjustable friction associated with the telescoping motion to dampen any unwanted trailer swaying motions while traveling.

Weight-Carrying Hitch

A weight-carrying hitch supports the trailer tongue weight, just as if it were luggage located at a hitch ball or some other connecting point of the vehicle. These kinds of hitches are the most popular on the market today and they are commonly used to tow small and medium sized trailers.

Weight-Distributing Hitch

A weight-distributing system works by applying leverage through spring (load) bars. They are typically used for heavier loads to distribute trailer tongue weight to the tow vehicle's front axle and the trailer axle(s). When used in accordance with the manufacturer's directions, it provides for a more level ride, offering more consistent steering and brake control thereby enhancing towing safety. The addition of a friction/hydraulic sway control also dampens sway caused by traffic and crosswinds and contributes positively to tow vehicle and trailer stability. Trailer sway control and a weight distributing (load equalizing) hitch are recommended for heavier Tongue Weights (TW) and may be required depending on vehicle and trailer configuration/loading to comply with Gross Axle Weight Rating (GAWR) requirements.

WARNING!

- **An improperly adjusted Weight Distributing Hitch system may reduce handling, stability, braking performance, and could result in a collision.**
- **Weight Distributing Systems may not be compatible with Surge Brake Couplers. Consult with your hitch and trailer manufacturer or a reputable Recreational Vehicle dealer for additional information.**

Trailer Hitch Classification

The following chart provides the industry standard for the maximum trailer weight a given trailer hitch class can tow and should be used to assist you in selecting the correct trailer hitch for your intended towing condition.

Trailer Hitch Classification Definitions	
Class	**Max. Trailer Hitch Industry Standards**
Class I - Light Duty	2,000 lbs (907 kg)
Class II - Medium Duty	3,500 lbs (1,587 kg)
Class III - Heavy Duty	5,000 lbs (2,267 kg)
Class IV - Extra Heavy Duty	10,000 lbs (4,535 kg)
Refer to the “Trailer Towing Weights (Maximum Trailer Weight Ratings)” chart for the Maximum Gross Trailer Weight (GTW) towable for your given drivetrain.	
All trailer hitches should be professionally installed on your vehicle.	

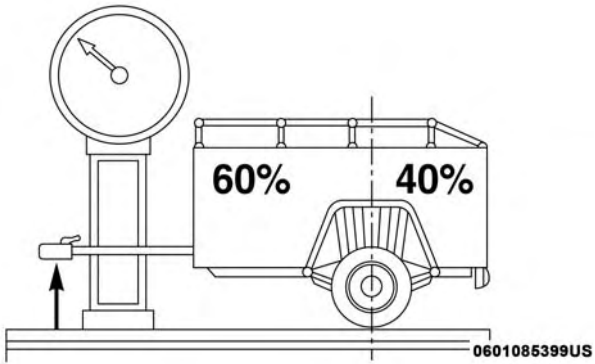
Trailer Towing Weights (Maximum Trailer Weight Ratings)

Engine/ Transmission	Model	GCWR (Gross Combined Wt. Rating)	Frontal Area	Max. GTW (Gross Trailer Wt.)	Max. Trailer Tongue Wt. (See Note)
2.0L	Two–Door	8,016 lbs (3 636 kg)	20 ft2 (1.86 m2)	2,000 lbs (907 kg)	200 lbs (91 kg)
	Four–Door	8,117 lbs (3 682 kg)	30 ft2 (2.79 m2)	3,500 lbs (1 587 kg)	350 lbs (158 kg)
3.6L	Two–Door	8,016 lbs (3 636 kg)	20 ft2 (1.86 m2)	2,000 lbs (907 kg)	200 lbs (91 kg)
	Four–Door	8,117 lbs (3 682 kg)	30 ft2 (2.79 m2)	3,500 lbs (1 587 kg)	350 lbs (158 kg)
Refer to local laws for maximum trailer towing speeds.					

NOTE: The trailer tongue weight must be considered as part of the combined weight of occupants and cargo (ie. the GVWR), and the GVWR should never exceed the weight referenced on the Tire and Loading Information placard. Refer to “Tire Safety Information” in “Servicing And Maintenance” for further information.

Trailer And Tongue Weight

Never exceed the maximum tongue weight stamped on your bumper or trailer hitch.



Consider the following items when computing the weight on the rear axle of the vehicle:

- The tongue weight of the trailer.
- The weight of any other type of cargo or equipment put in or on your vehicle.
- The weight of the driver and all passengers.

NOTE: Remember that everything put into or on the trailer adds to the load on your vehicle. Also, additional factory-installed options or dealer-installed options must be considered as part of the total load on your vehicle. Refer to the "Tire And Loading Information" placard for the maximum combined weight of occupants and cargo for your vehicle.

Towing Requirements — Tires

- Proper tire inflation pressures are essential to the safe and satisfactory operation of your vehicle. Refer to "Tires – General Information" in "Servicing And Maintenance" for proper tire inflation procedures.
- Check the trailer tires for proper tire inflation pressures before trailer usage.
- Check for signs of tire wear or visible tire damage before towing a trailer. Refer to "Tires – General Information" in "Servicing And Maintenance" for proper inspection procedure.
- When replacing tires, refer to "Tires – General Information" in "Servicing And Maintenance" for proper tire replacement procedures. Replacing tires with a higher load carrying capacity will not increase the vehicle's GVWR and GAWR limits.

Towing Requirements — Trailer Brakes

- Do **not** interconnect the hydraulic brake system or vacuum system of your vehicle with that of the trailer. This could cause inadequate braking and possible personal injury.
- An electronically actuated trailer brake controller is required when towing a trailer with electronically actuated brakes. When towing a trailer equipped with a hydraulic surge actuated brake system, an electronic brake controller is not required.
- Trailer brakes are recommended for trailers over 1,000 lbs (453 kg) and required for trailers in excess of 2,000 lbs (907 kg).

WARNING!

- **Do not connect trailer brakes to your vehicle's hydraulic brake lines. It can overload your brake system and cause it to fail. You might not have brakes when you need them and could have a collision.**
- **Towing any trailer will increase your stopping distance. When towing you should allow for additional space between your vehicle and the vehicle in front of you. Failure to do so could result in a collision.**

CAUTION!

If the trailer weighs more than 1,000 lbs (453 kg) loaded, it should have its own brakes and they should be of adequate capacity. Failure to do this could lead to accelerated brake lining wear, higher brake pedal effort, and longer stopping distances.

Towing Requirements — Trailer Lights And Wiring

Whenever you pull a trailer, regardless of the trailer size, stoplights and turn signals on the trailer are required for motoring safety.

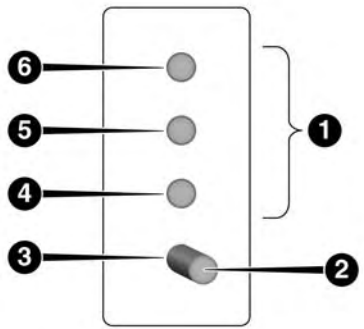
The Trailer Tow Package may include a four- and seven-pin wiring harness. Use a factory approved trailer harness and connector.

NOTE: Do not cut or splice wiring into the vehicle's wiring harness.

The electrical connections are all complete to the vehicle but you must mate the harness to a trailer connector. Refer to the following illustrations.

NOTE:

- Disconnect trailer wiring connector from the vehicle before launching a boat (or any other device plugged into vehicle's electrical connect) into water.
- Be sure to reconnect after clear from water area.



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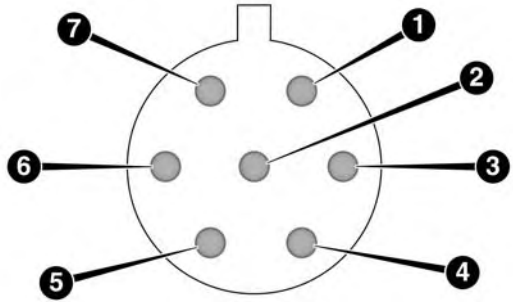
Four-Pin Connector

1 — Female Pins
2 — Male Pin
3 — Ground
4 — Park
5 — Left Stop/Turn
6 — Right Stop/Turn



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Seven-Pin Connector

1 — Battery
2 — Backup Lamps
3 — Right Stop/Turn
4 — Electric Brakes
5 — Ground
6 — Left Stop/Turn
7 — Running Lamps

Towing Tips

Before setting out on a trip, practice turning, stopping and backing the trailer in an area away from heavy traffic.

If using a manual transmission vehicle for trailer towing, all starts must be in first gear to avoid excessive clutch slippage.

Automatic Transmission — If Equipped

Select the DRIVE range when towing. The transmission controls include a drive strategy to avoid frequent shifting when towing. However, if frequent shifting does occur while in DRIVE, you can use the AutoStick shift control to manually select a lower gear.

NOTE: Using a lower gear while operating the vehicle under heavy loading conditions, will improve performance and extend transmission life by reducing excessive shifting and heat buildup. This action will also provide better engine braking.

AutoStick — If Equipped

- When using the AutoStick shift control, select the highest gear that allows for adequate performance and avoids frequent downshifts. For example, choose “5” if the desired speed can be maintained. Choose “4” or “3” if needed to maintain the desired speed.
- To prevent excess heat generation, avoid continuous driving at high RPM. Reduce vehicle speed as necessary to avoid extended driving at high RPM. Return to a higher gear or vehicle speed when grade and road conditions allow.

Electronic Speed Control — If Equipped

- Do not use in hilly terrain or with heavy loads.
- When using the speed control, if you experience speed drops greater than 10 mph (16 km/h), disengage until you can get back to cruising speed.
- Use speed control in flat terrain and with light loads to maximize fuel efficiency.

Cooling System

To reduce potential for engine and transmission overheating, take the following actions:

City Driving

When stopped for short periods of time, shift the transmission into NEUTRAL and increase engine idle speed.

Highway Driving

Reduce speed.

Air Conditioning

Turn off temporarily.

RECREATIONAL TOWING (BEHIND MOTORHOME, ETC.)

Towing This Vehicle Behind Another Vehicle

Towing Condition	Wheels OFF the Ground	Four-Wheel Drive Models
Flat Tow	NONE	**See Instructions** • Automatic transmission in PARK. • Manual transmission in gear (NOT in NEUTRAL [N]). • Transfer case in NEUTRAL (N). • Tow in forward direction.
Dolly Tow	Front	NOT ALLOWED
	Rear	NOT ALLOWED
On Trailer	ALL	OK
NOTE: When towing your vehicle, always follow applicable state and provincial laws. Contact state and provincial Highway Safety offices for additional details.		

Recreational Towing — Four-Wheel Drive Models

NOTE: The transfer case must be shifted into NEUTRAL (N), automatic transmission must be in PARK, and manual transmission must be in gear (NOT in NEUTRAL) for recreational towing.

CAUTION!

- **DO NOT dolly tow any 4WD vehicle. Towing with only one set of wheels on the ground (front or rear) will cause severe transmission and/or transfer case damage. Tow with all four wheels either ON the ground, or OFF the ground (using a vehicle trailer).**
- **Tow only in the forward direction. Towing this vehicle backwards can cause severe damage to the transfer case.**
- **Automatic transmissions must be placed in PARK for recreational towing.**
- **Manual transmissions must be placed in gear (not in Neutral) for recreational towing.**
- **Before recreational towing, perform the procedure outlined under "Shifting Into NEUTRAL (N)" to be certain that the transfer case is fully in NEUTRAL (N). Otherwise, internal damage will result.**

(Continued)

CAUTION! *(Continued)*

- **Towing this vehicle in violation of the above requirements can cause severe transmission and/or transfer case damage. Damage from improper towing is not covered under the New Vehicle Limited Warranty.**
- **Do not use a bumper-mounted clamp-on tow bar on your vehicle. The bumper face bar will be damaged.**

Shifting Into NEUTRAL (N)

Use the following procedure to prepare your vehicle for recreational towing.

WARNING!

You or others could be injured or killed if you leave the vehicle unattended with the transfer case in the NEUTRAL (N) position without first fully engaging the parking brake. The transfer case NEUTRAL (N) position disengages both the front and rear driveshafts from the powertrain, and will allow the vehicle to roll, even if the automatic transmission is in PARK (or manual transmission is in gear). The parking brake should always be applied when the driver is not in the vehicle.

CAUTION!

It is necessary to follow these steps to be certain that the transfer case is fully in NEUTRAL (N) before recreational towing to prevent damage to internal parts.

1. Bring the vehicle to a complete stop on level ground.
2. Press and hold the brake pedal.
3. Shift the automatic transmission into NEUTRAL or depress the clutch pedal on a manual transmission.
4. Turn the engine OFF.
5. Shift the transfer case lever into NEUTRAL (N).
6. Start the engine.
7. Shift the transmission into REVERSE.
8. Release the brake pedal (and clutch pedal on manual transmissions) for five seconds and ensure that there is no vehicle movement.
9. Repeat steps seven and eight with automatic transmission in DRIVE or manual transmission in first gear.
10. Turn the engine OFF.
11. Firmly apply the parking brake.
12. Shift the transmission into PARK or place manual transmission in gear (NOT in NEUTRAL).

CAUTION!

Damage to the transmission may occur if the transmission is shifted into PARK with the transfer case in NEUTRAL (N) and the engine running. With the transfer case in NEUTRAL (N) ensure that the engine is OFF before shifting the transmission into PARK.

13. Attach the vehicle to the tow vehicle using a suitable tow bar.
14. Release the parking brake.

Shifting Out of NEUTRAL (N)

Use the following procedure to prepare your vehicle for normal usage.

1. Bring the vehicle to a complete stop, leaving it connected to the tow vehicle.
2. Firmly apply the parking brake.
3. Start the engine.

4. Press and hold the brake pedal.
5. Shift the transmission into NEUTRAL.
6. Turn the engine OFF.
7. Shift the transfer case lever to the desired position.

NOTE: When shifting the transfer case out of NEUTRAL (N), the engine should remain OFF to avoid gear clash.

8. Shift the automatic transmission into PARK, or place manual transmission in NEUTRAL.
9. Release the brake pedal.
10. Disconnect vehicle from the tow vehicle.
11. Start the engine.
12. Press and hold the brake pedal.
13. Release the parking brake.
14. Shift the transmission into gear, release the brake pedal (and clutch pedal on manual transmissions), and check that the vehicle operates normally.

DRIVING TIPS

On-Road Driving Tips

Utility vehicles have higher ground clearance and a narrower track to make them capable of performing in a wide variety of off-road applications. Specific design characteristics give them a higher center of gravity than conventional passenger cars.

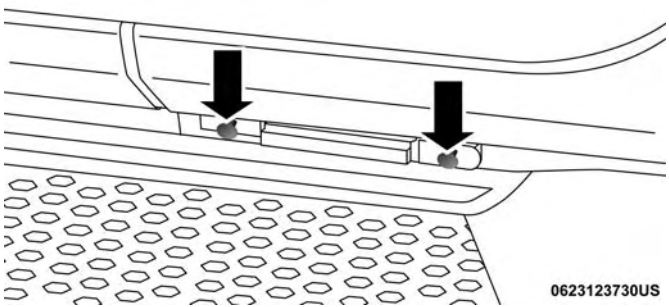
An advantage of the higher ground clearance is a better view of the road, allowing you to anticipate problems. They are not designed for cornering at the same speeds as conventional passenger cars any more than low-slung sports cars are designed to perform satisfactorily in off-road conditions. Avoid sharp turns or abrupt maneuvers. As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of control or vehicle rollover.

Off-Road Driving Tips

Side Step Removal — If Equipped

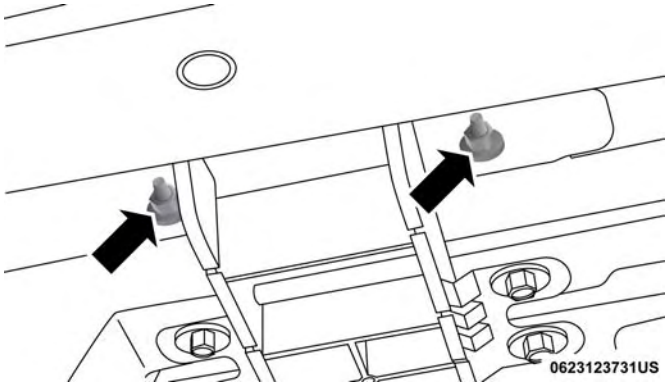
NOTE: Prior to off-road usage, the side steps should be removed to prevent damage if so equipped.

1. There are two studs on the bodyside of each connecting bracket.



Bodyside Studs

2. Remove both nuts from the underside of the vehicle for each bracket.



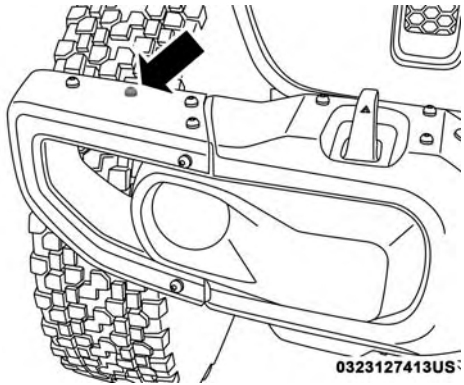
Underside Nuts

3. Remove the side step assembly.

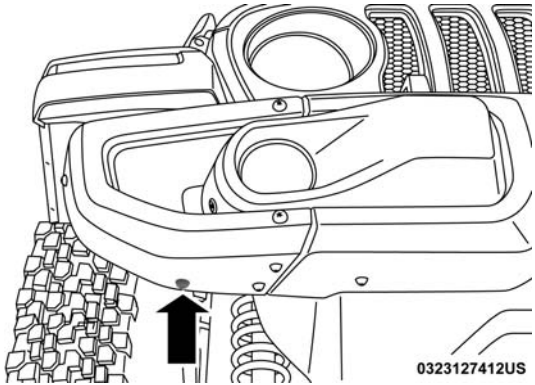
Bumper End Cap Removal

The end caps on your vehicle's front bumper can be removed by following the steps below:

1. Loosen the two bolts that retain the GAWR bracket (Bolts #1 and #2) to the end cap using a T45 torx bit screw driver. Do not remove the bolts.



Bolt #1



Bolt #2

2. Remove the remaining 8 bolts. The end cap can now be expanded open.
3. Gently remove the end cap from the vehicle and store it where it will not get damaged.
4. Repeat this procedure on the other side.

The Basics Of Off-Road Driving

You will encounter many types of terrain driving off-road. You should be familiar with the terrain and area before proceeding. There are many types of surface conditions: hard-packed dirt, gravel, rocks, grass, sand, mud, snow and ice. Every surface has a different effect on your vehicle's steering, handling and traction. Controlling your vehicle is one of the keys to successful off-road driving, so always keep a firm grip on the steering wheel and maintain a good driving posture. Avoid sudden accelerations, turns or braking. In most cases, there are no road signs, posted speed limits or signal lights. Therefore, you will need to use your own good judgment on what is safe and what is not. When on a trail, you should always be looking ahead for surface obstacles and changes in terrain. The key is to plan your future driving route while remembering what you are currently driving over.

NOTE: It is recommended that the Start/Stop System be disabled during off-road use.

CAUTION!

Never park your vehicle over dry grass or other combustible materials. The heat from your vehicle exhaust system could cause a fire.

WARNING!

Always wear your seat belt and firmly tie down cargo. Unsecured cargo can become projectiles in an off-road situation.

When To Use 4L (Low) Range

When off-road driving, shift into 4L (Low) for additional traction and control on slippery or difficult terrain, ascending or descending steep hills, and to increase low speed pulling power. This range should be limited to extreme situations such as deep snow, mud, steep inclines, or sand where additional low speed pulling power is needed. Vehicle speeds in excess of 25 mph (40 km/h) should be avoided when in 4L (Low) range.

CAUTION!

Do not use 4L (Low) range when operating the vehicle on dry pavement. Driveline hardware damage can result.

Simultaneous Brake And Throttle Operation

Many off-road driving conditions require the simultaneous use of the brake and throttle (two-footed driving). When climbing rocks, logs, or other stepped objects, using light brake pressure with light throttle will keep the vehicle from jerking or lurching. This technique is also used when you need to stop and restart a vehicle on a steep incline.

Driving In Snow, Mud And Sand

Snow

In heavy snow or for additional control and traction at slower speeds, shift the transmission into a low gear and the transfer case into 4L (Low) if necessary. Do not shift to a lower gear than necessary to maintain headway. Over-revving the engine can spin the wheels and traction will be lost. If you start to slow to a stop, try turning your steering wheel no more than a 1/4 turn quickly back and forth, while still applying throttle. This will allow the tires to get a fresh "bite" and help maintain your momentum.

CAUTION!

On icy or slippery roads, do not downshift at high engine RPM or vehicle speeds, because engine braking may cause skidding and loss of control.

Mud

Deep mud creates a great deal of suction around the tires and is very difficult to get through. You should use second gear (manual transmission), or DRIVE (automatic transmission), with the transfer case in the 4L (Low) position to maintain your momentum. If you start to slow to a stop, try turning your steering wheel no more than a 1/4 turn quickly back and forth for additional traction. Mud holes pose an increased threat of vehicle damage and getting stuck. They are normally full of debris from previous vehicles getting stuck. As a good practice before entering any mud hole, get out and determine how deep it is, if there are any hidden obstacles and if the vehicle can be safely recovered if stuck.

Sand

Soft sand is very difficult to travel through with full tire pressure. When crossing soft, sandy spots in a trail, maintain your vehicle's momentum and do not stop. The key to driving in soft sand is using the appropriate tire pressure, accelerating slowly, avoiding abrupt maneuvers and maintaining the vehicle's momentum. If you are going to be driving on large soft sandy areas or dunes, reduce your tire pressure to a minimum of 15 psi (103 kPa) to allow for a greater tire surface area. Reduced tire pressure will drastically improve your traction and handling while driving on the soft sand, but you must return the tires to normal air pressure before driving on pavement or other hard surfaces. Be sure you have a way to reinflate the tires prior to reducing the pressure.

CAUTION!

Reduced tire pressures may cause tire unseating and total loss of air pressure. To reduce the risk of tire unseating, while at a reduced tire pressure, reduce your speed and avoid sharp turns or abrupt maneuvers.

Crossing Obstacles (Rocks And Other High Points)

While driving off-road, you will encounter many types of terrain. These varying types of terrain bring different types of obstacles. Before proceeding, review the path ahead to determine the correct approach and your ability to safely recover the vehicle if something goes wrong. Keeping a firm grip on the steering wheel, bring the vehicle to a complete stop and then inch the vehicle forward until it makes contact with the object. Apply the throttle lightly while holding a light brake pressure and ease the vehicle up and over the object.

WARNING!

Crossing obstacles can cause abrupt steering system loading which could cause you to loose control of your vehicle.

Using A Spotter

There are many times where it is hard to see the obstacle or determine the correct path. Determining the correct path can be extremely difficult when you are confronting many obstacles. In these cases have someone guide you over, through, or around the obstacle. Have the person stand a safe distance in front of you where they can see the obstacle, watch your tires and undercarriage, and guide you through.

Crossing Large Rocks

When approaching large rocks, choose a path which ensures you drive over the largest of them with your tires. This will lift your undercarriage over the obstacle. The tread of the tire is tougher and thicker than the side wall and is designed to take the abuse. Always look ahead and make every effort to cross the large rocks with your tires.

CAUTION!

- **Never attempt to straddle a rock that is large enough to strike your axles or undercarriage.**
- **Never attempt to drive over a rock which is large enough to contact the door sills.**

Crossing A Ravine, Gully, Ditch, Washout Or Rut

When crossing a ravine, gully, ditch, washout or a large rut, the angled approach is the key to maintaining your vehicle's mobility. Approach these obstacles at a 45-degree angle and let each tire go through the obstacle independently. You need to use caution when crossing large obstacles with steep sides. Do not attempt to cross any large obstacle with steep sides at an angle great enough to put the vehicle at risk of a rollover. If you get caught in a rut, dig a small trench to the right or left at a 45-degree angle ahead of the front tires. Use the removed dirt to fill the rut ahead of the turnout you just created. You should now be able to drive out following the trench you just created at a 45-degree angle.

WARNING!

There is an increased risk of rollover when crossing an obstacle, at any angle, with steep sides.

Crossing Logs

To cross a log, approach it at a slight angle (approximately 10 to 15 degrees). This allows one front tire to be on top of the log while the other just starts to climb the log. While climbing the log, modulate your brake and accelerator to avoid spinning the log out from under your tires. Then ease the vehicle off the log using your brakes.

CAUTION!

Do not attempt to cross a log with a greater diameter than the running ground clearance or the vehicle will become high-centered.

Getting High-Centered

If you get hung up or high-centered on an object, get out of the vehicle and try to determine what the vehicle is hung up on, where it is contacting the underbody and what is the best direction to recover the vehicle. Depending on what you are in contact with, jack the vehicle up and place a few rocks under the tires so the weight is off of the high point when you let the vehicle down. You can also try rocking the vehicle or winching the vehicle off the object.

CAUTION!

Winching or rocking the vehicle off hard objects increases the risk of underbody damage.

Hill Climbing

Hill climbing requires good judgment and a good understanding of your abilities and your vehicle's limitations. Hills can cause serious problems. Some are just too steep to climb and should not be attempted. You should always feel confident with the vehicle and your abilities. You should always climb hills straight up and down. Never attempt to climb a hill on an angle.

Before Climbing A Steep Hill

As you approach a hill, consider its grade or steepness. Determine if it is too steep. Look to see what the traction is on the hill side trail. Is the trail straight up and down? What is on top and the other side? Are there ruts, rocks, branches or other obstacles on the path? Can you safely recover the vehicle if something goes wrong? If everything looks good and you feel confident, shift the transmission into a lower gear with 4L (Low) engaged, and proceed with caution, maintaining your momentum as you climb the hill.

Driving Up Hill

Once you have determined your ability to proceed and have shifted into the appropriate gear, line your vehicle up for the straightest possible run. Accelerate with an easy constant throttle and apply more power as you start up the hill. Do not race forward into a steep grade; the abrupt change of grade could cause you to lose control. If the front end begins to bounce, ease off the throttle slightly to bring all four tires back on the ground. As you approach the crest of the hill, ease off the throttle and slowly proceed over the top. If the wheels start to slip as you approach the crest of a hill, ease off the accelerator and maintain headway by turning the steering wheel no more than a 1/4 turn quickly back and forth. This will provide a fresh "bite" into the surface and will usually provide enough traction to complete the climb. If you do not make it to the top, place the vehicle in REVERSE and back straight down the grade using engine resistance along with the vehicle brakes.

WARNING!

Never attempt to climb a hill at an angle or turn around on a steep grade. Driving across an incline increases the risk of a rollover, which may result in severe injury.

Driving Downhill

Before driving down a steep hill, you need to determine if it is too steep for a safe descent. What is the surface traction? Is the grade too steep to maintain a slow, controlled descent? Are there obstacles? Is it a straight descent? Is there plenty of distance at the base of the hill to regain control if the vehicle descends to fast? If you feel confident in your ability to proceed, then make sure you are in 4L (Low) and proceed with caution. Allow engine braking to control the descent and apply your brakes, if necessary, but do not allow the tires to lock.

WARNING!

Do not descend a steep grade in NEUTRAL. Use vehicle brakes in conjunction with engine braking. Descending a grade too fast could cause you to lose control and be seriously injured or killed.

Driving Across An Incline

If at all possible, avoid driving across an incline. If it is necessary, know your vehicle's abilities. Driving across an incline places more weight on the downhill wheels, which increases the possibilities of a downhill slide or rollover. Make sure the surface has good traction with firm and stable soils. If possible, transverse the incline at an angle heading slightly up or down.

WARNING!

Driving across an incline increases the risk of a rollover, which may result in severe injury.

If You Stall Or Begin To Lose Headway

If you stall or begin to lose headway while climbing a steep hill, allow your vehicle to come to a stop and immediately apply the brake. Restart the engine and shift into REVERSE. Back slowly down the hill allowing engine braking to control the descent and apply your brakes, if necessary, but do not allow the tires to lock.

WARNING!

If the engine stalls or you lose headway or cannot make it to the top of a steep hill or grade, never attempt to turn around. To do so may result in tipping and rolling the vehicle, which may result in severe injury. Always back carefully straight down a hill in REVERSE. Never back down a hill in NEUTRAL using only the vehicle brakes. Never drive diagonally across a hill, always drive straight up or down.

Driving Through Water

Extreme care should be taken crossing any type of water. Water crossings should be avoided, if possible, and only be attempted when necessary in a safe, responsible manner. You should only drive through areas which are designated and approved. You should tread lightly and avoid damage to the environment. You should know your vehicle's abilities and be able to recover it if something goes wrong. You should never stop or shut a vehicle off when crossing deep water unless you ingested water into the engine air intake. If the engine stalls, do not attempt to restart it.

Determine if it has ingested water first. The key to any crossing is low and slow. Shift into first gear (manual transmission), or DRIVE (automatic transmission), with the transfer case in the 4L (Low) position and proceed very slowly with a constant slow speed {3 to 5 mph (5 to 8 km/h) maximum} and light throttle. Keep the vehicle moving; do not try to accelerate through the crossing. After crossing any water higher than the bottom of the axle differentials, you should inspect all of the vehicle fluids for signs of water ingestion.

CAUTION!

- **Water ingestion into the axles, transmission, transfer case, engine or vehicle interior can occur if you drive too fast or through too deep of water. Water can cause permanent damage to engine, driveline or other vehicle components, and your brakes will be less effective once wet and/or muddy.**
- **When driving through water, do not exceed 5 mph (8 km/h). Always check water depth before entering as a precaution, and check all fluids afterward. Driving through water may cause damage that may not be covered by the New Vehicle Limited Warranty.**

Before You Cross Any Type Of Water

As you approach any type of water, you need to determine if you can cross it safely and responsibly. If necessary, get out and walk through the water or probe it with a stick. You need to be sure of its depth, approach angle, current and bottom condition. Be careful of murky or muddy waters; check for hidden obstacles. Make sure you will not be intruding on any wildlife, and you can recover the vehicle if necessary. The key to a safe crossing is the water depth, current and bottom conditions. On soft bottoms, the vehicle will sink in, effectively increasing the water level on the vehicle. Be sure to consider this when determining the depth and the ability to safely cross.

Crossing Puddles, Pools, Flooded Areas Or Other Standing Water

Puddles, pools, flooded or other standing water areas normally contain murky or muddy waters. These water types normally contain hidden obstacles and make it difficult to determine an accurate water depth, approach angle, and bottom condition. Murky or muddy water holes are where you want to hook up tow straps prior to entering. This makes for a faster, cleaner and easier vehicle recovery. If you are able to determine you can safely cross, than proceed using the low and slow method.

CAUTION!

Muddy waters can reduce the cooling system effectiveness by depositing debris onto the radiator.

Crossing Ditches, Streams, Shallow Rivers Or Other Flowing Water

Flowing water can be extremely dangerous. Never attempt to cross a fast running stream or river even in shallow water. Fast moving water can easily push your vehicle downstream, sweeping it out of control. Even in very shallow water, a high current can still wash the dirt out from around your tires putting you and your vehicle in jeopardy. There is still a high risk of personal injury and vehicle damage with slower water currents in depths greater than the vehicle's running ground clearance. You should never attempt to cross flowing water which is deeper than the vehicle's running ground clearance. Even the slowest current can push the heaviest vehicle downstream and out of control if the water is deep enough to push on the large surface area of the vehicle's body. Before you proceed, determine the speed of the current, the water's depth, approach angle, bottom condition and if there are any obstacles. Then cross at an angle heading slightly upstream using the low and slow technique.

WARNING!

Never drive through fast moving deep water. It can push your vehicle downstream, sweeping it out of control. This could put you and your passengers at risk of injury or drowning.

After Driving Off-Road

Off-road operation puts more stress on your vehicle than does most on-road driving. After going off-road, it is always a good idea to check for damage. That way you can get any problems taken care of right away and have your vehicle ready when you need it.

- Completely inspect the underbody of your vehicle. Check tires, body structure, steering, suspension, and exhaust system for damage.
- Inspect the radiator for mud and debris and clean as required.
- Check threaded fasteners for looseness, particularly on the chassis, drivetrain components, steering, and suspension. Retighten them, if required, and torque to the values specified in the Service Manual.

- Check for accumulations of plants or brush. These things could be a fire hazard. They might hide damage to fuel lines, brake hoses, axle pinion seals, and propeller shafts.
- After extended operation in mud, sand, water, or similar dirty conditions, have the radiator, fan, brake rotors, wheels, brake linings, and axle yokes inspected and cleaned as soon as possible.

NOTE: Inspect the clutch vent holes in the manual transmission bell housing for mud and debris and clean as required.

WARNING!

Abrasive material in any part of the brakes may cause excessive wear or unpredictable braking. You might not have full braking power when you need it to prevent a collision. If you have been operating your vehicle in dirty conditions, get your brakes checked and cleaned as necessary.

- If you experience unusual vibration after driving in mud, slush or similar conditions, check the wheels for impacted material. Impacted material can cause a wheel imbalance and freeing the wheels of it will correct the situation.

IN CASE OF EMERGENCY

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HAZARD WARNING FLASHERS

The Hazard Warning flasher switch is located on the instrument panel below the climate controls.

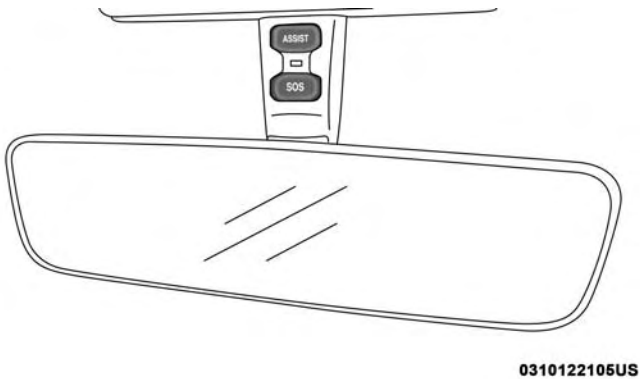
Push the switch to turn on the Hazard Warning flasher. When the switch is activated, all directional turn signals will flash on and off to warn oncoming traffic of an emergency. Push the switch a second time to turn off the Hazard Warning flashers.

This is an emergency warning system and it should not be used when the vehicle is in motion. Use it when your vehicle is disabled and it is creating a safety hazard for other motorists.

When you must leave the vehicle to seek assistance, the Hazard Warning flashers will continue to operate even though the ignition is placed in the OFF position.

NOTE: With extended use the Hazard Warning flashers may wear down your battery.

ASSIST AND SOS MIRROR — IF EQUIPPED



Assist And SOS Mirror

If equipped, the rearview mirror contains an ASSIST and a SOS button.

WARNING!

ALWAYS obey traffic laws and pay attention to the road. ALWAYS drive safely with your hands on the steering wheel. You have full responsibility and assume all risks related to the use of the features and applications in this vehicle. Only use the features and applications when it is safe to do so. Failure to do so may result in an accident involving serious injury or death.

NOTE:

- Your vehicle may be transmitting data as authorized by the subscriber.
- The SOS and ASSIST buttons will only function if you are connected to an operable LTE (voice/data) or 4G (data) network. Other Uconnect services will only be operable if your SiriusXM Guardian service is active and you are connected to an operable LTE (voice/data) or 4G (data) network.

ASSIST Call

The ASSIST Button is used to automatically connect you to any one of the following support centers:

- Roadside Assistance – If you get a flat tire, or need a tow, just push the ASSIST button and you'll be connected to someone who can help. Roadside Assistance will know what vehicle you're driving and its location. Additional fees may apply for roadside assistance.
- SiriusXM Guardian Customer Care – In-vehicle support for SiriusXM Guardian.
- Vehicle Customer Care – Total support for all other vehicle issues.

SOS Call

1. Push the SOS Call button on the Rearview Mirror.

NOTE: In case the SOS Call button is pushed in error, there will be a ten second delay before the SOS Call system initiates a call to a SOS operator. To cancel the SOS Call connection, push the SOS call button on the Rearview Mirror or press the cancellation button on the Device Screen. Termination of the SOS Call will turn off the green LED light on the Rearview Mirror.

2. The LED light located between the ASSIST and SOS buttons on the Rearview Mirror will turn green once a connection to a SOS operator has been made.

3. Once a connection between the vehicle and a SOS operator is made, the SOS Call system may transmit the following important vehicle information to a SOS operator:
   - Indication that the occupant placed a SOS Call.
   - The vehicle brand.
   - The last known GPS coordinates of the vehicle.
4. You should be able to speak with the SOS operator through the vehicle audio system to determine if additional help is needed.

WARNING!

ALWAYS obey traffic laws and pay attention to the road. ALWAYS drive safely with your hands on the steering wheel. You have full responsibility and assume all risks related to the use of the features and applications in this vehicle. Only use the features and applications when it is safe to do so. Failure to do so may result in an accident involving serious injury or death.

NOTE:

- Your vehicle may be transmitting data as authorized by the subscriber.
- Once a connection is made between the vehicle's SOS Call system and the SOS operator, the SOS operator may be able to open a voice connection with the vehicle to determine if additional help is needed. Once the SOS operator opens a voice connection with the vehicle's SOS Call system, the operator should be able to speak with you or other vehicle occupants and hear sounds occurring in the vehicle. The vehicle's SOS Call system will attempt to remain connected with the SOS operator until the SOS operator terminates the connection.

5. The SOS operator may attempt to contact appropriate emergency responders and provide them with important vehicle information and GPS coordinates.

WARNING!

- **If anyone in the vehicle could be in danger (e.g., fire or smoke is visible, dangerous road conditions or location), do not wait for voice contact from an Emergency Services Agent. All occupants should exit the vehicle immediately and move to a safe location.**
- **Never place anything on or near the vehicle's operable network and GPS antennas. You could prevent operable network and GPS signal reception, which can prevent your vehicle from placing an emergency call. An operable network and GPS signal reception is required for the SOS Call system to function properly.**
- **The SOS Call system is embedded into the vehicle's electrical system. Do not add aftermarket electrical equipment to the vehicle's electrical system. This may prevent your vehicle from sending a signal to initiate an emergency call. To avoid interference that can cause the SOS Call system to fail, never add aftermarket equipment (e.g., two-way mobile radio, CB radio, data recorder, etc.) to your vehicle's electrical system or modify the antennas on your vehicle. IF YOUR VEHICLE LOSES BATTERY POWER FOR ANY REASON (INCLUDING DURING OR AFTER**

(Continued)

WARNING! *(Continued)*

AN ACCIDENT), THE UCONNECT FEATURES, APPS AND SERVICES, AMONG OTHERS, WILL NOT OPERATE.

- **Modifications to any part of the SOS Call system could cause the air bag system to fail when you need it. You could be injured if the air bag system is not there to help protect you.**

SOS Call System Limitations

Vehicles sold in Mexico **DO NOT** have SOS Call system capabilities.

SOS or other emergency line operators in Mexico may not answer or respond to SOS system calls.

If the SOS Call system detects a malfunction, any of the following may occur at the time the malfunction is detected, and at the beginning of each ignition cycle:

- The Rearview Mirror light located between the ASSIST and SOS buttons will continuously be illuminated red.
- The Device Screen will display the following message "Vehicle device requires service. Please contact your dealer."

- An In-Vehicle Audio message will state "Vehicle device requires service. Please contact your dealer."

WARNING!

- **Ignoring the Rearview Mirror light could mean you will not have SOS Call services. If the Rearview Mirror light is illuminated, have your authorized dealer service the SOS Call system immediately.**
- **The Occupant Restraint Control module turns on the air bag Warning Light on the instrument panel if a malfunction in any part of the system is detected. If the Air Bag Warning Light is illuminated, have your authorized dealer service the Occupant Restraint Control system immediately.**

Even if the SOS Call system is fully functional, factors beyond FCA US LLC's control may prevent or stop the SOS Call system operation. These include, but are not limited to, the following factors:

- Delayed accessories mode is active.
- The ignition is in the OFF position.
- The vehicle's electrical systems are not intact.
- The SOS Call system software and/or hardware are damaged during a crash.
- The vehicle battery loses power or becomes disconnected during a vehicle crash.
- LTE (voice/data) or 4G (data) network and/or Global Positioning Satellite signals are unavailable or obstructed.
- Equipment malfunction at the SOS operator facility.
- Operator error by the SOS operator.
- LTE (voice/data) or 4G (data) network congestion.
- Weather.
- Buildings, structures, geographic terrain, or tunnels.

WARNING!

ALWAYS obey traffic laws and pay attention to the road. ALWAYS drive safely with your hands on the steering wheel. You have full responsibility and assume all risks related to the use of the features and applications in this vehicle. Only use the features and applications when it is safe to do so. Failure to do so may result in an accident involving serious injury or death.

NOTE:

- Your vehicle may be transmitting data as authorized by the subscriber.
- Never place anything on or near the vehicle's LTE (voice/data) or 4G (data) and GPS antennas. You could prevent LTE (voice/data) or 4G (data) and GPS signal reception, which can prevent your vehicle from placing an emergency call. An operable LTE (voice/data) or 4G (data) network connection and a GPS signal is required for the SOS Call system to function properly.

General Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CAUTION!

To avoid damage to the mirror during cleaning, never spray any cleaning solution directly onto the mirror. Apply the solution onto a clean cloth and wipe the mirror clean.

BULB REPLACEMENT

Replacement Bulbs

Interior Bulbs

	Bulb Number
Automatic Transmission Indicator Lamp	658
Heater Control Lamps (2)	194
Rocker Switch Indicator Lamp (Rear Window Defogger, and Rear Wash/Wipe)	**
Soundbar Dome Lamp	912
** Bulbs only available from an authorized dealer.	

Exterior Bulbs

	Bulb Number
Headlamps (2)	H13
Premium Head Lamps	LED – (Serviced At Authorized Dealer)
Sport Front Park/Turn Signal Lamps (2)	7442NALL
Premium Front Park/Turn Signal Lamps (2)	LED – (Serviced At Authorized Dealer)
Base (Sahara/Rubicon) Turn Lamp	7440NA
Base (Sahara/Rubicon) Park DRL Lamp	7443
Front Side Marker Lamps (2)	LED – (Serviced At Authorized Dealer)
Base Fog Lamps	PSX24W

	Bulb Number
Premium Fog Lamps	LED – (Serviced At Authorized Dealer)
Rear Premium LED Tail Lamps	LED – (Serviced At Authorized Dealer)
Rear Base Tail Lamp Stop/Tail/Turn Bulb	3157
Rear Base Tail Lamp Backup Bulb	7440
Rear Base Tail Lamp Side Marker	LED – (Serviced At Authorized Dealer)
Center High-Mounted Stop Lamp	LED – (Serviced At Authorized Dealer)
License Lamp	LED – (Serviced At Authorized Dealer)
NOTE: Numbers refer to commercial bulb types that can be purchased from an authorized dealer. If a bulb needs to be replaced, visit an authorized dealer or refer to the applicable Service Manual.	

Bulb Replacement

NOTE: Lens fogging can occur under certain atmospheric conditions. This will usually clear as atmospheric conditions change to allow the condensation to change back into a vapor. Turning the lamps on will usually accelerate the clearing process.

Halogen Headlamps

1. Open hood and support using prop rod.
2. Remove the front grille. Turn the retainers along the top 1/4 turn counterclockwise and remove.
3. Pull the bottom of the grille away starting at one side and working toward the other.
4. Remove the three screws holding the headlamp to the vehicle.
5. Remove lamp from the vehicle.
6. Remove the lamp from the collar.
7. Grasp the bulb and turn 1/4 turn counterclockwise.
8. Pull the bulb from the housing.
9. Push connector locking tab to the unlock position.

10. Remove connector from bulb.
11. Push connector onto new bulb base, and push the connector locking tab to the lock position.

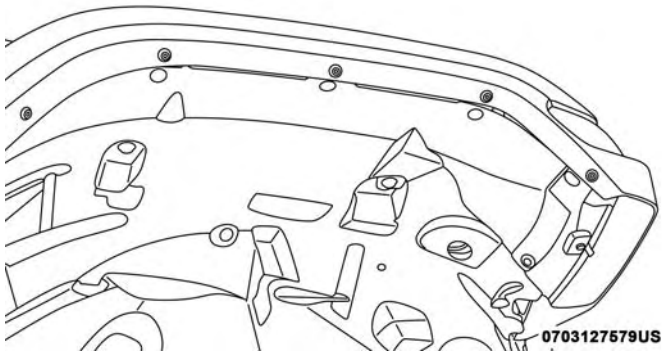
CAUTION!

Do not touch the new bulb with your fingers. Oil contamination will severely shorten bulb life. If the bulb comes in contact with any oily surface, clean the bulb with rubbing alcohol.

12. Reinstall bulb housing. Rotate the bulb 1/4 turn clockwise.

Front Park/Turn Signal

1. Remove the front wheel liner fasteners to access bulb sockets.



Wheel Liner

2. Turn the socket assembly 1/4 turn counterclockwise and remove from housing. Pull the bulb straight from the socket to replace.

LED Front Side Marker

1. Remove the front wheel liner fasteners to access side maker screw and electrical connector.
2. Remove fastening screw in the back of the front side maker assembly and disconnect electrical connector.
3. Remove and replace LED front side marker light assembly.

Halogen Front Fog Lamp

1. Reach under the vehicle to access the back of the front fog lamp.
2. Disconnect the wire harness connector from the front fog lamp connector receptacle.
3. Firmly grasp the bulb by the two latch features and squeeze them together to unlock the bulb from the back of the front fog lamp housing.
4. Pull the bulb straight out from the keyed opening in the housing and then connect the replacement bulb.

CAUTION!

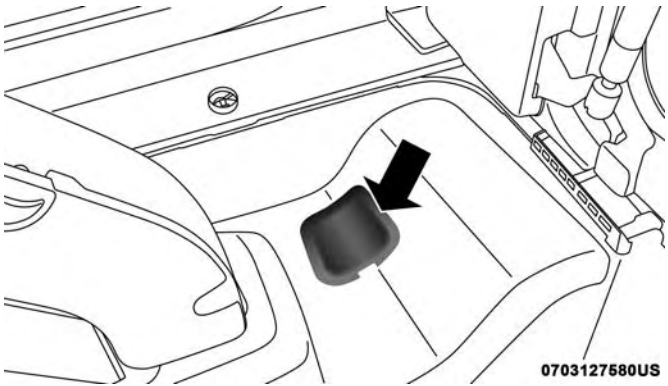
Do not touch the new bulb with your fingers. Oil contamination will severely shorten bulb life. If the bulb comes in contact with any oily surface, clean the bulb with rubbing alcohol.

LED Front Fog Lamp

If your vehicle is equipped with LED fog lamps they are replaced as an assembly.

Rear Tail, Stop, Turn Signal, And Backup Lamp

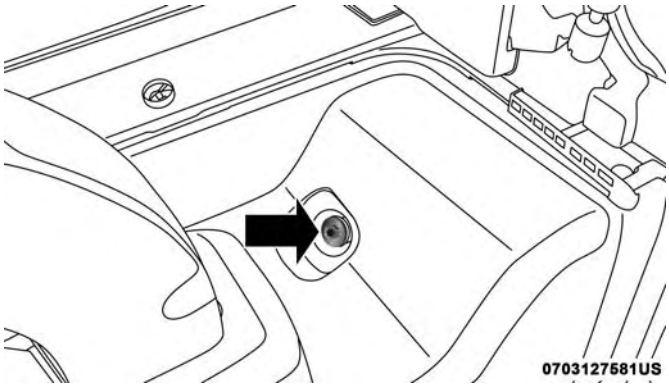
1. Remove interior trim panel cap to access single retaining screw for tail lamp assembly.



Trim Cap

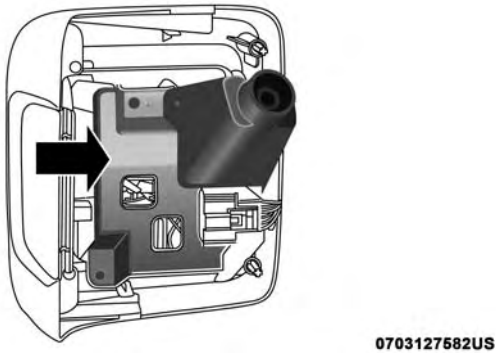
2. Remove retaining screw and disconnect electrical connector, then remove tail lamp assembly from the vehicle.

NOTE: If necessary, push in on the assembly tab located inboard behind the lamp housing.



Retaining Screw

3. Remove the three screws from assembly bracket to access bulb sockets.



Assembly Bracket

4. Rotate the appropriate socket 1/4 turn counterclockwise, then remove it from the housing.
5. Pull the bulb straight from the socket to replace.

Center High-Mounted Stop Lamp (CHMSL)

The stop lamp is mounted on a bracket that extends upward from the tailgate behind the spare tire. If service is needed, obtain the LED Assembly from an authorized dealer.

1. Remove the spare tire.
2. Remove the screws holding the tire carrier cover.
3. Remove two screws from lamp assembly and disconnect electrical connector.

License Plate Lamps

See an authorized dealer to replace these LED assemblies.

FUSES

WARNING!

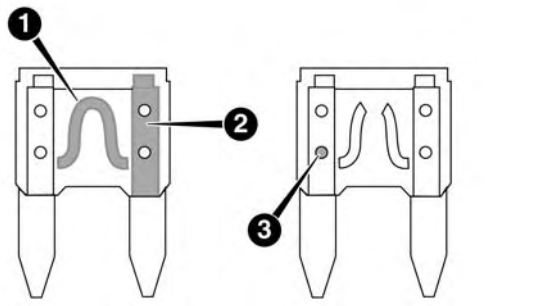
- **When replacing a blown fuse, always use an appropriate replacement fuse with the same amp rating as the original fuse. Never replace a fuse with another fuse of higher amp rating. Never replace a blown fuse with metal wires or any other material. Failure to use proper fuses may result in serious personal injury, fire and/or property damage.**
- **Before replacing a fuse, make sure that the ignition is off and that all the other services are switched off and/or disengaged.**
- **If the replaced fuse blows again, contact an authorized dealer.**
- **If a general protection fuse for safety systems (air bag system, braking system), power unit systems (engine system, gearbox system) or steering system blows, contact an authorized dealer.**

General Information

The fuses protect electrical systems against excessive current.

When a device does not work, you must check the fuse element inside the blade fuse for a break/melt.

Also, please be aware that when using power outlets for extended periods of time with the engine off may result in vehicle battery discharge.

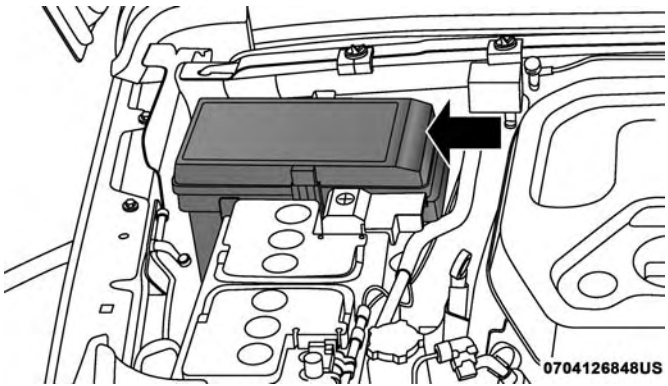


Blade Fuses

1 — Fuse Element
2 — Blade Fuse with a good/functional fuse element.
3 — Blade fuse with a NOT functional / BAD fuse element (blown fuse).

Power Distribution Center (PDC)

The Power Distribution Center is located in the engine compartment near the battery. This center contains cartridge fuses, mini fuses, and relays. The PDC top cover is labelled with each serviceable fuse/relay location, function, and size.



Power Distribution Center

Cavity	Cartridge Fuse	Micro Fuse	Description
F01	–	–	Spare
F02	40 Amp Green	–	Starter
F03	–	5 Amp Tan	IBS
F04	–	20 Amp Yellow	Fuel Pump MTR/FPCM
F05	–	5 Amp Tan	Security Gateway
F06	–	–	Spare
F07	–	15 Amp Blue	LTR Cool Pump — If Equipped
F08	–	15 Amp Blue	TCM-8HP CYGNUS
F09	–	–	Spare
F10	–	15 Amp Blue	KIN/RF HUB/ESCL
F11	–	10 Amp Red	UCI Port (USB & AUX)
F12	–	25 Amp Clear	HIFI Amplifier
F13	–	–	Spare
F14	–	–	Spare
F15	–	15 Amp Blue	IPC/SWITCH BANK-HD ELEC
F16	–	–	Spare
F17	–	–	Spare
F18	–	10 Amp Red	AC CLUTCH
F19	–	–	Spare
F20	30 Amp Pink	–	CBC 1-INTERIOR LIGHTS

Cavity	Cartridge Fuse	Micro Fuse	Description
F21	–	20 Amp Yellow	REAR WIPER
F22	–	10 Amp Red	ECM/PCM/MGU WAKE UP/ PPU WAKE UP
F23	–	10 Amp Red	PCM/ECM
F24	–	–	Spare
F25	–	10 Amp Red	MOD_SBW
F26	40 Amp Green	–	CBC 2-EXTERIOR LIGHTS #1
F27	30 Amp Pink	–	Front Wipers
F28	40 Amp Green	–	CBC 3-POWER LOCKS
F29	40 Amp Green	–	CBC 4-EXTERIOR LIGHTS #2
F30	–	–	Spare
F31	–	10 Amp Red	DIAGNOSTIC PORT
F32	–	10 Amp Red	HVAC CTRL MOD/SCL/OCM/DPDM
F33	–	10 Amp Red	PTS/IRCM/AIRBAG DISABLE LMPS
F34	–	10 Amp Red	ESC/EHPS/SBCM WAKE UP
F35	30 Amp Pink	–	BRAKE VAC PMP — If Equipped
F36	30 Amp Pink	–	TRLR TOW MOD — If Equipped
F37	30 Amp Pink	–	TRLR TOW CONN 7W — If Equipped
F38	20 Amp Blue	–	ECM
F39	–	–	Spare

Cavity	Cartridge Fuse	Micro Fuse	Description
F40	–	15 Amp Blue	DTCM/AXLE LOCK FT_RR
F41	–	15 Amp Blue	IC/SGW WAKE UP
F42	–	10 Amp Red	PCR CTRL FEED (ESS)/SPARE (BSG) — If Equipped
F43		20 Amp Yellow	PWR OUTLET (CARGO) BATT
F44	–	10 Amp Red	IRCAM HEATERS
F45	–	20 Amp Yellow	PWR OUTLET (CARGO) IGN*
F46	–	10 Amp Red	AUTO HDLP LVL MOD/LVL MTR/ HDLP SW
F47	–	–	Spare
F48	–	–	Spare
F49	–	10 Amp Red	ORC
F50	–	10 Amp Red	HD ACC — If Equipped
F51	–	10 Amp Red	DSRC/USB/ISRVM/CSGM
F52	–	20 Amp Yellow	CIGAR LTR
F53	–	–	Spare
F54	–	–	Spare
F55	–	–	Spare
F56	–	10 Amp Red	IN-CAR TEMP SENSOR
F57	–	20 Amp Yellow	Frt Drvr Htd Seat

Cavity	Cartridge Fuse	Micro Fuse	Description
F58	–	20 Amp Yellow	Frt Pass Htd Seat
F59	–	–	Spare
F60	–	15 Amp Blue	CSWM (HTD STR WHEEL)
F61	–	10 Amp Red	LBSS/RBSS
F62	–	–	Spare
F63	–	10 Amp Red	ORC
F64	–	–	Spare
F65	–	–	Spare
F66	40 Amp Green	–	HVAC BLOWER MTR FRT
F67	–	–	Spare
F68	–	–	Spare
F69	–	5 Amp Tan	MGU (BSG) — If Equipped
F70	–	25 Amp Clear	INJ/IGN COIL (GAS)/GLO PLUG MOD (DSL)
F71	–	–	Spare
F72	–	10 Amp Red	HD ELEC ACC PKG — If Equipped
F73	20 Amp Blue	–	PWR TOP LT
F74	20 Amp Blue	–	PWR TOP RT
F75	–	10 Amp Red	PPU-BPCM & APM (BSG) — If Equipped
F76	–	20 Amp Yellow	ECM (GAS)/PCM (DSL)

Cavity	Cartridge Fuse	Micro Fuse	Description
F77	–	10 Amp Red	HTD MIRRORS
F78	–	10 Amp Red	COMP/INTRUSION/SIREN/INTRUSION SNSRS
F79	–	20 Amp Yellow	SMART BAR CTRL MOD
F80	–	15 Amp Blue	PCM
F81	30 Amp Pink	–	REAR DEFROSTER (EBL)
F82	30 Amp Pink	–	FUEL HTR — If Equipped
F83	60 Amp Yellow		GLOW PLUG — If Equipped
F84	30 Amp Pink	–	UREA HTR CTRL UNIT — If Equipped
F85	–	10 Amp Red	PM SENSOR — If Equipped
F86	30 Amp Pink	–	BRAKE VAC PMP 2 — If Equipped
F87	–	10 Amp Red	SUPPLY/PURGING PMP — If Equipped
F88	20 Amp Blue	–	NOx SENSOR #1/ #2 — IF Equipped
F89	–	10 Amp Red	SCCM/CRUISE CTL/DTV
F90	20 Amp Blue	–	TRLR TOW PARK LMP — If Equipped
F91	–	20 Amp Yellow	HORN
F92	40 Amp Green	–	HD ACCY #2 — If Equipped
F93	40 Amp Green	–	HD ACCY #1 — If Equipped
F94	–	10 Amp Red	TPM/CORAX
F95	–	–	Spare

Cavity	Cartridge Fuse	Micro Fuse	Description
F96	–	10 Amp Red	PWR MIRROR SW
F97	–	20 Amp Yellow	RADIO/TBM
F98	–	10 Amp Red	SW BANK-HD ELEC/OFF ROAD
F99	–	–	Spare
F100	30 Amp Pink	–	ESC-ECU & VALVES
F101	30 Amp Pink	–	DTCM
F102	–	15 Amp Blue	DUAL USB PORT
F103	–	15 Amp Blue	HD ACCY #3 — If Equipped
F104	–	15 Amp Blue	PPU COOL PUMP — If Equipped
F105	–	10 Amp Red	ICS/HVAC
F106	40 Amp Green	–	ESC-PUMP MTR
F107	–	20 Amp Yellow	TRLR TOW STOP/TURN LT — If Equipped
F108	–	15 Amp Blue	HD ACCY #4 — If Equipped
F109	–	20 Amp Yellow	TRLR TOW STOP/TURN RT — If Equipped
F110	30 Amp Pink	–	POWER INVERTER
F111	20 Amp Blue	–	TRLR TOW BACKUP — If Equipped

* Customer can select to switch the Cargo Power Outlet from F43 battery fed power to this position F45 which is fed when the ignition in ON.

CAUTION!

- When installing the power distribution center cover, it is important to ensure the cover is properly positioned and fully latched. Failure to do so may allow water to get into the power distribution center and possibly result in an electrical system failure.
- When replacing a blown fuse, it is important to use only a fuse having the correct amperage rating. The use of a fuse with a rating other than indicated may result in a dangerous electrical system overload. If a properly rated fuse continues to blow, it indicates a problem in the circuit that must be corrected.

JACKING AND TIRE CHANGING

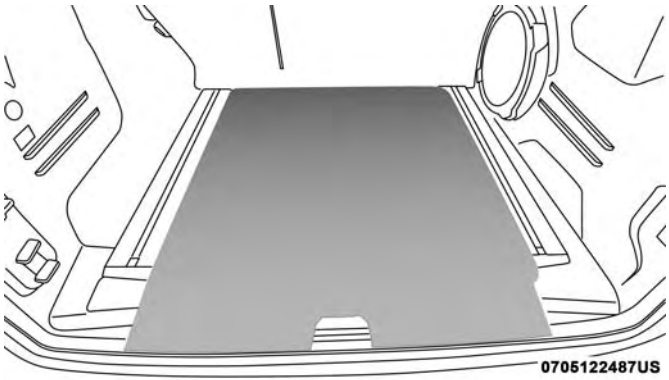
WARNING!

- Do not attempt to change a tire on the side of the vehicle close to moving traffic. Pull far enough off the road to avoid the danger of being hit when operating the jack or changing the wheel.
- Being under a jacked-up vehicle is dangerous. The vehicle could slip off the jack and fall on you. You could be crushed. Never put any part of your body under a vehicle that is on a jack. If you need to get under a raised vehicle, take it to a service center where it can be raised on a lift.
- Never start or run the engine while the vehicle is on a jack.
- The jack is designed to be used as a tool for changing tires only. The jack should not be used to lift the vehicle for service purposes. The vehicle should be jacked on a firm level surface only. Avoid ice or slippery areas.

Jack Location

The jack and lug wrench are located in the rear cargo area. To remove jack and tools proceed as follows:

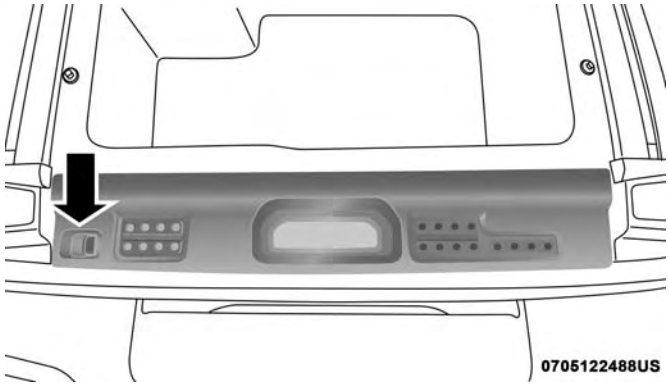
1. Lift the load floor in the cargo area.



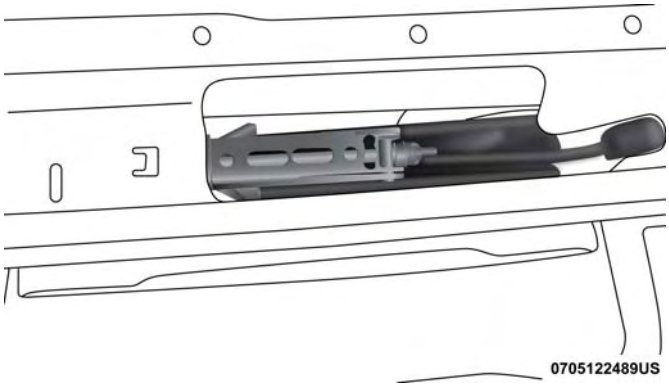
Load Floor

NOTE: The load floor can be removed for easier access by pulling the load floor directly rearward.

2. Remove the hardware storage cover by pinching the latch on the left side and pulling upward.

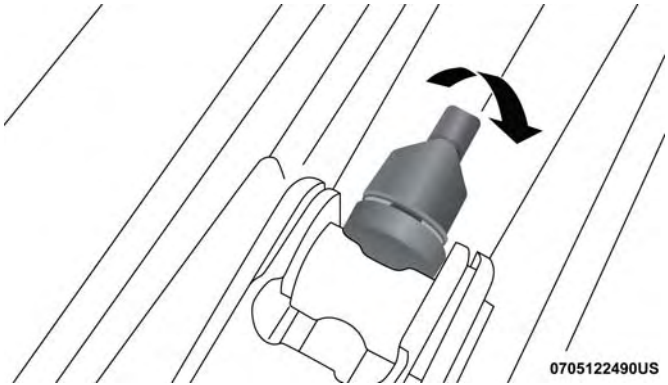


Hardware Storage Cover Latch



Jack And Lug Wrench

3. Turn the black plastic wing nut counterclockwise to loosen the jack from the storage bin.

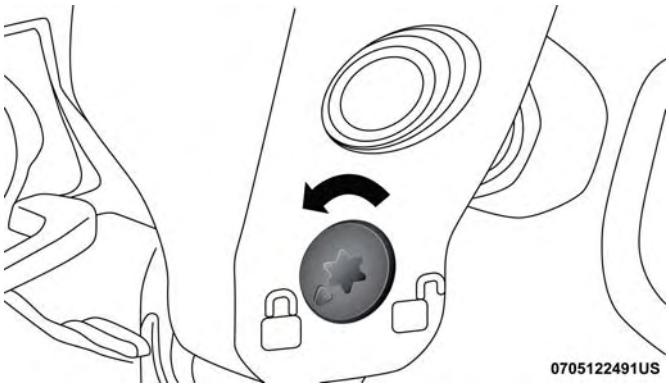


Plastic Wing Nut Location

4. Remove tool kit and assemble tools.

Spare Tire Removal

1. To remove the spare tire from the carrier, remove the tire cover, if equipped.
2. Remove the Rear Camera Cover by turning the lock bolt to the left with the #T40 Torx head driver and ratchet from the supplied tool kit.



Unlock Rear Camera Cover

3. Remove the lug nuts with the lug wrench turning them counterclockwise. If equipped, remove the locking lug nut with the lock key (located in the glove box) turning it counterclockwise.

Stowing The Replaced Spare Tire

1. Mount the spare tire onto the carrier. Torque down lug nuts and locking lug nut.
2. Reinstall the camera cover and the return lock bolt to the lock position with the provided tools.
3. Reinstall the tire cover if applicable.

NOTE: If you have added aftermarket accessories to the spare tire mounted carrier, it cannot exceed a gross weight of 85 lbs (38.5 kg) including the weight of the spare tire.

Preparations For Jacking

1. Park on a firm, level surface. Avoid ice or slippery areas.

WARNING!

Do not attempt to change a tire on the side of the vehicle close to moving traffic, pull far enough off the road to avoid being hit when operating the jack or changing the wheel.

2. Turn on the Hazard Warning flasher.
3. Apply the parking brake.

4. Shift the automatic transmission into PARK, or a manual transmission into REVERSE.
5. Turn the ignition to LOCK.
6. Block both the front and rear of the wheel diagonally opposite the jacking position. For example, if the right front wheel is being changed, block the left rear wheel.

NOTE: Passengers should not remain in the vehicle when the vehicle is being jacked.

Jacking Instructions

WARNING!

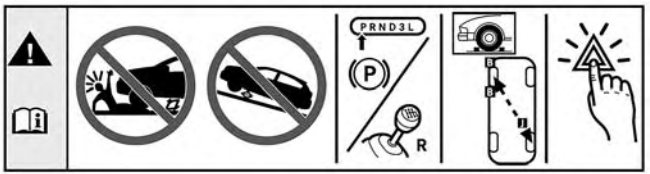
Carefully follow these tire changing warnings to help prevent personal injury or damage to your vehicle:

- **Always park on a firm, level surface as far from the edge of the roadway as possible before raising the vehicle.**
- **Turn on the Hazard Warning flashers.**
- **Block the wheel diagonally opposite the wheel to be raised.**

(Continued)

WARNING! ***(Continued)***

- **Set the parking brake firmly and set an automatic transmission in PARK; a manual transmission in REVERSE.**
- **Never start or run the engine with the vehicle on a jack.**
- **Do not let anyone sit in the vehicle when it is on a jack.**
- **Do not get under the vehicle when it is on a jack. If you need to get under a raised vehicle, take it to a service center where it can be raised on a lift.**
- **Only use the jack in the positions indicated and for lifting this vehicle during a tire change.**
- **If working on or near a roadway, be extremely careful of motor traffic.**
- **To assure that spare tires, flat or inflated, are securely stowed, spares must be stowed with the valve stem facing the ground.**



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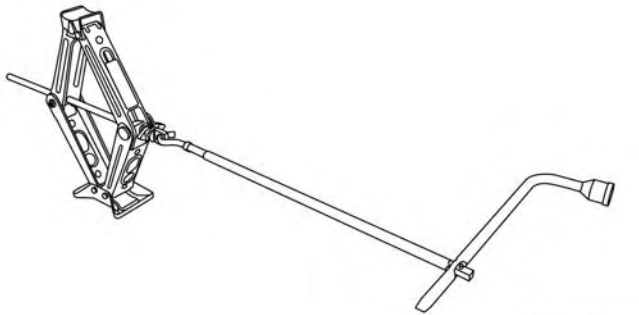
Jack Warning Label

CAUTION!

Do not attempt to raise the vehicle by jacking on locations other than those indicated.

1. Remove the spare tire, jack and tools from the stored location.
2. Loosen (but do not remove) the wheel lug nuts by turning them to the left one turn while the wheel is still on the ground.
3. Assemble the jack and jacking tools. Connect the jack handle driver to the extension, then to the lug wrench.



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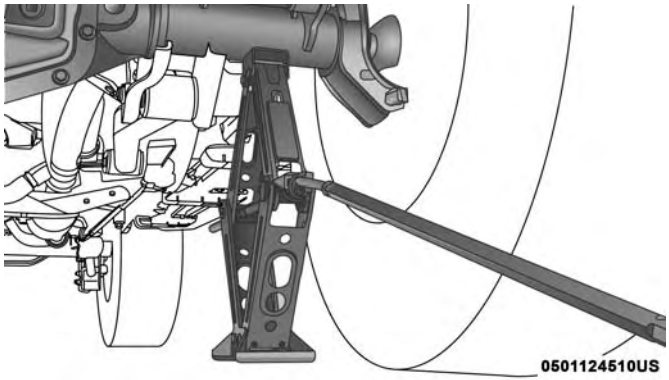
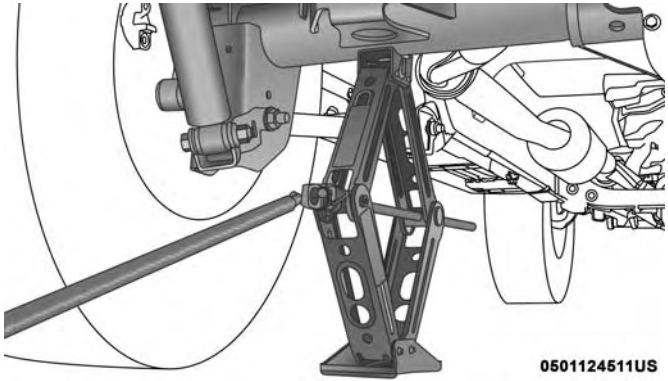
Assembled Jack And Tools

4. Operate the jack from the front or the rear of the vehicle. Place the jack under the axle tube, as shown. **Do not raise the vehicle until you are sure the jack is fully engaged.**



Front Jacking Location



Rear Jacking Location

5. Raise the vehicle by turning the jack screw clockwise. Raise the vehicle only until the tire just clears the surface and enough clearance is obtained to install the spare tire. Minimum tire lift provides maximum stability.

WARNING!

Raising the vehicle higher than necessary can make the vehicle less stable. It could slip off the jack and hurt someone near it. Raise the vehicle only enough to remove the tire.

6. Remove the lug nuts and wheel.
7. Position the spare wheel/tire on the vehicle and install the lug nuts with the cone-shaped end toward the wheel. Lightly tighten the lug nuts clockwise.

WARNING!

To avoid the risk of forcing the vehicle off the jack, do not tighten the wheel nuts fully until the vehicle has been lowered. Failure to follow this warning may result in serious injury.

8. Lower the vehicle by turning the jack screw to the left, and remove the jack.
9. Finish tightening the lug nuts. Push down on the wrench while tightening for increased leverage. Alternate nuts until each nut has been tightened twice. Refer to "Torque Specifications" in "Technical Specifications" for correct lug nut torque.
10. Remove the jack assembly and wheel blocks.
11. Secure the jack and tools in their proper locations.
12. Secure the damaged wheel/tire on the spare tire carrier. Torque down lug nuts and locking lug nut.
13. Reinstall the camera cover and return the lock bolt to the lock position by turning the lock to the right using the provided #40 Torx head driver and ratchet.

WARNING!

A loose tire or jack thrown forward in a collision or hard stop, could endanger the occupants of the vehicle. Always stow the jack parts and the spare tire in the places provided.

Road Tire Installation

1. Mount the road tire on the axle.
2. Install the remaining lug nuts with the cone shaped end of the nut toward the wheel. Lightly tighten the lug nuts.

WARNING!

To avoid the risk of forcing the vehicle off the jack, do not tighten the wheel nuts fully until the vehicle has been lowered. Failure to follow this warning may result in serious injury.

3. Lower the vehicle to the ground by turning the jack handle counterclockwise.
4. Finish tightening the lug nuts. Push down on the wrench while at the end of the handle for increased leverage. Tighten the lug nuts in a star pattern until each nut has been tightened twice. For the correct lug nut torque refer to "Torque Specifications" in "Technical Specifications". If in doubt about the correct tightness, have them checked with a torque wrench by your authorized dealer or service station.
5. After 25 miles (40 km), check the lug nut torque with a torque wrench to ensure that all lug nuts are properly seated against the wheel.

MANUAL PARK RELEASE

WARNING!

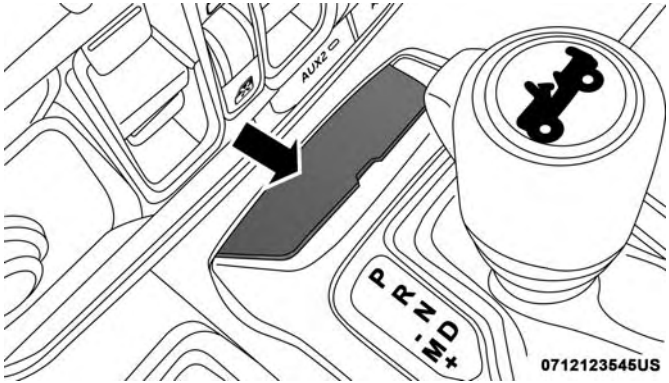
Always secure your vehicle by fully applying the parking brake before activating the Manual Park Release. In addition, you should be seated in the driver's seat with your foot firmly on the brake pedal when activating the Manual Park Release. Activating the Manual Park Release will allow your vehicle to roll away if it is not secured by the parking brake, or by proper connection to a tow vehicle. Activating the Manual Park Release on an unsecured vehicle could lead to serious injury or death for those in or around the vehicle.

In order to push or tow the vehicle in cases where the transmission will not shift out of PARK (such as a dead battery), a Manual Park Release is available.

Follow these steps to use the Manual Park Release:

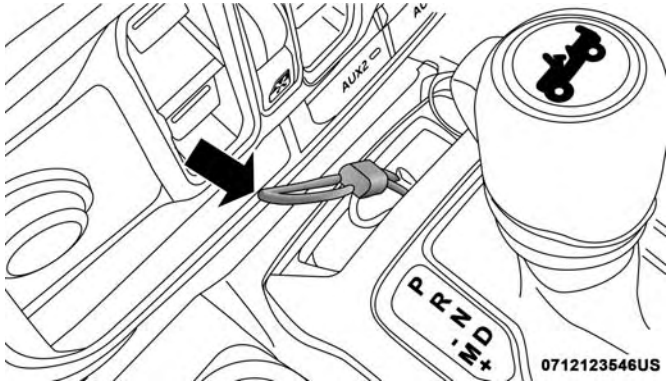
1. Firmly apply the parking brake.

2. Remove the manual park release cover, located above the gear selector, to access the release tether strap.



Manual Park Release Cover

3. Using a small screwdriver or similar tool, fish the tether strap up through the opening in the console base.



Tether Strap

4. Press and maintain firm pressure on the brake pedal.
5. Pull the tether strap up and to the left until the release lever locks into place in the vertical position. The vehicle is now out of PARK and can be moved. Release the parking brake only when the vehicle is securely connected to a tow vehicle.

To Reset The Manual Park Release:

1. Pull upward on the tether strap, releasing it from the "locked" position.
2. Lower the Manual Park Release lever downward and to the right, into its original position.
3. Pull up gently on the tether strap to confirm that the lever is locked in its stowed position.
4. Tuck the tether strap into the base of the console, and reinstall the cover.

JUMP STARTING

If your vehicle has a discharged battery, it can be jump started using a set of jumper cables and a battery in another vehicle, or by using a portable battery booster pack. Jump starting can be dangerous if done improperly, so please follow the procedures in this section carefully.

WARNING!

Do not attempt jump starting if the battery is frozen. It could rupture or explode and cause personal injury.

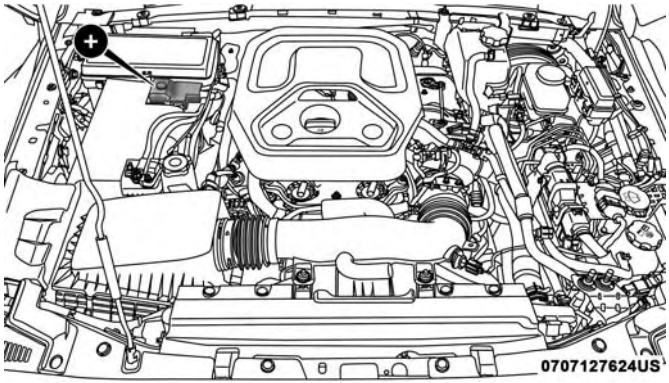
CAUTION!

Do not use a portable battery booster pack or any other booster source with a system voltage greater than 12 Volts or damage to the battery, starter motor, alternator or electrical system may occur.

NOTE: When using a portable battery booster pack, follow the manufacturer's operating instructions and precautions.

Preparations For Jump Start

The battery in your vehicle is located in the right rear of the engine compartment, behind the Power Distribution Center.



Positive Battery Post

NOTE: The positive battery post is covered with a protective cap. Lift up on the cap to gain access to the post.

WARNING!

- **Take care to avoid the radiator cooling fan whenever the hood is raised. It can start anytime the ignition switch is ON. You can be injured by moving fan blades.**
- **Remove any metal jewelry such as rings, watch bands and bracelets that could make an inadvertent electrical contact. You could be seriously injured.**
- **Batteries contain sulfuric acid that can burn your skin or eyes and generate hydrogen gas which is flammable and explosive. Keep open flames or sparks away from the battery.**

1. Apply the parking brake, shift the automatic transmission into PARK (manual transmission in NEUTRAL) and turn the ignition to LOCK.
2. Turn off the heater, radio, and all unnecessary electrical accessories.
3. If using another vehicle to jump start the battery, park the vehicle within the jumper cable's reach, apply the parking brake and make sure the ignition is OFF.

WARNING!

Do not allow vehicles to touch each other as this could establish a ground connection and personal injury could result.

Jump Starting Procedure

WARNING!

Failure to follow this jump starting procedure could result in personal injury or property damage due to battery explosion.

CAUTION!

Failure to follow these procedures could result in damage to the charging system of the booster vehicle or the discharged vehicle.

NOTE: Make sure at all times that unused ends of jumper cables are not contacting each other or either vehicle while making connections.

Connecting The Jumper Cables

1. Connect the positive **(+)** end of the jumper cable to the remote positive **(+)** post of the discharged vehicle.
2. Connect the opposite end of the positive **(+)** jumper cable to the positive **(+)** post of the booster battery.
3. Connect the negative end **(-)** of the jumper cable to the negative **(-)** post of the booster battery.
4. Connect the opposite end of the negative **(-)** jumper cable to a good engine ground (exposed metal part of the discharged vehicle's engine) away from the battery and the fuel injection system.

WARNING!

Do not connect the jumper cable to the negative (-) post of the discharged battery. The resulting electrical spark could cause the battery to explode and could result in personal injury. Only use the specific ground point, do not use any other exposed metal parts.

5. Start the engine in the vehicle that has the booster battery, let the engine idle a few minutes, and then start the engine in the vehicle with the discharged battery.

CAUTION!

Do not run the booster vehicle engine above 2000 rpm since it provides no charging benefit, wastes fuel and can damage booster vehicle engine.

6. Once the engine is started, remove the jumper cables in the reverse sequence:

Disconnecting The Jumper Cables

1. Disconnect the negative **(-)** end of the jumper cable from the engine ground of the vehicle with the discharged battery.
2. Disconnect the opposite end of the negative **(-)** jumper cable from the negative **(-)** post of the booster battery.
3. Disconnect the positive **(+)** end of the jumper cable from the positive **(+)** post of the booster battery.
4. Disconnect the opposite end of the positive **(+)** jumper cable from the remote positive **(+)** post of the discharged vehicle.
5. Reinstall the protective cover over the remote positive **(+)** post of the discharged vehicle.

If frequent jump starting is required to start your vehicle you should have the battery and charging system tested at an authorized dealer.

CAUTION!

Accessories plugged into the vehicle power outlets draw power from the vehicle's battery, even when not in use (i.e., cellular devices, etc.). Eventually, if plugged in long enough without engine operation, the vehicle's battery will discharge sufficiently to degrade battery life and/or prevent the engine from starting.

IF YOUR ENGINE OVERHEATS

In any of the following situations, you can reduce the potential for overheating by taking the appropriate action.

- On the highways — slow down.
- In city traffic — while stopped, shift transmission into NEUTRAL, but do not increase engine idle speed.

CAUTION!

Driving with a hot cooling system could damage your vehicle. If the temperature gauge reads HOT (H), pull over and stop the vehicle. Idle the vehicle with the air conditioner turned off until the pointer drops back into the normal range. If the pointer remains on HOT (H), and you hear continuous chimes, turn the engine off immediately and call for service.

NOTE: There are steps that you can take to slow down an impending overheat condition:

- If your air conditioner (A/C) is on, turn it off. The A/C system adds heat to the engine cooling system and turning the A/C off can help remove this heat.
- You can also turn the temperature control to maximum heat, the mode control to floor and the blower control to high. This allows the heater core to act as a supplement to the radiator and aids in removing heat from the engine cooling system.

WARNING!

You or others can be badly burned by hot engine coolant (antifreeze) or steam from your radiator. If you see or hear steam coming from under the hood, do not open the hood until the radiator has had time to cool. Never try to open a cooling system pressure cap when the radiator or coolant bottle is hot.

FREEING A STUCK VEHICLE

If your vehicle becomes stuck in mud, sand or snow, it can often be moved using a rocking motion. Turn the steering wheel right and left to clear the area around the front wheels. For vehicles with automatic transmission, push and hold the lock button on the gear selector. Then, shift back and forth between DRIVE and REVERSE (with automatic transmission) or SECOND GEAR and REVERSE (with manual transmission), while gently pressing the accelerator. Use the least amount of accelerator pedal pressure that will maintain the rocking motion, without spinning the wheels or racing the engine.

NOTE:

- For vehicles with automatic transmission: Shifts between DRIVE and REVERSE can only be achieved at wheel speeds of 5 mph (8 km/h) or less. Whenever the transmission remains in NEUTRAL for more than 2 seconds, you must press the brake pedal to engage DRIVE or REVERSE.
- Push the ″ESC Off″ switch to place the Electronic Stability Control (ESC) system in ″Partial Off″ mode before rocking the vehicle. Refer to "Electronic Brake Control System" in "Safety" for further information. Once the vehicle has been freed, push the ″ESC Off″ switch again to restore ″ESC On″ mode.

WARNING!

Fast spinning tires can be dangerous. Forces generated by excessive wheel speeds may cause damage, or even failure, of the axle and tires. A tire could explode and injure someone. Do not spin your vehicle's wheels faster than 30 mph (48 km/h) or for longer than 30 seconds continuously without stopping when you are stuck and do not let anyone near a spinning wheel, no matter what the speed.

CAUTION!

- **Racing the engine or spinning the wheels may lead to transmission overheating and failure. Allow the engine to idle with the transmission in NEUTRAL for at least one minute after every five rocking-motion cycles. This will minimize overheating and reduce the risk of clutch or transmission failure during prolonged efforts to free a stuck vehicle.**
- **When "rocking" a stuck vehicle by shifting between DRIVE/SECOND GEAR and REVERSE, do not spin the wheels faster than 15 mph (24 km/h), or drivetrain damage may result.**
- **Revving the engine or spinning the wheels too fast may lead to transmission overheating and failure. It can also damage the tires. Do not spin the wheels above 30 mph (48 km/h) while in gear (no transmission shifting occurring).**

TOWING A DISABLED VEHICLE

This section describes procedures for towing a disabled vehicle using a commercial towing service. If the transmission and drivetrain are operable, disabled vehicles may also be towed as described under "Recreational Towing" in the "Starting And Operating" section.

Towing Condition	Wheels OFF The Ground	4WD MODELS
Flat Tow	NONE	**See instructions under "Recreational Towing" in "Starting And Operating".** • Automatic Transmission in **PARK** • Manual Transmission in gear (**NOT** in NEUTRAL) • Transfer Case in **NEUTRAL** • Tow in **forward** direction
Wheel Lift Or Dolly Tow	Front	**NOT ALLOWED**
	Rear	**NOT ALLOWED**
Flatbed	**ALL**	**BEST METHOD**

Proper towing or lifting equipment is required to prevent damage to your vehicle. Use only tow bars and other equipment designed for this purpose, following equipment manufacturer's instructions. Use of safety chains is mandatory. Attach a tow bar or other towing device to main structural members of the vehicle, not to bumpers or associated brackets. State and local laws regarding vehicles under tow must be observed.

If you must use the accessories (wipers, defrosters, etc.) while being towed, the ignition must be in the ON/RUN position, not the ACC position.

If the key fob is unavailable, or the vehicle's battery is discharged, refer to "Manual Park Release" in this section for instructions on shifting the transmission out of PARK in order to move the vehicle.

CAUTION!

- **Do not use sling type equipment when towing. Vehicle damage may occur.**
- **When securing the vehicle to a flat bed truck, do not attach to front or rear suspension components. Damage to your vehicle may result from improper towing.**

Four–Wheel Drive Models

The manufacturer recommends towing with all wheels **OFF** the ground. Acceptable methods are to tow the vehicle on a flatbed or with one end of the vehicle raised and the opposite end on a towing dolly.

If flatbed equipment is not available and the transfer case is operable, the vehicle may be towed (in the forward direction, with **ALL** wheels on the ground), **IF** the transfer case is in **NEUTRAL** (N) and the transmission is in **PARK** (for automatic transmissions) or in gear (**NOT** in **NEUTRAL**, for manual transmissions). Refer to "Recreational Towing" in "Starting And Operating" for detailed instructions.

CAUTION!

- **Front or rear wheel lifts must not be used (if the remaining wheels are on the ground). Internal damage to the transmission or transfer case will occur if a front or rear wheel lift is used when towing.**
- **Towing this vehicle in violation of the above requirements can cause severe transmission and/or transfer case damage. Damage from improper towing is not covered under the New Vehicle Limited Warranty.**

Emergency Tow Hooks — If Equipped

If your vehicle is equipped with tow hooks, they are mounted in the front and the rear.

NOTE: For off-road recovery, it is recommended to use both of the front tow hooks to minimize the risk of damage to the vehicle. Always use an appropriately rated tow strap.

WARNING!

- **Do not use a chain for freeing a stuck vehicle. Chains may break, causing serious injury or death.**
- **Stand clear of vehicles when pulling with tow hooks. Tow straps may become disengaged, causing serious injury.**

CAUTION!

Tow hooks are for emergency use only, to rescue a vehicle stranded off road. Do not use tow hooks for tow truck hookup or highway towing. You could damage your vehicle. Tow straps are recommended when towing the vehicle, chains may cause vehicle damage.

ENHANCED ACCIDENT RESPONSE SYSTEM (EARS)

This vehicle is equipped with an Enhanced Accident Response System.

Please refer to "Occupant Restraint Systems" in "Safety" for further information on the Enhanced Accident Response System (EARS) function.

EVENT DATA RECORDER (EDR)

This vehicle is equipped with an Event Data Recorder (EDR). The main purpose of an EDR is to record data that will assist in understanding how a vehicle's systems performed under certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle.

Please refer to "Occupant Restraint Systems" in "Safety" for further information on the Event Data Recorder (EDR).

SERVICING AND MAINTENANCE

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SCHEDULED SERVICING

Your vehicle is equipped with an automatic oil change indicator system. The oil change indicator system will remind you that it is time to take your vehicle in for scheduled maintenance.

Based on engine operation conditions, the oil change indicator message will illuminate. This means that service is required for your vehicle. Operating conditions such as frequent short-trips, trailer tow, extremely hot or cold ambient temperatures will influence when the "Change Oil" or "Oil Change Required" message is displayed. Severe Operating Conditions can cause the change oil message to illuminate as early as 3,500 miles (5,600 km) since last reset. Have your vehicle serviced as soon as possible, within the next 500 miles (805 km).

On vehicles equipped with instrument cluster display, "Oil Change Required" will be displayed and a single chime will sound, indicating that an oil change is necessary.

On non-instrument cluster display equipped vehicles, "Change Oil" will flash in the instrument cluster odometer and a single chime will sound, indicating that an oil change is necessary.

Your authorized dealer will reset the oil change indicator message after completing the scheduled oil change. If a scheduled oil change is performed by someone other than your authorized dealer, the message can be reset by referring to the steps described under "Warning And Indicator Lights" or "Instrument Cluster Display" in "Getting To Know Your Instrument Panel" for further information.

NOTE: Under no circumstances should oil change intervals exceed 10,000 miles (16,000 km), twelve months or 350 hours of engine run time, whichever comes first. The 350 hours of engine run or idle time is generally only a concern for fleet customers.

Severe Duty All Models

Change Engine Oil at 4,000 miles (6,500 km) or 350 hours of engine run time if the vehicle is operated in a dusty and off road environment or is operated predominately at idle or only very low engine RPM's. This type of vehicle use is considered Severe Duty.

Once A Month Or Before A Long Trip:

- Check engine oil level
- Check windshield washer fluid level
- Check the tire inflation pressures and look for unusual wear or damage
- Check the fluid levels of the coolant reservoir, brake master cylinder, power steering and automatic transmission, and fill as needed
- Check function of all interior and exterior lights

Maintenance Plan

Required Maintenance Intervals

Refer to the maintenance plan on the following pages for the required maintenance intervals.

At Every Oil Change Interval As Indicated By Oil Change Indicator System:
• Change oil and filter
• Rotate the tires **Rotate at the first sign of irregular wear, even if it occurs before the oil indicator system turns on**
• Inspect battery and clean and tighten terminals as required
• Inspect automatic transmission fluid if equipped with dipstick
• Inspect brake pads, shoes, rotors, drums, hoses and park brake
• Inspect engine cooling system protection and hoses
• Inspect exhaust system
• Inspect engine air cleaner if using in dusty or off-road conditions
• Inspect all door latches for presence of grease, reapply if necessary.

Mileage or time passed (whichever comes first)	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	100,000	110,000	120,000	130,000	140,000	150,000
Or Years:	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Or Kilometers:	32,000	48,000	64,000	80,000	96,000	112,000	128,000	144,000	160,000	176,000	192,000	208,000	224,000	240,000
Additional Inspections														
Inspect the CV/Universal joints.	X		X		X		X		X		X		X	
Inspect front suspension, tie rod ends, and replace if necessary.	X		X		X		X		X		X		X	
Inspect the front and rear axle fluid.	X				X				X				X	
Inspect the brake linings, replace as necessary	X		X		X		X		X		X		X	
Adjust parking brake on vehicles equipped with four wheel disc brakes.	X		X		X		X		X		X		X	
Inspect transfer case fluid.		X						X						X

Mileage or time passed (whichever comes first)	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	100,000	110,000	120,000	130,000	140,000	150,000
Or Years:	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Or Kilometers:	**32,000**	**48,000**	**64,000**	**80,000**	**96,000**	**112,000**	**128,000**	**144,000**	**160,000**	**176,000**	**192,000**	**208,000**	**224,000**	**240,000**
Additional Maintenance														
Replace engine air cleaner filter.		X			X			X			X			X
Replace air conditioning/cabin air filter.	X		X		X		X		X		X		X	
Replace Spark Plugs – 2.0L Engine**		X			X			X			X			X
Replace spark plugs – 3.6L Engine**									X					
Flush and replace the engine, intercooler (if equipped), battery (if equipped), and Motor Generator Unit (MGU) (if equipped) coolant at 10 years or 150,000 miles (240,000 km) whichever comes first.									X					X

Mileage or time passed (whichever comes first)	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	100,000	110,000	120,000	130,000	140,000	150,000
Or Years:	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Or Kilometers:	32,000	48,000	64,000	80,000	96,000	112,000	128,000	144,000	160,000	176,000	192,000	208,000	224,000	240,000
Change the manual transmission fluid if using your vehicle for any of the following: trailer towing, snow plowing, heavy loading, taxi, police, delivery service (commercial service), off-road, desert operation or more than 50% of your driving is at sustained high speeds during hot weather, above 90°F (32°C).		X			X			X			X			X
Change transfer case fluid if using your vehicle for any of the following: police, taxi, fleet, or frequent trailer towing.					X						X			
Inspect and replace PCV valve if necessary.									X					
Change front and rear axle fluid if using your vehicle for police, taxi, fleet, off-road or frequent trailer towing.			X				X				X			

** The spark plug change interval is mileage based only, yearly intervals do not apply.

WARNING!

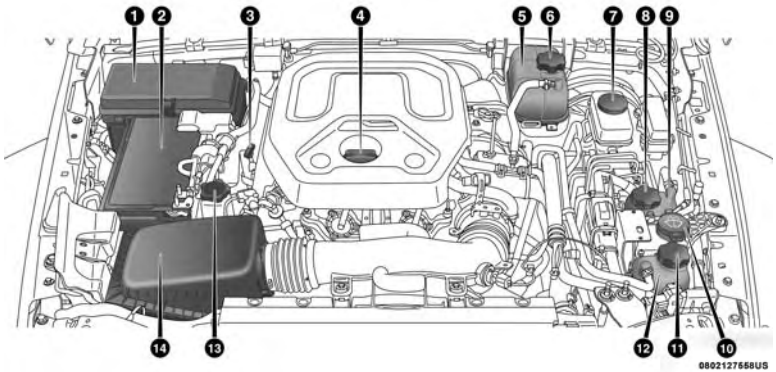
- **You can be badly injured working on or around a motor vehicle. Do only service work for which you have the knowledge and the right equipment. If you have any doubt about your ability to perform a service job, take your vehicle to a competent mechanic.**
- **Failure to properly inspect and maintain your vehicle could result in a component malfunction and effect vehicle handling and performance. This could cause an accident.**

Heavy Duty Use Of The Vehicle

Change engine oil at 4,000 miles (6,500 km) or 350 hours of engine run time if the vehicle is operated in a dusty and off road environment or is operated predominately at idle or only very low engine RPM's. This type of vehicle use is considered Severe Duty.

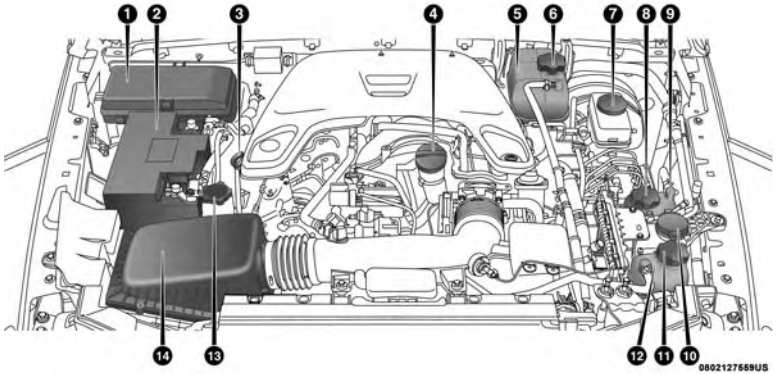
ENGINE COMPARTMENT

2.0L Engine



1 — Power Distribution Center (Fuses)
2 — Battery
3 — Engine Oil Dipstick
4 — Engine Oil Fill
5 — Engine Coolant Reservoir
6 — Engine Coolant Pressure Cap
7 — Brake Fluid Reservoir
8 — Power Pack Unit Pressure Cap — If Equipped
9 — Power Pack Unit Pressure Reservoir — If Equipped
10 — Washer Fluid Reservoir
11 — Intercooler/Motor Generator Unit (If Equipped) Coolant Pressure Cap
12 — Intercooler/Motor Generator Unit (If Equipped) Coolant Reservoir
13 — Power Steering Fluid Reservoir
14 — Engine Air Cleaner

3.6L Engine



1 — Power Distribution Center (Fuses)
2 — Battery
3 — Engine Oil Dipstick
4 — Engine Oil Fill
5 — Engine Coolant Reservoir
6 — Engine Coolant Pressure Cap
7 — Brake Fluid Reservoir
8 — Power Pack Unit Pressure Cap — If Equipped
9 — Power Pack Unit Pressure Reservoir — If Equipped
10 — Washer Fluid Reservoir
11 — Motor Generator Unit Coolant Pressure Cap — If Equipped
12 — Motor Generator Unit Coolant Reservoir — If Equipped
13 — Power Steering Fluid Reservoir
14 — Engine Air Cleaner

Checking Oil Level

To ensure proper lubrication of your vehicle's engine, the engine oil must be maintained at the correct level. The engine oil level should be checked five minutes after a warmed up engine has been shut off.

Checking the oil while the vehicle is on level ground will improve the accuracy of the oil level readings. Always maintain the oil level within the SAFE zone on the dipstick. Adding 1 quart (0.95 liters) of oil when the reading is at the bottom of the crosshatch zone will result in a reading at the top of the crosshatch zone on these engines.

CAUTION!

Overfilling or underfilling the crankcase will cause aeration or loss of oil pressure. This could damage your engine.

Adding Washer Fluid

The fluid reservoir for the windshield washers and the rear window washer (if equipped) is shared. The fluid reservoir is located in the engine compartment. Be sure to check the fluid level at regular intervals. Fill the reservoir with windshield washer solvent only (not radiator antifreeze). When refilling the washer fluid reservoir, take some washer fluid and apply it to a cloth or towel and wipe clean the wiper blades; this will help blade performance.

To prevent freeze-up of your windshield washer system in cold weather, select a solution or mixture that meets or exceeds the temperature range of your climate. This rating information can be found on most washer fluid containers.

WARNING!

Commercial windshield washer solvents are flammable. They could ignite and burn you. Care must be exercised when filling or working around the washer solution.

Maintenance-Free Battery

Your vehicle is equipped with a maintenance-free battery. You will never have to add water, nor is periodic maintenance required.

WARNING!

- **Battery fluid is a corrosive acid solution and can burn or even blind you. Do not allow battery fluid to**

(Continued)

WARNING! *(Continued)*

contact your eyes, skin, or clothing. Do not lean over a battery when attaching clamps. If acid splashes in eyes or on skin, flush the area immediately with large amounts of water. Refer to "Jump Starting Procedure" in "In Case Of Emergency" for further information.

- **Battery gas is flammable and explosive. Keep flame or sparks away from the battery. Do not use a booster battery or any other booster source with an output greater than 12 Volts. Do not allow cable clamps to touch each other.**
- **Battery posts, terminals, and related accessories contain lead and lead compounds. Wash hands after handling.**

CAUTION!

- **It is essential when replacing the cables on the battery that the positive cable is attached to the positive post and the negative cable is attached to the negative post. Battery posts are marked positive (+) and negative (-)**

(Continued)

CAUTION! *(Continued)*

and are identified on the battery case. Cable clamps should be tight on the terminal posts and free of corrosion.

- **If a "fast charger" is used while the battery is in the vehicle, disconnect both vehicle battery cables before connecting the charger to the battery. Do not use a "fast charger" to provide starting voltage.**

DEALER SERVICE

An authorized dealer has the qualified service personnel, special tools, and equipment to perform all service operations in an expert manner. Service Manuals are available which include detailed service information for your vehicle. Refer to these Service Manuals before attempting any procedure yourself.

NOTE: Intentional tampering with emissions control systems may void your warranty and could result in civil penalties being assessed against you.

WARNING!

You can be badly injured working on or around a motor vehicle. Only do service work for which you have the knowledge and the proper equipment. If you have any doubt about your ability to perform a service job, take your vehicle to a competent mechanic.

Engine Oil

Change Engine Oil — Gasoline Engine

Refer to "Scheduled Servicing" in this section for the proper maintenance intervals.

NOTE: Under no circumstances should oil change intervals exceed 10,000 miles (16,000 km), 12 months or 350 hours of engine run time, whichever comes first. The 350 hours of engine run or idle time is generally only a concern for fleet customers.

Engine Oil Selection — 2.0L Engine

For best performance and maximum protection under all types of operating conditions, the manufacturer only recommends engine oils that are API Certified and meet the requirements of FCA Material Standard MS-13340.

Engine Oil Selection 3.6L Engine

For best performance and maximum protection under all types of operating conditions, the manufacturer only recommends engine oils that are API Certified and meet the requirements of FCA Material Standard MS-6395.

American Petroleum Institute (API) Engine Oil Identification Symbol

This symbol means that the oil has been certified by the American Petroleum Institute (API). The manufacturer only recommends API Certified engine oils.

This symbol certifies 0W-20, 5W-20, 0W-30, 5W-30 and 10W-30 engine oils.

CAUTION!

Do not use chemical flushes in your engine oil as the chemicals can damage your engine. Such damage is not covered by the New Vehicle Limited Warranty.

Engine Oil Viscosity (SAE Grade) — 2.0L Engine

Mopar SAE 5W-30 engine oil approved to FCA Material Standard MS-13340 such as Pennzoil, Shell Helix or equivalent is recommended for all operating temperatures. This engine oil improves low temperature starting and vehicle fuel economy.

The engine oil filler cap also shows the recommended engine oil viscosity for your engine. For information on engine oil filler cap location, refer to the "Engine Compartment" illustration in this section.

Lubricants which do not have both the engine oil certification mark and the correct SAE viscosity grade number should not be used.

Engine Oil Viscosity (SAE Grade) — 3.6L Engine

Mopar SAE 0W-20 engine oil approved to FCA Material Standard MS-6395 such as Pennzoil, Shell Helix or equivalent is recommended for all operating temperatures. This engine oil improves low temperature starting and vehicle fuel economy.

The engine oil filler cap also shows the recommended engine oil viscosity for your engine. For information on engine oil filler cap location, refer to the "Engine Compartment" illustration in this section.

Lubricants which do not have both the engine oil certification mark and the correct SAE viscosity grade number should not be used.

Synthetic Engine Oils

You may use synthetic engine oils provided the recommended oil quality requirements are met, and the recommended maintenance intervals for oil and filter changes are followed.

Synthetic engine oils which do not have both the engine oil certification mark and the correct SAE viscosity grade number should not be used.

Materials Added To Engine Oil

The manufacturer strongly recommends against the addition of any additives (other than leak detection dyes) to the engine oil. Engine oil is an engineered product and its performance may be impaired by supplemental additives.

Disposing Of Used Engine Oil And Oil Filters

Care should be taken in disposing of used engine oil and oil filters from your vehicle. Used oil and oil filters, indiscriminately discarded, can present a problem to the environment. Contact an authorized dealer, service station

or governmental agency for advice on how and where used oil and oil filters can be safely discarded in your area.

Engine Oil Filter

The engine oil filter should be replaced with a new filter at every engine oil change.

Engine Oil Filter Selection

This manufacturer's engines have a full-flow type disposable oil filter. Use a filter of this type for replacement. The quality of replacement filters varies considerably. Only high quality filters should be used to assure most efficient service. Mopar engine oil filters are high quality oil filters and are recommended.

Engine Air Cleaner Filter

Refer to the "Maintenance Plan" in this section for the proper maintenance intervals.

NOTE: Be sure to follow the "Severe Duty Conditions" maintenance interval if applicable.

WARNING!

The air induction system (air cleaner, hoses, etc.) can provide a measure of protection in the case of engine backfire. Do not remove the air induction system (air cleaner, hoses, etc.) unless such removal is necessary for repair or maintenance. Make sure that no one is near the engine compartment before starting the vehicle with the air induction system (air cleaner, hoses, etc.) removed. Failure to do so can result in serious personal injury.

Engine Air Cleaner Filter Selection

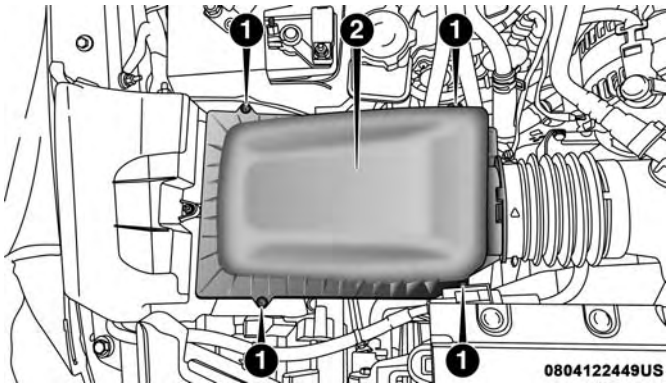
The quality of replacement engine air cleaner filters varies considerably. Only high quality filters should be used to assure most efficient service. Mopar engine air cleaner filters are a high quality filter and are recommended.

Engine Air Cleaner Filter Inspection and Replacement — Gasoline Engine

Follow the recommended maintenance intervals as shown in the Maintenance Schedule in this section.

Engine Air Cleaner Filter Removal

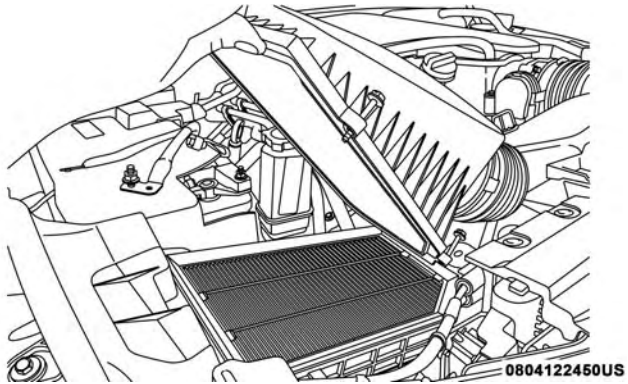
1. Loosen the retainers from the air cleaner cover using a suitable tool.



Air Cleaner Filter Cover

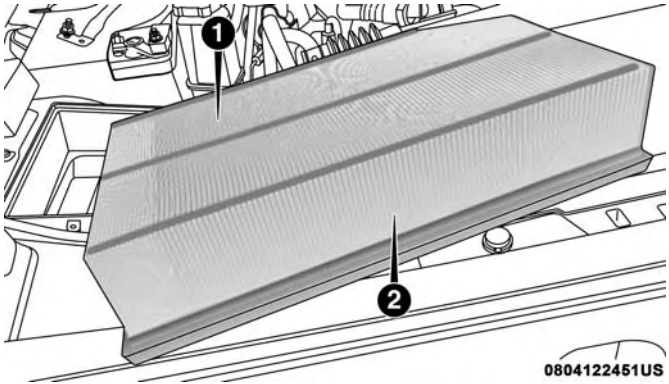
1 — Retainers
2 — Air Filter Cover

2. Lift the air cleaner cover to access the air cleaner filter.



Air Cleaner Filter Cover

3. Remove the air cleaner filter element from the housing assembly.



Air Cleaner Filter

1 — Air Cleaner Filter Inspection Surface
2 — Air Cleaner Filter

Engine Air Cleaner Filter Installation

NOTE: Inspect and clean the housing if dirt or debris is present before replacing the air filter element.

1. Install the air cleaner filter element into the housing assembly with the air cleaner filter inspection surface facing downward.
2. Tighten air cleaner cover retainers using a suitable tool.

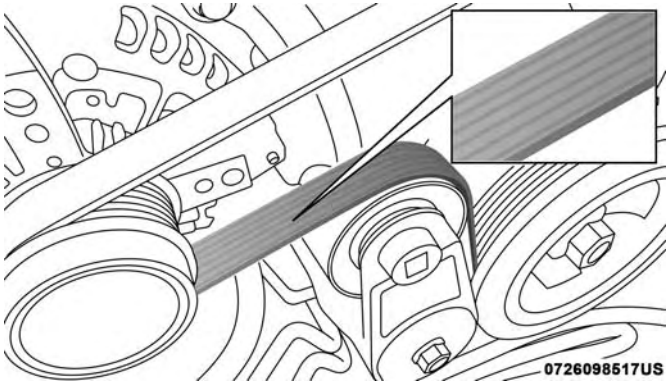
Accessory Drive Belt Inspection

WARNING!

- **Do not attempt to inspect an accessory drive belt with vehicle running.**
- **When working near the radiator cooling fan, disconnect the fan motor lead. The fan is temperature controlled and can start at any time regardless of ignition mode. You could be injured by the moving fan blades.**
- **You can be badly injured working on or around a motor vehicle. Only do service work for which you have the knowledge and the proper equipment. If you have any doubt about your ability to perform a service job, take your vehicle to a competent mechanic.**

When inspecting accessory drive belts, small cracks that run across ribbed surface of belt from rib to rib, are considered normal. These are not a reason to replace belt. However, cracks running along a rib (not across) are not

normal. Any belt with cracks running along a rib must be replaced. Also have the belt replaced if it has excessive wear, frayed cords or severe glazing.



Accessory Belt (Serpentine Belt)

Conditions that would require replacement:

- Rib chunking (one or more ribs has separated from belt body)
- Rib or belt wear
- Longitudinal belt cracking (cracks between two ribs)
- Belt slips
- "Groove jumping" (belt does not maintain correct position on pulley)
- Belt broken (note: identify and correct problem before new belt is installed)
- Noise (objectionable squeal, squeak, or rumble is heard or felt while drive belt is in operation)

Some conditions can be caused by a faulty component such as a belt pulley. Belt pulleys should be carefully inspected for damage and proper alignment.

Belt replacement on some models requires the use of special tools, we recommend having your vehicle serviced at an authorized dealer.

Air Conditioner Maintenance

For best possible performance, your air conditioner should be checked and serviced by an authorized dealer at the start of each warm season. This service should include cleaning of the condenser fins and a performance test. Drive belt tension should also be checked at this time.

WARNING!

- **Use only refrigerants and compressor lubricants approved by the manufacturer for your air conditioning system. Some unapproved refrigerants are flammable and can explode, injuring you. Other unapproved refrigerants or lubricants can cause the system to fail, requiring costly repairs. Refer to Warranty Information Book, located in your owner's information kit, for further warranty information.**
- **The air conditioning system contains refrigerant under high pressure. To avoid risk of personal injury or damage to the system, adding refrigerant or any repair requiring lines to be disconnected should be done by an experienced technician.**

CAUTION!

Do not use chemical flushes in your air conditioning system as the chemicals can damage your air conditioning components. Such damage is not covered by the New Vehicle Limited Warranty.

Refrigerant Recovery And Recycling R-134a — If Equipped

R-134a Air Conditioning Refrigerant is a hydrofluorocarbon (HFC) that is an ozone-friendly substance. The manufacturer recommends that air conditioning service be performed by an authorized dealer or other service facilities using recovery and recycling equipment.

NOTE: Use only manufacturer approved A/C system PAG compressor oil and refrigerants.

Refrigerant Recovery And Recycling — R–1234yf

R–1234yf Air Conditioning Refrigerant is a hydrofluoroolefin (HFO) that is endorsed by the Environmental Protection Agency and is an ozone-friendly substance with a low global-warming potential. The manufacturer recommends that air conditioning service be performed by an authorized dealer using recovery and recycling equipment.

NOTE: Use only manufacturer approved A/C system PAG compressor oil, and refrigerants.

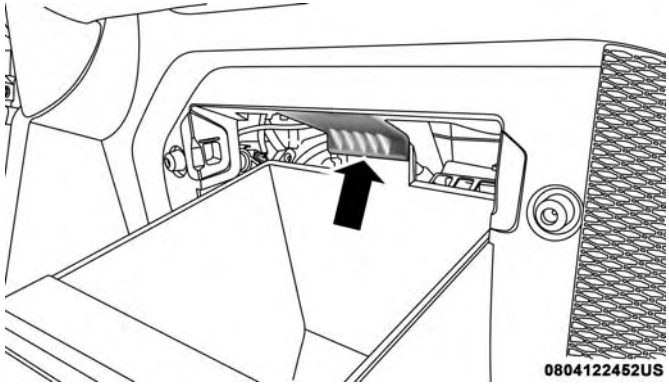
Air Conditioning Filter Replacement (A/C Air Filter)

WARNING!

Do not remove the cabin air filter while the vehicle is running, or while the ignition is in the ACC or ON/RUN mode. With the cabin air filter removed and the blower operating, the blower can contact hands and may propel dirt and debris into your eyes, resulting in personal injury.

The A/C air filter is located in the fresh air inlet behind the glove compartment. Perform the following procedure to replace the filter:

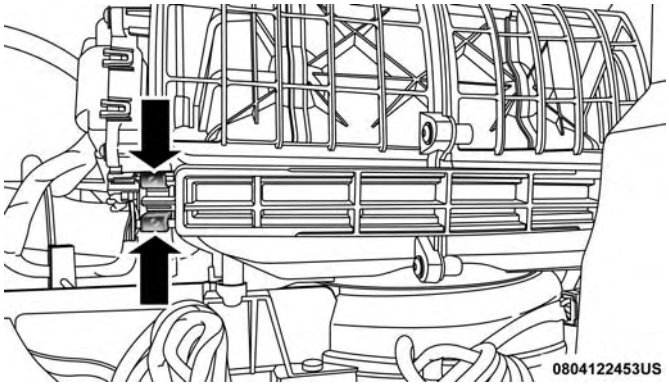
1. Open the glove compartment and remove all contents.
2. Push up on the glove compartment travel stop and lower the door.



Glove Compartment Travel Stop

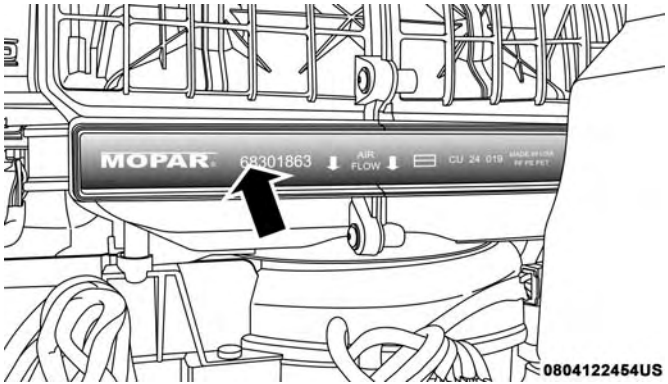
3. Pivot the glove compartment downward.

4. Disengage the two retaining tabs that secure the air filter access door to the HVAC housing.



Air Filter Retaining Tabs

5. Remove the air filter from the HVAC air inlet housing. Pull the filter elements out pinching them to the right for clearance.



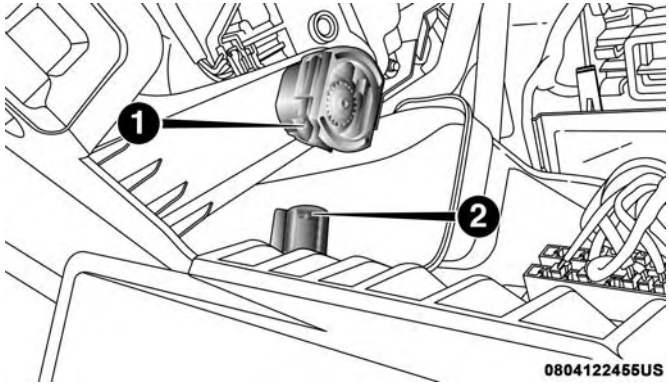
Air Filter

6. Install the A/C air filter with the air filter position indicators pointing in the same direction as removal.

CAUTION!

The cabin air filter is identified with an arrow to indicate airflow direction through the filter. Failure to properly install the filter will result in the need to replace it more often.

7. Close A/C Air Filter access door and secure retaining tabs.
8. Rotate the glove compartment door back into position ensuring you have properly engaged the travel damper.



Travel Dampener

1 — Travel Dampener Housing
2 — Travel Dampener Rod

Refer to the "Maintenance Plan" in this section for the proper maintenance intervals.

Body Lubrication

Locks and all body pivot points, including such items as seat tracks, door hinge pivot points and rollers, liftgate, tailgate, decklid, sliding doors and hood hinges, should be lubricated periodically with a lithium based grease, such as Mopar Spray White Lube to assure quiet, easy operation and to protect against rust and wear. Prior to the application of any lubricant, the parts concerned should be wiped clean to remove dust and grit; after lubricating excess oil and grease should be removed. Particular attention should also be given to hood latching components to ensure proper function. When performing other underhood services, the hood latch, release mechanism and safety catch should be cleaned and lubricated.

The external lock cylinders should be lubricated twice a year, preferably in the Fall and Spring. Apply a small amount of a high quality lubricant, such as Mopar Lock Cylinder Lubricant directly into the lock cylinder.

Windshield Wiper Blades

Clean the rubber edges of the wiper blades and the windshield periodically with a sponge or soft cloth and a mild nonabrasive cleaner. This will remove accumulations of salt or road film.

Operation of the wipers on dry glass for long periods may cause deterioration of the wiper blades. Always use washer fluid when using the wipers to remove salt or dirt from a dry windshield.

Avoid using the wiper blades to remove frost or ice from the windshield. Keep the blade rubber out of contact with petroleum products such as engine oil, gasoline, etc.

NOTE: Life expectancy of wiper blades varies depending on geographical area and frequency of use. Poor performance of blades may be present with chattering, marks, water lines or wet spots. If any of these conditions are present, clean the wiper blades or replace as necessary.

The wiper blades and wiper arms should be inspected periodically, not just when wiper performance problems are experienced. This inspection should include the following points:

- Wear Or Uneven Edges
- Foreign Material
- Hardening Or Cracking
- Deformation Or Fatigue

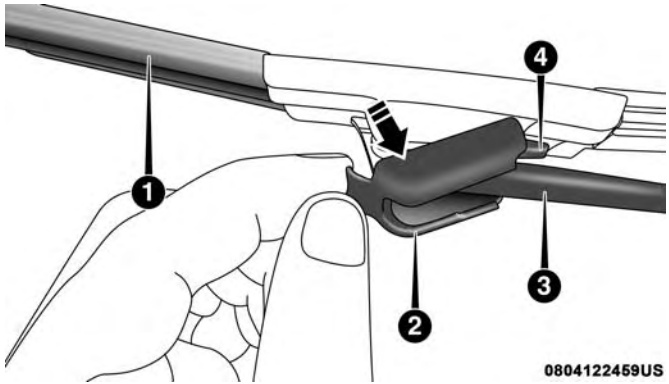
If a wiper blade or wiper arm is damaged, replace the affected wiper arm or blade with a new unit. Do not attempt to repair a wiper arm or blade that is damaged.

Wiper Blade Removal/Installation

CAUTION!

Do not allow the wiper arm to spring back against the glass without the wiper blade in place or the glass may be damaged.

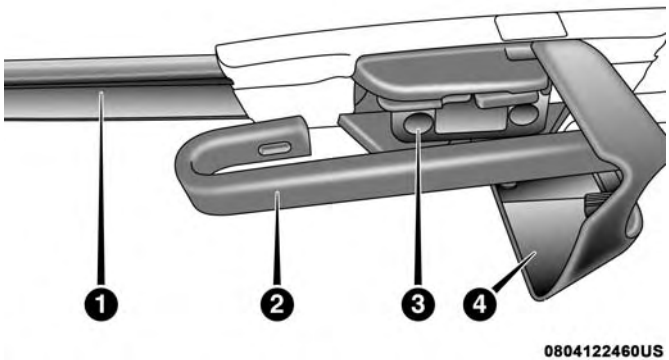
1. Lift the wiper arm to raise the wiper blade off of the glass, until the wiper arm is in the full up position.



Wiper Blade With Release Tab In Locked Position

1 — Wiper Blade
2 — Cover
3 — Wiper Arm
4 — Release Tab

2. To disengage the wiper blade from the wiper arm, raise the cover, press the release tab on the wiper blade and while holding the wiper arm with one hand, slide the wiper blade down towards the base of the wiper arm.



Wiper Blade With Release Tab In Unlocked Position

1 — Wiper Blade
2 — Wiper Arm J Hook
3 — J Hook Retainer
4 — Cover

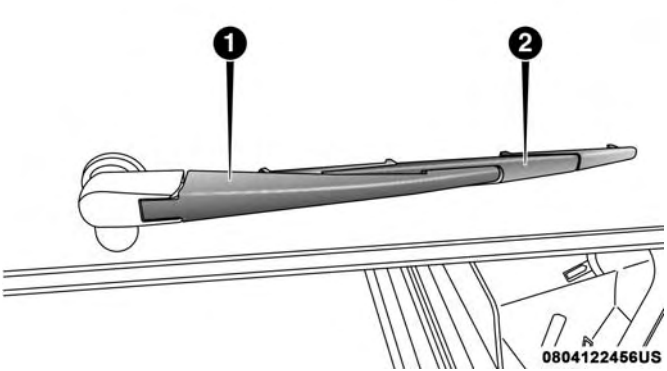
3. With the wiper blade disengaged, remove the wiper blade from the wiper arm.
4. Gently lower the wiper arm onto the glass.

Installing The Front Wipers

1. Lift the wiper arm off of the glass, until the wiper arm is in the full up position.
2. Position the wiper blade near the hook on the tip of the wiper arm.
3. Insert the hook on the tip of the arm through the opening in the wiper blade.
4. Slide the wiper blade up into the hook on the wiper arm, latch engagement will be accompanied by an audible click then close the cover.
5. Gently lower the wiper blade onto the glass.

Rear Wiper Blade Removal/Installation

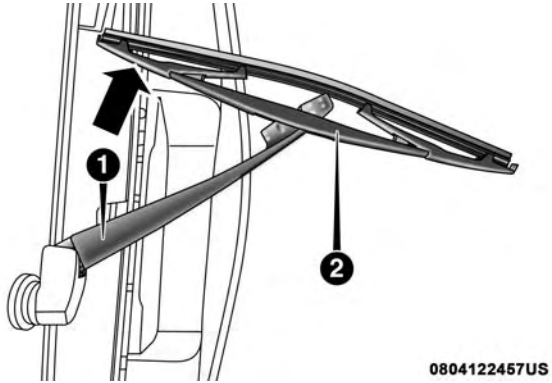
1. Open tailgate to access the wiper arm.



Rear Wiper Assembly

1 — Wiper Arm
2 — Wiper Blade

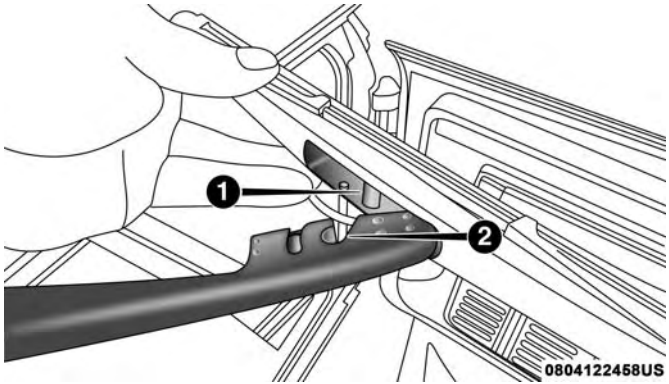
2. Lift wiper arm off of the glass and rotate wiper blade outward to disengage the wiper blade from the wiper arm.



Wiper Blade And Wiper Arm

1 — Wiper Arm
2 — Wiper Blade

3. Gently set the arm on the glass.



Wiper Blade Removed From Wiper Arm

1 — Wiper Blade Pivot Pin
2 — Wiper Arm Receptacle

Installing The Rear Wiper

1. Lift the wiper arm off of the glass.
2. Insert the wiper blade pivot pin into the opening on the end of the wiper arm and rotate the wiper in to place.
3. Place with wiper on the glass and close the tail gate.

Exhaust System

The best protection against carbon monoxide entry into the vehicle body is a properly maintained engine exhaust system.

If you notice a change in the sound of the exhaust system; or if the exhaust fumes can be detected inside the vehicle; or when the underside or rear of the vehicle is damaged; have an authorized technician inspect the complete exhaust system and adjacent body areas for broken, damaged, deteriorated, or mispositioned parts. Open seams or loose connections could permit exhaust fumes to seep into the passenger compartment. In addition, have the exhaust system inspected each time the vehicle is raised for lubrication or oil change. Replace as required.

WARNING!

- **Exhaust gases can injure or kill. They contain carbon monoxide (CO), which is colorless and odorless. Breathing it can make you unconscious and can eventually poison you. To avoid breathing CO, refer to "Safety Tips" in "Safety" for further information.**

(Continued)

WARNING! ***(Continued)***

- **A hot exhaust system can start a fire if you park over materials that can burn. Such materials might be grass or leaves coming into contact with your exhaust system. Do not park or operate your vehicle in areas where your exhaust system can contact anything that can burn.**

CAUTION!

- **The catalytic converter requires the use of unleaded fuel only. Leaded gasoline will destroy the effectiveness of the catalyst as an emissions control device and may seriously reduce engine performance and cause serious damage to the engine.**
- **Damage to the catalytic converter can result if your vehicle is not kept in proper operating condition. In the event of engine malfunction, particularly involving engine misfire or other apparent loss of performance, have your vehicle serviced promptly. Continued operation of your vehicle with a severe malfunction could cause the converter to overheat, resulting in possible damage to the converter and vehicle.**

Under normal operating conditions, the catalytic converter will not require maintenance. However, it is important to keep the engine properly tuned to assure proper catalyst operation and prevent possible catalyst damage.

NOTE: Intentional tampering with emissions control systems can result in civil penalties being assessed against you.

In unusual situations involving grossly malfunctioning engine operation, a scorching odor may suggest severe and abnormal catalyst overheating. If this occurs, stop the vehicle, turn off the engine and allow it to cool. Service, including a tune-up to manufacturer's specifications, should be obtained immediately.

To minimize the possibility of catalytic converter damage:

- Do not interrupt the ignition when the transmission is in gear and the vehicle is in motion.
- Do not try to start the vehicle by pushing or towing the vehicle.
- Do not idle the engine with any ignition components disconnected or removed, such as when diagnostic testing, or for prolonged periods during very rough idle or malfunctioning operating conditions.

Cooling System

WARNING!

- **You or others can be badly burned by hot engine coolant (antifreeze) or steam from your radiator. If you see or hear steam coming from under the hood, do not open the hood until the radiator has had time to cool. Never open a cooling system pressure cap when the radiator or coolant bottle is hot.**
- **Keep hands, tools, clothing, and jewelry away from the radiator cooling fan when the hood is raised. The fan starts automatically and may start at any time, whether the engine is running or not.**
- **When working near the radiator cooling fan, disconnect the fan motor lead or turn the ignition to the OFF mode. The fan is temperature controlled and can start at any time the ignition is in the ON mode.**

Coolant Checks

Check the engine, battery (if equipped), intercooler (if equipped), and Motor Generator Unit (MGU) (if equipped) coolant (antifreeze) protection every 12 months (before the onset of freezing weather, where applicable). If the engine, battery (if equipped), intercooler (if equipped), and MGU (if equipped) coolant (antifreeze) is dirty or rusty in appearance, the system should be drained, flushed and refilled with fresh coolant (antifreeze). Check the front of the A/C condenser (if equipped) or radiator for any accumulation of bugs, leaves, etc. If dirty, clean by gently spraying water from a garden hose vertically down the face of the A/C condenser (if equipped) or the back of the radiator core.

Check the engine, battery (if equipped), intercooler (if equipped), and MGU (if equipped) cooling system hoses for brittle rubber, cracking, tears, cuts, and tightness of the connection at the coolant recovery bottle and radiator. Inspect the entire system for leaks. DO NOT REMOVE THE COOLANT PRESSURE CAP WHEN THE COOLING SYSTEM IS HOT.

Cooling System — Drain, Flush And Refill

NOTE: Some vehicles require special tools to add coolant properly. Failure to fill these systems properly could lead to severe internal engine damage. If any coolant is needed to be added to the system please contact an local authorized dealer.

If the engine coolant (antifreeze) is dirty or contains visible sediment, have an authorized dealer clean and flush with OAT coolant (antifreeze) (conforming to MS.90032).

Refer to the “Maintenance Plan” in this section for the proper maintenance intervals.

Selection Of Coolant

Refer to “Fluids And Lubricants” in “Technical Specifications” for further information.

NOTE:

- Mixing of engine coolant (antifreeze) other than specified Organic Additive Technology (OAT) engine coolant (antifreeze), may result in engine damage and may decrease corrosion protection. Organic Additive Technology (OAT) engine coolant is different and should not be mixed with Hybrid Organic Additive Technology (HOAT) engine coolant (antifreeze) or any “globally compatible” coolant (antifreeze). If a non-OAT engine coolant (antifreeze) is introduced into the cooling system in an emergency, the cooling system will need to be drained, flushed, and refilled with fresh OAT coolant (conforming to MS.90032), by an authorized dealer as soon as possible.
- Do not use water alone or alcohol-based engine coolant (antifreeze) products. Do not use additional rust inhibitors or antirust products, as they may not be compatible with the radiator engine coolant and may plug the radiator.
- This vehicle has not been designed for use with propylene glycol-based engine coolant (antifreeze). Use of propylene glycolbased engine coolant (antifreeze) is not recommended.
- Some vehicles require special tools to add coolant properly. Failure to fill these systems properly could lead to severe internal engine damage. If any coolant is needed to be added to the system please contact your local authorized dealer.

Adding Coolant

Your vehicle has been built with an improved engine coolant (OAT coolant conforming to MS.90032) that allows extended maintenance intervals. This engine coolant (antifreeze) can be used up to ten years or 150,000 miles (240,000 km) before replacement. To prevent reducing this extended maintenance period, it is important that you use the same engine coolant (OAT coolant conforming to MS.90032) throughout the life of your vehicle.

Please review these recommendations for using Organic Additive Technology (OAT) engine coolant (antifreeze) that meets the requirements of FCA Material Standard MS.90032. When adding engine coolant (antifreeze):

- We recommend using Mopar Antifreeze/Coolant 10 Year/150,000 Mile (240,000 km) Formula OAT (Organic Additive Technology) that meets the requirements of FCA Material Standard MS.90032.
- Mix a minimum solution of 50% OAT engine coolant that meets the requirements of FCA Material Standard MS.90032 and distilled water. Use higher concentrations (not to exceed 70%) if temperatures below –34°F (–37°C) are anticipated. Please contact an authorized dealer for assistance.
- Use only high purity water such as distilled or deionized water when mixing the water/engine coolant (antifreeze) solution. The use of lower quality water will reduce the amount of corrosion protection in the engine cooling system.

NOTE:

- It is the owner's responsibility to maintain the proper level of protection against freezing according to the temperatures occurring in the area where the vehicle is operated.
- Some vehicles require special tools to add coolant properly. Failure to fill these systems properly could lead to severe internal engine damage. If any coolant is needed to be added to the system, please contact a local authorized dealer.
- Mixing engine coolant (antifreeze) types is not recommended and can result in cooling system damage. If HOAT and OAT coolant are mixed in an emergency, have a authorized dealer drain, flush, and refill with OAT coolant (conforming to MS.90032) as soon as possible.

Cooling System Pressure Cap

The cap must be fully tightened to prevent loss of engine coolant (antifreeze), and to ensure that engine coolant (antifreeze) will return to the radiator from the coolant expansion bottle/recovery tank if so equipped.

The cap should be inspected and cleaned if there is any accumulation of foreign material on the sealing surfaces.

WARNING!

- **Do not open hot engine cooling system. Never add engine coolant (antifreeze) when the engine is overheated. Do not loosen or remove the cap to cool an overheated engine. Heat causes pressure to build up in the cooling system. To prevent scalding or injury, do not remove the pressure cap while the system is hot or under pressure.**
- **Do not use a pressure cap other than the one specified for your vehicle. Personal injury or engine damage may result.**

Disposal Of Used Coolant

Used ethylene glycol-based coolant (antifreeze) is a regulated substance requiring proper disposal. Check with your local authorities to determine the disposal rules for your community. To prevent ingestion by animals or children, do not store ethylene glycol-based coolant in open containers or allow it to remain in puddles on the ground. If ingested by a child or pet, seek emergency assistance immediately. Clean up any ground spills immediately.

Coolant Level

The coolant bottle provides a quick visual method for determining that the coolant level is adequate. With the engine OFF and cold, the level of the engine coolant (antifreeze) in the bottle should be between the ranges indicated on the bottle.

The radiator normally remains completely full, so there is no need to remove the radiator/coolant pressure cap unless checking for engine coolant (antifreeze) freeze point or replacing coolant. Advise your service attendant of this. As long as the engine operating temperature is satisfactory, the coolant bottle need only be checked once a month.

When additional engine coolant (antifreeze) is needed to maintain the proper level, only OAT coolant that meets the requirements of FCA Material Standard MS.90032 should be added to the coolant bottle. Do not overfill.

Engine Coolant Level — 2.0L

WARNING!

- **Do not open hot engine cooling system. Never add engine coolant (antifreeze) when the engine is overheated. Do not loosen or remove the cap to cool an overheated engine. Heat causes pressure to build up in the cooling system. To prevent scalding or injury, do not remove the pressure cap while the system is hot or under pressure.**
- **Do not use a pressure cap other than the one specified for your vehicle. Personal injury or engine damage may result.**

With the engine OFF and cold, the level of the engine coolant should be within the OK range between the ADD and FULL range on the dipstick.

1. Remove the cap with level dipstick from the engine coolant bottle.
2. Clean off the coolant from the dipstick.
3. Rest the cap on the opening of the coolant bottle without tightening the cap.
4. Remove the cap with dipstick and check the coolant level on the dipstick.

The radiator normally remains completely full, so there is no need to remove the radiator/coolant pressure cap unless checking for engine coolant (antifreeze) freeze point or replacing coolant. Advise your service attendant of this. As long as the engine operating temperature is satisfactory, the coolant bottle need only be checked once a month.

When additional engine coolant (antifreeze) is needed to maintain the proper level, only OAT coolant that meets the requirements of FCA Material Standard MS.90032 should be added to the coolant bottle. Do not overfill.

Points To Remember

NOTE: When the vehicle is stopped after a few miles/kilometers of operation, you may observe vapor coming from the front of the engine compartment. This is normally a result of moisture from rain, snow, or high humidity accumulating on the radiator and being vaporized when the thermostat opens, allowing hot engine coolant (antifreeze) to enter the radiator.

If an examination of your engine compartment shows no evidence of radiator or hose leaks, the vehicle may be safely driven. The vapor will soon dissipate.

- Do not overfill the coolant expansion bottle.
- Check the coolant freeze point in the radiator and in the coolant expansion bottle. If engine coolant (antifreeze) needs to be added, the contents of the coolant expansion bottle must also be protected against freezing.
- If frequent engine coolant (antifreeze) additions are required, the cooling system should be pressure tested for leaks.
- Maintain engine coolant (antifreeze) concentration at a minimum of 50% OAT coolant (conforming to MS.90032) and distilled water for proper corrosion protection of your engine which contains aluminum components.
- Make sure that the coolant expansion bottle overflow hoses are not kinked or obstructed.
- Keep the front of the radiator clean. If your vehicle is equipped with air conditioning, keep the front of the condenser clean.
- Do not change the thermostat for Summer or Winter operation. If replacement is ever necessary, install ONLY the correct type thermostat. Other designs may result in unsatisfactory engine coolant (antifreeze) performance, poor gas mileage, and increased emissions.

Brake System

In order to assure brake system performance, all brake system components should be inspected periodically. Refer to the "Maintenance Plan" in this section for the proper maintenance intervals.

WARNING!

Riding the brakes can lead to brake failure and possibly a collision. Driving with your foot resting or riding on the brake pedal can result in abnormally high brake temperatures, excessive lining wear, and possible brake damage. You would not have your full braking capacity in an emergency.

Fluid Level Check — Brake Master Cylinder

The fluid level of the master cylinder should be checked whenever the vehicle is serviced, or immediately if the brake system warning light is on. If necessary, add fluid to bring level within the designated marks on the side of the reservoir of the brake master cylinder. Be sure to clean the top of the master cylinder area before removing cap. With disc brakes, fluid level can be expected to fall as the brake

pads wear. Brake fluid level should be checked when pads are replaced. If the brake fluid is abnormally low, check the system for leaks.

Refer to "Fluids And Lubricants" in "Technical Specifications" for further information.

WARNING!

- **Use only manufacturer's recommended brake fluid. Refer to "Fluids And Lubricants" in "Technical Specifications" for further information. Using the wrong type of brake fluid can severely damage your brake system and/or impair its performance. The proper type of brake fluid for your vehicle is also identified on the original factory installed hydraulic master cylinder reservoir.**
- **To avoid contamination from foreign matter or moisture, use only new brake fluid or fluid that has been in a tightly closed container. Keep the master cylinder reservoir cap secured at all times. Brake fluid in a open container absorbs moisture from the air resulting in a lower boiling point. This may cause it**

(Continued)

WARNING! *(Continued)*

to boil unexpectedly during hard or prolonged braking, resulting in sudden brake failure. This could result in a collision.

- **Overfilling the brake fluid reservoir can result in spilling brake fluid on hot engine parts, causing the brake fluid to catch fire. Brake fluid can also damage painted and vinyl surfaces, care should be taken to avoid its contact with these surfaces.**
- **Do not allow petroleum based fluid to contaminate the brake fluid. Brake seal components could be damaged, causing partial or complete brake failure. This could result in a collision.**

Front/Rear Axle Fluid

For normal service, periodic fluid level checks are not required. When the vehicle is serviced for other reasons the exterior surfaces of the axle assembly should be inspected. If gear oil leakage is suspected inspect the fluid level. Refer to "Fluids And Lubricants" in "Technical Specifications" for further information.

Fluid Level Check

Lubricant should be approximately 1/8 inch (3 mm) below the bottom edge of the oil fill hole.

NOTE: Make sure that the vehicle is level and supported by the axles

Adding Fluid

Add lubricant only at the fill hole and only to the level specified above.

Selection Of Lubricant

Use only the manufacturer's recommended fluid. Refer to "Fluids And Lubricants" in "Technical Specifications" for further information.

Transfer Case

Selection Of Lubricant

Use only the manufacturer's recommended fluid. Refer to "Fluids And Lubricants" in "Technical Specifications" for further information.

Fluid Level Check

This fluid level can be checked by removing the filler plug. The fluid level should be to the bottom edge of the filler plug hole with the vehicle in a level position.

Drain And Refill

Refer to the "Maintenance Plan" in this section for the proper maintenance intervals.

Manual Transmission

Selection Of Lubricant

Use only manufacturer's recommended manual transmission fluid. Refer to "Fluids And Lubricants" in "Technical Specifications" for further information.

Fluid Level Check

Check the fluid level by removing the fill plug. The fluid level should be between the bottom of the fill hole and a point not more than 3/16 of an inch (4.76 mm) below the bottom of the hole.

Add fluid, if necessary, to maintain the proper level.

Frequency Of Fluid Change

Under normal operating conditions, the fluid installed at the factory will give satisfactory lubrication for the life of the vehicle. If the fluid becomes contaminated with water, it should be changed immediately. Otherwise, change the fluid as recommended in the Maintenance Plan. Refer to the "Maintenance Plan" for the proper maintenance intervals.

Automatic Transmission

Selection Of Lubricant

It is important to use the proper transmission fluid to ensure optimum transmission performance and life. Use only the manufacturer's specified transmission fluid. Refer to "Fluids And Lubricants" in "Technical Specifications" for fluid specifications. It is important to maintain the transmission fluid at the correct level using the recommended fluid.

NOTE: No chemical flushes should be used in any transmission; only the approved lubricant should be used.

CAUTION!

Using a transmission fluid other than the manufacturer's recommended fluid may cause deterioration in transmission shift quality and/or torque converter shudder. Refer to "Fluids And Lubricants" in "Technical Specifications" for fluid specifications.

Special Additives

The manufacturer strongly recommends against using any special additives in the transmission. Automatic Transmission Fluid (ATF) is an engineered product and its performance may be impaired by supplemental additives. Therefore, do not add any fluid additives to the transmission. Avoid using transmission sealers as they may adversely affect seals.

CAUTION!

Do not use chemical flushes in your transmission as the chemicals can damage your transmission components. Such damage is not covered by the New Vehicle Limited Warranty.

Fluid Level Check

The fluid level is preset at the factory and does not require adjustment under normal operating conditions. Routine fluid level checks are not required; therefore the transmission has no dipstick. An authorized dealer can check your transmission fluid level using special service tools. If you notice fluid leakage or transmission malfunction, visit an authorized dealer immediately to have the transmission fluid level checked. Operating the vehicle with an improper fluid level can cause severe transmission damage.

CAUTION!

If a transmission fluid leak occurs, visit an authorized dealer immediately. Severe transmission damage may occur. An authorized dealer has the proper tools to adjust the fluid level accurately.

Fluid And Filter Changes

Under normal operating conditions, the fluid installed at the factory will provide satisfactory lubrication for the life of the vehicle.

Routine fluid and filter changes are not required. However, change the fluid and filter if the fluid becomes contaminated (with water, etc.), or if the transmission is disassembled for any reason.

RAISING THE VEHICLE

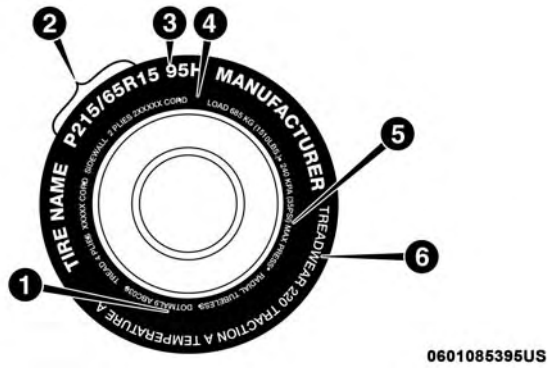
In the case where it is necessary to raise the vehicle, go to an authorized dealer or service station.

TIRES

Tire Safety Information

Tire safety information will cover aspects of the following information: Tire Markings, Tire Identification Numbers, Tire Terminology and Definitions, Tire Pressures, and Tire Loading.

Tire Markings



Tire Markings

1 — U.S. DOT Safety Standards Code (TIN)	4 — Maximum Load
2 — Size Designation	5 — Maximum Pressure
3 — Service Description	6 — Treadwear, Traction and Temperature Grades

NOTE:

- P (Passenger) — Metric tire sizing is based on U.S. design standards. P-Metric tires have the letter "P" molded into the sidewall preceding the size designation. Example: P215/65R15 95H.
- European — Metric tire sizing is based on European design standards. Tires designed to this standard have the tire size molded into the sidewall beginning with the section width. The letter "P" is absent from this tire size designation. Example: 215/65R15 96H.
- LT (Light Truck) — Metric tire sizing is based on U.S. design standards. The size designation for LT-Metric tires is the same as for P-Metric tires except for the letters "LT" that are molded into the sidewall preceding the size designation. Example: LT235/85R16.
- Temporary spare tires are designed for temporary emergency use only. Temporary high pressure compact spare tires have the letter "T" or "S" molded into the sidewall preceding the size designation. Example: T145/80D18 103M.
- High flotation tire sizing is based on U.S. design standards and it begins with the tire diameter molded into the sidewall. Example: 31x10.5 R15 LT.

Tire Sizing Chart

EXAMPLE:

Example Size Designation: P215/65R15XL 95H, 215/65R15 96H, LT235/85R16C, T145/80D18 103M, 31x10.5 R15 LT
P = Passenger car tire size based on U.S. design standards, or **"....blank...."** = Passenger car tire based on European design standards, or **LT** = Light truck tire based on U.S. design standards, or **T or S** = Temporary spare tire or **31** = Overall diameter in inches (in)
215, 235, 145 = Section width in millimeters (mm)
65, 85, 80 = Aspect ratio in percent (%) – Ratio of section height to section width of tire, or **10.5** = Section width in inches (in)
R = Construction code – "R" means radial construction, or – "D" means diagonal or bias construction
15, 16, 18 = Rim diameter in inches (in)

EXAMPLE:

Service Description:
95 = Load Index – A numerical code associated with the maximum load a tire can carry
H = Speed Symbol – A symbol indicating the range of speeds at which a tire can carry a load corresponding to its load index under certain operating conditions – The maximum speed corresponding to the speed symbol should only be achieved under specified operating conditions (i.e., tire pressure, vehicle loading, road conditions, and posted speed limits)
Load Identification: Absence of the following load identification symbols on the sidewall of the tire indicates a Standard Load (SL) tire: • **XL** = Extra load (or reinforced) tire, or • **LL** = Light load tire or • **C, D, E, F, G** = Load range associated with the maximum load a tire can carry at a specified pressure
Maximum Load – Maximum load indicates the maximum load this tire is designed to carry
Maximum Pressure – Maximum pressure indicates the maximum permissible cold tire inflation pressure for this tire

Tire Identification Number (TIN)

The TIN may be found on one or both sides of the tire; however, the date code may only be on one side. Tires with white sidewalls will have the full TIN, including the date code, located on the white sidewall side of the tire. Look for the TIN on the outboard side of black sidewall tires as mounted on the vehicle. If the TIN is not found on the outboard side, then you will find it on the inboard side of the tire.

EXAMPLE:
DOT MA L9 ABCD 0301
DOT = Department of Transportation – This symbol certifies that the tire is in compliance with the U.S. Department of Transportation tire safety standards and is approved for highway use
MA = Code representing the tire manufacturing location (two digits)
L9 = Code representing the tire size (two digits)
ABCD = Code used by the tire manufacturer (one to four digits)
03 = Number representing the week in which the tire was manufactured (two digits) – 03 means the 3rd week
01 = Number representing the year in which the tire was manufactured (two digits) – 01 means the year 2001 – Prior to July 2000, tire manufacturers were only required to have one number to represent the year in which the tire was manufactured. Example: 031 could represent the 3rd week of 1981 or 1991

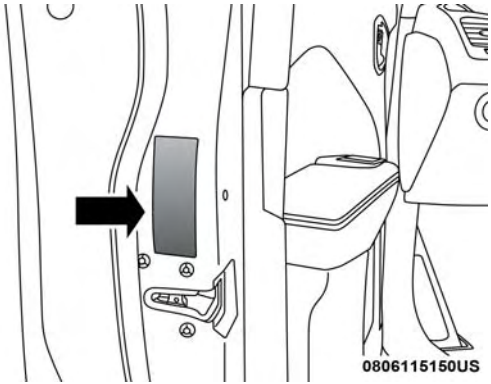
Tire Terminology And Definitions

Term	Definition
B-Pillar	The vehicle B-Pillar is the structural member of the body located behind the front door.
Cold Tire Inflation Pressure	Cold tire inflation pressure is defined as the tire pressure after the vehicle has not been driven for at least three hours, or driven less than 1 mile (1.6 km) after sitting for a minimum of three hours. Inflation pressure is measured in units of PSI (pounds per square inch) or kPa (kilopascals).
Maximum Inflation Pressure	The maximum inflation pressure is the maximum permissible cold tire inflation pressure for this tire. The maximum inflation pressure is molded into the sidewall.
Recommended Cold Tire Inflation Pressure	Vehicle manufacturer's recommended cold tire inflation pressure as shown on the tire placard.
Tire Placard	A label permanently attached to the vehicle describing the vehicle's loading capacity, the original equipment tire sizes and the recommended cold tire inflation pressures.

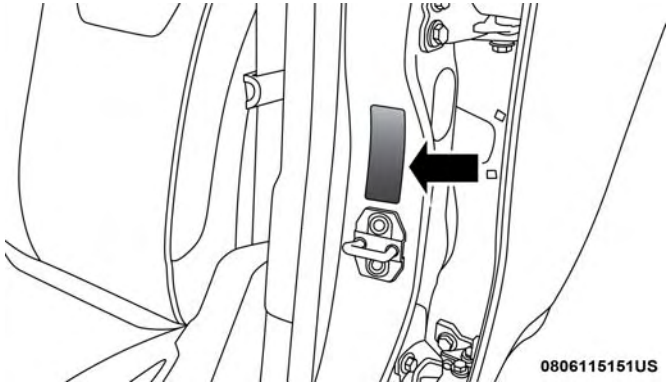
Tire Loading And Tire Pressure

NOTE: The proper cold tire inflation pressure is listed on the driver's side B-Pillar or the rear edge of the driver's side door.

Check the inflation pressure of each tire, including the spare tire (if equipped), at least monthly and inflate to the recommended pressure for your vehicle.

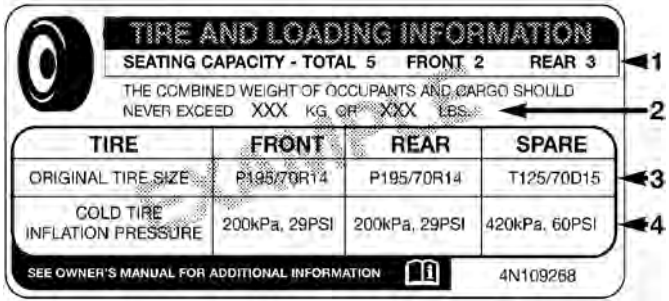


Example Tire Placard Location (Door)



Example Tire Placard Location (B-Pillar)

Tire And Loading Information Placard



Tire And Loading Information Placard

This placard tells you important information about the:

1. Number of people that can be carried in the vehicle.
2. Total weight your vehicle can carry.
3. Tire size designed for your vehicle.
4. Cold tire inflation pressures for the front, rear, and spare tires.

Loading

The vehicle maximum load on the tire must not exceed the load carrying capacity of the tire on your vehicle. You will not exceed the tire's load carrying capacity if you adhere to the loading conditions, tire size, and cold tire inflation pressures specified on the Tire and Loading Information placard in "Vehicle Loading" in the "Starting And Operating" section of this manual.

NOTE: Under a maximum loaded vehicle condition, gross axle weight ratings (GAWRs) for the front and rear axles must not be exceeded.

For further information on GAWRs, vehicle loading, and trailer towing, refer to "Vehicle Loading" in the "Starting And Operating" section of this manual.

To determine the maximum loading conditions of your vehicle, locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs" on the Tire and Loading Information placard. The combined weight of occupants, cargo/luggage and trailer tongue weight (if applicable) should never exceed the weight referenced here.

Steps For Determining Correct Load Limit—

(1) Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.

(2) Determine the combined weight of the driver and passengers that will be riding in your vehicle.

(3) Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.

(4) The resulting figure equals the available amount of cargo and luggage load capacity. For example, if "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5x150) = 650 lbs.)

(5) Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.

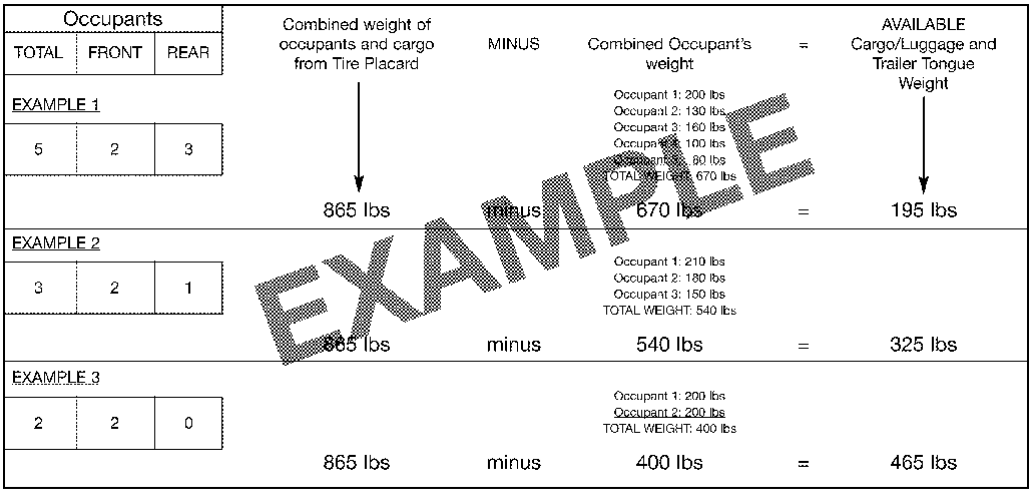
(6) If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

Metric Example For Load Limit

For example, if "XXX" amount equals 635 kg and there will be five 68 kg passengers in your vehicle, the amount of available cargo and luggage load capacity is 295 kg (635-340 (5x68) = 295 kg) as shown in step 4.

NOTE:

- If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. The following table shows examples on how to calculate total load, cargo/luggage, and towing capacities of your vehicle with varying seating configurations and number and size of occupants. This table is for illustration purposes only and may not be accurate for the seating and load carry capacity of your vehicle.
- For the following example, the combined weight of occupants and cargo should never exceed 865 lbs (392 kg).



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WARNING!

Overloading of your tires is dangerous. Overloading can cause tire failure, affect vehicle handling, and increase your stopping distance. Use tires of the recommended load capacity for your vehicle. Never overload them.

Tires — General Information

Tire Pressure

Proper tire inflation pressure is essential to the safe and satisfactory operation of your vehicle. Four primary areas are affected by improper tire pressure:

- Safety and Vehicle Stability
- Economy
- Tread Wear
- Ride Comfort

Safety

WARNING!

- **Improperly inflated tires are dangerous and can cause collisions.**
- **Underinflation increases tire flexing and can result in overheating and tire failure.**
- **Overinflation reduces a tire's ability to cushion shock. Objects on the road and chuckholes can cause damage that result in tire failure.**

(Continued)

WARNING! *(Continued)*

- **Overinflated or underinflated tires can affect vehicle handling and can fail suddenly, resulting in loss of vehicle control.**
- **Unequal tire pressures can cause steering problems. You could lose control of your vehicle.**
- **Unequal tire pressures from one side of the vehicle to the other can cause the vehicle to drift to the right or left.**
- **Always drive with each tire inflated to the recommended cold tire inflation pressure.**

Both under-inflation and over-inflation affect the stability of the vehicle and can produce a feeling of sluggish response or over responsiveness in the steering.

NOTE:

- Unequal tire pressures from side to side may cause erratic and unpredictable steering response.
- Unequal tire pressure from side to side may cause the vehicle to drift left or right.

Fuel Economy

Underinflated tires will increase tire rolling resistance resulting in higher fuel consumption.

Tread Wear

Improper cold tire inflation pressures can cause abnormal wear patterns and reduced tread life, resulting in the need for earlier tire replacement.

Ride Comfort And Vehicle Stability

Proper tire inflation contributes to a comfortable ride. Over-inflation produces a jarring and uncomfortable ride.

Tire Inflation Pressures

The proper cold tire inflation pressure is listed on the driver's side B-Pillar or rear edge of the driver's side door.

At least once a month:

- Check and adjust tire pressure with a good quality pocket-type pressure gauge. Do not make a visual judgement when determining proper inflation. Tires may look properly inflated even when they are underinflated.
- Inspect tires for signs of tire wear or visible damage.

CAUTION!

After inspecting or adjusting the tire pressure, always reinstall the valve stem cap. This will prevent moisture and dirt from entering the valve stem, which could damage the valve stem.

Inflation pressures specified on the placard are always "cold tire inflation pressure". Cold tire inflation pressure is defined as the tire pressure after the vehicle has not been driven for at least three hours, or driven less than 1 mile (1.6 km) after sitting for a minimum of three hours. The cold tire inflation pressure must not exceed the maximum inflation pressure molded into the tire sidewall.

Check tire pressures more often if subject to a wide range of outdoor temperatures, as tire pressures vary with temperature changes.

Tire pressures change by approximately 1 psi (7 kPa) per 12°F (7°C) of air temperature change. Keep this in mind when checking tire pressure inside a garage, especially in the Winter.

Example: If garage temperature = 68°F (20°C) and the outside temperature = 32°F (0°C) then the cold tire inflation

pressure should be increased by 3 psi (21 kPa), which equals 1 psi (7 kPa) for every 12°F (7°C) for this outside temperature condition.

Tire pressure may increase from 2 to 6 psi (13 to 40 kPa) during operation. DO NOT reduce this normal pressure build up or your tire pressure will be too low.

Tire Pressures For High Speed Operation

The manufacturer advocates driving at safe speeds and within posted speed limits. Where speed limits or conditions are such that the vehicle can be driven at high speeds, maintaining correct tire inflation pressure is very important. Increased tire pressure and reduced vehicle loading may be required for high-speed vehicle operation. Refer to an authorized tire dealer or original equipment vehicle dealer for recommended safe operating speeds, loading and cold tire inflation pressures.

WARNING!

High speed driving with your vehicle under maximum load is dangerous. The added strain on your tires could cause them to fail. You could have a serious collision. Do not drive a vehicle loaded to the maximum capacity at continuous speeds above 75 mph (120 km/h).

Radial Ply Tires

WARNING!

Combining radial ply tires with other types of tires on your vehicle will cause your vehicle to handle poorly. The instability could cause a collision. Always use radial ply tires in sets of four. Never combine them with other types of tires.

Tire Repair

If your tire becomes damaged, it may be repaired if it meets the following criteria:

- The tire has not been driven on when flat.
- The damage is only on the tread section of your tire (sidewall damage is not repairable).
- The puncture is no greater than a ¼ of an inch (6 mm).

Consult an authorized tire dealer for tire repairs and additional information.

Damaged Run Flat tires, or Run Flat tires that have experienced a loss of pressure should be replaced immediately with another Run Flat tire of identical size and service description (Load Index and Speed Symbol).

Run Flat Tires — If Equipped

Run Flat tires allow you the capability to drive 50 miles (80 km) at 50 mph (80 km/h) after a rapid loss of inflation pressure. This rapid loss of inflation is referred to as the Run Flat mode. A Run Flat mode occurs when the tire inflation pressure is of/or below 14 psi (96 kPa). Once a Run Flat tire reaches the run flat mode it has limited driving capabilities and needs to be replaced immediately. A Run Flat tire is not repairable.

It is not recommended driving a vehicle loaded at full capacity or to tow a trailer while a tire is in the run flat mode.

See the tire pressure monitoring section for more information.

Tire Spinning

When stuck in mud, sand, snow, or ice conditions, do not spin your vehicle's wheels above 30 mph (48 km/h) or for longer than 30 seconds continuously without stopping.

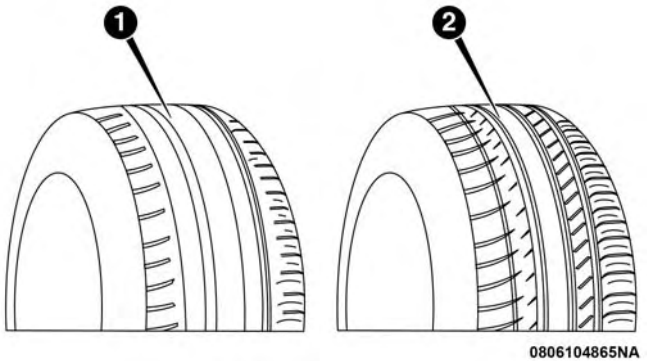
Refer to "Freeing A Stuck Vehicle" in "In Case Of Emergency" for further information.

WARNING!

Fast spinning tires can be dangerous. Forces generated by excessive wheel speeds may cause tire damage or failure. A tire could explode and injure someone. Do not spin your vehicle's wheels faster than 30 mph (48 km/h) for more than 30 seconds continuously when you are stuck, and do not let anyone near a spinning wheel, no matter what the speed.

Tread Wear Indicators

Tread wear indicators are in the original equipment tires to help you in determining when your tires should be replaced.



Tire Tread

1 — Worn Tire
2 — New Tire

These indicators are molded into the bottom of the tread grooves. They will appear as bands when the tread depth becomes a 1/16 of an inch (1.6 mm). When the tread is worn to the tread wear indicators, the tire should be replaced. Refer to "Replacement Tires" in this section for further information.

Life Of Tire

The service life of a tire is dependent upon varying factors including, but not limited to:

- Driving style.
- Tire pressure - Improper cold tire inflation pressures can cause uneven wear patterns to develop across the tire tread. These abnormal wear patterns will reduce tread life, resulting in the need for earlier tire replacement.
- Distance driven.
- Performance tires, tires with a speed rating of V or higher, and Summer tires typically have a reduced tread life. Rotation of these tires per the vehicle scheduled maintenance is highly recommended.

WARNING!

Tires and the spare tire should be replaced after six years, regardless of the remaining tread. Failure to follow this warning can result in sudden tire failure. You could lose control and have a collision resulting in serious injury or death.

Keep dismounted tires in a cool, dry place with as little exposure to light as possible. Protect tires from contact with oil, grease, and gasoline.

Replacement Tires

The tires on your new vehicle provide a balance of many characteristics. They should be inspected regularly for wear and correct cold tire inflation pressures. The manufacturer strongly recommends that you use tires equivalent to the originals in size, quality and performance when replacement is needed. Refer to the paragraph on "Tread Wear Indicators" in this section. Refer to the Tire and Loading Information placard or the Vehicle Certification Label for the size designation of your tire. The Load Index and Speed Symbol for your tire will be found on the original equipment tire sidewall.

See the Tire Sizing Chart example found in the "Tire Safety Information" section of this manual for more information relating to the Load Index and Speed Symbol of a tire.

It is recommended to replace the two front tires or two rear tires as a pair. Replacing just one tire can seriously affect your vehicle's handling. If you ever replace a wheel, make sure that the wheel's specifications match those of the original wheels.

It is recommended you contact an authorized tire dealer or original equipment dealer with any questions you may have on tire specifications or capability. Failure to use equivalent replacement tires may adversely affect the safety, handling, and ride of your vehicle.

WARNING!

- **Do not use a tire, wheel size, load rating, or speed rating other than that specified for your vehicle. Some combinations of unapproved tires and wheels may change suspension dimensions and performance characteristics, resulting in changes to steering, handling, and braking of your vehicle. This can cause unpredictable handling and stress to steering**

(Continued)

WARNING! *(Continued)*

and suspension components. You could lose control and have a collision resulting in serious injury or death. Use only the tire and wheel sizes with load ratings approved for your vehicle.

- **Never use a tire with a smaller load index or capacity, other than what was originally equipped on your vehicle. Using a tire with a smaller load index could result in tire overloading and failure. You could lose control and have a collision.**
- **Failure to equip your vehicle with tires having adequate speed capability can result in sudden tire failure and loss of vehicle control.**

CAUTION!

Replacing original tires with tires of a different size may result in false speedometer and odometer readings.

Tire Types

All Season Tires — If Equipped

All Season tires provide traction for all seasons (Spring, Summer, Fall, and Winter). Traction levels may vary between different all season tires. All season tires can be identified by the M+S, M&S, M/S or MS designation on the tire sidewall. Use all season tires only in sets of four; failure to do so may adversely affect the safety and handling of your vehicle.

Summer Or Three Season Tires — If Equipped

Summer tires provide traction in both wet and dry conditions, and are not intended to be driven in snow or on ice. If your vehicle is equipped with Summer tires, be aware these tires are not designed for Winter or cold driving conditions. Install Winter tires on your vehicle when ambient temperatures are less than 40°F (5°C) or if roads are covered with ice or snow. For more information, contact an authorized dealer.

Summer tires do not contain the all season designation or mountain/snowflake symbol on the tire sidewall. Use Summer tires only in sets of four; failure to do so may adversely affect the safety and handling of your vehicle.

WARNING!

Do not use Summer tires in snow/ice conditions. You could lose vehicle control, resulting in severe injury or death. Driving too fast for conditions also creates the possibility of loss of vehicle control.

Snow Tires

Some areas of the country require the use of snow tires during the Winter. Snow tires can be identified by a "mountain/snowflake" symbol on the tire sidewall.

If you need snow tires, select tires equivalent in size and type to the original equipment tires. Use snow tires only in sets of four; failure to do so may adversely affect the safety and handling of your vehicle.

Snow tires generally have lower speed ratings than what was originally equipped with your vehicle and should not be operated at sustained speeds over 75 mph (120 km/h). For speeds above 75 mph (120 km/h) refer to original equipment or an authorized tire dealer for recommended safe operating speeds, loading and cold tire inflation pressures.

While studded tires improve performance on ice, skid and traction capability on wet or dry surfaces may be poorer than that of non-studded tires. Some states prohibit studded tires; therefore, local laws should be checked before using these tire types.

Spare Tires — If Equipped

NOTE: For vehicles equipped with Tire Service Kit instead of a spare tire, please refer to "Tire Service Kit" in "In Case Of Emergency" for further information.

CAUTION!

Because of the reduced ground clearance, do not take your vehicle through an automatic car wash with a compact or limited use temporary spare installed. Damage to the vehicle may result.

Spare Tire Matching Original Equipped Tire And Wheel — If Equipped

Your vehicle may be equipped with a spare tire and wheel equivalent in look and function to the original equipment tire and wheel found on the front or rear axle of your vehicle. This spare tire may be used in the tire rotation for

your vehicle. If your vehicle has this option, refer to an authorized tire dealer for the recommended tire rotation pattern.

Compact Spare Tire — If Equipped

The compact spare is for temporary emergency use only. You can identify if your vehicle is equipped with a compact spare by looking at the spare tire description on the Tire and Loading Information Placard located on the driver's side door opening or on the sidewall of the tire. Compact spare tire descriptions begin with the letter "T" or "S" preceding the size designation. Example: T145/80D18 103M.

T, S = Temporary Spare Tire

Since this tire has limited tread life, the original equipment tire should be repaired (or replaced) and reinstalled on your vehicle at the first opportunity.

Do not install a wheel cover or attempt to mount a conventional tire on the compact spare wheel, since the wheel is designed specifically for the compact spare tire. Do not install more than one compact spare tire and wheel on the vehicle at any given time.

WARNING!

Compact and collapsible spares are for temporary emergency use only. With these spares, do not drive more than 50 mph (80 km/h). Temporary use spares have limited tread life. When the tread is worn to the tread wear indicators, the temporary use spare tire needs to be replaced. Be sure to follow the warnings, which apply to your spare. Failure to do so could result in spare tire failure and loss of vehicle control.

Full Size Spare — If Equipped

The full size spare is for temporary emergency use only. This tire may look like the originally equipped tire on the front or rear axle of your vehicle, but it is not. This spare tire may have limited tread life. When the tread is worn to the tread wear indicators, the temporary use full size spare tire needs to be replaced. Since it is not the same as your original equipment tire, replace (or repair) the original equipment tire and reinstall on the vehicle at the first opportunity.

Limited Use Spare — If Equipped

The limited use spare tire is for temporary emergency use only. This tire is identified by a label located on the limited use spare wheel. This label contains the driving limitations for this spare. This tire may look like the original equipped tire on the front or rear axle of your vehicle, but it is not. Installation of this limited use spare tire affects vehicle handling. Since it is not the same as your original equipment tire, replace (or repair) the original equipment tire and reinstall on the vehicle at the first opportunity.

WARNING!

Limited use spares are for emergency use only. Installation of this limited use spare tire affects vehicle handling. With this tire, do not drive more than the speed listed on the limited use spare wheel. Keep inflated to the cold tire inflation pressures listed on your Tire and Loading Information Placard located on the driver's side B-Pillar or the rear edge of the driver's side door. Replace (or repair) the original equipment tire at the first opportunity and reinstall it on your vehicle. Failure to do so could result in loss of vehicle control.

Wheel And Wheel Trim Care

All wheels and wheel trim, especially aluminum and chrome plated wheels, should be cleaned regularly using mild (neutral Ph) soap and water to maintain their luster and to prevent corrosion. Wash wheels with the same soap solution recommended for the body of the vehicle and remember to always wash when the surfaces are not hot to the touch.

Your wheels are susceptible to deterioration caused by salt, sodium chloride, magnesium chloride, calcium chloride, etc., and other road chemicals used to melt ice or control dust on dirt roads. Use a soft cloth or sponge and mild soap to wipe away promptly. Do not use harsh chemicals or a stiff brush. They can damage the wheel's protective coating that helps keep them from corroding and tarnishing.

CAUTION!

Avoid products or automatic car washes that use acidic solutions or strong alkaline additives or harsh brushes. Many aftermarket wheel cleaners and automatic car washes may damage the wheel's protective finish. Such damage is not covered by the New Vehicle Limited Warranty. Only car wash soap, Mopar Wheel Cleaner or equivalent is recommended.

When cleaning extremely dirty wheels including excessive brake dust, care must be taken in the selection of tire and wheel cleaning chemicals and equipment to prevent damage to the wheels. Mopar Wheel Treatment or Mopar Chrome Cleaner or their equivalent is recommended or select a non-abrasive, non-acidic cleaner for aluminum or chrome wheels.

CAUTION!

Do not use scouring pads, steel wool, a bristle brush, metal polishes or oven cleaner. These products may damage the wheel's protective finish. Such damage is not covered by the New Vehicle Limited Warranty. Only car wash soap, Mopar Wheel Cleaner or equivalent is recommended.

NOTE: If you intend parking or storing your vehicle for an extended period after cleaning the wheels with wheel cleaner, drive your vehicle and apply the brakes to remove the water droplets from the brake components. This activity will remove the red rust on the brake rotors and prevent vehicle vibration when braking.

Dark Vapor Chrome, Black Satin Chrome, or Low Gloss Clear Coat Wheels

CAUTION!

If your vehicle is equipped with these specialty wheels, DO NOT USE wheel cleaners, abrasives, or polishing compounds. They will permanently damage this finish and such damage is not covered by the New Vehicle Limited Warranty. HAND WASH ONLY USING MILD SOAP AND WATER WITH A SOFT CLOTH. Used on a regular basis; this is all that is required to maintain this finish.

Tire Chains (Traction Devices)

Use of traction devices require sufficient tire-to-body clearance. Follow these recommendations to guard against damage.

- Traction device must be of proper size for the tire, as recommended by the traction device manufacturer.
- Install on Rear Tires Only.
- 245/75R17 tire with the use of a traction device that meets the SAE type "Class S" specification is recommended.

WARNING!

Using tires of different size and type (M+S, Snow) between front and rear axles can cause unpredictable handling. You could lose control and have a collision.

CAUTION!

To avoid damage to your vehicle or tires, observe the following precautions:

- **Because of restricted traction device clearance between tires and other suspension components, it is important that only traction devices in good condition are used. Broken devices can cause serious damage. Stop the vehicle immediately if noise occurs that could indicate device breakage. Remove the damaged parts of the device before further use.**
- **Install device as tightly as possible and then retighten after driving about ½ mile (0.8 km).**
- **Do not exceed 30 mph (48 km/h).**
- **Drive cautiously and avoid severe turns and large bumps, especially with a loaded vehicle.**
- **Do not drive for a prolonged period on dry pavement.**

(Continued)

CAUTION! *(Continued)*

- **Observe the traction device manufacturer's instructions on the method of installation, operating speed, and conditions for use. Always use the suggested operating speed of the device manufacturer's if it is less than 30 mph (48 km/h).**
- **Do not use traction devices on a compact spare tire.**

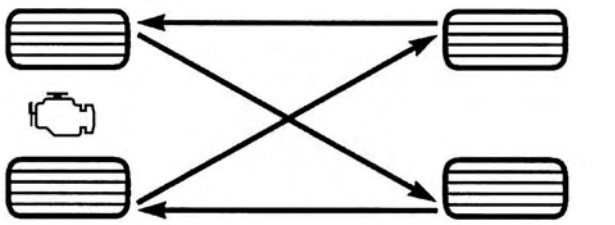
Tire Rotation Recommendations

The tires on the front and rear of your vehicle operate at different loads and perform different steering, handling, and braking functions. For these reasons, they wear at unequal rates.

These effects can be reduced by timely rotation of tires. The benefits of rotation are especially worthwhile with aggressive tread designs such as those on On/Off Road type tires. Rotation will increase tread life, help to maintain mud, snow, and wet traction levels, and contribute to a smooth, quiet ride.

Refer to the "Maintenance Plan" for the proper maintenance intervals. The reasons for any rapid or unusual wear should be corrected prior to rotation being performed.

The suggested rotation method is the "rearward-cross" shown in the following diagram.



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Tire Rotation

CAUTION!

Proper operation of four-wheel drive vehicles depends on tires of equal size, type and circumference on each wheel. Any difference in tire size can cause damage to the transfer case. Tire rotation schedule should be followed to balance tire wear.

DEPARTMENT OF TRANSPORTATION UNIFORM TIRE QUALITY GRADES

The following tire grading categories were established by the National Highway Traffic Safety Administration. The specific grade rating assigned by the tire's manufacturer in each category is shown on the sidewall of the tires on your vehicle.

All passenger vehicle tires must conform to Federal safety requirements in addition to these grades.

Treadwear

The Treadwear grade is a comparative rating, based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one-half times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices, and differences in road characteristics and climate.

Traction Grades

The Traction grades, from highest to lowest, are AA, A, B, and C. These grades represent the tire's ability to stop on wet pavement, as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

WARNING!

The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature Grades

The Temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat, when tested under controlled conditions on a specified indoor laboratory test wheel.

Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance, which all passenger vehicle tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel, than the minimum required by law.

WARNING!

The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, under-inflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

STORING THE VEHICLE

If you are storing your vehicle for more than 21 days, we recommend that you take the following steps to minimize the drain on your vehicle's battery:

- Disconnect the negative cable from battery.
- Any time you store your vehicle or keep it out of service (i.e., vacation) for two weeks or more, run the air conditioning system at idle for about five minutes in the fresh air and high blower setting. This will ensure adequate system lubrication to minimize the possibility of compressor damage when the system is started again.

BODYWORK

Protection From Atmospheric Agents

Vehicle body care requirements vary according to geographic locations and usage. Chemicals that make roads passable in snow and ice and those that are sprayed on trees and road surfaces during other seasons are highly corrosive to the metal in your vehicle. Outside parking, which exposes your vehicle to airborne contaminants, road surfaces on which the vehicle is operated, extreme hot or cold weather and other extreme conditions will have an adverse effect on paint, metal trim, and underbody protection.

The following maintenance recommendations will enable you to obtain maximum benefit from the corrosion resistance built into your vehicle.

What Causes Corrosion?

Corrosion is the result of deterioration or removal of paint and protective coatings from your vehicle.

The most common causes are:

- Road salt, dirt and moisture accumulation.
- Stone and gravel impact.
- Insects, tree sap and tar.
- Salt in the air near seacoast localities.
- Atmospheric fallout/industrial pollutants.

Body And Underbody Maintenance

Cleaning Headlights

Your vehicle is equipped with plastic headlights and fog lights that are lighter and less susceptible to stone breakage than glass headlights.

Plastic is not as scratch resistant as glass and therefore different lens cleaning procedures must be followed.

To minimize the possibility of scratching the lenses and reducing light output, avoid wiping with a dry cloth. To remove road dirt, wash with a mild soap solution followed by rinsing.

Do not use abrasive cleaning components, solvents, steel wool or other aggressive material to clean the lenses.

Preserving The Bodywork

Washing

- Wash your vehicle regularly. Always wash your vehicle in the shade using Mopar Car Wash, or a mild car wash soap, and rinse the panels completely with clear water.

- If insects, tar, or other similar deposits have accumulated on your vehicle, use Mopar Super Kleen Bug and Tar Remover to remove.
- Use a high quality cleaner wax, such as Mopar Cleaner Wax to remove road film, stains and to protect your paint finish. Take care never to scratch the paint.
- Avoid using abrasive compounds and power buffing that may diminish the gloss or thin out the paint finish.

CAUTION!

- **Do not use abrasive or strong cleaning materials such as steel wool or scouring powder that will scratch metal and painted surfaces.**
- **Use of power washers exceeding 1,200 psi (8,274 kPa) can result in damage or removal of paint and decals.**

Special Care

- If you drive on salted or dusty roads or if you drive near the ocean, hose off the undercarriage at least once a month.
- It is important that the drain holes in the lower edges of the doors, rocker panels, and trunk be kept clear and open.
- If you detect any stone chips or scratches in the paint, touch them up immediately. The cost of such repairs is considered the responsibility of the owner.
- If your vehicle is damaged due to a collision or similar cause that destroys the paint and protective coating, have your vehicle repaired as soon as possible. The cost of such repairs is considered the responsibility of the owner.
- If you carry special cargo such as chemicals, fertilizers, de-icer salt, etc., be sure that such materials are well packaged and sealed.
- If a lot of driving is done on gravel roads, consider mud or stone shields behind each wheel.
- Use Mopar Touch Up Paint on scratches as soon as possible. An authorized dealer has touch up paint to match the color of your vehicle.

Appearance Care For Fabric Top Models

To maintain the appearance of your vehicle's interior trim and top, follow these precautions:

- Avoid leaving your vehicle unattended with the top down, as exposure to sun or rain may damage interior trim.
- Do not use harsh cleaners or bleaching agents on top material, as damage may result.
- Do not allow any vinyl cleaner to run down and dry on the paint, leaving a streak.
- After cleaning your vehicle's fabric top, always make sure it is completely dry before lowering.
- Be especially careful when washing the windows by following the directions for "Care of Fabric Top Windows."

Washing – Use Mopar Car Wash or equivalent, or mild soap suds, lukewarm water, and a brush with soft bristles. If extra cleaning is required, use Mopar Convertible Cloth Top Cleaner or equivalent, or a mild foaming cleaner on the entire top, but support the top from underneath.

Rinsing – Be sure to remove all traces of cleaner by rinsing the top thoroughly with clean water. Remember to allow the top to dry before lowering it.

CAUTION!

Failure to follow these cautions may cause interior water damage, stains or mildew on the top material:

- **Avoid high-pressure car washes, as they can damage the top material. Also, increased water pressure may force past the weather strips.**
- **It is recommended that the top be free of water prior to opening it. Operating the top, opening a door or lowering a window while the top is wet may allow water to drip into the vehicle's interior.**
- **Use care when washing the vehicle, water pressure directed at the weather strip seals may cause water to leak into the vehicle's interior.**
- **Careless handling and storage of the removable roof panels may damage the seals, causing water to leak into the vehicle's interior.**
- **The front panel(s) must be positioned properly to ensure sealing. Improper installation can cause water to leak into the vehicle's interior.**

Care Of Fabric Top Windows

Your vehicle's fabric top has pliable plastic windows which can be scratched unless special care is taken by following these directions:

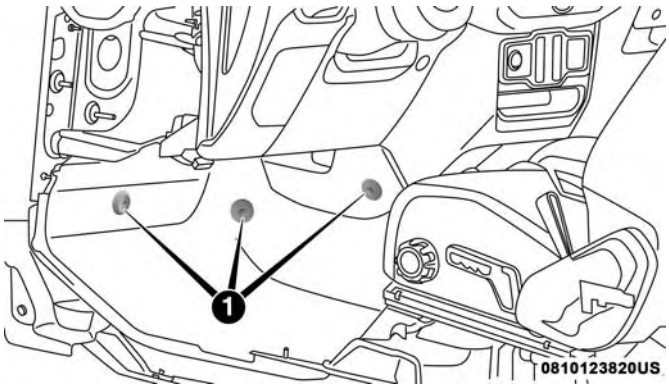
- Never use a dry cloth to remove dust. Instead, **use a microfiber towel or soft cotton cloth moistened with cold or warm, clean water, and wipe across the window, not up and down.** Mopar Jeep Soft Glass Window Cleaner or equivalent will safely clean all plastic windows without scratching. It removes fine scratches to improve visibility and provides UV protection to help prevent yellowing.
- When washing, **never use hot water** or anything stronger than a mild soap. Never use solvents such as alcohol or harsh cleaning agents.
- Always rinse thoroughly with cold water, then wipe with a soft and slightly moist, clean cloth.
- When removing frost, snow or ice, **never use a scraper or de-icing chemicals.** Use warm water only if you must clean the window quickly.
- Debris (sand, mud/dirt, dust, or salt) from off-road driving will have an impact on plastic retainer operation. Even normal on-road driving and vehicle washing will eventually impact window plastic retainer operation. To maintain ease of use of the window plastic retainers, each window plastic retainer should be cleaned and lubricated regularly. Clean them with a mild soap solution and a small brush. Cleaning products are available through an authorized dealer.
- Never paste stickers, gummed labels or any tape to the windows. Adhesives are hard to remove and may damage the windows.

INTERIORS

Carpet Removal

Front Carpets (Two And Four Door Models):

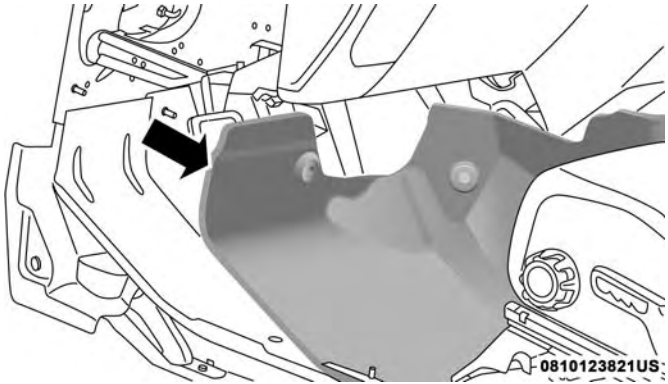
1. Remove the front grommets.



Front Carpet

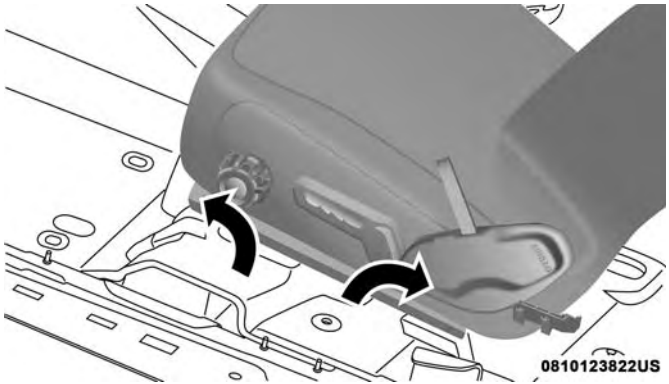
1 — Grommets

2. Pull the carpet out from the front to the rear.



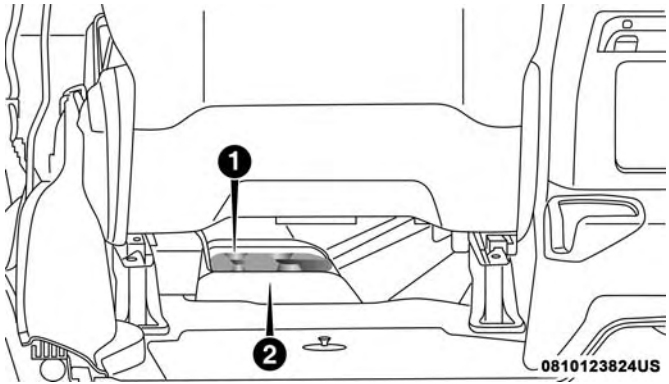
Front Carpet Pulled Away

3. Remove the grommets under the front seat. First for the rear carpet and then the front carpet.



Front And Rear Carpet Split

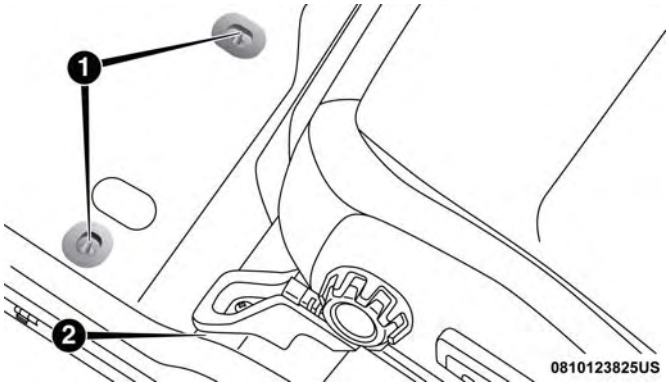
4. Under the back of the front seat, open the carpet split and then pull out the rear edge and slide the carpet to the front (do not remove the harness).



Rear Underside Of Front Seat

1 — Harness
2 — Carpet Split

5. Finally open the carpet split around seat bracket and then remove the last two grommets.



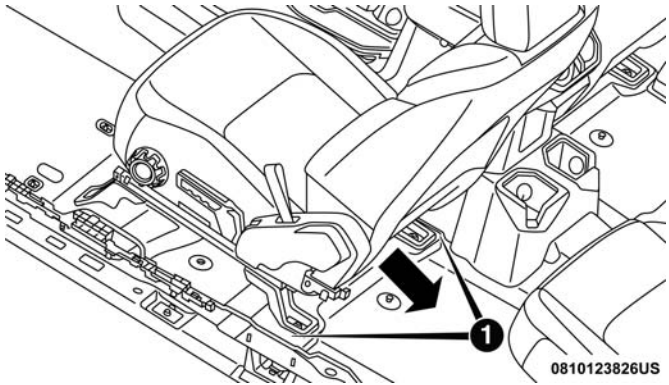
Front Seat And Floor

1 — Grommets
2 — Carpet Split

6. When reinstalling carpet please preform these steps in reverse order making sure that the carpet is tucked under the scuffs, B pillar, console, and refasten grommets.

Rear Carpet (Four Door Models):

1. Remove the grommets under the front seat (one left and one right).
2. Then pull the carpet out, to the rear and open the carpet split around the front seats brackets.

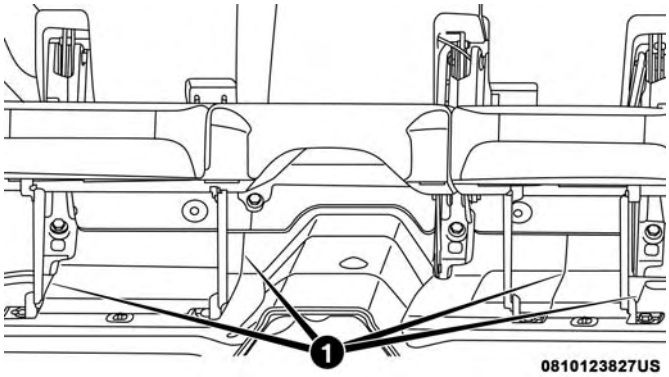


Pull Toward The Rear Of Vehicle

1 — Carpet Split

3. Remove the grommets under the rear seat (one left and one right). First the grommet for the cargo carpet and then the rear carpet.

4. Pull the carpet out to the front and open the carpet split around the rear seats brackets.



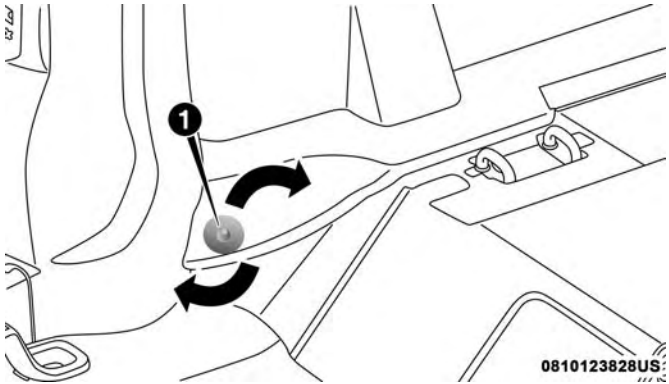
Under Rear Seat

1 — Carpet Split

5. When reinstalling carpet please preform these steps in reverse order making sure that the carpet is tucked under the scuffs, B pillar, console, and refasten grommets.

Rear Carpet (Two Door Models):

1. Remove the rear seats.
2. Remove the sides grommets (one left and one right). First the grommet from the side carpet and then the rear carpet.

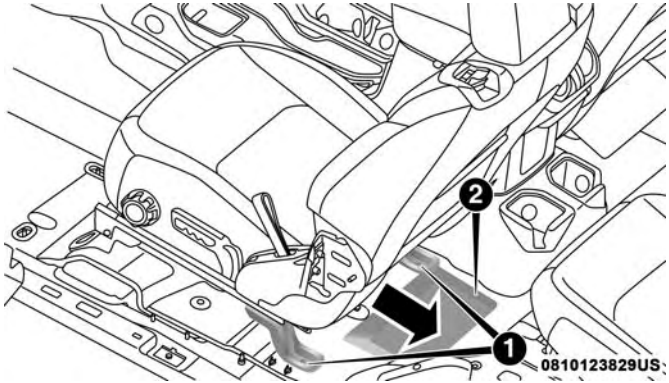


Side Carpet

1 — Grommet

3. Remove the grommets under the front seat (one left and one right).

4. Then pull the carpet out to the rear and open the carpet split around the front seats brackets.



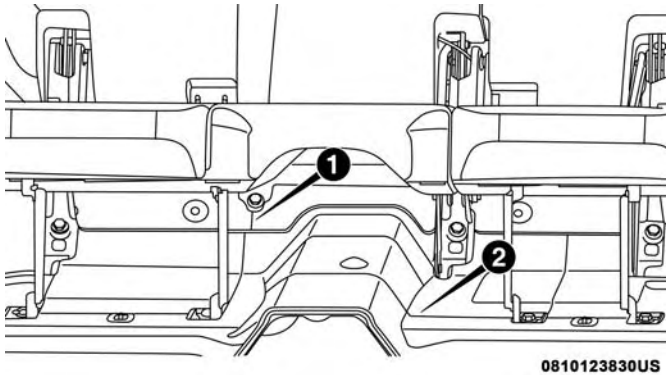
Pull Carpet To The Rear

1 — Carpet Split
2 — Rear Carpet

5. When reinstalling carpet please preform these steps in reverse order making sure that the carpet is tucked under the scuffs, B pillar, console, and refasten grommets.

Cargo Carpet (Four Door Models):

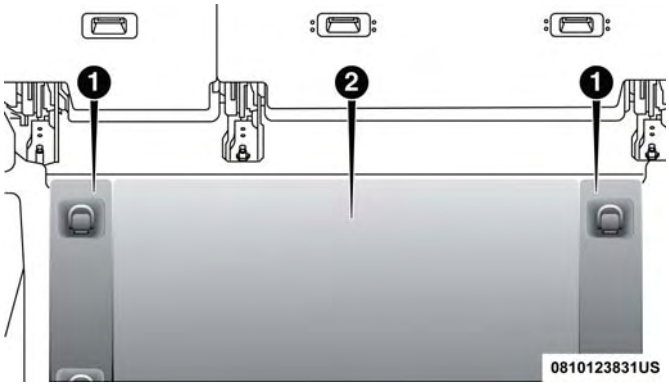
1. Remove the grommets under the rear seat (one left and one right).
2. Pull the carpet out to the rear and open the carpet split around the seat belt attachment.



Under Rear Seat

1 — Carpet Split
2 — Rear Carpet

3. Remove the carpet under the load floor and the side support and then pull the carpet out.



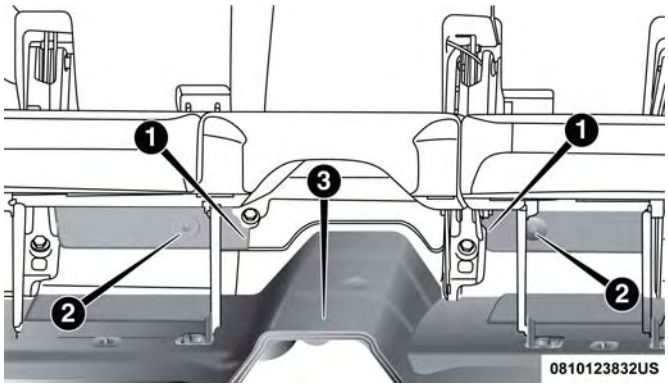
Rear Load Floor

1 — Side Supports
2 — Load Floor

4. When reinstalling carpet please preform these steps in reverse order making sure that the carpet is tucked under the scuffs, B pillar, console, and refasten grommets.

Cargo Carpet (Four Door Models) With Gap Hider:

1. Remove the grommets under the rear seat (one left and one right).
2. Pull the carpet out to the front and open the carpet split around the seat belt attachment and under the center seat bracket.



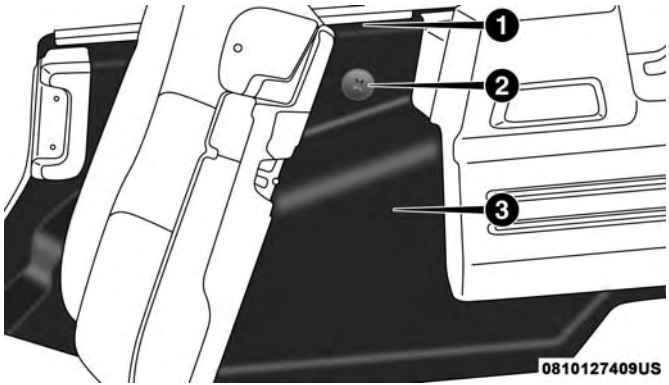
Under Rear Seat

1 — Carpet Split
2 — Grommets
3 — Rear Carpet

3. When reinstalling carpet please preform these steps in reverse order making sure that the carpet is tucked under the scuffs, B pillar, console, and refasten grommets.

Side Carpet (Four Door Models):

1. Remove the side grommet (one left and one right).
2. Pull the carpet out starting on the top flange, then all around the perimeter and open the carpet split around the seat belt attachment.



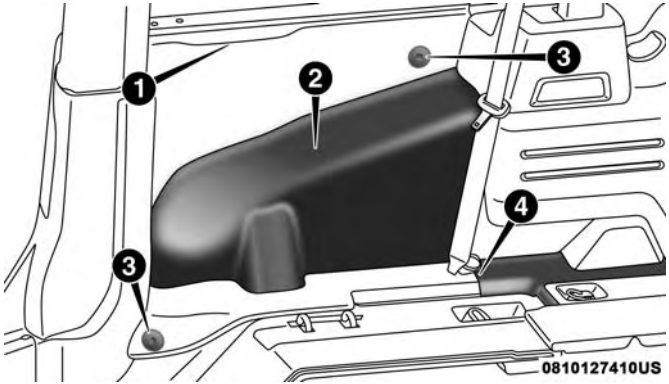
Inside Sidewall

1 — Top Flange
2 — Grommet
3 — Side Carpet

3. When reinstalling carpet please preform these steps in reverse order making sure that the carpet is tucked under the scuffs, B pillar, console, and refasten grommets.

Side Carpet (Two Door Models):

1. Remove the side grommet and then the lower one (left and right).
2. Pull the carpet out starting on the top flange, then all around the perimeter and open the carpet split around the seat belt attachment.



Inside Sidewall

1 — Top Flange
2 — Side Carpet
3 — Grommets
4 — Carpet Split

3. When reinstalling carpet please preform these steps in reverse order making sure that the carpet is tucked under the scuffs, B pillar, console, and refasten grommets.

Seats And Fabric Parts

Use Mopar Total Clean to clean fabric upholstery and carpeting.

WARNING!

Do not use volatile solvents for cleaning purposes. Many are potentially flammable, and if used in closed areas they may cause respiratory harm.

Seat Belt Maintenance

Do not bleach, dye or clean the belts with chemical solvents or abrasive cleaners. This will weaken the fabric. Sun damage can also weaken the fabric.

If the belts need cleaning, use a mild soap solution or lukewarm water. Do not remove the belts from the vehicle to wash them. Dry with a soft cloth.

Replace the belts if they appear frayed or worn or if the buckles do not work properly.

WARNING!

A frayed or torn belt could rip apart in a collision and leave you with no protection. Inspect the belt system periodically, checking for cuts, frays, or loose parts. Damaged parts must be replaced immediately. Do not disassemble or modify the system. Seat belt assemblies must be replaced after a collision if they have been damaged (i.e., bent retractor, torn webbing, etc.).

Plastic And Coated Parts

Use Mopar Total Clean to clean vinyl upholstery.

CAUTION!

- **Direct contact of air fresheners, insect repellents, suntan lotions, or hand sanitizers to the plastic, painted, or decorated surfaces of the interior may cause permanent damage. Wipe away immediately.**
- **Damage caused by these type of products may not be covered by your New Vehicle Limited Warranty.**

Cleaning Plastic Instrument Cluster Lenses

The lenses in front of the instruments in this vehicle are molded in clear plastic. When cleaning the lenses, care must be taken to avoid scratching the plastic.

1. Clean with a wet soft cloth. A mild soap solution may be used, but do not use high alcohol content or abrasive cleaners. If soap is used, wipe clean with a clean damp cloth.
2. Dry with a soft cloth.

Leather Parts

Mopar Total Clean is specifically recommended for leather upholstery.

Your leather upholstery can be best preserved by regular cleaning with a damp soft cloth. Small particles of dirt can act as an abrasive and damage the leather upholstery and should be removed promptly with a damp cloth. Stubborn soils can be removed easily with a soft cloth and Mopar Total Clean. Care should be taken to avoid soaking your leather upholstery with any liquid. Please do not use polishes, oils, cleaning fluids, solvents, detergents, or ammonia-based cleaners to clean your leather upholstery. Application of a leather conditioner is not required to maintain the original condition.

NOTE: If equipped with light colored leather, it tends to show any foreign material, dirt, and fabric dye transfer more so than darker colors. The leather is designed for easy cleaning, and FCA recommends Mopar total care leather cleaner applied on a cloth to clean the leather seats as needed.

CAUTION!

Do not use Alcohol and Alcohol-based and/or Ketone based cleaning products to clean leather seats, as damage to the seat may result.

Glass Surfaces

All glass surfaces should be cleaned on a regular basis with Mopar Glass Cleaner, or any commercial household-type glass cleaner. Never use an abrasive type cleaner. Use caution when cleaning the inside rear window equipped with electric defrosters or windows equipped with radio antennas. Do not use scrapers or other sharp instruments that may scratch the elements.

When cleaning the rear view mirror, spray cleaner on the towel or cloth that you are using. Do not spray cleaner directly on the mirror.

TECHNICAL SPECIFICATIONS

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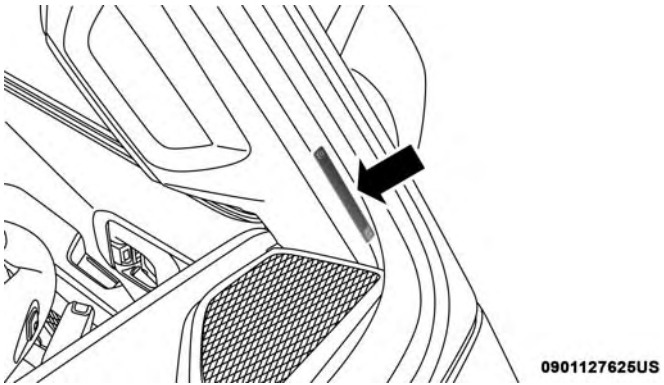
VEHICLE IDENTIFICATION NUMBER

The Vehicle Identification Number (VIN) is found on the left front corner of the A pillar, visible from outside of the vehicle through the windshield. This number also appears underbody, on the right side of the frame rail near the center of the vehicle, as well as on the Automobile Information Disclosure Label affixed to a window on your vehicle. Save this label for a convenient record of your vehicle identification number and optional equipment.

The VIN is also stamped on either right or left hand side of the engine block.



Vehicle Identification Number

NOTE: It is illegal to remove or alter the VIN plate.

WHEEL AND TIRE TORQUE SPECIFICATIONS

Proper lug nut/bolt torque is very important to ensure that the wheel is properly mounted to the vehicle. Any time a wheel has been removed and reinstalled on the vehicle, the lug nuts/bolts should be torqued using a properly calibrated torque wrench using a high quality six sided (hex) deep wall socket.

Torque Specifications

Lug Nut/Bolt Torque	**Lug Nut/Bolt Size	Lug Nut/Bolt Socket Size
130 Ft-Lbs (176 N·m)	M14 x 1.50	22 mm

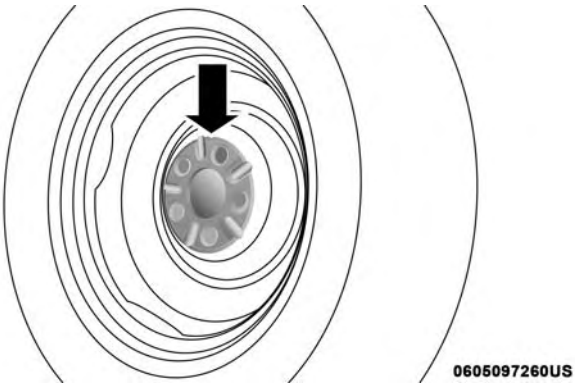
**Use only your authorized dealer recommended lug nuts/bolts and clean or remove any dirt or oil before tightening.

Inspect the wheel mounting surface prior to mounting the tire and remove any corrosion or loose particles.

Spare Tire Torque Specifications

Lug Nut/Bolt Torque	**Lug Nut/Bolt Size	Lug Nut/Bolt Socket Size
59 Ft-Lbs (80 N·m)	M14 x 1.50	22 mm

Spare tire torque is for the spare tire carrier located on the tailgate.



Wheel Mounting Surface

Tighten the lug nuts/bolts in a star pattern until each nut/bolt has been tightened twice. Ensure that the socket is fully engaged on the lug nut/bolt (do not insert it halfway).

Torque Patterns

After 25 miles (40 km), check the lug nut/bolt torque to be sure that all the lug nuts/bolts are properly seated against the wheel.

WARNING!

To avoid the risk of forcing the vehicle off the jack, do not tighten the lug nuts fully until the vehicle has been lowered. Failure to follow this warning may result in personal injury.

FUEL REQUIREMENTS

2.0L Engine

This engine is designed to meet all emission regulations, and provide satisfactory fuel economy and performance when using high-quality unleaded "Regular" gasoline having a posted octane number of 87 as specified by the (R+M)/2 method. For optimal performance the use of 91 or higher octane "Premium" gasoline is recommended in these engines.

While operating on gasoline with the required octane number, hearing a light knocking sound from the engine is not a cause for concern. However, if the engine is heard making a heavy knocking sound, see your dealer immediately. Use of gasoline with a lower than recommended octane number can cause engine failure and may void or not be covered by the New Vehicle Limited Warranty.

Poor quality gasoline can cause problems such as hard starting, stalling, and hesitations. If you experience these symptoms, try another brand of gasoline before considering service for the vehicle.

3.6L Engine

This engine is designed to meet all emissions regulations and provide excellent fuel economy and performance when using high-quality unleaded "Regular" gasoline having an octane rating of 87 as specified by the (R+M)/2 method. The use of higher octane "Premium" gasoline will not provide any benefit over "Regular" gasoline in these engines.

While operating on gasoline with an octane number of 87, hearing a light knocking sound from the engine is not a cause for concern. However, if the engine is heard making a heavy knocking sound, see your dealer immediately. Use of gasoline with an octane number lower than 87 can cause engine failure and may void or not be covered by the New Vehicle Limited Warranty.

Poor quality gasoline can cause problems such as hard starting, stalling, and hesitations. If you experience these symptoms, try another brand of gasoline before considering service for the vehicle.

Reformulated Gasoline

Many areas of the country require the use of cleaner burning gasoline referred to as "Reformulated Gasoline". Reformulated gasoline contains oxygenates and are specifically blended to reduce vehicle emissions and improve air quality.

The use of reformulated gasoline is recommended. Properly blended reformulated gasoline will provide improved performance and durability of engine and fuel system components.

Materials Added To Fuel

Besides using unleaded gasoline with the proper octane rating, gasolines that contain detergents, corrosion and stability additives are recommended. Using gasolines that have these additives will help improve fuel economy, reduce emissions, and maintain vehicle performance.

Designated TOP TIER Detergent Gasoline contains a higher level of detergents to further aide in minimizing engine and fuel system deposits. When available, the usage of Top Tier Detergent gasoline is recommended. Visit www.toptiergas.com for a list of TOP TIER Detergent Gasoline Retailers.

Indiscriminate use of fuel system cleaning agents should be avoided. Many of these materials intended for gum and varnish removal may contain active solvents or similar ingredients. These can harm fuel system gasket and diaphragm materials.

Gasoline/Oxygenate Blends

Some fuel suppliers blend unleaded gasoline with oxygenates such as ethanol.

CAUTION!

DO NOT use E-85, gasoline containing methanol, or gasoline containing more than 15% ethanol (E-15). Use of these blends may result in starting and drivability problems, damage critical fuel system components,

(Continued)

CAUTION! *(Continued)*

cause emissions to exceed the applicable standard, and/or cause the "Malfunction Indicator Light" to illuminate. Please observe pump labels as they should clearly communicate if a fuel contains greater than 15% ethanol (E-15).

Problems that result from using gasoline containing more than 15% ethanol (E-15) or gasoline containing methanol are not the responsibility of the manufacturer and may void or not be covered under New Vehicle Limited Warranty.

Do Not Use E-85 In Non-Flex Fuel Vehicles

Non-Flex Fuel Vehicles (FFV) are compatible with gasoline containing up to 15% ethanol (E-15). Use of gasoline with higher ethanol content may void the New Vehicle Limited Warranty.

If a Non-FFV vehicle is inadvertently fueled with E-85 fuel, the engine will have some or all of these symptoms:

- Operate in a lean mode.
- OBD II "Malfunction Indicator Light" on.
- Poor engine performance.
- Poor cold start and cold drivability.
- Increased risk for fuel system component corrosion.

CNG And LP Fuel System Modifications

Modifications that allow the engine to run on compressed natural gas (CNG) or liquid propane (LP) may result in damage to the engine, emissions, and fuel system components. Problems that result from running CNG or LP are not the responsibility of the manufacturer and may void or not be covered under the New Vehicle Limited Warranty.

MMT In Gasoline

Methylcyclopentadienyl Manganese Tricarbonyl (MMT) is a manganese-containing metallic additive that is blended into some gasoline to increase octane. Gasoline blended with MMT provides no performance advantage beyond gasoline of the same octane number without MMT. Gasoline blended with MMT reduces spark plug life and reduces emissions system performance in some vehicles. The manufacturer recommends that gasoline without MMT be used in your vehicle. The MMT content of gasoline may not be indicated on the gasoline pump; therefore, you should ask your gasoline retailer whether the gasoline contains MMT. MMT is prohibited in Federal and California reformulated gasoline.

Fuel System Cautions

CAUTION!

Follow these guidelines to maintain your vehicle's performance:

- **The use of leaded gasoline is prohibited by Federal law. Using leaded gasoline can impair engine performance and damage the emissions control system.**
- **An out-of-tune engine or certain fuel or ignition malfunctions can cause the catalytic converter to overheat. If you notice a pungent burning odor or some light smoke, your engine may be out of tune or malfunctioning and may require immediate service. Contact an authorized dealer for service assistance.**
- **The use of fuel additives, which are now being sold as octane enhancers, is not recommended. Most of these products contain high concentrations of methanol. Fuel system damage or vehicle performance problems resulting from the use of such fuels or additives is not the responsibility of the manufacturer and may void or not be covered under the New Vehicle Limited Warranty.**

NOTE: Intentional tampering with the emissions control system can result in civil penalties being assessed against you.

Carbon Monoxide Warnings

WARNING!

Carbon monoxide (CO) in exhaust gases is deadly. Follow the precautions below to prevent carbon monoxide poisoning:

- **Do not inhale exhaust gases. They contain carbon monoxide, a colorless and odorless gas, which can kill. Never run the engine in a closed area, such as a garage, and never sit in a parked vehicle with the engine running for an extended period. If the vehicle is stopped in an open area with the engine running for more than a short period, adjust the ventilation system to force fresh, outside air into the vehicle.**
- **Guard against carbon monoxide with proper maintenance. Have the exhaust system inspected every time the vehicle is raised. Have any abnormal conditions repaired promptly. Until repaired, drive with all side windows fully open.**

FLUID CAPACITIES

	U.S.	Metric
Fuel (Approximate)		
Two Door Models	18.5 Gallons	70 Liters
Four Door Models	21.5 Gallons	81 Liters
Engine Oil with Filter		
2.0L Engine	5 Quarts	4.73 Liters
3.6L Engine	5 Quarts	4.73 Liters
Cooling System *		
2.0L Engine (Mopar Antifreeze/ Engine Coolant 10 Year/150,000 Mile Formula or equivalent)	9.9 Quarts	9.4 Liters
2.0L Engine Intercooler without Motor Generator Unit (MGU) (Mopar Antifreeze/Engine Coolant 10 Year/ 150,000 Mile Formula or equivalent)	3.2 Quarts	3.0 Liters
2.0L Engine Intercooler with Motor Generator Unit (MGU) (Mopar Antifreeze/Engine Coolant 10 Year/ 150,000 Mile Formula or equivalent)	3.5 Quarts	3.3 Liters

	U.S.	Metric
2.0L Battery Coolant (Mopar Antifreeze/Engine Coolant 10 Year/ 150,000 Mile Formula or equivalent)	2.5 Quarts	2.4 Liters
3.6L Engine (Mopar Antifreeze/ Engine Coolant 10 Year/150,000 Mile Formula or equivalent)	10.7 Quarts	10.1 Liters
3.6L Motor Generator Unit (MGU) (Mopar Antifreeze/Engine Coolant 10 Year/150,000 Mile Formula or equivalent)	1.9 Quarts	1.8 Liters
3.6L Battery Coolant (Mopar Antifreeze/Engine Coolant 10 Year/ 150,000 Mile Formula or equivalent)	2.5 Quarts	2.4 Liters
* Includes coolant recovery bottle filled to MAX level.		

FLUIDS AND LUBRICANTS

Engine

Component	Fluid, Lubricant, or Genuine Part
Engine Coolant	We recommend you use Mopar Antifreeze/Coolant 10 Year/150,000 Mile Formula OAT (Organic Additive Technology) or equivalent meeting the requirements of FCA Material Standard MS.90032.
Intercooler/Motor Generator Unit (if equipped)	We recommend you use Mopar Antifreeze/Coolant 10 Year/150,000 Mile Formula OAT (Organic Additive Technology) or equivalent meeting the requirements of FCA Material Standard MS.90032.
Battery Coolant (if equipped)	We recommend you use Mopar Antifreeze/Coolant 10 Year/150,000 Mile Formula OAT (Organic Additive Technology) or equivalent meeting the requirements of FCA Material Standard MS.90032.
Engine Oil — 2.0L Engine	We recommend you use API Certified SAE 5W-30 Fully Synthetic Engine Oil, meeting the requirements of FCA Material Standard MS-13340 such as Mopar, Pennzoil, and Shell Helix. Refer to your engine oil filler cap for correct SAE grade.

Component	Fluid, Lubricant, or Genuine Part
Engine Oil — 3.6L Engine	We recommend you use API Certified SAE 0W-20 Engine Oil, meeting the requirements of FCA Material Standard MS-6395 such as Mopar, Pennzoil, and Shell Helix. Refer to your engine oil filler cap for correct SAE grade.
Engine Oil Filter	We recommend you use Mopar Engine Oil Filter or equivalent.
Spark Plugs	We recommend you use Mopar Spark Plugs.
Fuel Selection — 2.0L Engine	87 Octane Minimum – 91 Octane Recommended, 0-15% Ethanol.
Fuel Selection — 3.6L Engine	87 Octane, 0-15% Ethanol.

CAUTION!

- **Mixing of engine coolant (antifreeze) other than specified Organic Additive Technology (OAT) engine coolant (antifreeze), may result in engine damage and may decrease corrosion protection. Organic Additive Technology (OAT) engine coolant is different and should not be mixed with Hybrid Organic Additive Technology (HOAT) engine coolant (antifreeze) or any "globally compatible" coolant (antifreeze). If a non-OAT engine coolant (antifreeze) is**

(Continued)

CAUTION! *(Continued)*

introduced into the cooling system in an emergency, the cooling system will need to be drained, flushed, and refilled with fresh OAT coolant (conforming to MS.90032), by an authorized dealer as soon as possible.
- **Do not use water alone or alcohol-based engine coolant (antifreeze) products. Do not use additional rust inhibitors or antirust products, as they may not**

(Continued)

CAUTION! *(Continued)*

be compatible with the radiator engine coolant and may plug the radiator.

- **This vehicle has not been designed for use with propylene glycol-based engine coolant (antifreeze). Use of propylene glycol-based engine coolant (antifreeze) is not recommended.**

Chassis

Component	Fluid, Lubricant, or Genuine Part
Automatic Transmission – If Equipped	Use only Mopar ZF 8&9 Speed ATF Automatic Transmission Fluid or equivalent. Failure to use the correct fluid may affect the function or performance of your transmission.
Manual Transmission – If Equipped	We recommend you use Mopar ATF+4 Automatic Transmission Fluid.
Transfer Case	We recommend you use Mopar ATF+4 Automatic Transmission Fluid.
Axle Differential (Front)	We recommend you use Mopar Gear & Axle Lubricant (SAE 75W85)(API GL-5)

Component	Fluid, Lubricant, or Genuine Part
Axle Differential (Rear)	We recommend you use Mopar Gear & Axle Lubricant (SAE 75W85)(API GL-5). Models equipped with Trac-Lok Limited Slip Differential require a friction modifier additive.
Brake Master Cylinder	We recommend you use Mopar DOT 3 Brake Fluid, SAE J1703. If DOT 3, SAE J1703 brake fluid is not available, then DOT 4 is acceptable.
Power Steering Reservoir	We recommend you use Mopar Power Steering Fluid +4, Mopar ATF+4 Automatic Transmission Fluid.

MULTIMEDIA

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UCONNECT SYSTEMS

For detailed information about your Uconnect system, refer to your Uconnect Owner's Manual Supplement.

NOTE: Uconnect screen images are for illustration purposes only and may not reflect exact software for your vehicle.

DRAG & DROP MENU BAR

The Uconnect features and services in the main menu bar are easily changed for your convenience. Simply follow these steps:

Uconnect 4 Main Menu

Uconnect 4C/4C NAV Main Menu

1. Press the "Apps" button to open the App screen.
2. Press and hold, then drag the selected App to replace an existing shortcut in the main menu bar.

The new shortcut will now be an active App/shortcut on the main menu bar.

CYBERSECURITY

Your vehicle may be a connected vehicle and may be equipped with both wired and wireless networks. These networks allow your vehicle to send and receive information. This information allows systems and features in your vehicle to function properly.

Your vehicle may be equipped with certain security features to reduce the risk of unauthorized and unlawful access to vehicle systems and wireless communications. Vehicle software technology continues to evolve over time and FCA US LLC, working with its suppliers, evaluates and takes appropriate steps as needed. Similar to a computer or other devices, your vehicle may require software updates to improve the usability and performance of your systems or to reduce the potential risk of unauthorized and unlawful access to your vehicle systems.

The risk of unauthorized and unlawful access to your vehicle systems may still exist, even if the most recent version of vehicle software (such as Uconnect software) is installed.

WARNING!

- **It is not possible to know or to predict all of the possible outcomes if your vehicle's systems are breached. It may be possible that vehicle systems, including safety related systems, could be impaired or a loss of vehicle control could occur that may result in an accident involving serious injury or death.**
- **ONLY insert media (e.g., USB, SD card, or CD) into your vehicle if it came from a trusted source. Media of unknown origin could possibly contain malicious software, and if installed in your vehicle, it may increase the possibility for vehicle systems to be breached.**
- **As always, if you experience unusual vehicle behavior, take your vehicle to your nearest authorized dealer immediately.**

NOTE:

- FCA US LLC or your dealer may contact you directly regarding software updates.
- To help further improve vehicle security and minimize the potential risk of a security breach, vehicle owners should:
  - Routinely check www.driveuconnect.com/software-update to learn about available Uconnect software updates.
  - Only connect and use trusted media devices (e.g. personal mobile phones, USBs, CDs).

Privacy of any wireless and wired communications cannot be assured. Third parties may unlawfully intercept information and private communications without your consent. For further information, refer to "Data Collection & Privacy" in "Uconnect + SiriusXM Guardian" in your Uconnect Owner's Manual Supplement and "Onboard Diagnostic System (OBD II) Cybersecurity" in "Getting To Know Your Instrument Panel".

UCONNECT SETTINGS

The Uconnect system uses a combination of buttons on the touchscreen and buttons on the faceplate located on the center of the instrument panel that allow you to access and change the customer programmable features. Many features can vary by vehicle.

Buttons on the touchscreen are accessible on the Uconnect touchscreen.

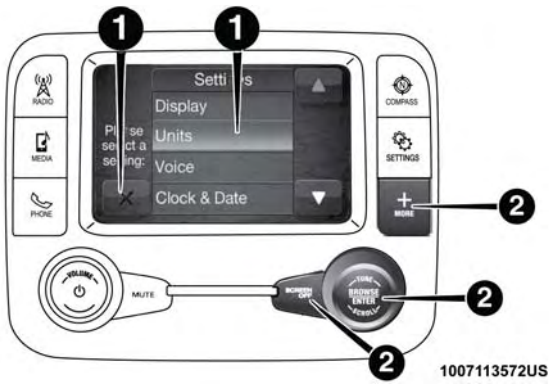
Buttons on the faceplate are located below, and beside the Uconnect system in the center of the instrument panel. In addition, there is a Scroll/Enter control knob located on the right side. Turn the control knob to scroll through menus and change settings (i.e., 30, 60, 90), push the center of the control knob one or more times to select or change a setting (i.e., ON, OFF).

Your Uconnect system may also have Screen Off and Mute buttons on the faceplate.

Push the Display Off button on the faceplate to turn off the Uconnect screen. Push the Display Off button on the faceplate a second time to turn the screen on.

Push the Back Arrow button on the faceplate to exit out of a Menu or certain option on the Uconnect system.

Customer Programmable Features — Uconnect 3 Settings



Uconnect 3 Buttons On The Touchscreen And Buttons On The Faceplate

1 — Uconnect Buttons On The Touchscreen
2 — Uconnect Buttons On The Faceplate

Push the "Settings" button on the touchscreen to display the settings menu screen. In this mode the Uconnect system allows you to access all of the available programmable features.

NOTE: Only one touchscreen area may be selected at a time.

When making a selection, press the button on the touchscreen to enter the desired mode. Once in the desired mode, press and release the preferred setting and make your selection. Once the setting is complete, either press the back arrow/Done button on the touchscreen or the Back button on the faceplate to return to the previous menu. Pressing the Up or Down Arrow buttons on the right side of the screen will allow you to toggle up or down through the available settings.

NOTE: All settings should be changed with the ignition in the "MAR/RUN" position.

The following tables list the settings that may be found within the Uconnect 3 radio, along with the selectable options pertaining to each setting.

Display

After pressing the “Display” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Display Mode	Auto	Manual	
Brightness	+	-	
NOTE: The “Brightness” setting can also be adjusted by selecting any point on the scale between the “+” and “-” buttons on the touchscreen.			
Language	English	Français	Español
NOTE: Selecting any option within the “Language” setting will change the language for all displayed nomenclature, including the trip functions and the navigation system (if equipped).			
Touchscreen Beep	☐	☑	

Units

After pressing the “Units” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Units	US	Metric	Custom

NOTE:
- The “Metric” option changes the instrument cluster display to metric units of measure.
- The “Custom” option allows setting the “Fuel Consumption” (L/100km, or km/L) and “Pressure” (kPa, or bar) units of measure independently.

Clock & Date

After pressing the “Clock & Date” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options			
Set Time and Format	12 hour	24 hour	AM	PM

NOTE:
Within the “Set Time and Format” setting, press the corresponding arrow buttons on the touchscreen to adjust to the correct time.

Setting Name	Selectable Options	
Show Time Status — If Equipped	On	Off
Sync Time — If Equipped	On	Off

Safety/Assistance

After pressing the "Safety/Assistance" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
ParkView Backup Camera Delay — If Equipped	On	Off

NOTE:
The "ParkView Backup Camera Delay" setting determines whether or not the screen will display the rear view image with dynamic grid lines for up to ten seconds after the vehicle is shifted out of REVERSE. This delay will be canceled if the vehicle's speed exceeds 8 mph (13 km/h), the transmission is shifted into PARK, or the ignition is switched to the OFF position.

Setting Name	Selectable Options	
ParkView Backup Camera Active Guide Lines — If Equipped	☐	☑

NOTE:
The "ParkView Backup Camera Active Guide Lines" setting overlays the Rear Backup Camera image with active, or dynamic, grid lines to help illustrate the width of the vehicle and its project back up path, based on the steering wheel position when the option is checked. A dashed center line overlay indicates the center of the vehicle to assist with parking or aligning to a hitch/receiver.

ParkSense — If Equipped	Sound Only	Sound and Display	
Rear ParkSense Volume — If Equipped	Low	Medium	High
Front ParkSense Volume — If Equipped	Low	Medium	High
Blind Spot Alert — If Equipped	Off	Lights	Lights and Chime

NOTE:
If your vehicle has experienced any damage in the area where the sensor is located, even if the fascia is not damaged, the sensor may have become misaligned. Take your vehicle to an authorized dealer to verify sensor alignment. A sensor that is misaligned will result in the Blind Spot Monitor (BSM) not operating to specification.

Setting Name	Selectable Options		
Blind Spot Alert — If Equipped	Off	Lights	Lights and Chime
Rain Sensing Auto Wipers — If Equipped	☐	☑	
Auto Park Brake	On	Off	

Lights

After pressing the "Lights" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options			
Headlight Off Delay	0 sec	30 sec	60 sec	90 sec
NOTE: When the "Headlight Off Delay" feature is selected, it allows the adjustment of the amount of time the headlights remain on after the engine is shut off.				
Automatic High Beam Headlamps — If Equipped	On		Off	
Daytime Running Lights	Yes		No	
Flash Lights With Lock — If Equipped	On		Off	

Setting Name	Selectable Options	
Interior Ambient Lights	+	-
NOTE: The “Interior Ambient Lights” setting can also be adjusted by selecting any point on the scale between the “+” and “-” buttons on the touchscreen.		

Doors & Locks

After pressing the “Doors & Locks” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Auto Door Locks	On	Off
NOTE: When this feature is selected, all doors will lock automatically when the vehicle reaches a speed of 12 mph (20 km/h).		
Auto Unlock On Exit	On	Off
NOTE: When this feature is selected, all doors will unlock when the vehicle is stopped and the transmission is in the PARK or NEUTRAL position and the driver’s door is opened.		

Setting Name	Selectable Options	
Flash Lights With Lock	On	Off
Horn With Lock	On	Off
Horn With Remote Start — If Equipped	On	Off
Remote Door Unlock/Door Unlock	Driver	All

NOTE:
When "Driver" is selected, only the driver's door will unlock on the first push of the key fob unlock button, you must push the key fob unlock button twice to unlock the passenger's doors. When "All" is selected, all of the doors will unlock on the first press of the key fob unlock button. If "All" is programmed, all doors will unlock no matter which Passive Entry equipped door handle is grasped. If "Driver" is programmed, only the driver's door will unlock when the driver's door is grasped. Touching the handle more than once will only result in the driver's door opening once. If the driver's door is opened, the interior door lock/unlock switch can be used to unlock all doors (or use key fob).

Auto Comfort Systems — If Equipped

After pressing the "Auto-On Comfort Systems" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Auto-On Driver Heated/Ventilated Seat & Steering Wheel With Vehicle Start — If Equipped	Off	Remote Start	All Starts
NOTE: When this feature is selected, the driver's heated seat and heated steering wheel will automatically turn on when temperatures are below 40° F (4.4° C). When temperatures are above 80° F (26.7° C), the driver vented seat will turn on.			

Engine Off Options

After pressing the "Engine Off Options" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options			
Headlight Off Delay	0 sec	30 sec	60 sec	90 sec
NOTE: When this feature is selected, it allows the adjustment of the amount of time the headlights remain on after the engine is shut off.				

Audio

After pressing the "Audio" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options				
Equalizer	Bass		Mid		Treble
NOTE: When in this display you may adjust the "Bass", "Mid", and "Treble" settings. Adjust the settings with the "+" and "–" setting buttons on the touchscreen or by selecting any point on the scale between the "+" and "–" buttons on the touchscreen. Bass/Mid/Treble also allow you to simply slide your finger up or down to change the setting as well as press directly on the desired setting.					
Balance/Fade	Up Arrow Button	Down Arrow Button	Left Arrow Button	Right Arrow Button	Center "C" Button
NOTE: When in this display you may adjust the "Balance/Fade" of the audio by using the "Arrow" button on the touchscreen to adjust the sound level from the front and rear or right and left side speakers. Press the "Center 'C' Button" on the touchscreen to reset the balance and fade to the factory setting.					
Speed Adjusted Volume	Off	1		2	3
Surround Sound — If Equipped	On		Off		

Setting Name	Selectable Options	
Loudness	On	Off
NOTE: The “Loudness” feature improves sound quality at lower volumes when enabled.		
AUX Volume Offset — If Equipped	+	-
NOTE: The “AUX Volume Offset” feature provides the ability to tune the audio level for portable devices connected through the AUX input.		

Phone/Bluetooth

After pressing the “Phone/Bluetooth” button on the touch-screen, the following settings will be available:

Setting Name	Selectable Options
Paired Phones	List of Paired Phones
NOTE: This feature shows which phones are paired to the Phone/Bluetooth system. For further information, refer to the Uconnect Owner’s Manual Supplement.	

SiriusXM Setup — If Equipped

After pressing the "SiriusXM Setup" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options
Channel Skip	List of Channels
NOTE: SiriusXM can be programmed to designate a group of channels that are the most desirable to listen to or to exclude undesirable channels while scanning. This feature allows you to select the channels you would like to skip.	
Subscription Info	Sirius ID
NOTE: New vehicle purchasers or lessees will receive a free limited time subscription to SiriusXM Satellite Radio with your radio. Following the expiration of the free services, it will be necessary to access the information on the Subscription Information screen to re-subscribe. 1. Press the "Subscription Info" button on the touchscreen to access the Subscription Information screen. 2. Write down the Sirius ID numbers for your receiver. To reactivate your service, either call the number listed on the screen or visit the provider online. SiriusXM Travel Link is a separate subscription.	

Restore Settings

After pressing the “Restore Settings” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Restore Settings	OK	Cancel
NOTE: When the “Restore Settings” feature is selected, it will reset all settings to their default settings.		

Clear Personal Data

After pressing the “Clear Personal Data” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Clear Personal Data	OK	Cancel
NOTE: When the “Clear Personal Data” feature is selected it will remove all personal data including Bluetooth devices and presets.		

Customer Programmable Features — Uconnect 4 Settings

Uconnect 4 With 7-inch Display Touchscreen and Faceplate Buttons

1 — Uconnect Buttons On The Touchscreen
2 — Uconnect Buttons On The Faceplate

Press the "Settings" button on the bottom bar, or press the "Apps" button, then press the "Settings" button on the touchscreen to display the menu setting screen. In this mode the Uconnect system allows you to access all of the available programmable features.

NOTE:

- Only one touchscreen area may be selected at a time.
- Depending on the vehicles options, feature settings may vary.

When making a selection, press the button on the touchscreen to enter the desired mode. Once in the desired mode, press and release the preferred setting "option" until a check-mark appears next to the setting, showing that setting has been selected. Once the setting is complete, either press the Back Arrow button on the touchscreen to return to the previous menu, or press the "X" button on the touchscreen to close out of the settings screen. Pressing the Up or Down Arrow button on the right side of the screen will allow you to toggle up or down through the available settings.

The following tables list the settings that may be found within the Uconnect 4 with 7-inch display radio, along with the selectable options pertaining to each setting.

Language

After pressing the “Language” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Language	English	Espanol	Francais

Display

After pressing the “Display” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Display Mode	Auto	Manual
Display Brightness Headlights On	+	-
Display Brightness Headlights Off	+	-
AutoShow	☐	☑

Setting Name	Selectable Options	
Touchscreen Beep	☐	☑
Control Screen Timeout	☐	☑
Phone Pop-ups Displayed in Cluster	☐	☑

Units

After pressing the "Units" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Units	US	Metric	Custom

NOTE:
- The "Metric" option changes the instrument cluster display to metric units of measure.
- The "Custom" option allows setting the "Distance, Fuel Consumption" (MPG (US), MPG(UK), L/100km, or km/L),"Pressure" (kPa, or bar) and "Temperature" (C, or F) units of measure independently.

Voice

After pressing the "Voice" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Voice Response Length	Brief	Detailed	
Show Command List	Always	With Help	Never

Time & Date

After pressing the "Time & Date" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Set Time Hours	+	-
NOTE: The "Set Time Hours" feature will allow you to adjust the hours.		
Set Time Minutes	+	-
NOTE: The "Set Time Minutes" feature will allow you to adjust the minutes.		
Time Format	12hrs	24hrs
	AM	PM

Camera

After pressing the “Camera” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
ParkView Backup Camera Delay — If Equipped	☐	☑
NOTE: The “ParkView Backup Camera Delay” setting determines whether or not the screen will display the rear view image with dynamic grid lines for up to ten seconds after the vehicle is shifted out of REVERSE. This delay will be canceled if the vehicle’s speed exceeds 8 mph (13 km/h), the transmission is shifted into PARK, or the ignition is switched to the OFF position.		
ParkView Backup Camera Active Guide Lines — If Equipped	☐	☑
NOTE: The “ParkView Backup Camera Active Guide Lines” feature overlays the Rear Backup Camera image with active, or dynamic, grid lines to help illustrate the width of the vehicle and its project back up path, based on the steering wheel position when the option is checked. A dashed center line overlay indicates the center of the vehicle to assist with parking or aligning to a hitch/receiver.		
ParkView Backup Camera Fixed Guide Lines — If Equipped	☐	☑

Safety/Driving Assistance — If Equipped

After pressing the "Safety/Driving Assistance" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
ParkSense — If Equipped	Sound	Sound and Display	
Rear ParkSense Volume	Low	Medium	High
Rain Sensing Auto Wipers	☐	☑	

Lights

After pressing the "Lights" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options			
Interior Ambient Lights	+		-	
NOTE: The "Interior Ambient Lights" setting can also be adjusted by selecting any point on the scale between the "+" and "-" buttons on the touchscreen.				
Headlight Off Delay	0 sec	30 sec	60 sec	90 sec
NOTE: When the "Headlight Off Delay" feature is selected, it allows the adjustment of the amount of time the headlights remain on after the engine is shut off.				

Setting Name	Selectable Options	
Auto Dim High Beams — If Equipped	☐	☑
NOTE: When the "Cornering Lights" feature is selected, if the steering wheel rotation angle is large or the turn signal indicators are on, a light (incorporated in the fog light) will turn on, on the relevant side to improve visibility at night.		
Flash Lights With Lock — If Equipped	☐	☑

Doors & Locks

After pressing the "Doors & Locks" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Auto Door Locks — If Equipped	☐	☑
NOTE: When this feature is selected, all doors will lock automatically when the vehicle reaches a speed of 12 mph (20 km/h).		

Setting Name	Selectable Options	
Auto Unlock On Exit	☐	☑
NOTE: When this feature is selected, all doors will unlock when the vehicle is stopped and the transmission is in the PARK or NEUTRAL position and the driver's door is opened.		
Flash Lights With Lock	☐	☑
Remote Door Unlock	Driver Door	All Doors
Personal Settings Linked To Key Fob — If Equipped	☐	☑

Engine Off Options — If Equipped

After pressing the "Engine Off Options" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Doors On Engine Off Power Delay	+	-
Doors Off Engine Off Power Delay	+	-
Headlight Off Delay	+	-

Aux Switches

After pressing the "Aux Switches" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Aux 1-4			
	Type	Latching	Momentary
	Power Source	Battery	Ignition
	Recalled Last State	☐	☑
NOTE: Holding last state conditions are met when switch type is set to latching and power source is set to ignition.			

Audio

After pressing the "Audio" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options
Balance & Fade	Speaker Icon
NOTE: When in this display you may adjust the "Balance & Fade" of the audio by pressing and dragging the "Speaker Icon" toward any location in the box.	

Setting Name	Selectable Options			
Equalizer	Bass	Mid	Treble	
NOTE: When in this display you may adjust the “Bass”, “Mid”, and “Treble” settings. Adjust the settings with the “+” and “–” setting buttons on the touchscreen or by selecting any point on the scale between the “+” and “–” buttons on the touchscreen. Bass/Mid/Treble also allow you to simply slide your finger up or down to change the setting as well as press directly on the desired setting.				
Speed Adjusted Volume	Off	1	2	3
Loudness	Yes		No	
NOTE: The “Loudness” feature improves sound quality at lower volumes when enabled.				
AUX Volume Offset — If Equipped	+		-	
NOTE: This feature provides the ability to tune the audio level for portable devices connected through the AUX input.				
Auto Play	On		Off	
NOTE: The “Auto Play” feature automatically starts playing audio when a USB device is connected and turned on.				

Phone

After pressing the “Phone” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Do Not Disturb	Do Not Distrurb Options	
Paired Phones And Audio Devices	List Of Paired Phones And Audio Devices	
NOTE: This feature shows which phones and audio devices are paired to the Phone/Bluetooth system. For further information, refer to the Uconnect Owner’s Manual Supplement.		
Phone Pop-ups Displayed In Cluster	☐	☑

SiriusXM Setup — If Equipped

After pressing the “SiriusXM Setup” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options
Channel Skip	List Of Channels
NOTE: SiriusXM can be programmed to designate a group of channels that are the most desirable to listen to or to exclude undesirable channels while scanning. This feature allows you to select the channels you would like to skip.	

Setting Name	Selectable Options
Subscription Info	Sirius ID

NOTE:
New vehicle purchasers or lessees will receive a free limited time subscription to SiriusXM Satellite Radio with your radio. Following the expiration of the free services, it will be necessary to access the information on the Subscription Information screen to re-subscribe.

1. Press the “Subscription Info” button on the touchscreen to access the Subscription Information screen.
2. Write down the Sirius ID numbers for your receiver. To reactivate your service, either call the number listed on the screen or visit the provider online.

SiriusXM Travel Link is a separate subscription.

Restore Settings

After pressing the “Restore Settings” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Restore Settings	OK	Cancel

NOTE:
When this feature is selected it will reset all settings to their default settings.

Clear Personal Data

After pressing the "Clear Personal Data" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Clear Personal Data	OK	Cancel
NOTE: When this feature is selected it will remove all personal data including Bluetooth devices and presets.		

Customer Programmable Features — Uconnect 4/4C NAV Settings

Uconnect 4/4C NAV Touchscreen and Faceplate Buttons

1 — Uconnect Buttons On The Touchscreen
2 — Uconnect Buttons On The Faceplate

Press the "Apps" button, then press the "Settings" button on the touchscreen to display the menu setting screen. In this mode the Uconnect system allows you to access all of the available programmable features.

NOTE:

- Only one touchscreen area may be selected at a time.
- Depending on the vehicles options, feature settings may vary.

When making a selection, press the button on the touchscreen to enter the desired mode. Once in the desired mode, press and release the preferred setting "option" until a check-mark appears next to the setting, showing that setting has been selected. Once the setting is complete, either press the Back Arrow button on the touchscreen to return to the previous menu, or press the "X" button on the touchscreen to close out of the settings screen. Pressing the Up or Down Arrow button on the right side of the screen will allow you to toggle up or down through the available settings.

The following tables list the settings that may be found within the Uconnect 4/4C NAV radio, along with the selectable options pertaining to each setting.

Display

After pressing the “Display” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Display Mode	Manual	Auto
Display Brightness With Headlights ON	+	-
NOTE: To make changes to the ″Display Brightness with Headlights ON″ setting, the headlights must be on and the interior dimmer switch must not be in the ″party″ or ″parade″ positions.		
Display Brightness With Headlights OFF	+	-
NOTE: To make changes to the ″Display Brightness with Headlights OFF″ setting, the headlights must be off and the interior dimmer switch must not be in the ″party″ or ″parade″ positions.		
Set Theme	☐	☑
NOTE: When in this display, you may select the theme for the display screen. To make your selection, press the ″Set Theme″ button on the touchscreen, then select the desired theme option button until a check-mark appears showing that the setting has been selected.		

Setting Name	Selectable Options	
Set Language	☐	☑
NOTE: When the “Set Language” feature is selected, you may select one of multiple languages (English / Français / Español) for all display nomenclature, including the trip functions and the navigation system (if equipped). Press the “Set Language” button on the touchscreen, then press the desired language button on the touchscreen until a check-mark appears next to the language, showing that setting has been selected.		
Touchscreen Beep	☐	☑
Control Screen Time-Out	☐	☑
NOTE: When the “Control Screen Time-Out” feature is selected, the Controls Screen will stay open for five seconds before the screen times out. With the feature deselected, the screen will stay open until it is manually closed.		
Navigation Turn-By-Turn In Cluster	☐	☑
NOTE: When the “Navigation Turn-By-Turn In Cluster” feature is selected, the turn-by-turn directions will appear in the Instrument Cluster Display as the vehicle approaches a designated turn within a programmed route.		

Units

After pressing the "Units" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Units	US	Metric	Custom

NOTE:
- The "Metric" option changes the instrument cluster display to metric units of measure.
- The "Custom" option allows setting the "Fuel Consumption" (L/100km, or km/L), "Pressure" (kPa, or bar), and "Temperature" (°C or °F) units of measure independently.

Voice

After pressing the "Voice" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Voice Response Length	Brief	Detailed	
Show Command List	Always	With Help	Never

Clock

After pressing the “Clock” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Sync Time With GPS — If Equipped	☐	☑
Set Time Hours	+	-
NOTE: The “Set Time Hours” feature will allow you to adjust the hours. The “Sync time with GPS” button on the touchscreen must be unchecked.		
Set Time Minutes	+	-
NOTE: The “Set Time Minutes” feature will allow you to adjust the minutes. The “Sync time with GPS” button on the touchscreen must be unchecked.		
Time Format	12hrs	24hrs
Show Time in Status Bar — If Equipped	☐	☑

Camera

After pressing the “Camera” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
ParkView Backup Camera Delay — If Equipped	☐	☑
NOTE: The “ParkView Backup Camera Delay” setting determines whether or not the screen will display the rear view image with dynamic grid lines for up to ten seconds after the vehicle is shifted out of REVERSE. This delay will be canceled if the vehicle’s speed exceeds 8 mph (13 km/h), the transmission is shifted into PARK, or the ignition is switched to the OFF position.		
ParkView Backup Camera Active Guide Lines — If Equipped	☐	☑
NOTE: The “ParkView Backup Camera Active Guide Lines” feature overlays the Rear Backup Camera image with active, or dynamic, grid lines to help illustrate the width of the vehicle and its project back up path, based on the steering wheel position when the option is checked. A dashed center line overlay indicates the center of the vehicle to assist with parking or aligning to a hitch/receiver.		
ParkView Backup Camera Fixed Guide Lines — If Equipped	☐	☑

Safety & Driving Assistance

After pressing the "Safety & Driving Assistance" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
ParkSense — If Equipped	Sound Only	Sound and Display	
Front ParkSense Volume	Low	Medium	High
Rear ParkSense Volume	Low	Medium	High
Blind Spot Alert — If Equipped	Off	Lights	Lights & Chime
NOTE: If your vehicle has experienced any damage in the area where the sensor is located, even if the fascia is not damaged, the sensor may have become misaligned. Take your vehicle to your authorized dealer to verify sensor alignment. A sensor that is misaligned will result in the BSM not operating to specification.			
Rain Sensing Auto Wipers	☐	☑	

Mirror and Wipers

After pressing the "Mirror and Wipers" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Rain Sensing Auto Wipers	On	Off
Tilt Mirrors in Reverse	On	Off

Setting Name	Selectable Options	
Auto Folding Side Mirrors — If Equipped	On	Off
Headlights with Wipers	On	Off

Lights

After pressing the “Lights” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options			
Headlight Off Delay	0 sec	30 sec	60 sec	90 sec
NOTE: When this feature is selected, it allows the adjustment of the amount of time the headlights remain on after the engine is shut off.				
Daytime Running Lights	Yes		No	
Flash Lights With Lock — If Equipped	On		Off	
Interior Ambient Lights	+		-	
NOTE: The “Interior Ambient Lights” setting can also be adjusted by selecting any point on the scale between the “+” and “-” buttons on the touchscreen.				

Setting Name	Selectable Options	
Auto Dim High Beams — If Equipped	☐	☑
NOTE: When the "Auto Dim High Beams" feature is selected, the high beam headlights will activate/deactivate automatically under certain conditions.		

Doors & Locks

After pressing the "Doors & Locks" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Auto Unlock On Exit	☐	☑	
NOTE: When the "Auto Unlock On Exit" feature is selected, all doors will unlock when the vehicle is stopped, the transmission is in the PARK or NEUTRAL position, and the driver's door is opened.			
Flash Lights With Lock	☐	☑	
Sound Horn With Lock — If Equipped	Off	1st Press	2nd Press
Sound Horn With Remote Start — If Equipped	☐	☑	

Setting Name	Selectable Options	
1st Press Of Key Fob Unlocks	Driver Door	All Doors
NOTE: When "Driver Door" is selected with 1st Press Of Key Fob Unlocks, only the driver's door will unlock with the first press of the key fob unlock button. You must press the key fob unlock button twice to unlock the passenger's doors. When "All Doors" is selected for 1st Press Of Key Fob Unlocks, all doors will unlock on the first press of the key fob unlock button. If the vehicle is programmed 1st Press Of Key Fob Unlocks "All Doors," all doors will unlock, no matter which Passive Entry equipped door handle is grasped. If 1st Press Of Key Fob Unlocks "Driver Door" is programmed, only the driver's door will unlock when the driver's door is grasped. With Passive Entry, if 1st Press Of Key Fob Unlocks "Driver Door" is programmed, touching the handle more than once will result in only the driver's door opening. If "Driver Door" is selected, once the driver door is opened, the interior door lock/unlock switch can be used to unlock all doors (or use key fob).		
Personal Settings Linked to Key Fob — If Equipped	☐	☑
NOTE: The "Personal Settings Linked To Key Fob" feature provides automatic recall of all settings stored to a memory location (driver's seat, exterior mirrors, steering column position and radio station pre-sets) to enhance driver mobility when entering and exiting the vehicle.		

Auto Comfort Systems — If Equipped

After pressing the "Auto-On Comfort Systems" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Auto-On Driver Heated/Ventilated Seat & Steering Wheel With Vehicle Start — If Equipped	Off	Remote Start	All Starts
NOTE: When this feature is selected the driver's heated seat and heated steering wheel will automatically turn on when temperatures are below 40° F (4.4° C). When temperatures are above 80° F (26.7° C) the driver vented seat will turn on.			

Aux Switches — If Equipped

After pressing the "Aux Switches" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options		
Aux 1-4	Type	Latching	Momentary
	Power Source	Battery	Ignition
	Recalled Last State	☐	☑
NOTE: Holding last state conditions are met when switch type is set to latching and power source is set to ignition.			

Engine Off Options

After pressing the "Engine Off Options" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Doors On Engine Off Power Delay	+	-
Doors Off Engine Off Power Delay	+	-
Headlight Off Delay	+	-

Audio

After pressing the "Audio" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options
Balance/Fade	Speaker Icon
NOTE: When in this display you may adjust the "Balance/Fade" of the audio by pressing and dragging the "Speaker Icon" toward any location in the box.	

Setting Name	Selectable Options			
Equalizer	Bass	Mid	Treble	
NOTE: When in this display you may adjust the “Bass”, “Mid”, and “Treble” settings. Adjust the settings with the “+” and “–” setting buttons on the touchscreen or by selecting any point on the scale between the “+” and “–” buttons on the touchscreen. Bass/Mid/Treble also allow you to simply slide your finger up or down to change the setting as well as press directly on the desired setting.				
Speed Adjusted Volume	Off	1	2	3
Surround Sound — If Equipped	On		Off	
AUX Volume Offset — If Equipped	+		-	
NOTE: This feature provides the ability to tune the audio level for portable devices connected through the AUX input.				

Phone/Bluetooth

After pressing the “Phone/Bluetooth” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options
Paired Phones	List Of Paired Phones
NOTE: This feature shows which phones are paired to the Phone/Bluetooth system. For further information, refer to the Uconnect Owner’s Manual Supplement.	

Setting Name	Selectable Options
Paired Audio Sources	List Of Paired Audio Sources
NOTE: This feature shows which Audio Sources are paired to the Phone/Bluetooth system. For further information, refer to the Uconnect Owner's Manual Supplement.	

SiriusXM Setup — If Equipped

After pressing the "SiriusXM Setup" button on the touch-screen, the following settings will be available:

Setting Name	Selectable Options
Channel Skip	List Of Channels
NOTE: SiriusXM can be programmed to designate a group of channels that are the most desirable to listen to or to exclude undesirable channels while scanning. This feature allows you to select the channels you would like to skip.	

Setting Name	Selectable Options
Subscription Info	Sirius ID

NOTE:
New vehicle purchasers or lessees will receive a free limited time subscription to SiriusXM Satellite Radio with your radio. Following the expiration of the free services, it will be necessary to access the information on the Subscription Information screen to re-subscribe.

1. Press the “Subscription Info” button on the touchscreen to access the Subscription Information screen.
2. Write down the Sirius ID numbers for your receiver. To reactivate your service, either call the number listed on the screen or visit the provider online.

SiriusXM Travel Link is a separate subscription.

Restore Settings

After pressing the “Restore Settings” button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Restore Settings	OK	Cancel

NOTE:
When this feature is selected it will reset all settings to their default settings.

Clear Personal Data

After pressing the "Clear Personal Data" button on the touchscreen, the following settings will be available:

Setting Name	Selectable Options	
Clear Personal Data	OK	Cancel
NOTE: When this feature is selected it will remove all personal data including Bluetooth devices and presets.		

System Information

After pressing the “System Information” button on the touchscreen, the following settings will be available:

<table>
<tr><th>Setting Name</th><th colspan="2">Selectable Options</th></tr>
<tr><td>Software Licenses</td><td colspan="2">Software Information Screen</td></tr>
<tr><td colspan="3">NOTE:
When this feature is selected, a “Licensing Information” screen will appear, displaying a licensing information website for the radio.</td></tr>
<tr><td>Map Update</td><td>Download System Information To USB</td><td>Generate Request Code</td></tr>
<tr><td colspan="3">NOTE:
The “Download System Information To USB” will create a special USB required for Map updates of the radio.
Whereas the “Generate Request Code” will display a code for the user to input online when downloading the maps.</td></tr>
</table>

OFF ROAD PAGES — IF EQUIPPED

Your vehicle is equipped with Off Road Pages, which provides the vehicle status while operating on off road conditions. It supplies information relating to the vehicle ride height, the status of the transfer case, the pitch and roll of the vehicle (if equipped).

To access Off Road Pages, press the "Apps" button on the touchscreen, and then select "Off Road Pages".

Main Menu

1 — Off Road Pages App
2 — Uconnect Apps Button

Off Road Pages has the following selectable pages:

- Drivetrain
- Pitch and Roll
- Accessory Gauge

Off Road Pages Status Bar

The Off Road Pages Status Bar is located along the bottom of Off Road Pages and is present in each of the three selectable page options. It provides continually updating information for the following items:

- Current Transfer Case Status
- Current Latitude/Longitude
- Current Altitude of the vehicle
- Status of Hill Descent/Selec-Speed Control and Selected Speed in MPH (km/h)

Status Bar 2WD/4WD

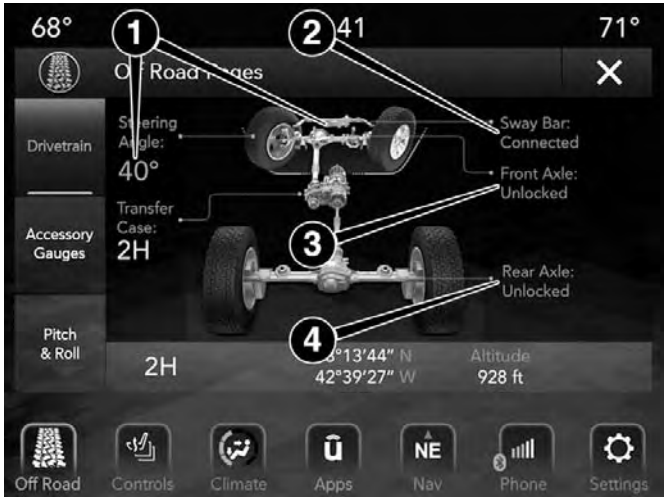
1 — Transfer Case Status
2 — Current Latitude/Longitude
3 — Current Altitude
4 — Hill Decent Control

Drivetrain

The Drivetrain page displays information concerning the vehicle's drivetrain.

The following information is displayed:

- Steering angle in degrees
- Status of Transfer Case
- Status of the Rear Axles — If Equipped



Drivetrain Menu 2WD/4WD

1 — Steering Angle
2 — Sway Bar
3 — Front Axle Locker Status
4 — Rear Axle Locker Status

Pitch And Roll

The Pitch And Roll page displays the vehicle's current pitch (angle up and down) and roll (angle side to side) in degrees. The pitch and roll gauges provide a visualization of the current vehicle angle.

Pitch And Roll Menu 2WD/4WD

1 — Current Pitch
2 — Current Roll

Accessory Gauges

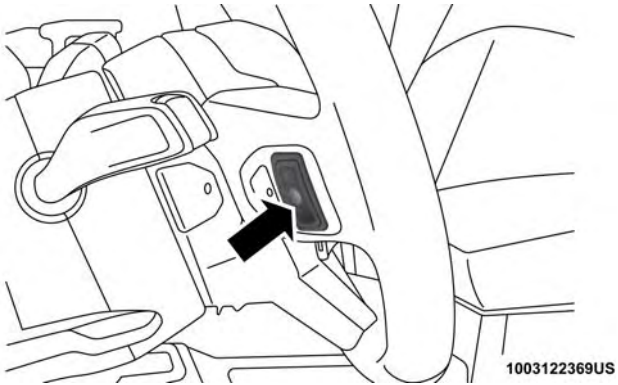
The Accessory Gauges page displays the current status of the vehicle's Coolant Temperature, Oil Temperature, Oil Pressure (Gas Vehicles Only), Transmission Temperature, and Battery Voltage.

Accessory Gauges Menu 2WD/4WD

1 — Coolant Temperature
2 — Oil Temperature
3 — Oil Pressure (Gas Vehicles Only)
4 — Battery Voltage
5 — Transmission Temperature (Automatic Transmissions Only)

STEERING WHEEL AUDIO CONTROLS

The remote sound system controls are located on the rear surface of the steering wheel. Reach behind the wheel to access the switches.



Audio Controls (Back View Of Steering Wheel)

The right-hand control is a rocker-type switch with a push-button in the center and controls the volume and mode of the sound system. Pushing the top of the rocker switch increases the volume, and pushing the bottom of the rocker switch decreases the volume.

Pushing the center button will make the radio switch between the various modes available (AM/FM/SAT/CD/USB/AUX, etc.).

The left-hand control is a rocker-type switch with a push-button in the center. The function of the left-hand control is different depending on which mode you are in.

The following describes the left-hand control operation in each mode.

Radio Operation

Pushing the top of the switch will “Seek” up for the next listenable station and pushing the bottom of the switch will “Seek” down for the next listenable station.

The button located in the center of the left-hand control will tune to the next preset station that you have programmed in the radio preset button.

AUX/USB/MP3 CONTROL — IF EQUIPPED

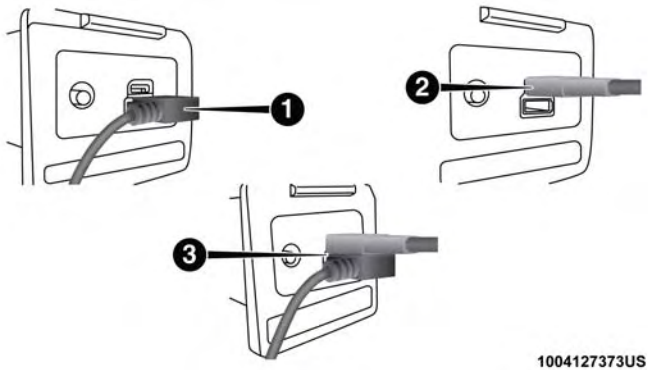
The Media Hub is located on the Instrument Panel, below the Climate Controls. Behind the Media Hub access door contains one AUX port, a Type C USB Port and one standard USB Port. Both USB Ports allow you to play music from iPod/MP3 players or USB devices through your vehicle's sound system.

The Smart Charging USB ports provide power to your device up to an hour after the vehicle is turned off.

NOTE:

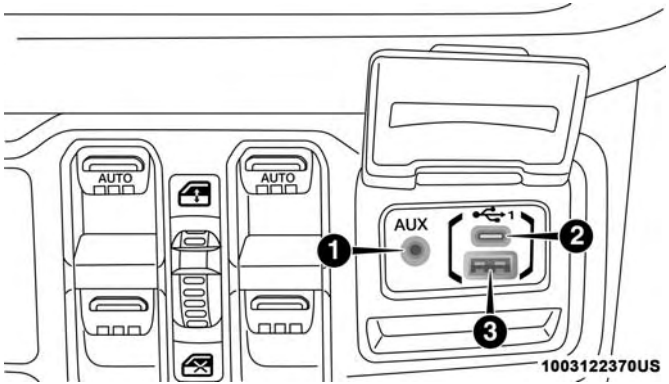
- The Type C USB port is the primary media port for the radio. Two devices can be plugged in at the same time and both ports provide charging capabilities, but only one port can transfer data to the head unit at a time.
- Both ports share a single data connection. However, the user cannot switch between Type A or Type C.

For example, if a device is plugged into the Type A USB port and another device is plugged into the Type C port, connection to the Type A port will be lost. Alternatively, if a device is plugged into the Type C port and another device is plugged into the Type A port, the Type C device maintains primary connection.

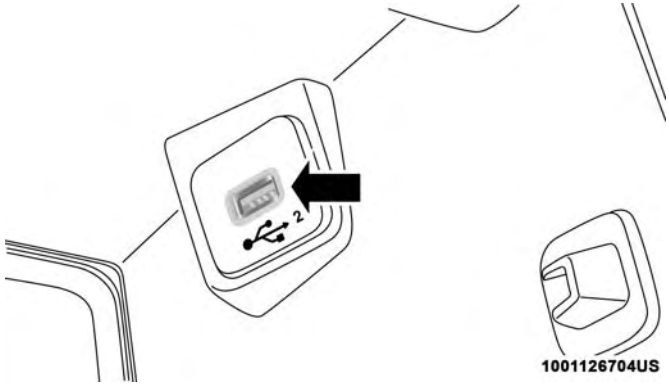


USB Connection

1 — Type A Plugged In
2 — Type C Plugged In
3 — Type A And Type C Plugged In



Media Hub

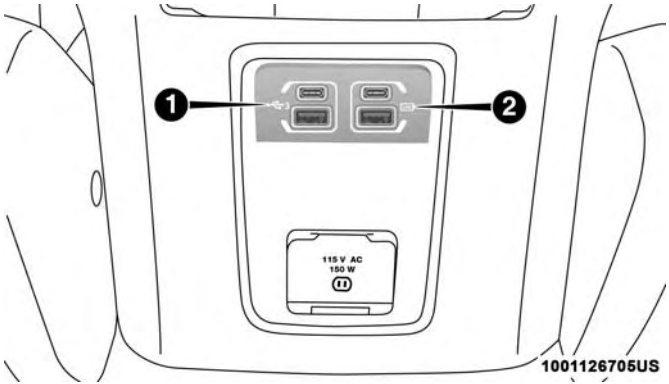


Center Console USB

1 — AUX Port
2 — Type C USB Port
3 — Type A USB Port

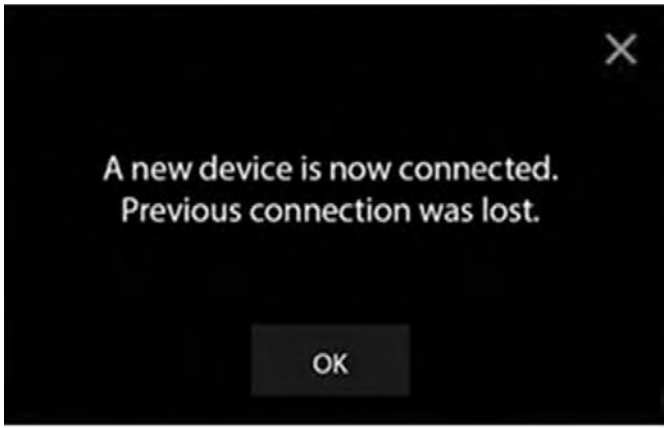
Located inside the center console, a second USB Port allows you to play music from iPod/MP3 players or USB devices through your vehicle's sound system.

A third and fourth USB Ports are located behind the center console, above the Power Inverter. One is a charge only port, and can only charge USB devices. The other USB Port allows you to play music from iPod/MP3 players or USB devices through your vehicle's sound system.

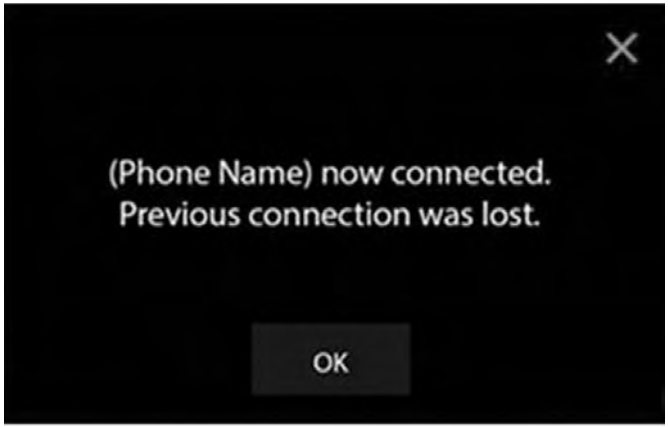


USB On The Back Of The Center Console

1 — Type C And Standard USB Ports
2 — Type C And Standard Charge Only USB Ports



Device Plugged In Message Screen



Phone Plugged In Message Screen

Phone or USB Plugged In Message Screen

NOTE: Plugging in a phone or another USB device may cause the connection to a previous device to be lost.

WARNING!
Do not plug in or remove the iPod or external device while driving. Failure to follow this warning could result in a collision.

RADIO OPERATION AND MOBILE PHONES

Under certain conditions, the mobile phone being on in your vehicle can cause erratic or noisy performance from your radio. This condition may be lessened or eliminated by relocating the mobile phone antenna. This condition is not harmful to the radio. If your radio performance does not satisfactorily "clear" by the repositioning of the antenna, it is recommended that the radio volume be turned down or off during mobile phone operation when not using Uconnect (if equipped).

Regulatory And Safety Information

USA/CANADA

Exposure to Radio Frequency Radiation

The radiated output power of the internal wireless radio is far below the FCC and IC radio frequency exposure limits. Nevertheless, the wireless radio will be used in such a manner that the radio is 20 cm or further from the human body.

The internal wireless radio operates within guidelines found in radio frequency safety standards and recommendations, which reflect the consensus of the scientific community.

The radio manufacturer believes the internal wireless radio is safe for use by consumers. The level of energy emitted is far less than the electromagnetic energy emitted by wireless devices such as mobile phones. However, the use of wireless radios may be restricted in some situations or environments, such as aboard airplanes. If you are unsure of restrictions, you are encouraged to ask for authorization before turning on the wireless radio.

The following regulatory statement applies to all Radio Frequency (RF) devices equipped in this vehicle:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
- If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

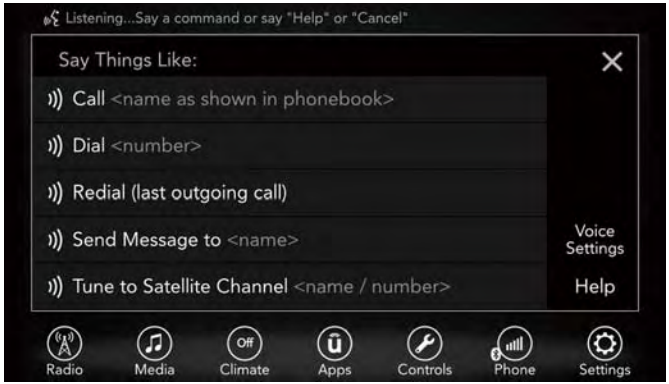
  1. Increase the separation between the equipment and receiver.
  2. Consult an authorized dealer or an experienced radio technician for help.

UCONNECT VOICE RECOGNITION QUICK TIPS

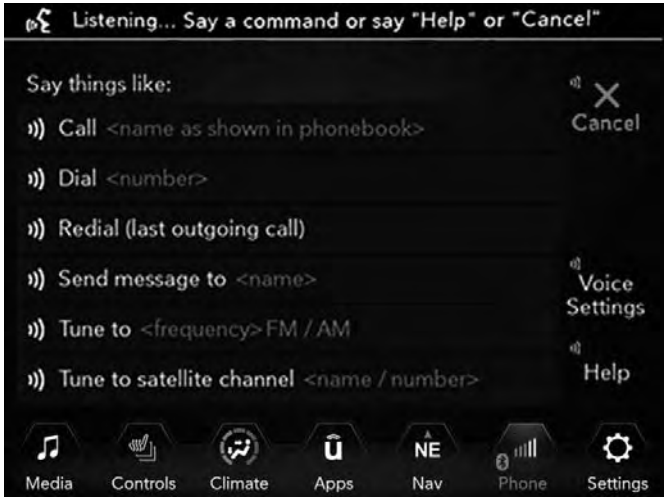
Introducing Uconnect

Start using Uconnect Voice Recognition with these helpful quick tips. It provides the key Voice Commands and tips you need to know to control your Uconnect 3, Uconnect 4, or Uconnect 4/4C NAV system.

Uconnect 3



Uconnect 4



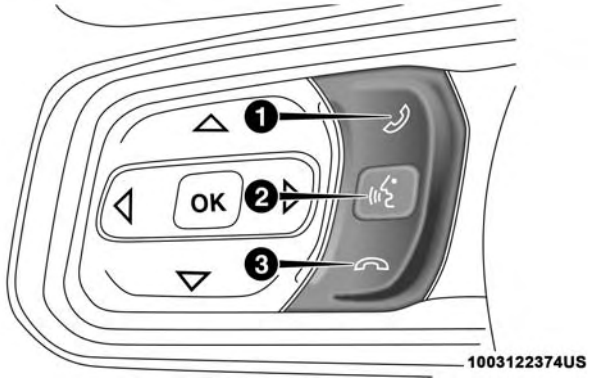
Uconnect 4/4C NAV

If you see the NAV icon on the bottom bar, or in the Apps menus, of your 8.4-inch touchscreen, you have the Uconnect 4C NAV system. If not, you have a Uconnect 4 with 8.4-inch display system.

Get Started

All you need to control your Uconnect system with your voice are the buttons on your steering wheel.

1. Visit UconnectPhone.com to check mobile device and feature compatibility and to find phone pairing instructions.
2. Reduce background noise. Wind and passenger conversations are examples of noise that may impact recognition.
3. Speak clearly at a normal pace and volume while facing straight ahead. The microphone is positioned on the rearview mirror and aimed at the driver.
4. Each time you give a Voice Command, you must first push either the Voice Recognition (VR) or Phone button, wait until **after** the beep, then say your Voice Command.
5. You can interrupt the help message or system prompts by pushing the VR or Phone button and saying a Voice Command from current category.



Uconnect Voice Command Buttons — If Equipped

1 — Push To Initiate Or To Answer A Phone Call, Send Or Receive A Text
2 — For All Radios: Push To Begin Radio Or Media Functions. For 8.4-inch Displays Only: Push To Begin Navigation, Apps And Climate Functions.
3 — Push To End Call

Basic Voice Commands

The basic Voice Commands below can be given at any point while using your Uconnect system.

Push the VR button. After the beep, say:

- **"Cancel"** to stop a current voice session
- **"Help"** to hear a list of suggested Voice Commands
- **"Repeat"** to listen to the system prompts again

Notice the visual cues that inform you of your voice recognition system's status. Cues appear on the touch-screen.

Radio

Use your voice to quickly get to the AM, FM or SiriusXM Satellite Radio stations you would like to hear. (Subscription or included SiriusXM Satellite Radio trial required.)

Push the VR button. After the beep, say:

- " **Tune to** ninety-five-point-five FM"
- " **Tune to Satellite Channel** Hits 1"

TIP: At any time, if you are not sure of what to say or want to learn a Voice Command, push the VR button and say **"Help."** The system will provide you with a list of commands.

Uconnect 3 Radio

Uconnect 4 Radio

Uconnect 4/4C NAV Radio

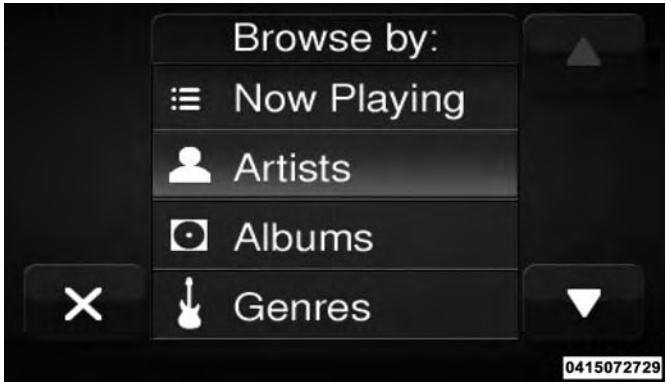
Media

Uconnect offers connections via USB, Bluetooth and auxiliary ports (If Equipped). Voice operation is only available for connected USB and AUX devices.

Push the VR button . After the beep, say one of the following commands and follow the prompts to switch your media source or choose an artist.

- " **Change source to** Bluetooth"
- " **Change source to** AUX"
- " **Change source to** USB"
- " **Play artist** Beethoven"; " **Play album** Greatest Hits"; " **Play song** Moonlight Sonata"; " **Play genre** Classical"

TIP: Press the Browse button on the touchscreen to see all of the music on your USB device. Your Voice Command must match **exactly** how the artist, album, song and genre information is displayed.



Uconnect 3 Media

Uconnect 4 Media

Uconnect 4/4C NAV Media

Phone

Making and answering hands-free phone calls is easy with Uconnect. When the Phonebook button is illuminated on your touchscreen, your system is ready. Check UconnectPhone.com for mobile phone compatibility and pairing instructions.

Push the Phone button . After the beep, say one of the following commands...

- " **Call** John Smith"
- " **Dial** 123-456-7890 and follow the system prompts"
- " **Redial** (call previous outgoing phone number)"
- " **Call back** (call previous incoming phone number)"

TIP: When providing a Voice Command, push the Phone button and say **"Call,"** then pronounce the name **exactly** as it appears in your phone book. When a contact has multiple phone numbers, you can say " **Call** John Smith **work.**"

Uconnect 3 Phone

Uconnect 4 Phone

Uconnect 4/4C NAV Phone

Voice Text Reply

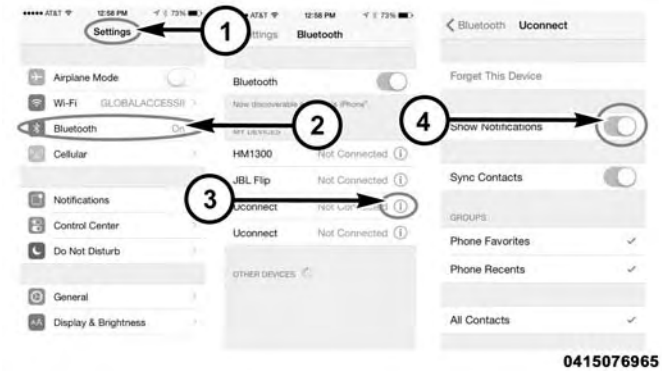
Uconnect announces **incoming** text messages. Push the Phone button and say " **Listen**." (Must have compatible mobile phone paired to Uconnect system.)

1. Once an incoming text message is read to you, push the Phone button . After the beep, say: " **Reply**."
2. Listen to the Uconnect prompts. After the beep, repeat one of the pre-defined messages and follow the system prompts.

PRE-DEFINED VOICE TEXT REPLY RESPONSES		
Yes.	Stuck in traffic.	See you later.
No.	Start without me.	I'll be late.
Okay.	Where are you?	I will be <number> minutes late.
Call me.	Are you there yet?	
I'll call you later.	I need directions.	See you in <number> of minutes.
I'm on my way.	Can't talk right now.	
I'm lost.		Thanks.

TIP: Your mobile phone must have the full implementation of the **Message Access Profile (MAP)** to take advantage of this feature. For details about MAP, visit UconnectPhone.com.

Apple iPhone iOS 6 or later supports reading **incoming** text messages only. To enable this feature on your Apple iPhone, follow these four simple steps:



iPhone Notification Settings

1 — Select "Settings"
2 — Select "Bluetooth"
3 — Select The (i) For The Paired Vehicle
4 — Turn On "Show Notifications"

TIP: Voice Text Reply is not compatible with iPhone, but if your vehicle is equipped with Siri Eyes Free, you can use your voice to send a text message.

Climate

Too hot? Too cold? Adjust vehicle temperatures hands-free and keep everyone comfortable while you keep moving ahead. (If vehicle is equipped with climate control.)

Push the VR button . After the beep, say one of the following commands:

- " **Set driver temperature to** 70 **degrees**"
- " **Set passenger temperature to** 70 **degrees**"

TIP: Voice Command for Climate may only be used to adjust the interior temperature of your vehicle. Voice Command will not work to adjust the heated seats or steering wheel if equipped.

Uconnect 4/4C NAV Climate

Navigation (4C NAV)

The Uconnect navigation feature helps you save time and become more productive when you know exactly how to get to where you want to go. (Navigation is optional on the Uconnect 4C with 8.4–inch display system.)

1. To enter a destination, push the VR button . After the beep, say:

- For the Uconnect 4 System, say: " **Enter state**."
- For the 4C NAV Uconnect System, say: " **Find address** 800 Chrysler Drive Auburn Hills, Michigan."

2. Then follow the system prompts.

TIP: To start a POI search, push the VR button . After the beep, say: " **Find nearest** coffee shop."

Uconnect 4C NAV Navigation

SiriusXM Guardian (4C NAV) — If Equipped

CAUTION!

Some SiriusXM Guardian services, including SOS Call and Roadside Assistance Call will NOT work without an operable LTE (voice/data) or 3G or 4G (data) network connection compatible with your device.

NOTE: Your vehicle may be transmitting data as authorized by the subscriber.

An included trial and/or subscription is required to take advantage of the SiriusXM Guardian services in the next section of this guide. To register with SiriusXM Guardian, press the Apps button on the Uconnect 4C/4C NAV touchscreen to get started.

NOTE: SiriusXM Guardian is available only on equipped vehicles purchased within the continental United States, Alaska, Hawaii and Canada. Services can only be used where coverage is available; see coverage map for details.

SOS Call

Theft Alarm Notification

Remote Door Lock/Unlock

Send & Go

Vehicle Finder

Stolen Vehicle Assistance

Remote Vehicle Start**

Remote Horn & Lights

Roadside Assistance Call

Vehicle Health Reports**

Vehicle Health Alert**

Performance Pages Plus**

**If vehicle is equipped.

Register (4C NAV)

To unlock the full potential of SiriusXM Guardian in your vehicle, you must activate your SiriusXM Guardian services.

1. Press the Apps icon on the bottom of your in-vehicle touchscreen.
2. Select the Activate Services icon from your list of apps.
3. Select "Customer Care" to speak with a SiriusXM Guardian Customer Care agent who will activate services in your vehicle, or select "Enter Email" to activate on the web.

- U.S. residents visit: www.siriusxm.com/guardian.
- Canadian residents visit: www.siriusxm.com/guardian/ca.

Vehicle Health Report/Alert (4C NAV)

Your vehicle will send you a monthly email report, which summarizes the performance of your vehicle's key systems so you can stay on top of your vehicle's maintenance needs if you are registered for SiriusXM Guardian. Your vehicle will also send you Vehicle Health Alerts when it detects issues with its key systems that need your attention. For further information, refer to your owner's manual.

Mobile App (4C NAV)

You're only a few steps away from using remote commands.

Mobile App

To use the Uconnect App:

- Download the Uconnect App to your mobile device.
- Press the Info button on the navigation bar at the bottom of the app for Vehicle Info.
- Press the Remote button on the navigation bar at the bottom of the app to Lock/Unlock, Remote Start, and activate your horn and lights remotely.
- Press the Location button on the navigation bar at the bottom of the app to bring up a map to locate your vehicle or send a location to your vehicle's navigation system.
- Press the Settings button in the upper left corner of the app to bring up app settings and access the Assist Call Centers.

NOTE: For further information please visit DriveUconnect.com (U.S. Residents) or DriveUconnect.ca (Canadian Residents).

SiriusXM Travel Link (4C NAV)

Need to find a gas station, view local movie listings, check a sports score or the 5 - day weather forecast? SiriusXM Travel Link is a suite of services that brings a wealth of information right to your Uconnect 4C NAV system. (Not available for Uconnect 4 system.)

Push the VR button . After the beep, say one of the following commands:

- **"Show fuel prices"**
- **"Show 5 - day weather forecast"**
- **"Show extended weather"**

TIP: Traffic alerts are not accessible with Voice Command.

SiriusXM Travel Link

Siri Eyes Free — If Equipped

Siri lets you use your voice to send text messages, select media, place phone calls and much more. Siri uses your natural language to understand what you mean and will respond back to confirm your requests. The system is designed to keep your eyes on the road and your hands on the wheel by letting Siri help you perform useful tasks.

To enable Siri, push and hold, then release the Uconnect Voice Recognition (VR) button on the steering wheel. After you hear a double beep you can ask Siri to play podcasts and music, get directions, read text messages and many other useful requests.

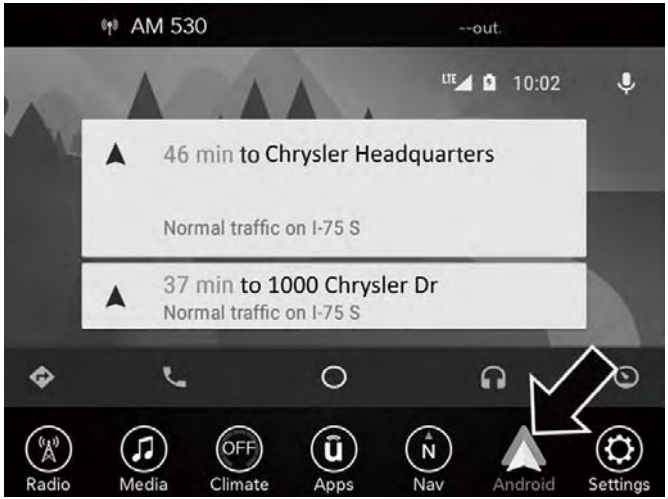
Uconnect 4C/4C NAV With 8.4–inch Siri Eyes Free Available

Android Auto — If Equipped

Android Auto allows you to use your voice to interact with Android's best-in-class speech technology through your vehicle's voice recognition system, and use your smartphone's data plan to project your Android powered smartphone and a number of its apps onto your Uconnect touchscreen. Connect your Android 5.0 (Lollipop), or higher, to one of the media USB ports, using the factory-provided USB cable, and press the new Android Auto icon that replaces your "Phone" icon on the main menu bar to begin Android Auto. Push and hold the VR button on the steering wheel, or press and hold the "Microphone" icon within Android Auto, to activate Android's VR, which recognizes natural voice commands, to use a list of your smartphone's features:

- Maps
- Music
- Phone
- Text Messages
- Additional Apps

Android Auto On 7-inch Display



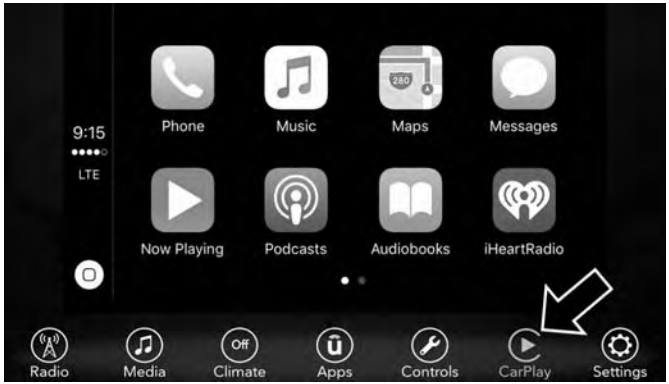
Android Auto On 8.4-inch Display

Refer to your Uconnect Owner's Manual Supplement for further information.

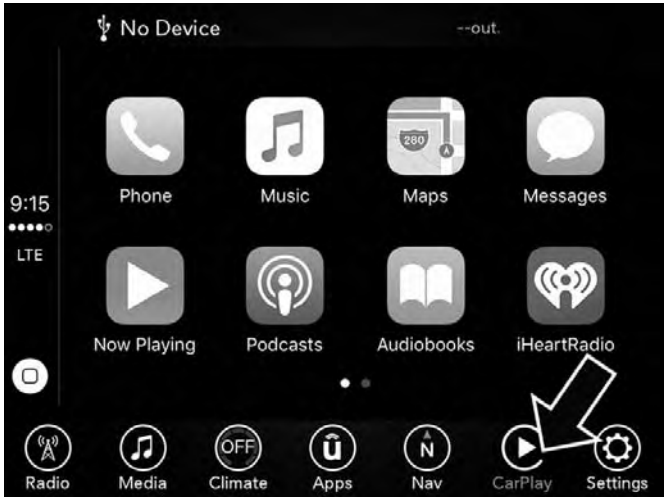
Apple CarPlay — If Equipped

Apple CarPlay allows you to use your voice to interact with Siri through your vehicle's voice recognition system, and use your smartphone's data plan to project your iPhone and a number of its apps onto your Uconnect touchscreen. Connect your iPhone 5, or higher, to one of the media USB ports, using the factory-provided Lightning cable, and press the new CarPlay icon that replaces your "Phone" icon on the main menu bar to begin Apple CarPlay. Press and hold the VR button on the steering wheel, or press and hold the "Home" button within Apple CarPlay, to activate Siri, which recognizes natural voice commands to use a list of your iPhone's features:

- Phone
- Music
- Messages
- Maps
- Additional Apps



Apple CarPlay On 7-inch Display



Apple CarPlay On 8.4-inch Display

Refer to your Uconnect Owner's Manual Supplement for further information.

General Information

The following regulatory statement applies to all Radio Frequency (RF) devices equipped in this vehicle:

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Additional Information

Uconnect System Support:

- U.S. residents visit DriveUconnect.com or call: 1-877-855-8400(24 hours a day 7 days a week)
- Canadian residents visit DriveUconnect.ca or call: 1-800-465-2001(English) or 1-800-387-9983(French)

SiriusXM Guardian services support:

- U.S. residents visit siriusxm.com/guardian or call: 1-844-796-4827
- Canadian residents visit www.siriusxm.com/guardian/ca or call: 1-877-324-9091

CD/DVD DISC MAINTENANCE

To keep a CD/DVD in good condition, take the following precautions:

1. Handle the disc by its edge; avoid touching the surface.
2. If the disc is stained, clean the surface with a soft cloth, wiping from center to edge.
3. Do not apply paper or tape to the disc; avoid scratching the disc.
4. Do not use solvents such as benzene, thinner, cleaners, or anti-static sprays.
5. Store the disc in its case after playing.
6. Do not expose the disc to direct sunlight.
7. Do not store the disc where temperatures may become too high.

NOTE: If you experience difficulty in playing a particular disc, it may be damaged, (e.g., scratched, reflective coating removed, a hair, moisture or dew on the disc) oversized, or have protection encoding. Try a known good disc before considering disc player service.

CUSTOMER ASSISTANCE

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SUGGESTIONS FOR OBTAINING SERVICE FOR YOUR VEHICLE

Prepare For The Appointment

If you are having warranty work done, be sure to have the right papers with you. Take your warranty folder. All work to be performed may not be covered by the warranty. Discuss additional charges with the service manager. Keep a maintenance log of your vehicle's service history. This can often provide a clue to the current problem.

Prepare A List

Make a written list of your vehicle's problems or the specific work you want done. If you've had an accident or work done that is not on your maintenance log, let the service advisor know.

Be Reasonable With Requests

If you list a number of items and you must have your vehicle by the end of the day, discuss the situation with the service advisor and list the items in order of priority. At many authorized dealers, you may obtain a rental vehicle at a minimal daily charge. If you need a rental, it is advisable to make these arrangements when you call for an appointment.

IF YOU NEED ASSISTANCE

The manufacturer and its authorized dealer are vitally interested in your satisfaction. We want you to be happy with our products and services.

Warranty service must be done by an authorized dealer. We strongly recommend that you take the vehicle to an authorized dealer. They know your vehicle the best, and are most concerned that you get prompt and high quality service. The manufacturer's authorized dealer have the facilities, factory-trained technicians, special tools, and the latest information to ensure the vehicle is fixed correctly and in a timely manner.

This is why you should always talk to an authorized dealer service manager first. Most matters can be resolved with this process.

- If for some reason you are still not satisfied, talk to the general manager or owner of the authorized dealer. They want to know if you need assistance.
- If an authorized dealer is unable to resolve the concern, you may contact the manufacturer's customer center.

Any communication to the manufacturer's customer center should include the following information:

- Owner's name and address
- Owner's telephone number (home and office)
- Authorized dealer name
- Vehicle Identification Number (VIN)
- Vehicle delivery date and mileage

FCA US LLC Customer Center

P.O. Box 21–8004

Auburn Hills, MI 48321–8004

Phone: (877) 426-5337

FCA Canada Inc. Customer Center

P.O. Box 1621

Windsor, Ontario N9A 4H6

Phone: (800) 465-2001 English / (800) 387-9983 French

In Mexico Contact

Av. Prolongacion Paseo de la Reforma, 1240

Sante Fe C.P. 05109

Mexico, D. F.

In Mexico City: 5081-7568

Outside Mexico City: 1-800-505-1300

Puerto Rico And U.S. Virgin Islands

Customer Service Chrysler International Services LLC

P.O. Box 191857

San Juan 00919-1857

Tel.: (888) 242-6342

Fax: (787) 782-3345

Customer Assistance For The Hearing Or Speech Impaired (TDD/TTY)

To assist customers who have hearing difficulties, the manufacturer has installed special TDD (Telecommunication Devices for the Deaf) equipment at its customer center. Any hearing or speech impaired customer, who has access to a TDD or a conventional teletypewriter (TTY) in the United States, can communicate with the manufacturer by dialing 1-800-380-CHRY.

Canadian residents with hearing difficulties that require assistance can use the special needs relay service offered by Bell Canada. For TTY teletypewriter users, dial 711 and for Voice callers, dial 1-800-855-0511 to connect with a Bell Relay Service operator.

Service Contract

You may have purchased a service contract for a vehicle to help protect you from the high cost of unexpected repairs after the manufacturer's New Vehicle Limited Warranty expires. The manufacturer stands behind only the manufacturer's service contracts. If you purchased a manufacturer's service contract, you will receive Plan Provisions and an Owner Identification Card in the mail within three weeks of the vehicle delivery date. If you have any questions about the service contract, call the manufacturer's Service Contract National Customer Hotline at 1-800-521-9922 (Canadian residents, call (800) 465-2001 English / (800) 387-9983 French).

The manufacturer will not stand behind any service contract that is not the manufacturer's service contract. It is not responsible for any service contract other than the manufacturer's service contract. If you purchased a service contract that is not a manufacturer's service contract, and you require service after the manufacturer's New Vehicle Limited Warranty expires, please refer to the contract documents, and contact the person listed in those documents.

We appreciate that you have made a major investment when you purchased the vehicle. An authorized dealer has also made a major investment in facilities, tools, and training to assure that you are absolutely delighted with the ownership experience. You will be pleased with their sincere efforts to resolve any warranty issues or related concerns.

WARNING!

Engine exhaust (internal combustion engines only), some of its constituents, and certain vehicle components contain, or emit, chemicals known to the State of California to cause cancer and birth defects, or other reproductive harm. In addition, certain fluids contained in vehicles and certain products of component wear contain, or emit, chemicals known to the State of California to cause cancer and birth defects, or other reproductive harm.

WARRANTY INFORMATION

See the Warranty Information Booklet for the terms and provisions of FCA US LLC warranties applicable to this vehicle and market.

MOPAR PARTS

Mopar fluids, lubricants, parts, and accessories are available from an authorized dealer. They are recommended for your vehicle in order to help keep the vehicle operating at its best.

REPORTING SAFETY DEFECTS

In The 50 United States And Washington, D.C.

If you believe that your vehicle has a defect that could cause a crash or cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying FCA US LLC.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, an authorized dealer or FCA US LLC.

To contact NHTSA, you may call the Vehicle Safety Hotline toll free at 1-888-327-4236 (TTY: 1-800-424-9153); or go to http://www.safercar.gov; or write to: Administrator, NHTSA, 1200 New Jersey Avenue, SE., West Building, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

In Canada

If you believe that your vehicle has a safety defect, you should contact the Customer Service Department immediately. Canadian customers who wish to report a safety defect to the Canadian government should contact Transport Canada, Motor Vehicle Defect Investigations and Recalls at 1-800-333-0510 or go to http://www.tc.gc.ca/roadsafety/.

PUBLICATION ORDER FORMS

To order the following manuals, you may use either the website or the phone numbers listed below. Visa, Mastercard, American Express, and Discover orders are accepted.

Service Manuals

These comprehensive Service Manuals provide the information that students and professional technicians need in diagnosing/troubleshooting, problem solving, maintaining, servicing, and repairing FCA US LLC vehicles. A complete working knowledge of the vehicle, system, and/or components is written in straightforward language with illustrations, diagrams, and charts.

Diagnostic Procedure Manuals

Diagnostic Procedure Manuals are filled with diagrams, charts and detailed illustrations. These practical manuals make it easy for students and technicians to find and fix problems on computer-controlled vehicle systems and features. They show exactly how to find and correct problems the first time, using step-by-step troubleshooting and drivability procedures, proven diagnostic tests and a complete list of all tools and equipment.

Owner's Manuals

These Owner's Manuals have been prepared with the assistance of service and engineering specialists to acquaint you with specific FCA US LLC vehicles. Included are starting, operating, emergency and maintenance procedures as well as specifications, capabilities and safety tips.

Call toll free at:

- **1-800-890-4038 (U.S.)**
- **1-800-387-1143 (Canada)**

Or

Visit us on the Worldwide Web at:

- www.techauthority.com

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INSTALLATION OF RADIO TRANSMITTING EQUIPMENT

Special design considerations are incorporated into this vehicle's electronic system to provide immunity to radio frequency signals. Mobile two-way radios and telephone equipment must be installed properly by trained personnel. The following must be observed during installation.

The positive power connection should be made directly to the battery and fused as close to the battery as possible. The negative power connection should be made to body sheet metal adjacent to the negative battery connection. This connection should not be fused.

Antennas for two-way radios should be mounted on the roof or the rear area of the vehicle. Care should be used in mounting antennas with magnet bases. Magnets may affect the accuracy or operation of the compass on vehicles so equipped.

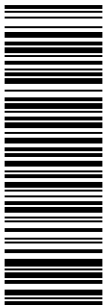
The antenna cable should be as short as practical and routed away from the vehicle wiring when possible. Use only fully shielded coaxial cable.

Carefully match the antenna and cable to the radio to ensure a low Standing Wave Ratio (SWR).

Mobile radio equipment with output power greater than normal may require special precautions.

All installations should be checked for possible interference between the communications equipment and the vehicle's electronic systems.

Jeep®



18JL-126-AA

First Edition
Printed in the U.S.A.

EXHIBIT 15

FIAT CHRYSLER AUTOMOBILES

2015 SUSTAINABILITY REPORT

CLICK FOR INSTRUCTIONS ON
USING THIS REPORT

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Letter from the Chairman and the Chief Executive Officer

FCA closed on a very strong note its first full year as a single, unified global group.

Our results were well in excess of our full-year guidance, further underscoring our commitment to achieve the ambitious 2018 financial targets set out in our five-year plan, and our determination to be a global automaker performing at the highest level.

Excluding Ferrari, net revenues for the year climbed 18 percent to €110.6 billion. Adjusted EBIT came in at €4.8 billion, 43 percent higher than 2014, with NAFTA more than doubling and EMEA returning to profitability one year ahead of plan.

Our net industrial debt was significantly reduced during 2015 and, after the effects of the Ferrari spinoff completed at the beginning of January, the Group begins 2016 operations with net industrial debt of €5 billion, down from the €7.7 billion at year-end 2014.

In order to further fund the capital requirements of the Group's five-year Business Plan, the Board of Directors has decided not to recommend a dividend on FCA common shares for 2015.

Worldwide shipments totaled 4.6 million units, in line with prior year, with continued global expansion for the Jeep brand, which posted an all-time annual record of 1.3 million vehicles shipped worldwide.

Looking at the performance of our mass-market operations by region, in NAFTA we continued to outperform the market, with sales up seven percent over the prior year.

In the United States, we closed the year posting our 69th consecutive month of year-over-year sales gains and our best annual sales since 2006. In Canada, we finished the year as market leader, with 73 straight months of growth and the strongest annual sales performance in our history.

In LATAM, our results were down due to continued macroeconomic weakness in the region resulting in poor trading conditions. Despite this situation, FCA maintained its leadership in Brazil, a position we have held for 14 years. The opening of the new Pernambuco industrial complex in April 2015 is a key move to further consolidate our leadership and to increase the profitability of our operations in the region going forward.

In APAC, results were positive, although below the prior year's level primarily due to the contraction in demand for imported vehicles in China, as competition from local producers continues to intensify. Results were also impacted by the interruption of supply following the Tianjin port explosion in August.

On the back of a more favorable product mix, higher volumes and positive pricing actions, results in EMEA improved significantly, with the region posting an Adjusted EBIT of €213 million, compared with negative €41 million in the prior year.

There were also positive contributions from Maserati, although below the 2014 level, and from Components.

With regard to the near-term outlook, we gave guidance for the current year, with expected revenues of €110 billion or higher, Adjusted EBIT in excess of €5.0 billion and net industrial debt below €5.0 billion.

We will work towards the achievement of these targets with the same spirit that has brought us this far, that of a global company that operates by linking the achievement of financial targets with respect for all stakeholders, convinced that success will ultimately be judged by how it is achieved.

In an era where values such as transparency, integrity and reliability are often put to the test, we believe it is increasingly important that the entire organization work to ensure that our development is responsible. This is why our commitment to sustainable growth is deeply rooted in our corporate culture; it is integral to our business model and, above all, it is something that is non-negotiable.

We believe that the true value of a multi-national organization such as ours is also determined by its level of environmental awareness, respect for people, fair and transparent conduct in commercial relationships and positive contribution to local communities.

We are pleased that our sustainability efforts have been recognized by the world's leading sustainability rating agencies. For the seventh consecutive year, FCA was included in the prestigious DJSI World Index. It was also named to the Climate "A" list in the CDP Climate Change Program 2015 and actively participates in additional CDP initiatives on Water, Forest and Supply Chain.

We also supported the UN Climate Change Conference of the Parties (COP21) through specific commitments and signed the CEO Climate Leadership for Automotive Declaration, signaling our support for the vision of decarbonizing automotive transport. FCA's commitment to sustainable use of the world's resources was also marked by the signing of the Charter of Milan. This document, which was presented to UN Secretary General Ban Ki-moon at the closing of the Milan Expo, reaffirms our involvement in the common goal of protecting and preserving our planet.

To name just a few examples, during 2015 we implemented more than 4,300 new environmental projects at our plants worldwide, leading to about €65 million in savings, while specific projects to reduce water consumption at our facilities resulted in €2.7 million in cost savings and 2.3 billion m^3 of water saved, with our group-wide recycling index reaching 99% in 2015.

As a result of continuous improvements over the years, the percentage of electric energy used in our manufacturing activities that is derived from renewable sources reached 22% in 2015.

Work-related injuries at Group facilities decreased by 20% compared to previous year, representing the 9th consecutive year of improvement.

FCA employees worldwide volunteered thousands of hours to serve the community in the various locations where we operate. In addition, the Group committed more than €22 million to local communities around the world.

A pioneer and leader in natural gas vehicles for 15 years, FCA recently revealed the Chrysler Pacifica Hybrid, the industry's first electrified minivan.

We are convinced that the significant steps we have already taken and the objectives that we have set for the future guarantee FCA and all its stakeholders that "good practices" are not left to individual discretion, but form an integral part of the Group's business strategy.

We want to thank everyone in the FCA organization for their professional and personal contributions, for their courage and determination to change together for the better, constantly guided by a sense of responsibility toward those who have placed their trust in us.

Thank you also to our shareholders and to all of our stakeholders for having been loyal partners on our journey so far and for continuing to support us as we embark on the next phase of our development.

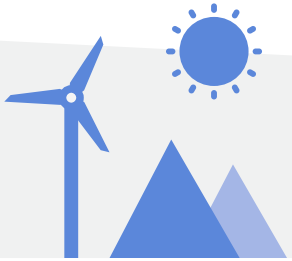
29 February 2016

John Elkann
/S/ Chairman

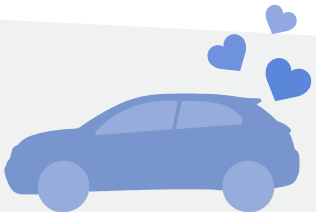
Sergio Marchionne
/S/ Chief Executive Officer

Generating Value, Delivering on Leadership

Delivering Commitments and Actions



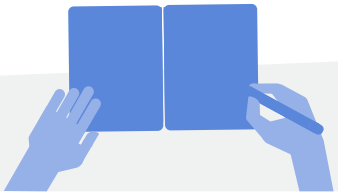
FCA signs **CEO Climate Leadership** for **Automotive Declaration**



FCA **supports climate-specific commitments** through **COP21**

FCA Global Sustainable Mobility Partner for **EXPO 2015** opened to **20M visitors** from around the world

Low carbon logistics implemented in North America with fleet of **179** new **Compressed Natural Gas** trucks



€22M committed to **local communities**, including **53%** for **educational programs**

4,600+ stakeholders engaged in **sustainability discussions** worldwide

500+ performance indicators and long-term **sustainability targets monitored** worldwide

Delivering Milestones >

Generating Value, Delivering on Leadership

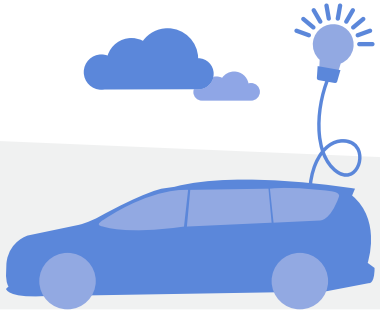
Delivering Milestones

1.2M tons of **waste recovered** to support transition to **circular economy**

- 38% water used for **each vehicle** produced worldwide vs 2010

Frequency and **Severity** of injuries **reduced** for **ninth consecutive year**

~ 33% of top 200 **shareholders** participating in FCA listing on NY and Milan Stock Exchanges are **Highly ESG sensitive**



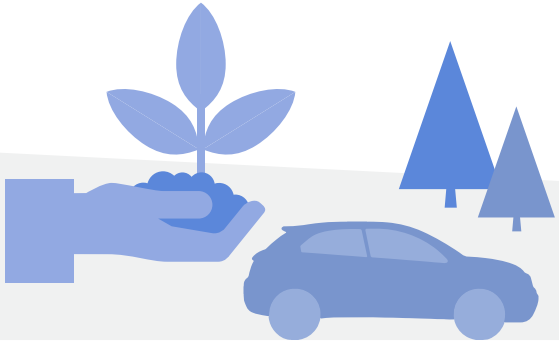
FCA unveils **industry's first electrified minivan:** Chrysler Pacifica Hybrid

Delivering Recognitions >

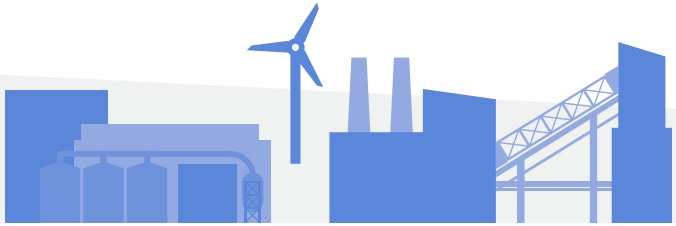
Generating Value, Delivering on Leadership

Delivering Recognitions

FCA wins **Best Employers** for **Healthy Lifestyles** Gold Award in U.S.



FCA marks more than **15 years** as **pioneer** and **leader** in **natural gas** vehicles in **Europe**



67% of FCA plants with certified **World Class Manufacturing** performance level

Environmental achievements recognized at global **EHSLA event**

MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM

CDP A LIST 2015 CLIMATE

FCA recognized among world's leading companies for combined economic, environmental and social performance

Our Business Model

Fiat Chrysler Automobiles is an international automotive group engaged in designing, engineering, manufacturing, distributing and selling vehicles, components and production systems, with operations in approximately 40 countries and commercial relationships with customers across 150 countries.
In 2015, FCA activities were organized through seven reportable segments[1] operating to achieve profitability and responsible growth in a highly competitive and dynamic economy.

FCA touches countless lives on a daily basis, from our 235,000 employees, to the thousands of individuals who work for our dealers and suppliers, to the more than 4.6 million customers who, in 2015, bought our new vehicles. We create value through the improved livelihoods of our customers and employees, vitality among our communities, and financial return to our investors.

Each stage of the **value chain** includes a description of the main activities related to that stage, a link to the section on related FCA results and a list of potential direct or indirect impacts on various capitals and stakeholders related to that stage.
The information is reported following recommendations of the Integrated Reporting framework and the G4 standard issued by the Global Reporting Initiative.

FCA believes that the ability to create value for stakeholders through each of the value chain phases can help to promote responsible development and tackle climate change. The need to transition to a low-carbon and more sustainable future is one of the major challenges facing everyone on the planet today.

Central to FCA's approach is the belief that effective, lasting solutions to climate change and other pressing environmental issues can only be achieved through an integrated approach that combines individual and collective commitment; an effective multi-stakeholder strategy; investment in enabling premium processes and technologies; and the incorporation of circular economy principles in operations. All of these elements are an integral part of FCA's model of operating responsibly.

The graphics present a simplified view of our highly complex industry to illustrate how various capitals (financial, production, intellectual, human, natural, social and relational) as inputs are converted through our business activities into outcomes, bringing value to our customers, to society and to the environment.

The relationship between inputs and outcomes is intended to show the interconnectivity of the Group's activities and is not cause-and-effect; several inputs can affect one single outcome or a single input may impact many outcomes.

[1] *Four regional mass-market vehicle segments (NAFTA, LATAM, APAC and EMEA), two global luxury brand segments (Ferrari and Maserati) and a global components segment (Magneti Marelli, Comau and Teksid). Ferrari spin-off effective since January 3, 2016.*

GRI: G4-2, G4-3, G4-6, G4-8, G4-9, G4-EC2

Our Business Model

OUTCOMES

Design & Innovation

This stage includes the research, development and design activities conducted with respect to both products and processes within the Group. Innovative approaches to vehicle efficiency, safety and quality combine with processes that reduce waste of all kind throughout the value chain.

> Read more

Impacts

- Innovation in products and processes
- Customer safety during driving experience
- Vehicle fuel economy and CO_2 emissions
- Vehicle quality
- Customer satisfaction and loyalty
- Product competitiveness and reputation
- Brand perception and value
- Vehicle material composition and end-of-life
- Greenhouse gas emissions and natural resource consumption in production processes
- Employee health and safety in production processes

RAW MATERIALS

Our Business Model

Raw Materials

This stage covers the extraction of raw materials that are subsequently processed and transformed to manufacture our vehicles.

> Read more

DESIGN & INNOVATION

Impacts

- Indirect environmental impacts from extraction and material sourcing operations
- Indirect social impacts on communities near the extraction site
- External stakeholder perception due to raw material provision
- International standards and regulatory compliance
- Indirect employment in third parties' operations
- Local revenue for business partners

SUPPLIERS

Our Business Model

Suppliers

This stage includes the operations suppliers perform to provide FCA with the parts, components and services necessary for the production of Group vehicles.

> Read more

RAW MATERIALS

Impacts

- Indirect employment in third parties' operations
- Working conditions for third party employees
- Local revenue for business partners and communities where FCA operates
- Indirect emissions and natural resource consumption
- Innovation on components and processes
- Technological sharing among regions and industries

PRODUCTION

Production

This stage includes all activities at Group plants which transform parts and components into finished vehicles.

> Read more

SUPPLIERS

DISTRIBUTION

Impacts

- Direct employment
- Local revenue for communities where FCA operates
- Employee development through training
- Employee working conditions
- Emissions and natural resource consumption from direct operations
- Process innovation
- Technological and know-how sharing across regions, Group companies and working teams
- Respect of product safety and quality standards

GRI: G4-EC8, G4-SO2

Distribution

This stage includes transport, storage and distribution operations of raw materials and components to plants, and finished vehicles from the production site to dealerships before reaching the final customer.

> Read more

PRODUCTION

DEALERS

Impacts

- Indirect employment in third parties' operations
- Local revenue for business partners and communities
- Fuel consumption and greenhouse gas emissions
- Social impacts on traffic and road safety
- Production continuity
- Vehicle delivery to customers

Our Business Model

Dealers

This stage includes the activities that take place in the dealerships, from customer welcome, to sale and delivery of vehicles and after-sales technical assistance.

> Read more

DISTRIBUTION

Impacts

- Indirect employment
- Local revenue for business partners and communities
- Product competitiveness
- Customer satisfaction and loyalty
- Brand perception and value
- Sales and profitability

CONSUMERS

Customers

This stage relates to the use phase of our vehicles by consumers around the world.

> Read more

DEALERS

Impacts

- Social impacts on traffic, road safety and freedom of mobility
- Vehicle fuel consumption and emissions
- Customer satisfaction and loyalty
- Brand reputation and value

RECYCLING

Recycling

This stage includes operations for the disposal of vehicles at the end of their useful life.

> Read more

CONSUMERS

Impacts

- Sourcing of raw materials
- Access to critical raw materials
- Natural resource scarcity
- Environmental impacts of vehicle end-of-life: waste generation, dismantling, recycling, disposal management and remanufacturing

Value Chain Inputs

These are key figures that serve as input in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Financial

Financial capital consists of the financial resources available to FCA for use in the development, production and sale of quality vehicles that can successfully compete in an increasingly global market.

INPUTS

€96.1 billion
Net Revenues (2014)

€7.7 billion
Net Industrial Debt (2014)

€1.06 billion
Adjusted net profit - including Ferrari (2014)

€26.2 billion
Available Liquidity (2014)

Value Chain Inputs

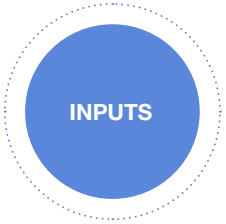
These are key figures that serve as input in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Manufactured

Manufactured capital consists of FCA buildings, technology and other physical assets and the value of investments to maintain and upgrade those assets to the highest technical and quality standards.

166 manufacturing facilities
worldwide, as well as other properties
(parts distribution centers, research laboratories, proving grounds, warehouses and office buildings)

€27.5 billion of total carrying value of **FCA property**, plant and equipment assets



Value Chain Inputs

These are key figures that serve as input in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Intellectual

Intellectual capital consists of knowledge-based assets such as systems and processes, patents and licenses, and other know-how that FCA can trace back to its more than century-long heritage in the automotive sector.

INPUTS

- **8,311 patents** registered at December 31, 2014
- Approximately **€4.1 billion invested** in **research and development activities**[2]
- **85 R&D locations** with approximately **20,000 employees**
- Continuous research on **vehicle innovation**, **quality**, **safety**, **performance** and **eco-mobility**
- **World Class Manufacturing** program adopted in 2006
- **Employee suggestions** for **improvement collected** worldwide

[2] *Includes capitalized R&D and R&D charged directly to the income statement (Ferrari included in the scope).*

Value Chain Inputs

These are key figures that serve as input in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Human

FCA human capital consists of all individuals worldwide who dedicate themselves on a daily basis to achieving the organization's objectives and creating sustainable long-term value for stakeholders.

INPUTS

228,690 employees at December 31, 2014

~€61 million invested in training and development

~62,400 employees evaluated globally **through** the **Performance Leadership Management** evaluation process (managers, professional and salaried)

€291 million invested for improvement to **Safety** and **Working Conditions** and to employee health, equivalent to 2.5% of annual personnel costs

Health and Safety certification (OHSAS) in place at **136 plants**, covering 187,000 employees

GRI: G4-9, G4-LA9, G4-LA10, G4-LA11

Value Chain Inputs

These are key figures that serve as input in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Social and Relationship

Social and relationship capital consists of the network of relationships based on dialogue that FCA has with internal and external stakeholders, including suppliers, business partners, distributors, dealers, customers, media, investors, public institutions and authorities, regulatory agencies, schools, universities and local communities.

INPUTS

More than **4,600 stakeholders** worldwide **responded to online sustainability survey**

72 sustainability targets updated and communicated to stakeholders

Open dialogue with **international institutions**, **associations** and **partners** on a global scale

~8,500 distribution relationships (dealers and distributors) across **150 countries**

26 Customer Contact Centers worldwide, **30 languages spoken**, more than **1,400 agents**

€62.0 billion in purchases from **2,347 direct material suppliers**

Sustainability Self-Assessment Survey completed by **327 suppliers**

More than **€22 million donated** to local communities, of which **53% to support education**, **culture and art**

GRI: G4-EC8, G4-EN32, G4-EN33, G4-LA14, G4-HR10, G4-SO9

Value Chain Inputs

These are key figures that serve as input in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Natural

Natural capital consists of resources, either physical or not, required by FCA to conduct its activities and manufacture its products.

INPUTS

- Approximately **48 million GJ** of **energy consumed** at Group plants worldwide
- **21.9%** of **electricity from renewable sources**
- **5.93 GJ** of **energy consumed** per **vehicle produced**
- **24.9 million m³** of **water consumed** (withdrawal) at Group plants worldwide
- **3.09 m³** of **water consumed** per **vehicle produced**
- Average of **1,392.6 kg** of **materials used** per **vehicle in Europe**, of which **583.4 kg** are **recycled materials**

GRI: G4-9, G4-EN1, G4-EN2, G4-EN3, G4-EN5, G4-EN8

Value Chain Outcomes

These are key figures that serve as outcomes in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Financial

Financial capital generated through the sale of Group products enables FCA to strengthen its global market position and invest to increase the value of the other capitals (including Ferrari).

€113.2 billion
Net Revenues (2015), **+18%** vs previous year

€2 billion
Adjusted Net Profit (2015)

€6 billion
Net Industrial Debt (2015)

€25.2 billion
Available Liquidity (2015)

3.2 million of FCA outstanding **shares** held by **Socially Responsible Investors**[3]

[3] *Data refers to IPREO Shareholders Identification registered in February 2016.*

Value Chain Outcomes

These are key figures that serve as outcomes in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Manufactured

FCA increases its manufactured capital by developing its global presence and increasing production capacity through modernization of existing plants and construction of new plants.

Expanded **Jeep manufacturing footprint** at the global level to support the brand's increase in sales. In October 2015, the **first Jeep Cherokee rolled off** the line **at the Changsha plant** (China), which is adopting **World Class Manufacturing** standards **to bring Chinese consumers world-class quality** vehicles.

Retooled Mirafiori Assembly Plant (Italy) for the **production** of the **Maserati Levante**, the **brand's first ever SUV**, starting in early 2016

Value Chain Outcomes

These are key figures that serve as outcomes in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Intellectual

To succeed in the highly-competitive, technology-driven auto sector, FCA continuously develops its intellectual capital as one of the means to improve the sustainability profile of its products and processes.

704 new patents and **664 new design rights** registered in 2015

Development of **integrated execution strategies** and **common flexible architectures**, including Small Wide platform (Jeep Renegade and 500X) and standardized parts and components

135 facilities applying **World Class Manufacturing** program, with **70** reaching an award level **(5 Gold level**, **15 Silver and 50 Bronze)**

Employee engagement demonstrated through more than **2.2 million WCM suggestions**

Numerous **product recognitions in 2015**, including:

- **"Auto Europa"** award **for the second consecutive year** given to **FCA** for **leadership in natural gas technology**
- The **new Fiat Doblò Cargo** named **"Light Van of the Year"**
- **Fiat Professional brand** named **"Van Fleet Manufacturer of the Year"** for the **second year running** and **"Green Fleet Manufacturer of the Year"**
- **Jeep Grand Cherokee EcoDiesel** named **2015 Green SUV of the Year** by Green Car Journal
- **3.0-liter EcoDiesel V-6** among Ward's **"10 Best Engines"** for **third consecutive year**
- **Uconnect®** received **"Infotainment of the Year"** award from Digital Trends

More than **71,000 suggestions** received **from employees** through **iPropose initiative**, **STEP-UP!**, **Mais** and **Haz Máz** programs

OUTCOMES

Value Chain Outcomes

These are key figures that serve as outcomes in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Human

FCA regards proper recognition and development of human capital as fundamental to the long-term success of the organization. Excellence is heavily dependent on factors such as diversity, professional experience and know-how, and a healthy and safe work environment.

234,621 employees, **+2.6%** vs 2014

2.8 million hours of **training** worldwide

Empowered individuals offered **professional opportunities** that allow them to gain experience in other geographic or business areas

Well-being initiatives of the **Health Promotion Program** implemented at selected locations

Accident indicators improved, with **decreases of 20% in the Frequency Rate** and **20% in the Severity Rate** vs 2014

Safety record responsible for savings of approximately **€88 million** in state accident premiums in Italy since 2011

Establishment of **Environment**, **Health and Safety Leadership Awards**, which are **open to** all **FCA employees and contractors**

OUTCOMES

GRI: G4-9, G4-LA1, G4-LA9

Value Chain Outcomes

These are key figures that serve as outcomes in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Social and Relationship

FCA's dialogue with the various categories of stakeholders enriches its social and relationship capital and is essential to identifying current and future trends that can influence the choices of the Group itself, as well as consumers, business partners, lawmakers and regulators, etc.

Results of **sustainability-focused Stakeholder Engagement process** used to update the **Materiality Diagram** and **extend engagement** to other countries

FCA recognized as a leader for its sustainability commitment and performance. **FCA included in** the prestigious **Dow Jones Sustainability Index World**, as well as the **CDP Climate Performance Leadership Index** (A list)

FCA **Official Global Partner for Expo Milano 2015** and supplier of **official fleet of 71 natural gas** and **10 electric-powered vehicles**

Customer **recognition of brand value** demonstrated by increasing sales volumes: **Jeep's strong global performance** continued with **record worldwide shipments** of **1.3 million**, **up 21%** vs 2014

Nearly **16 million customer contacts** managed by our **Customer Contact Centers**

Key suppliers accounted for **roughly 61%** of total purchase value

Approximately **36 ideas** were **implemented by suppliers** in the EMEA region, allowing **shared economic benefits** of approximately **€1.1 million**

Supported several initiatives worldwide **for development** of **local communities**, **2,736 scholarships awarded** and partnerships with universities, research institutes and public institutions

OUTCOMES

Value Chain Outcomes

These are key figures that serve as outcomes in generating value for our stakeholders. Data reflects the status at December 31, 2015, unless stated otherwise.

Natural

FCA acts to minimize any potentially negative impact of its activities on natural capital by adopting leading technologies and processes, reducing consumption of natural resources, mitigating supplier-related risks and, in general, seeking to apply the highest international standards and best practices.

OUTCOMES

4.1 million tons of CO_2 emissions at Group plants, a **decrease of 6.8%** vs 2010 despite a **0.2% increase in production volumes**

1.2 million cumulative tons of CO_2 emissions avoided since 2010 through a **23.4% decrease in emissions** per vehicle produced

19.6 million m^3 of water discharged at Group plants worldwide

2.3 billion m^3 of water saved at Group plants worldwide with **recycling index of 98.9%**

1.5 million tons in total waste generated at Group plants worldwide, of which **14.9% sent to landfill** and **82.3% recovered**

70.7% reduction vs 2010 **in hazardous waste** per vehicle produced at Group plants

Approximately **4,300 environmental projects** implemented **under the WCM program**, leading to a **significant reduction** (3,700 TJ) in **energy consumption** compared with 2014 and resulting in **0.3 million tons of CO_2 emissions** avoided and **€65 million** in costs saved

83% of **vehicle materials reused** and/or **recovered** in Italy

GRI: G4-9, G4-EN10, G4-EN19, G4-EN22, G4-EN23

Our Responsibilities

Fighting Climate Change

The global fight against the harmful effects of climate change made a significant leap forward in 2015, with the landmark agreement signed at the United Nations Climate Change Conference of the Parties (COP21). To contribute to the goal of keeping global warming below 2 degrees Celsius, 195 countries pledged to curb emissions and take action to preserve the environment.

Together with other sectors, the automotive industry is being called upon to help stabilize the level of greenhouse gases in the atmosphere and to take an active role in the research and development of solutions for more sustainable mobility. FCA believes that effective, long-lasting results to address climate change can only be achieved through the combined efforts of government, energy producers, manufacturers, consumers, academia and the financial community. To this end, the Company supports the objectives of COP21 through specific commitments. We signed the CEO Climate Leadership for Automotive Declaration to show our commitment to the goal of decarbonizing automotive transport. We also signed the Charter of Milan, presented to UN Secretary General Ban Ki-moon at the closing of the Milan Expo, as another indication of our support for the sustainable use of the world's resources. In addition, FCA joined the CDP business leadership initiative by committing to report climate change information in mainstream reports as a fiduciary duty and to contribute to responsible corporate engagement in climate policy.

FCA recognizes its role in addressing climate change effects along its value chain and aims to reduce the CO_2 emissions of its products and processes from design, production, distribution, use and the end-of-life phase. The Company has established long-term targets aimed at reducing our environmental footprint.

The areas where FCA can have the greatest direct impact are focused on our assembly plants, our products and our suppliers:

- FCA aims to reduce its plants' worldwide energy consumed per vehicle produced by 30% from 2010 to 2020.
- FCA aims to reduce its plants' worldwide CO_2 emissions per vehicle produced by 32% from 2010 to 2020.
- FCA aims to reduce its plants' worldwide water consumption per vehicle produced by 40% from 2010 to 2020.
- We continue to attack all types of waste and losses through our global World Class Manufacturing program, a best-in-class system that encompasses all plant processes, with the ultimate objective of zero waste, zero accidents, zero breakdowns and zero inventories.
- FCA aims to minimize environmental impacts related to the use of its products:
  - by 2020, achieve a 40% reduction in CO_2 emissions vs 2006 from Mass-Market Brand cars sold in Europe, maintaining high levels of competitiveness
  - improve the fuel economy of new FCA US vehicles compared with the vehicles they replace by at least 5 to 15%
  - continue to develop electric/hybrid technologies, focusing on solutions that are economically viable, competitive in the marketplace, and beneficial to society
  - minimize environmental impacts related to the use of products by engaging customers in eco-responsible behavior
- FCA aims to monitor CO_2 emissions of 90-100% of top Group suppliers (accounting for about 57% of purchases by value) by 2020 and support them in improving their sustainable performances.

Sustainability Targets

GRI: G4-1, G4-2, G4-EC2

Sustainability Model

Sustainability is about ensuring long-term financial success and business viability, in part by understanding and addressing the major needs of our stakeholders who are impacted by our decisions and actions.

Our long-term commitments reflect both ongoing changes in the competitive automotive environment and the evolution of stakeholder desires and requirements.

FCA's approach to sustainable development is reflected in the robust, well-established processes and organizational structures that have been created to ensure the integration of economic decisions with those of a social and environmental nature and the investigation of related impacts.

Sustainability awareness throughout FCA has evolved and strengthened over the years, becoming part of the strategic approach that drives the business.

To reinforce our commitment throughout the entire organizational structure, a process for delegating authority from the highest governance body to management and subsequently to employees has been reinforced since 2009, when responsibility for sustainability issues was assigned to the Nominating and Corporate Governance Committee which was reappointed in 2014 as the Governance and Sustainability Committee.

Since that time, several entities within the organization have assumed direct sustainability management roles. The Sustainability Team - with members in Italy, Brazil, China and the U.S. - plays a central role in promoting a culture of sustainability within the Group and among its various stakeholders. The team facilitates the process of continuous improvement, contributing to risk management, cost optimization, stakeholder engagement and enhancement of the Company's reputation. The team interacts with the individuals responsible for operational management of key issues (e.g., environment, innovation, human resources, supply chain) within each operating segment and region, as well as with the central functions, by supporting them in analyzing and reporting sustainability-related impacts and identifying potential areas for action. It also manages relationships with sustainability rating agencies, international organizations, analysts and socially responsible investors with the support of the Investor Relations team.

The Cross-Functional Sustainability Committee (CSC) promotes and evaluates operational decisions and plays an advisory role for proposals submitted to the Group Executive Council (GEC) by the Sustainability Team. Depending on the agenda to be discussed, the CSC may consist of representatives from the principal functions at the central and company levels (Business Development, Corporate Communications, Engineering, Design, Finance, GEC Coordinator, Human Resources, Industrial Relations, Institutional Relations, Internal Audit & Compliance, Manufacturing, Purchasing, Senior Counsel and Treasurer) and meet as necessary on an ad hoc basis. The Sustainability Group Coordinator is also a member of the GEC.

The Group Executive Council (GEC) is the decision-making body composed of the Chief Executive Officer (CEO), the Chief Operating Officers (COOs) of the regions and companies and various functional heads. The GEC defines the strategic approach and evaluates the alignment of Sustainability Targets with business objectives. The GEC is periodically updated on the status of projects and FCA's overall sustainability performance.

The Governance and Sustainability Committee (a subcommittee of the FCA Board of Directors) evaluates proposals related to strategic initiatives on sustainability-related aspects, presents opinions to the Board of Directors as necessary, and reviews the annual Sustainability Report. Consultations regarding sustainability aspects between stakeholders and the highest governance body are delegated to the Sustainability Team which is responsible for maintaining an open dialogue with internal and external stakeholders on these issues. Outcomes of this dialogue are then incorporated into the annual disclosure of the Sustainability Report and reported to the Governance and Sustainability Committee. Relevant outcomes from sustainability-focused Stakeholder Engagement events are reported to the appropriate level within the organization. These can include regional Heads of Human Resources and COOs of the regions and operating segments. Executives with responsibility for sustainability matters are involved in the yearly plan of Stakeholder Engagement activities and informed of results periodically.

GRI: G4-34, G4-35, G4-36, G4-37, G4-42, G4-43, G4-48, G4-49

Sustainable Investing

The Group's capacity to prosper in a competitive business environment by creating advantages and long-term value is a measure of how innovation and sustainability are embedded in the Group strategy. Environmental, Social and Governance (ESG) factors have increased their financial materiality in the last few decades. Thus, relations with shareholders are an essential element not only of FCA's governance structure, but also of the Company's sustainability approach.

The results published in the Global Sustainable Investment Review 2014 - which reports the results of market studies conducted by sustainable investment forums from Europe, the United States, Canada, Australia, Asia (excluding Japan) and Japan - show the increasing importance of the Socially Responsible Investors (SRI) market.

Since 2012, the global sustainable investment market has continued to grow both in absolute and relative terms, rising from $13.3 trillion to $21.4 trillion at the start of 2014. This 61% increase outpaced the growth in total professionally managed assets.

FCA is committed to building and maintaining an ongoing dialogue with SRIs who analyze environmental, social and corporate governance criteria as an indicator of a company's ability to generate long-term competitive financial returns and positive social impacts.

Ipreo, a global provider of market intelligence, conducted an analysis of the top 200 shareholders representing 45% of FCA free float shares in 2015. The aim was to identify the composition of shares owned by:

- **SRI funds**, which aim to achieve social and/or environmental performance by investing in selected and screened assets
- **ESG Investors**, who try to achieve a sustainable financial performance by integrating Environment, Social and Governance criteria in their investment decision as well as their management process.

Among the top 200 shareholders analyzed, 55% were revealed to be Highly or Medium **ESG sensitive**.
The concentration of Highly ESG sensitive shareholders in FCA (33% of the institutional investors analyzed) was significantly higher than the global market average (18%).

According to the analysis, the sustainability performance of FCA can have a direct correlation with the investment of 35 SRI funds representing 3.2 million Company shares.[1]

Moreover, 99 of the 200 institutions analyzed, representing 29% of the shares outstanding and 65% of the investors analyzed who own FCA shares, are signatories of the Principles for Responsible Investment (PRI) Initiative, one of the most important SRI initiatives supported by the United Nations. Its goal is to understand the implications of sustainability for investors and support signatories to incorporate these issues into their investment decision making and ownership practices. Sustainaible investors' interest in FCA demonstrates the relevance of FCA's sustainability approach.

[1] Data is calculated on 2016 FCA shares (after Ferrari spin off).

Sustainability Targets

FCA's approach to sustainability is based on aligning the Company's projects and initiatives to ensure that value is generated responsibly through the incorporation of economic, environmental and social aspects into its business decisions.

This approach has led to the creation of a focused and disciplined method for tracking the Company's progress toward sustainable development. Sustainability targets communicate annually to stakeholders by reporting on progress toward achievement of each goal during the current reporting year. FCA's sustainability approach has resulted in a variety of projects related to good corporate governance; environmentally responsible products, plants and processes; a healthy, safe and inclusive work environment; and constructive relationships with local communities and business partners, as these are the milestones along the Group's path of continual improvement oriented to long-term value creation.

In 2015, a thorough review of long-term sustainability targets was completed to ensure their continued relevance and alignment with the Group's direction. As a result, some targets were incorporated with others under shared objectives or initiatives. This rationalization was completed without eliminating or weakening any of our commitments. Transparent disclosure is offered within results reported.

Discover all our commitments and results:

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Corporate Culture and Values

Commitment: strengthen leadership position in Environmental, Social and Governance aspects

Targets	2015 Results
2020: demonstrate continued relevance of Group's sustainability performance to financial and non-financial stakeholders through global and regional recognition	✓ FCA recognized among sustainability leaders and confirmed as member of numerous leading indices, including the Dow Jones Sustainability Index World and CDP A List 2015
2020: incorporate sustainability targets in individual performance goals to drive behaviors in support of sustainability culture and values	✓ Sustainability targets incorporated in performance management system for individuals with responsibility for related projects, Top Management members and second-level reports to heads of operating sectors and certain central functions
2020: expand and innovate dialogue on sustainability topics to reach an increasing number of internal and external stakeholders worldwide	✓ More than 4,600 internal and external stakeholders engaged in an online sustainability survey ✓ Three sustainability-focused Stakeholder Engagement events held in LATAM and APAC regions with more than 170 internal and external stakeholders involved ✓ During Expo Milano 2015: - more than 1,300 people reached with sustainability-focused events - customer feedback on FCA sustainable fleet Share&Drive service averaged 4.7 out of 5 ✓ About 330 high school and university students involved in sustainability-focused open discussions with FCA representatives in Italy and the U.S. ✓ Outcomes from sustainability-focused Stakeholder Engagement events reported on ad hoc basis to regional Heads of Human Resources, executives with responsibility for sustainability matters, Chief Operating Officers of the regions and operating segments, the Governance and Sustainability Committee at Board level ✓ Around 55% of top 200 shareholders[2] Highly or Medium ESG sensitive ✓ About 250 internal sustainability network experts contributed throughout 2015 to the FCA sustainability program, representing all Group companies and business functions worldwide
2020: further incorporate respect for human rights, as already established in Code of Conduct, into Group audit processes, in accordance with local constraints and requirements	✓ Human rights risk self-assessment regarding child labor, young workers, labor practices, forced labor, non-discrimination, conditions of employment, security and supply chain management implemented as part of the FCA standard audit process in the EMEA, NAFTA, LATAM and APAC regions including all companies in order to cover due diligence requirements of the UN Ruggie Framework Guiding Principles

[2] *Data refers to IPREO Shareholders Identification registered in February 2016.*

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Risk Management

Commitment: continuously update risk management system to ensure business continuity, and manage climate change and other risks

Targets	2015 Results
2020: prevent and manage emerging risks to ensure business continuity and minimize economic, environmental and social impacts, both internal and external	Methodology and tools developed in collaboration with experts from reinsurance companies and available for loss prevention surveys to assess flood risk
2015: coordinate loss prevention activities through Business Continuity Management (BCM) process; create business resilience plans for all higher-risk facilities and supporting functions; integrate process into World Class Manufacturing (WCM) framework	Resilience plans completed and tested for 13 higher-risk facilities and 5 supporting functions; customized database developed for maintaining and sharing plans and mitigation actions; BCM process mapped to WCM: 5 pillars identified as supporting BCM

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Employees[3]

Commitment: increase competitiveness and employer branding by leveraging workforce diversity

Targets	2015 Results
2020: leverage diversity as a key asset and monitor equal opportunity implementation worldwide through Human Resources processes, to build a complete skill set and value everyone's contribution	✓ Internal mobility opportunities available to FCA salaried and hourly employees worldwide through a variety of channels, including job posting programs: on average half of posted positions are filled with internal candidates ✓ 25% of new hires were women, contributing to the continuous increase of female representation among the workforce ✓ More than 14% of leading positions held by women

Commitment: help employees achieve optimal professional and personal effectiveness on the job

2020: increase work-life balance opportunities to maximize employee satisfaction and effectiveness	✓ Several welfare initiatives in place across all regions and companies as part of the Group support to employees in delivering outstanding professional contribution and results
2020: strengthen local community involvement through regional implementation of corporate volunteer programs, based on local needs, policies, and constraints	✓ More than 5,600 employees volunteered worldwide, devoting more than 145,000 hours[4] during work time to support local community development, corresponding to an economic cost from the Company of approx. €3.7 million[5] ✓ More than 3,000 FCA US employees donated blood through on-site blood drives ✓ FCA US employees participated in scores of service projects through the Motor Citizens program in 2015, donating their time, energy and expertise

Commitment: attract, develop and retain the best people through engagement, challenge and reward

2020: conduct people satisfaction surveys on a regular basis to monitor and improve effectiveness in talent acquisition, development and retention	✓ Several people satisfaction surveys performed in 20 countries worldwide: - around 46,000 hourly and salaried employees from EMEA, NAFTA, LATAM, APAC regions, and Comau, Magneti Marelli and Maserati participated - survey results and key findings under evaluation for development of appropriate actions
2020: provide long-term, performance-related incentive plans and development programs at the regional level, in accordance with local requirements and constraints	✓ About 3,600 employees participated in short- and long-term exchange programs between FCA regions and companies; top talent high level training; and Executive MBA Programs ✓ Best practices and professional expertise shared across regions through international development path for more than 660 expatriates ✓ New-hire induction and orientation programs conducted for about 5,500 graduate (BA and above) employees (+37% vs 2014) ✓ Retention programs and incentives contributed to 8.3% reduction in manager attrition rate vs 2014
2020: develop new initiatives and channels to increase employee contribution to the Group's sustainability profile	✓ Ongoing employee contributions to improve business products and processes continued through several initiatives[6] with more than 2.3 million suggestions collected, resulting in significant financial return ✓ Regular communication from Company CEO informing employees about significant FCA activities

[3] Ferrari not included in the scope.
[4] Volunteer hours do not include NAFTA region data.
[5] The figure represents a conservative estimate that considers total personnel costs, total employees and assumptions on average total working days and hours.
[6] To leverage efforts, the target about WCM average suggestions per employee, which was published in 2014 Sustainability Report, has been combined with this target aimed at developing initiatives and channels to increase employee contributions to the Group's sustainability profile. The results include the WCM program, iPropose, BIS, STEP-UP!, MAIS and Haz Màz programs.

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Occupational Health and Safety

Commitment: continue internal and external certification process for the Occupational Health and Safety Management System

Targets	2015 Results
2020: achieve OHSAS 18001 certification for all Group plants operating worldwide	136 plants certified OHSAS 18001, covering approx. 187,000 employees (Read more)

Commitment: strive for a zero accident and injury rate and to maximize employee health and well-being

2020: achieve continued reduction in accident Frequency and Severity rates, with ultimate goal of zero lost time accidents for all Group plants	Reduced Frequency Rate for the ninth consecutive year with 0.12 accidents per 100,000 hours worked (-20% vs 2014 and -73% vs 2010) Reduced Severity Rate for the ninth consecutive year with 0.04 days of absence due to accidents per 1,000 hours worked (-20% vs 2014 and -69% vs 2010)
2020: expand Health Promotion Program (HPP) to all plants worldwide, in line with local needs and constraints, to promote healthy lifestyles and safe working environment	HPP expanded to 125 plants in 18 countries, with focus on smoking cessation, nutrition education and promotion of a preventive culture through medical checks

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Information and Communication Technology

Commitment: reduce Information and Communication Technologies (ICT) energy consumption

Targets	2015 Results
2020: extend Green ICT clauses to all relevant ICT suppliers	Included Green ICT clauses in the renewed Framework Agreements for Consultancy Services in EMEA region
2020: replace 100,000 video monitors with eco-efficient devices compared with 2010	Replaced approx. 64,100 video monitors with eco-efficient devices since 2010 with 848 cumulative MWh of electricity saved and 425 tons of CO_2 avoided
2020: continue replacement and/or virtualization of servers	Eliminated 260 physical servers and added 565 virtualized servers, resulting in energy consumption and CO_2 emission reductions

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Customers

Commitment: strengthen relationship with customers at the global level and achieve higher satisfaction levels

Targets	2015 Results
2020: support and engage existing and potential customers through a global Customer Care platform and dedicated initiatives or channels	Extended Customer Care global platform to Brazilian and Indian markets Provided worldwide customer assistance in 30 different languages[7] Provided innovative communication channels for existing and potential customers across regions (Read more)
2020: achieve customer service levels[8] in all regions in line with Group's best performing region	Customer service performance across regions varied from 72.0% to 89.6% call response within 20 seconds (Read more)

Commitment: enhance customer relationship and service experience

2016: reach 20% more customers in 18 EU markets vs 2013 through new multichannel customer feedback system	Reached +39% customers vs 2013

Commitment: ensure responsible and personalized selling practices

2016: increase loyalty products up to 40%[9] of all new contracts acquired annually by FCA Bank	Reached up to 31% of new contracts for loyalty products acquired by FCA Bank (vs 30% in 2013)
2016: increase annual renewal/refinancing rate on loyalty products held by existing FCA Bank customers to 45%[10]	Reached 40% for renewal/refinancing rate for existing FCA Bank customers in line with 2013 result

[7] Customer care languages changed compared to 2014 due to business reorganization.
[8] Group level refers to the level of service across the four regions: EMEA, NAFTA, LATAM and APAC.
[9] Range of achievement modified in 2015 as performance affected by EU market condition and related brand strategies.
[10] Target measurement redefined from 60% to 45%, according to change of calculation methodology, EU market condition and related brand strategies.

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Dealer and Service Network

Commitment: provide extensive training opportunities to standardize and expand the skills of sales force and technicians

Targets	2015 Results
2020: provide approx. 50% of total training hours to the FCA Italy sales and technical personnel worldwide dedicated to environmental and safety-related product features and increase training hours based on demonstrated needs of the network	Provided approx. 54% of the total training hours delivered to FCA Italy sales and technical personnel on environmental and safety features, corresponding to over 923,000 hours worldwide
2020: provide approx. 33% of total training hours to the FCA US sales force worldwide dedicated to environmental and safety-related product features and increase training hours based on demonstrated needs of the network	Provided approx. 27% of the total training hours delivered to FCA US sales force on environmental and safety features, corresponding to over 308,000 hours worldwide
2020: provide approx. 40% of total training hours to the FCA US technical personnel worldwide dedicated to diagnosis, repair and maintenance of eco-friendly engines and safety-related product features and increase training hours based on demonstrated needs of the network	Provided approx. 36% of the total training hours delivered to FCA US technical personnel on diagnosis, repair and maintenance of eco-friendly engines and safety-related product features, corresponding to over 536,000 hours worldwide
2020: provide approx. 50% of total training hours to the FCA Italy sales and technical personnel worldwide through distance learning, optimizing the learning methods and the sustainability impact	Provided approx. 47% of the total training hours delivered to FCA Italy sales and technical personnel worldwide through distance learning, corresponding to 817,000 hours

Commitment: reduce environmental impact of sales activities and promote excellence in the dealer network

2017: achieve 20% reduction (vs 2012) in average cumulative kWh of electricity consumed at Company-owned dealerships in Italy	Reduced by 4% vs 2012 electricity consumption at Company-owned Italian dealerships
2017: progressively introduce eco-efficiency guidelines and best practices at both independent and Company-owned dealerships	Sustainability award established for dealerships in Brazil, along with continuation of the award program in the U.S., to recognize best practices in environmental and social areas

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Suppliers

Commitment: promote social and environmental responsibility among suppliers

Targets	2015 Results
2020: address critical current and emerging issues to strive toward a conflict-free supply chain while enhancing mineral traceability in high-risk areas, and promote ethical sourcing through industry-driven programs and mechanisms[11]	✓ Conflict Minerals responses collected by FCA US from the 150 largest volume suppliers comprising approx. 91% of supply base APV (Annual Purchase Value) ✓ Provided support to suppliers in EMEA region to understand U.S. legislation and respond to conflict minerals requirements ✓ Monitored follow-up of the European legislative proposal on conflict minerals and the related Italian position within the ACEA Working Group, in collaboration with other automakers and suppliers

Commitment: work with all tiers of the supplier base on measurement and sharing of social and environmental responsibilities related to climate change, human rights and working conditions

2020: evaluate all Tier 1 suppliers with potential exposure to high environmental or social risks through sustainability audits or assessments; conduct targeted third party audits of all strategic suppliers	✓ 60 audits on major FCA suppliers performed by FCA Supplier Quality Engineers (27 audits) and third party auditors (33 audits)
2020: monitor CO_2 emissions of 90-100% of top Group suppliers (representing approx. 57% of purchases by value) through the CDP Supply Chain program	✓ 210 suppliers invited to respond to the CDP Supply Chain program, with response rate of 62%, average disclosure score of 77 and average performance band “D”

[11] To leverage efforts, the target to promote ethical sourcing, which was published in 2014 Sustainability Report, has been combined with this target aimed at striving toward a conflict-free supply chain, reported in the Supplier section of this Report.

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Communities

Commitment: support social inclusion and cultural and economic development in local communities

Targets	2015 Results
2020: serve as a catalyst to help enhance the self-sustaining social-economic development of local communities	✓ Local development opportunities and positive impacts generated by the Árvore da Vida program in Brazil: - about 21,500 individuals reached in the period 2004-2015 - about €1.1 million invested in 2015 - social and cultural initiatives continued in partnership with local network representatives ✓ FCA Serbia named Socially Responsible Company of the Year in 2015 by Serbian Association of Managers ✓ FCA Foundation grants amounted to approx. €4.5 million to organizations helping empower opportunity and support strong, resilient communities ✓ United Way contributions from FCA US employees in the U.S. and Canada, special events and FCA corporate donations totaled approx. €5 million
2020: advance youth education and training, with particular emphasis on science, technology, engineering and math programs, including initiatives that address innovation, mobility and environmental issues	✓ Agreement between FCA and Politecnico of Turin (Italy) for 2014-2018: - approx. €1.85 million contribution granted to support Automotive Engineering master degree course in 2015 - Voluntary Educational Program and Summer School offered with trainers and tutorship provided by Group managers for a total of 88 hours, of which 40 focused on environmental sustainability aspects in 2015 ✓ Industrial Automation Master, Summer Schools and Voluntary Educational Programs delivered by Comau to most talented university students worldwide with about 800 hours of lessons delivered ✓ Opportunities provided by the TechPro[2] project measured and assessed: - about 3,100 students trained - about 3 million hours of training provided - 694 internships, of which approx. 36% at Italian FCA after-sales centers - new Train the Trainer focused on new technologies, energy savings and environmental aspects of automotive maintenance ✓ Approx. €270,000 in grants from FCA Foundation to support *FIRST* programs in the U.S. and Canada: - 59 teams at the high school and middle school levels supported by FCA employee mentors ✓ FCA employees volunteered for activities to support and enhance youth development, such as literacy, tutoring, college readiness and career development ✓ About 3,400 children of FCA employees involved in programs focused on environmental awareness at Italian Summer Camps ✓ For a Healthier Planet and Risks in My School educational campaigns involved about 7,000 pupils at Kragujevac (Serbia) elementary and high schools

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Product

Commitment: minimize environmental impacts associated with our products by reducing CO_2 emissions through alternative fuels and propulsion systems, and encouraging eco-responsible behavior of consumers

Targets	2015 Results
2020: achieve 40% reduction in CO_2 emissions vs 2006[12] for Mass-Market Brand cars sold in Europe, while maintaining high levels of competitiveness	✓ Reduction of 19% in CO_2 emissions in Europe vs 2006 and of 25% vs 2000 while increasing product portfolio across Mass-Market Brands ✓ 72% of cars sold in Europe recorded emissions up to 120 g CO_2/km and 79 % up to 130 g CO_2/km
2020: achieve at least 5% to 15% improvement in fuel economy[13] for major renewals of FCA US vehicles compared with replaced vehicles/models	✓ Fuel economy of current vehicles improved through continued upgrades to existing engines and integration of efficiency technologies, including Pentastar 3.6-liter engine redesign in 2015, addition of Engine Stop-Start, aerodynamic and tire rolling resistance improvements, and vehicle weight reductions: - Jeep Cherokee 3.2-liter +2 mpg; improvement of +6% - Jeep Grand Cherokee 3.6-liter +2 mpg; improvement of +7%
2025: actively pursue actions in support of the U.S. EPA/NHTSA industry goal of 54.5 mpg by 2025	✓ 2015 product actions that contributed to fuel efficiency: - Pentastar engine upgrades contributed to fuel-economy improvements of more than 6% - Engine Stop-Start technology integrated into additional models: 2015 Jeep Cherokee 3.2-liter, Jeep Grand Cherokee 3.6-liter - Ram EcoDiesel fuel economy increased to 29 mpg - continued integration of technologies to improve fuel efficiency or decrease emissions, including active aerodynamic systems; LED lighting; vehicle weight reductions; thermal control technologies - more than 900,000 2015 model year vehicles produced in North America capable of running on E85 flexible fuel, which contains 85% ethanol, or biodiesel blends of up to 20% (B20)
2017: at least 6.8% reduction in CO_2 emissions on average fleet vs 2012 in Brazil	✓ Over 462,000[14] Flexfuel and TetraFuel vehicles licensed in Brazil (95.62% of total registered licenses) contributing to the progressive reduction of CO_2 emissions of average fleet
2020: develop electric/hybrid technologies, focusing on solutions that are economically viable, competitive in the marketplace, and beneficial to society	✓ FCA sustainable mobility fleet[15] for Expo Milano 2015 with 10 Fiat 500e vehicles provided; approx. 26,000 km traveled during more than 8,000 trips ✓ Experimental electric vehicle car-sharing service in collaboration with the city of Turin (Italy): 8 Fiat 500e vehicles traveled approx. 42,000 km in the urban area ✓ Chrysler Pacifica Hybrid minivan revealed at North American International Auto Show in January 2016: - industry's first electrified minivan - expected to achieve 80 miles per gallon equivalent (MPGe) in the city and 30 miles of all-electric range - available second half of 2016 ✓ Second phase of electrification project started in partnership with McMaster University (Canada) ✓ Energy storage technology project continued in partnership with cell suppliers and pack integrators ✓ First phase of innovation project on next generation power electronics completed ✓ Collaborative development of wireless charging for plug-in hybrid electric and battery electric vehicles near completion

[12] *2006 baseline established using impact assessment guidelines of EC Regulation 443/2009.*
[13] *Data is reported to the U.S. National Highway Traffic Safety Administration (NHTSA) and provided by model year, meaning the year used to designate a discrete vehicle model, irrespective of the calendar year in which the vehicle was actually produced, provided that the production period does not exceed 24 months. CAFE standards from NHTSA are set independently for passenger cars and light duty trucks. Fuel economy is based on the most recent NHTSA required submission, which for 2015 reflects mid-model year data. Previous year data is adjusted to reflect final EPA/NHTSA reports.*
[14] *Official data communicated to Brazil's INOVAR-Auto program that establishes a minimum average vehicle energy efficiency for 2017 expressed in megajoules per kilometer (MJ/km).*
[15] *Total of 81 vehicles provided (71 compressed natural gas and 10 electric) for Expo 2015 sustainable mobility fleet.*

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Commitment: minimize environmental impacts associated with our products by reducing CO_2 emissions through alternative fuels and propulsion systems, and encouraging eco-responsible behavior of consumers	
2020: maintain a wide offering of CNG models in Europe, promoting technological innovation and retaining significant position among leaders in Europe	✓ Market leadership confirmed for natural gas vehicles in Europe: - about 50% market share with a total of more than 44,000 natural gas vehicles sold in 2015 - more than 690,000 natural gas vehicles produced since 1997 ✓ BIOMETHAIR research project completed and demonstrator vehicle developed integrating a mild hybrid 48V architecture on a CNG-dedicated version of the TwinAir on a Fiat Panda model ✓ FCA sustainable mobility fleet[16] for Expo Milano 2015, with 35 natural-gas powered Fiat 500Ls provided through Share&Drive service with 6,700 rentals (Read more)
Commitment: minimize environmental impacts associated with our products by reducing CO_2 emissions, focusing on propulsion systems and encouraging customers in efficient-responsible behavior	
2020: reduce CO_2 emissions by 30% vs 2008 on entire Maserati product range	✓ Concept study for PHEV Hybrid architecture to be adopted for Maserati Quattroporte, Ghibli and Levante
2015: extension of Engine Stop-Start feature to all gasoline engines of Maserati Quattroporte and Ghibli with expected -6% on CO_2 emissions vs 2013 models	✓ Engine Stop-Start feature available on all Maserati versions of Quattroporte and Ghibli with average CO_2 emissions reduced by 8% in urban cycle
2020: reduce CO_2 emissions by 20% vs 2014 on entire Ferrari product range	✓ Two new turbo engines introduced in accordance to CO_2 emissions reduction plan ✓ Progressive implementation of innovative solutions (i.e. turbo, innovative gearbox, electric steering and 48V-hybrid)
Commitment: offer new mobility services that improve the urban mobility experience and provide greater access to affordable solutions	
2020: pursue research, advance development and delivery of new sustainable connectivity and mobility solutions that are economically viable for the Group and its customers	✓ U.S. Mobility Trends research launched spanning multiple generations and exploring five key trend areas: Connected Car; Autonomous Vehicles; Urban Mobility; Shared Economy; and Electric/Alternative Powertrains ✓ Global Connected Car of the Future research launched focusing on consumer experience inside the vehicle and emerging long-term consumer trends across Europe, North America and Asia (Read more) ✓ Uconnect features launched to enhance hands-free capability, minimize driver interruptions and integrate smartphone technology ✓ Uconnect Live, including infotainment, navigation, safety and eco-driving features, launched on Fiat 500X, Fiat 500L, Fiat 500, Jeep Renegade and new Lancia Ypsilon in EMEA region ✓ Emergency Road Assistance Program based on Global Navigation Satellite System (ERA GLONAS) continued, with eCall device ready for certification ✓ Enjoy[17], the sustainable car-sharing service launched by ENI in partnership with FCA and Trenitalia, extended to Turin (Italy), reaching a total of about 420,000 individuals and 5 million rentals in 2015
2016: extend Fiat Likes U across Europe and establish an international network with major universities	✓ Fiat Likes U project extended to other Italian and European universities with the car-sharing service used by over 4,000 students totaling more than 715,000 km traveled (Read more)

[16] *Total of 81 vehicles provided (71 compressed natural gas and 10 electric) for Expo 2015 sustainable mobility fleet.*
[17] *Already available in Milan, Rome and Florence (Italy).*

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Commitment: assess environmental and social impacts throughout the entire product life cycle	
2020: offer new products (vehicles and components) with environmental performance certification through integration of ISO 14040/44-compliant Life Cycle Assessment (LCA) methodologies	✓ Critical review by a third party certification firm for compliance verification of the LCA applied to the Jeep Cherokee diesel vs gasoline versions and Fiat 500 gasoline vs electric versions ✓ LCA completed on previous version of Fiat Panda vs new Fiat Panda ✓ LCA completed on Magneti Marelli products: throttle body; steel subframe; and composite dashboard ✓ Magneti Marelli began assessment of suppliers' knowledge and application of LCA methodology ✓ LCA completed on the new eco-friendly Fiat Uno dashboard, adopting a jute and polypropylene fiber thermoformed composite material ✓ LCA completed in LATAM region on the potential use of food waste and scraps in vehicle parts ✓ LCA completed on different materials used for the vehicle carpet floor comparing recyclable, recycled and lighter materials vs traditional materials ✓ LCA started in LATAM region on paint processes comparing different technologies
2015: involve selected suppliers in the EMEA region in joint research and development projects based on LCA analysis of the environmental impacts of strategic vehicle components	✓ LCA research and development activities conducted in collaboration with selected suppliers within EU-funded research projects
2015: integrate LCA-based eco-design guidelines in the vehicle development process	◐ LCA internal guidelines defined in collaboration with various departments and businesses
2015: complete LCA analysis of body pre-paint process, comparing chemical substances used in normal production with those used in this process	○ LCA studies completed within the NANOPIGMY project related to innovative paint process and materials[18]
Commitment: strengthen sustainable materials strategy at the global level	
2020: minimize environmental impact of materials used in vehicles	✓ Conformity related to Substances of Concern managed for supplier components and materials through Felis and IMDS System according to Global Automotive Declarable Substance List
2020: increase the use of renewable and recyclable materials in next generation vehicles with a focus on recycling and substitution opportunities for critical raw materials	✓ Consultation process established with suppliers and external partners for testing in automotive applications carbon fiber composites recycled from aeronautic industry ✓ Began work on the EU Horizon 2020 GreenLight Project to develop automotive applications for bio-based carbon fiber materials derived from waste vegetable polymers ✓ Assessment continued of several bio-filled material applications for next generation vehicles ✓ Renewable material made of polypropylene and jute fiber used in the front and rear door panels of Jeep Renegade manufactured in Brazil ✓ CRF active involvement in the EU's Horizon 2020 research and innovation program to support viable solutions for critical raw materials
2015: evaluation of SVHC phase-out alternatives and development of substitutes	✓ Launched the IMDS/Substances of Concern Compliance Portal application to improve data relevant to global material content reporting requirements and chemical substance prohibitions

[18] *2015 result represents a preliminary activity of the LCA analysis of body pre-paint process that will be performed upon completion of technical process update.*

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Commitment: responsibly manage vehicle end-of-life

2020: outperform European Union reuse/recycling quota target (85%) and reuse/recovery quota target (95%) in Italy and achieve similar results in other main EU markets	✓ 82% of vehicle materials reused and/or recycled in Italy ✓ 83% of vehicle materials reused and/or recovered in Italy
2020: improve efficiency in management of End-of-Life Vehicles (ELVs) and exceed minimum regulatory requirements with expansion of qualified and certified ELV network in relevant markets	✓ 100% of tires collected in Italy by dismantlers used in recycling activities ✓ Innovative applications implemented through the TyRec4LIFE EU Project: alternative road paving made of asphalt modified with rubber powder from end-of-life tires ✓ ELV network capacity and quality expanded in France, Spain and Portugal ✓ ELV monitoring activities increased, reaching 70 markets across the EMEA, NAFTA, LATAM and APAC regions

Commitments: improve vehicle preventive, active and passive systems and overall road safety performance through telematic technologies and infomobility services

2020: continue to focus on vehicle occupant safety through advanced solutions encompassing all safety aspects while: - adapting to the rapidly changing regulatory requirements and third-party ratings in all regions - maintaining high levels of structural crashworthiness while introducing Advanced Driver Assistance Systems (ADAS) such as Automatic Emergency Brakes (AEB) and Forward Collision Warning (FCW) - offering modular architectures, innovative and efficient restraint systems and providing technically advanced active safety systems for mass market vehicles including global applications - continue to be an industry leader in user-centered Human Machine Interface (HMI) design approaches for all safety system customer interfaces	✓ Resources and processes of the Office of Vehicle Safety and Regulatory Compliance expanded at FCA US ✓ Announced “Recall Central”, a new internet portal that consolidates recall campaign information ✓ 2016 Fiat 500X named 2016 U.S. IIHS Top Safety Pick Plus ✓ 2016 Chrysler 200 named 2016 U.S. IIHS Top Safety Pick Plus ✓ U.S. NCAP overall 5-star rating achieved by 2016 Dodge Challenger ✓ Australian NCAP 5-star rating achieved by Jeep Grand Cherokee ✓ Introduced new impact simulation system in EMEA region with innovative features such as pitching and full side impact capability ✓ Latin NCAP 5-star rating achieved by Jeep Renegade for Adult and Child occupant protection ✓ New office of Vehicle Safety and Regulatory Compliance established in Brazil reporting to the Chief Operating Officer of LATAM region ✓ Child restraint system further updated and available in FCA aftermarket for Fiat Panda Cross (77%) and 500X (85%) contributing to EuroNCAP child protection results ✓ Fiat 500X achieved 74% score in EuroNCAP pedestrian protection ✓ Internal accident database enhanced with additional 1,500 cases through the participation in the European IGLAD consortium
2015: technological assessment of sensor and communication-based combined solutions aimed at improving recognition of dangerous situations and reducing driver distractions	✓ V2X applications installed on prototype vehicles to improve detection and recognition of dangerous driving scenarios and accident risks ✓ Development and validation of algorithms to estimate driver attention level

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Commitment: improve preventive, active and passive safety systems on Maserati models	
2016: introduce new driver-assist and safety systems such as Active Cruise Control (ACC), Front Collision Warning (FCW) and Roll Over Mitigation (ROM)	Blind Spot Detection system (BSD) available for Maserati Quattroporte and Ghibli
Commitment: continue to offer competitive products that meet the needs of customers worldwide	
2020: achieve top quartile[19] competitive position for vehicle portfolio, leading to increased customer loyalty and advocacy for our products based on applicable regional benchmarks	Improved on average 15% globally for the rate of repair in the first 90 days of ownership Things Gone Wrong (TGW) from surveys that evaluate functionality/design issues at 90 days of ownership improved in two regions and globally remained stable

[19] *Vehicle portfolio will place within the top 25% of benchmark data.*

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Plants[20]

Commitment: expand application and certification of Environmental and Energy Management Systems

Targets	2015 Results
2020: achieve Environmental (ISO 14001) and Energy[21] (ISO 50001) certification for all Group plants operating worldwide	✓ 146 Group plants certified with ISO 14001, accounting for 100% of total Group industrial revenues[22] and covering over 97% of manufacturing employees[23] ✓ ISO 50001 certification for plants accounting for 94% of total FCA energy consumption (Read more)

Commitment: expand application of World Class Manufacturing (WCM) program

2020: extend WCM program to 99%[24] of Group plants operating worldwide and achieve bronze, silver, gold or world class award performance level for 100% of plants in WCM program	✓ WCM program implemented in 135 plants, accounting for 97% of total Group manufacturing cost base ✓ Award performance level achieved in 70 plants (50 bronze, 15 silver and 5 gold level), accounting for 67%[24] of Group plants adopting WCM (Read more)

Commitment: optimize environmental performance of production processes

2020: achieve 30% reduction in energy consumed per vehicle produced vs 2010 at Mass-Market Brand assembly and stamping plants worldwide	✓ Reduced by 19.5% energy consumption per vehicle produced at Mass-Market Brand assembly and stamping plants worldwide vs 2010 (from 7.37 to 5.93 GJ/vehicle) (Read more)
2020: achieve 32% reduction in CO_2 emitted per vehicle produced vs 2010 at Mass-Market Brand assembly and stamping plants worldwide	✓ Reduced by 23.4% CO_2 emissions per vehicle produced at Mass-Market Brand assembly and stamping plants worldwide vs 2010 (from 0.616 to 0.472 tons CO_2/vehicle) (Read more)
2020: use electricity generated from renewable sources for 100% of purchased electricity supplied from the grid and consumed by Mass-Market Brand plants in EMEA region	✓ 100% of electricity - supplied from the grid and consumed by Mass-Market Brand plants in Italy - is renewable (Read more)
2020: achieve 40% reduction in water consumed per vehicle produced vs 2010 at Mass-Market Brand assembly and stamping plants worldwide	✓ Reduced by 38.1% water consumption per vehicle produced at Mass-Market Brand assembly and stamping plants worldwide vs 2010 (from 4.99 to 3.09 m^3/vehicle) (Read more)
2020: maintain water recycling index over 95% at all FCA plants worldwide	✓ Achieved 98.9% water recycling index at FCA plants worldwide (Read more)

[20] *2020 targets for this section are based on current estimates of future production volumes according to the 2014-2018 Business Plan period.*
[21] *Where relevant, corresponding to 95% of energy consumption of all Group plants.*
[22] *Industrial revenues are those attributable to the activities of plants directly controlled by the Group.*
[23] *Manufacturing employees are those directly and indirectly involved in manufacturing processes.*
[24] *Percentage based on the total manufacturing cost base.*

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Commitment: optimize environmental performance of production processes	
2020: achieve 14% reduction in waste generated per vehicle produced vs 2010 at Mass-Market Brand assembly and stamping plants worldwide	Reduced by 21.1% waste generated per vehicle produced at Mass-Market Brand assembly and stamping plants worldwide vs 2010 (from 217.2 to 171.3 kg/vehicle) (Read more)
2020: achieve 54% reduction in hazardous waste generated per vehicle produced vs 2010 at Mass-Market Brand assembly and stamping plants worldwide	Reduced by 70.7% hazardous waste generated per vehicle produced at Mass-Market Brand assembly and stamping plants worldwide vs 2010 (from 8.2 to 2.4 kg/vehicle) (Read more)
2020: achieve up to 98% waste recovery at Group plants worldwide, with specific targets for each company	Achieved 96.7% waste recovery at Mass-Market Brand assembly and stamping plants worldwide (Read more)
2020: achieve 25% reduction in Volatile Organic Compounds (VOC) emitted per square meter vs 2010 at Mass-Market Brand assembly and stamping plants worldwide	Reduced by 23.8% VOC emissions per square meter at Mass-Market Brand assembly and stamping plants worldwide vs 2010 (from 32.4 to 24.7 g/m^2) (Read more)

Target exceeded | Target achieved or in line with glide path | Target partially achieved | Target postponed

Logistics

Commitment: reduce the environmental impact of logistics globally while delivering on-time goods to and from plants and finished vehicles to markets

Targets	2015 Results
2020: enhance logistics operations through optimization of fleet characteristics and application of methodologies designed to reduce the impact of freight and vehicle movement	FCA owned fleet upgraded with eco-efficient solutions: - 179 new compressed natural gas-powered tractors for upstream transport in NAFTA region - 91% of FCA-owned trucks used for downstream transport across EMEA region already compliant with Euro V and VI standards Sustainability assessment completed by logistics providers through specific questionnaires (Read more) New projects implemented and/or expanded to improve worldwide transport operations, such as: - use of intermodal solutions (Read more) - increase of transport capacity (Read more) - optimization of routes (Read more)
2020: leverage existing and emerging processes and technologies to move materials while protecting part quality and the environment	Performance and environmental impact of packaging and protective materials improved through: - new investments in standard containers - optimized design of special racks for premium parts - adoption of returnable crates and elimination of plastic films in selected flows (Read more)

Process for Sustainability Targets

Each year, the Sustainability Team coordinates and consolidates feedback from all regions and business functions to update the targets. The highest governance bodies of the Group are engaged in the development and approval of goals related to economic, environmental and social aspects. This process consists of three main phases:

Planning phase

Sustainability commitments and targets are initially defined on the basis of the areas for improvement identified by the Sustainability Team in collaboration with the operating segments/regions and central functions. In support of that activity, throughout the year the team monitors the performance of best-in-class competitors as well as the assessments by the principal sustainability rating agencies, international organizations and Socially Responsible Investors with whom the Group has a relationship. Draft Sustainability Targets are submitted for the approval of the Group Executive Council (GEC), which evaluates their consistency with Group strategy and makes appropriate recommendations.

Management phase

Responsibility for individual projects and achievement of the Sustainability Targets rests with the various operating segments/regions or corporate functions which have the resources, tools and knowledge necessary for their implementation.

Control phase

As a further indication of adherence to the commitments made, the Sustainability Team is periodically updated on the status of projects and, in turn, updates the GEC.

Corporate Governance

Corporate Governance Pillars

FCA's corporate governance structure has been expanded over time to incorporate a set of values, rules and procedures that reflect regulatory changes, improvements in corporate governance practices and suggestions from the major sustainability rating agencies.

The principal aspects of **FCA's governance** relating to management of the business in an ethical, transparent and responsible manner to create value for stakeholders, are:

- the System of Corporate Governance which regulates relations between the Board of Directors of the Company and its shareholders, endorsing the principles and best practice provisions set out in the Dutch Corporate Governance Code
- the Code of Conduct comprised of Principles, Practices and Procedures underscoring the Group's commitment to the highest standards of integrity and ethics, essential to drive social and economic development in line with sustainability goals
- the Risk Management model, aimed at safeguarding the value of investments, preventing accidents or limiting their impact, consistently with the highest prevention standards
- the Whistleblowing Procedure which, through the new FCA Ethics Helpline, represents the Group channel to report conducts which are contrary to the principles outlined in the FCA Code of Conduct or to seek advice concerning its application and interpretation
- the Sustainability Governance model, aimed at monitoring and managing the organization's performance on economic, social and environmental aspects as well as maintaining a constant dialogue with all stakeholder groups.

Because being a responsible corporate citizen is essential to the Company's success, FCA works with organizations and governments around the world to advance solutions related to our own performance as well as on issues linked to sustainable mobility. Participation in public policy, industry, and academic forums provides a way to contribute to the future development of regulations and standards in the automotive industry. Advocacy activities are conducted in strict and full compliance with the FCA Code of Conduct and applicable laws.

Any relationship between FCA and political parties and their representatives or candidates is conducted according to the highest standards of transparency and integrity. Political contributions by the Group are only allowed where permitted by law and must be authorized at the appropriate level within each Group company. In 2015, no contributions were made by FCA to political parties. FCA does not have a Political Action Committee (PAC), but employees are free to make personal contributions to political candidates or parties, to the extent that these contributions do not violate corporate policy. Any political association or financial contribution made by Group employees is considered personal and completely voluntary.

GRI: G4-DMA, G4-16, G4-34, G4-56, G4-SO6

Relationships and Memberships

GRI: G4-16

In Europe, the Group belongs to trade associations such as the European Automobile Manufacturers' Association (ACEA) for passenger cars and commercial vehicles.

The Alliance of Automobile Manufacturers is the leading advocacy group for the U.S. auto industry. The Alliance focuses on developing and implementing constructive solutions to public policy challenges that promote sustainable mobility and benefit society in the areas of environment, energy and motor vehicle safety. The organization provides FCA US and the auto industry with a united voice on U.S. federal and state regulatory and legislative matters.

In Brazil, the Group has long been an active member of the Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA), among others. This nationwide association unites the country's automakers with the purpose of addressing industry and market issues affecting the automotive sector as well as coordinating and protecting the collective interests of the association's members.

In some countries, dialogue occurs through the employers' associations to which the Group companies belong, such as Bundesvereinigung der Deutschen Arbeitgeberverbände (BDA) in Germany, Mouvement des Entreprises de France (MEDEF) in France, Confederación Española de Organizaciones Empresariales del Metal (CONFEMETAL) in Spain, the Polish Confederation of Private Employers - Lewiatan (PKPP Lewiatan) in Poland, Confederação Nacional da Indústria (CNI) in Brazil and Cámara Nacional de la Industria de Transformación (CANACINTRA) in Mexico.

These associations operate to protect the interests of their members and represent them within the social dialogue, at both a national and local level, with the main political and administrative institutions, the trade unions and the other social parties.

Through its 40 federations in 34 countries, Business Europe, the confederation of European businesses, represents businesses of all sizes and is a recognized partner which is qualified to take part in social dialogue within the European Union.

Corporate Governance Structure[1]

FCA's governance supports how we do business on a daily basis, enabling us to lead the way to sustainable growth and to create value by supplying innovative products and services while respecting the legitimate interests of stakeholders. FCA's governance structure consists of a management and control system and general meetings of shareholders. In addition, as required by law, the accounts are reviewed or audited by independent auditors.

The **Board of Directors** as a whole is responsible for the strategy of the Company. The Board of Directors is composed of two executive Directors (i.e., the Chairman and the Chief Executive Officer), having responsibility for the day-to-day management of the Company, and nine non-executive Directors, who do not have such day-to-day responsibility within the Company or the Group. Pursuant to Article 17 of the Articles of Association, the general authority to represent the Company shall be vested in the Board of Directors and the Chief Executive Officer.

On certain key industrial matters the Board of Directors is advised by the Group Executive Council (GEC). The GEC is an operational decision-making body of the Group, which is responsible for reviewing the operating performance of the businesses, and making decisions on certain operational matters.

Seven Directors qualified as independent (representing a majority) for purposes of NYSE rules, Rule 10A-3 of the Securities Exchange Act of 1934, as amended (the Exchange Act) and the Dutch Corporate Governance Code.

During 2015, there were six meetings of the Board of Directors. The average attendance at those meetings was 100%.

In accordance with the Dutch Code, the majority of members of the FCA Board are non-executive and independent. Independence is a crucial requirement for the proper functioning of the Board. An important means of promoting independent action of the Board is to ensure the diversity of its composition in terms of such factors as age, gender, expertise, social background or nationality (DCGC III.3.1). The presence of independent directors is essential to the protection of the interests of shareholders, particularly minority shareholders, and third parties, assuring that potential conflicts between the interests of the Company and those of the controlling shareholders are assessed impartially. The Board of Directors has also appointed Mr. Ronald L. Thompson as Senior Non-Executive Director in accordance with Section III.8.1 of the Code.

The composition of the FCA Board of Directors reflects international standards:

- there are 11 directors, ensuring the effective functioning of the Board and its Committees
- the Board is composed of three women and eight men, with women making up 27% of the total and emphasizing the benefits of gender diversity in its membership
- Board member average age is 60.

[1] *The Company addresses its overall corporate governance structure in the "Corporate Governance" section of the Annual Report, as well as in the Governance section of the Company's website where all amendments during the year are reported.*

Board of Directors' Qualification and Expertise

GRI: G4-38, G4-40

An optimal combination of skills and experience is fundamental to the proper functioning of the Board. The size, complexity and product offerings of the sectors in which FCA operates, and the geographic spread of its businesses, require that Board members have a broad and diverse mix of skills and background. International experience and an understanding of industrial and financial sectors are also reflected in the Board membership. For more details on the Board of Directors, including its composition and curriculum vitae for individual members, see the Board of Directors section of the corporate website.

Board of Directors

Evaluation of the Board of Directors' Performance

GRI: G4-40, G4-43, G4-44

Periodic evaluation of the Board of Directors and its committees is the responsibility of the Governance and Sustainability Committee. The periodic assessment was conducted for 2015 through a self-evaluation process based on dedicated questionnaires. The results of that evaluation are typically reported to the Board during its meetings. This evaluation process focuses on the most material aspects relating to the Board of Directors and its Committees, including:

(i) the structure, composition, role, functioning and responsibilities of the Board and each of its Committees

(ii) procedures for Board and Committee meetings, management of information, and decision-making processes

(iii) the effectiveness, efficiency and completeness of the information provided to the Board on the work of the Committees

(iv) the relationship between the Board and the Committees

(v) an evaluation of the performance of the Board and the Committees

(vi) the value of the self-evaluation process itself.

To improve the performance of the Board, the Chairman of the Board of Directors uses his best efforts to cause the Directors, after the election and during their mandate, to participate in initiatives aimed at providing them with knowledge of the business sector in which the issuer runs its activity; of corporate dynamics and relevant changes; of the relevant regulatory framework. Structure and content of Board meetings and participation at Committee meetings ensures that the Directors are kept informed about Company operations and market conditions. Meetings to examine specific issues are also held periodically on-site at industrial locations. The Directors also receive periodic updates on significant changes in laws and regulations.

Board Committees

GRI: G4-34, G4-37, G4-38, G4-40, G4-42, G4-43, G4-44, G4-45, G4-48

The Board of Directors is supported by three Committees, whose roles and responsibilities are regularly reviewed and updated to reflect current best practices in corporate governance:

- Governance and Sustainability Committee
- Audit Committee
- Compensation Committee

Governance and Sustainability Committee

The **Governance and Sustainability Committee** is responsible for, among other things, assisting and advising the Board of Directors with: (i) the identification of the criteria, professional and personal qualifications for candidates to serve as Directors; (ii) periodical assessment of the size and composition of the Board of Directors; (iii) periodical assessment of the performance of individual Directors and reporting on this to the Board of Directors; (iv) proposals for appointment of executive and non-executive Directors; (v) supervision of the selection criteria and appointment procedure for senior management; (vi) monitoring and evaluating reports on the Group's sustainable development policies and practices, management standards, strategy, performance and governance globally; and (vii) reviewing, assessing and making recommendations on strategic guidelines for sustainability-related issues, and reviewing the annual Sustainability Report.
The Committee is composed of three Directors, two of whom are independent.
During 2015, two meetings of the Governance and Sustainability Committee were held, with 100% attendance of Directors these meetings.

For details about the **Audit and Compensation Committees**, refer to the Governance section of the corporate website.

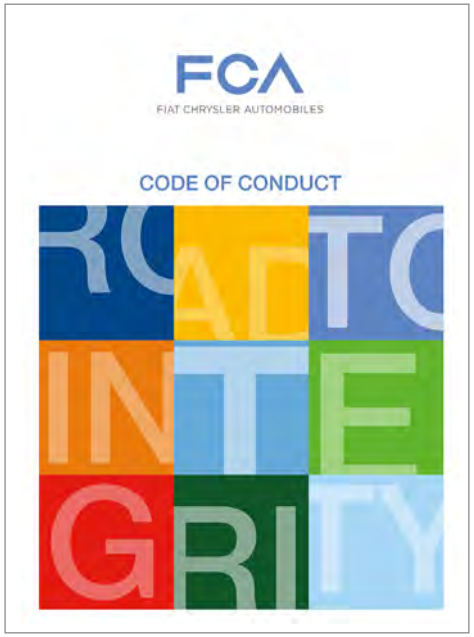
Audit and Compensation Committees

General Meetings

GRI: G4-34, G4-37, G4-40, G4-45

General meetings are the mechanism through which all shareholders are represented. At general meetings, shareholders vote on, among other proposals, approval of the annual financial statements, the appointment of members of the Board of Directors and the engagement of the independent auditors. The general meeting of shareholders has at all times power to suspend or to dismiss any director. The term of office of directors is for approximately one year after appointment, such period expiring on the day the first annual general meeting of shareholders is held in the following calendar year at the end of the relevant meeting. In addition to financial performance, sustainability results are also presented to the public during the Annual General Meeting.

Code of Conduct



A company's values serve as the foundation upon which it can build a culture dedicated to growth, innovation and responsibility.
FCA recognizes that investments in machinery and plants alone cannot account for the results a company achieves. The importance of legacy must also be considered, in particular concerning people and values.

FCA endorses the United Nations (UN) Declaration of Human Rights, the International Labor Organization (ILO) Conventions and the Organization for Economic Co-Operation and Development (OECD) Guidelines for Multinational Companies.
The **FCA Code of Conduct** is intended to be consistent with such guidelines and aims to ensure that all members of the Company's workforce act with the highest level of integrity, comply with applicable laws, and build a better future for our Company and the communities in which we do business.

The FCA Code of Conduct is comprised of three primary elements:

- Principles that capture the Company commitment to important values in business and personal conduct
- Practices that are the basic rules that must guide our daily behaviors required to achieve our overarching Principles
- Procedures that further articulate the Company's specific operational approach to achieving compliance and that may have specific application limited to certain geographical regions and/or businesses as appropriate.

FCA has Guidelines and/or Policies that will continue to apply until their replacement by a comprehensive set of Practices and Procedures.

The Code applies to all Board members and officers of Fiat Chrysler Automobiles N.V. and its subsidiaries, as well as full-time and part-time employees of FCA and any of its subsidiaries. The Code also applies to all temporary, contract and all other individuals and companies that act on behalf of FCA, wherever they are located in the world.

FCA uses its best efforts to ensure that the Code is regarded as a best practice of business conduct and observed by those third parties with whom it maintains business relationships of a lasting nature such as suppliers, dealers, advisors and agents.

The Code may be consulted and downloaded from FCA's corporate website as well as its employee portal, and is posted throughout the Company for employee access. Copies can also be obtained from Human Resources, the Legal Department or the Head of Internal Audit and Compliance.

FCA disseminates the Principles established in the Code of Conduct and the values of good governance to all employees. In 2015, more than 115,000 FCA employees worldwide received training in ethics and compliance, with particular focus on the Code of Conduct, business ethics, best practices related to anti-corruption, corporate governance and human rights (including non-discrimination) topics.

GRI: G4-DMA, G4-15, G4-56, G4-57, G4-HR1, G4-HR2, G4-SO4

Acting with Integrity

The Code of Conduct aims to ensure that all members of the FCA workforce act with the highest level of integrity. To this end, in 2015 the level of knowledge and compliance with the Code of Conduct has again been systematically measured.

Violations of the Code of Conduct are essentially identified through:

- periodic activities carried out by Internal Audit & Compliance
- reports received in accordance with the Whistleblowing Procedures
- checks forming part of the standard operating procedures.

For the Whistleblowing reporting, FCA has established dedicated channels, to provide a worldwide, common and independent intake. The new **FCA Ethics Helpline** has been implemented in 2015 as an essential element of the whistleblowing management process in accordance with the Code of Conduct Principles. It is managed by an independent provider, available 24 hours a day, seven days a week.

The entire process was organized in order to consolidate the two methodologies previously in place and to define a common and global approach.

The FCA Ethics Helpline is a comprehensive and confidential reporting tool to report concerns or seek guidance regarding the FCA Principles outlined in the Code of Conduct or other corporate policies (including alleged fraud, abuse, and other misconduct in the workplace) or applicable laws.

FCA has chosen this reporting tool to meet compliance needs, maintaining an accurate reporting environment.

In addition to the FCA Ethics Helpline, it is also possible to report potential forms of misconduct of the Principles, outlined in the Code of Conduct, by utilizing the addresses contained in the **Worldwide Ethics and Compliance Contact List**.

The FCA Ethics Helpline also allows employees, suppliers, clients and other stakeholders to request advice about the application of the Code of Conduct (for example, to verify definitions of terms or restrictions under the Code), and to report any concerns about alleged situations, events, or actions that they may believe are inconsistent with our Code. The FCA Ethics Helpline can be accessed either by phone (35 dedicated numbers in 21 languages) or by web intake (19 languages available).

In addition to the Ethics Helpline, FCA employees may also seek advice concerning the application and interpretation of the FCA Code of Conduct by contacting their immediate supervisor, Human Resources representatives, or the Legal Department.

FCA has adopted a comprehensive awareness program to communicate the new process, together with the new Code of Conduct release, which includes:

- 103,000 emails sent from FCA CEO to FCA employees
- 242 legal entities involved
- five posters in 23 languages in over 600 locations, attached to message boards and in the canteens/cafeterias
- dedicated area in the FCA employee portal, with a link available on the homepage for all the workforce
- training session together with the new Code of Conduct release
- link to the Ethics Helpline published on supplier portal.

GRI: G4-DMA, G4-57, G4-58, G4-HR3, G4-HR9, G4-HR12, G4-SO3, G4-SO4, G4-SO5, G4-SO11, G4-EN34

FCA analyzes and investigates the allegations received; the results and potential disciplinary actions arising are assessed by the relevant bodies.

For all **Code violations**, the disciplinary measures taken are commensurate with the seriousness of the case and comply with local legislation. The relevant responsible parties are notified of the violations, irrespective of whether criminal charges are brought by the authorities.

Whistleblowing Procedures as of December 31, 2015
by Code of Conduct categories

	Total closed cases	Total confirmed cases
Managing Our Assets and Information	195	53
Interacting with External Parties	163	29
Conducting Business	105	25
Protecting Our Workforce	131	31
Total	**594**	**138**

The violations of the Code of Conduct have been categorized according to the Principles of the Code. Accordingly, Managing Our Assets and Information includes communicating effectively, protecting FCA assets and maintaining appropriate records. The category Interacting with External Parties comprises avoiding conflicts of interest and supporting our communities. Conducting Business covers sustainably purchasing goods or services, transacting business legally and engaging in sustainable practices. Finally, Protecting Our Workforce includes behaviors related to maintaining a fair and secure workplace, and ensuring health and safety. See the complete Code of Conduct for further details about each category.

Compliance with business ethics standards, including those that relate to corruption, is checked through regular audits conducted by the FCA Internal Audit & Compliance department based on the annual risk assessment.

Compliance with competition laws is also crucial to the Group's reputation. To fulfill FCA's commitment to compliance in this area in all countries where we do business, FCA has adopted a comprehensive compliance program, which includes Competition Guidelines, periodic training on Foreign Corruption Practices Act (FCPA), awareness and counseling.

When dealing with our business partners, our workforce is expected to always maintain the highest degree of integrity and to act solely in the best interest of the Company. Any situation that constitutes a conflict or gives the appearance of a potential conflict must be disclosed immediately to any of the individuals or groups listed in FCA's Worldwide Ethics and Compliance Contact List.

Related content

www.ethicshelpline.fcagroup.com >

GRI: G4-DMA, G4-57, G4-58, G4-EN34, G4-HR3, G4-HR9, G4-HR12, G4-SO3, G4-SO4, G4-SO5, G4-SO11

Combating Corruption and Bribery

GRI: G4-DMA, G4-15, G4-57, G4-58

Included in the FCA Code of Conduct's Principle on "Transacting Business Legally" are, among others, rules related to anti-bribery, anti-corruption, anti-competitive behavior and conflicts of interest.

Anti-bribery and anti-corruption laws implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, the OECD Guidelines, and laws such as the United States Foreign Corrupt Practices Act, United Kingdom Bribery Act and similar laws (e.g., Brazil's Anti-Corruption Law – Lei da Empresa Limpa) prohibit providing, directly or indirectly (such as through an intermediary), anything of value not only to domestic, but also to foreign government, political or military employees or officials, foreign political party officials or candidates; employees of foreign government owned or controlled entities; or representatives of international organizations (such as the United Nations or the World Bank); or to private entities/individuals for the purpose of obtaining or retaining business or securing any improper advantage.

FCA's record keeping and internal accounting and control Practices and Procedures are designed to ensure integrity and accuracy in the recording and reporting of all business transactions.

Human Rights

In accordance with the Code of Conduct, "FCA is firmly committed to conduct all of its business activities in a socially responsible manner and in line with sustainable practices and local or regional requirements and expectations. The FCA Group's principles and practices in support of sustainability include [...], Child Labor and Forced Labor Prohibitions, [...]."

FCA does not employ any form of forced, mandatory or child labor, namely it does not employ people younger than the permissible age for working established in the legislation of the place in which the work is carried out and, in any case, younger than 15, unless an exception is expressly provided by international conventions and by local legislation. The annual analysis of the presence of child labor at FCA companies covered 96.1% of employees[2] worldwide, and showed that no incidents of child labor or forced and compulsory labor took place in any of the companies mapped, including those located in countries that have not ratified ILO Conventions on these issues.

The survey also confirmed that FCA does not employ individuals under the minimum working age set by local legislation, apprentices under the statutory minimum age, or minors under 15 years of age in countries where the minimum age is lower.

To address the potential risk of child labor, particularly in disadvantaged areas, FCA has implemented several initiatives where we have operations. In several countries, these projects consist of job training courses, and are aimed at advocating inclusion and promoting completion of schooling. For more details, see the Educating Generations section.

The Group's pledge to create a working environment that is inclusive and free from any form of discrimination is captured by the FCA Code of Conduct through which the Company endorses the United Nations Declaration on Human Rights. Security personnel employed by FCA are among the stakeholders to whom the Code applies. These principles are reinforced through training initiatives that cover human rights-related aspects relevant to the professional behavior of security personnel. These initiatives address local needs and - where appropriate - specific requirements related to local regulations. For instance in Brazil, FCA's primary market in the LATAM region, all security personnel receive training on human rights every two years.

Security guards directly employed by the Group may be provided with training or modules covering human rights aspects.[3]

Human Rights risk self-assessments form part of the standard internal audit process in the NAFTA, EMEA, LATAM and APAC regions. This assessment aims to evaluate effective application of the UN Ruggie Framework Guiding Principles on Business and Human Rights. Areas covered by these self-assessments include:

- child labor & young workers
- forced labor
- freedom from discrimination
- terms of employment
- security
- supply chain management.

Individual legal entities carried out assessments based on their human rights compliance checklist and, as part of the standard audit procedures, 42% of the checklist items were checked by Internal Audit & Compliance.

[2] *Including Sevel (Italy).*
[3] *This refers not exclusively to training initiatives rolled out in 2015.*

Compliance

A summary is provided here of the final court judgments, final arbitration awards and other final orders deemed significant because of their value and for which a final decision was issued in 2015 against companies of FCA Group (**Final Judgments**).

There were no significant Final Judgments relating to breaches of i) environmental legislation, ii) rights of local communities, iii) marketing, advertising, promotions and sponsorships, iv) privacy, v) unfair competition, intellectual property and antitrust, vi) contractual liability, vii) product and service information and labeling, viii) litigation with suppliers.

With regard to product liability proceedings, in November 2015 the Los Angeles Superior Court, California, imposed FCA US LLC to pay $1,264,698.49 under a decision referring to a lawsuit issued by plaintiffs for the injuries resulting from the design of vehicle components.

In addition, there were also certain non-final judgments or administrative orders issued against FCA Group companies that are still pending and whose final outcome remains uncertain (Non-Final Judgments).

In July 2015, Spanish Competition Authority (CNMC) adopted a judgment sanctioning FCA Spain and other automotive companies for participating in an alleged cartel consisting of three information exchange schemes (breach of article 101 of Treaty on the Functioning of the European Union). FCA Spain was imposed a fine amounting to €6,968,254 and appealed it before the Audiencia Nacional, being fully confident that this matter will be clarified in due course.

In July 2015, FCA US LLC was ordered to pay $39,600,000 under a decision of the Superior Court for Decatur County, Georgia, referring to a lawsuit issued by plaintiffs for a death resulting from design of vehicle components. In August 2015, FCA US filed an appeal before the Georgia Court of Appeals as the decision above was the result of several errors that tainted the Court's approach to the lawsuit and denied FCA a fair trial.

In November 2015, the Public Prosecutor of Minas Gerais (Brazil) ordered the suspension of Fiat Ducato 2.3 Multijet sales, taking effect from December 10, 2015 due to alleged defects observed in the engine cylinder heads of models manufactured between 2011 and 2014. On December 7, 2015, Fiat Chrysler Automoveis Brasil LTDA filed an appeal before the State Court, requesting a suspension of the decision until the final judgment (granted on December 15, 2015), being fully confident that this matter will be clarified in due course. In connection to the administrative procedure reported above, the Brazilian Justice Ministry Consumer Protection Office (SENACON) sent a notice to the Company on December 9, 2015 requesting some clarifications related to a possible recall of the models involved. FCA replied on January 14, 2016, providing some clarifications and confirming that, due to the absence of risks to safety and health of consumers, a recall action is not expected.

Lastly, final rulings delivered in 2015 related to labor and social security litigations against FCA Group companies were aligned to those from previous years and concentrated mostly in Brazil and in Mexico, mainly related to the interpretation of local regulations. None of these final judgments can be considered exceptional either in nature or in number.

GRI: G4-DMA, G4-EN29, G4-PR2, G4-PR4, G4-PR7, G4-PR9, G4-SO5, G4-SO7, G4-SO8

Risk Management

FCA employs a multi-dimensional approach for managing and mitigating risks to its business operations and assets.
The risks encompass a broad array of topics, including socio-economic uncertainty; regulatory initiatives; competitive actions; industrial accidents; natural disasters; risks posed by climate change; liability claims and lawsuits; portfolio management and investor decisions; employee health, safety, and retention issues; and similar exposures among the FCA supply chain.

The impact of these risks can be tangible – usually quantified in financial terms – or more qualitative, such as the reputational risk among consumers, business partners and investors. The overall process involves identifying the risks, preemptively reducing their likelihood of occurrence, developing plans for responding to risks should they occur, and where possible, securing insurance to cover potential losses.

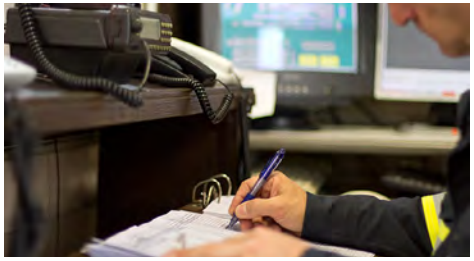
The three primary elements of the globally-integrated FCA approach are:

- the Enterprise Risk Management process, that increases visibility to key risks that may hinder FCA's ability to achieve its strategic goals. All regions collaborate to identify and prioritize risks based on impact and vulnerability, determine the acceptable risk tolerance, and monitor mitigation actions and risk metrics for key global risks throughout the year
- the Business Continuity Management process, that establishes and validates a structured approach to restoring normal business operations after a major disruption - typically those events that impair production across multiple days and/or manufacturing plants
- the Pure Risk Management process, that identifies conditions that could result in property and business interruption losses; assigns probability and estimates the impact; implements optimized prevention, protection, and risk transfer countermeasures; and monitors the process for effectiveness. These activities are not only focused on the traditional fire and natural hazard risks, but have been extended to several other pure risks through the development of innovative risk engineering solutions.

The FCA risk management entities provide a vital, real-time contribution to FCA's sustainable development and a competitive advantage in a fast-changing and challenging global business environment. The principal areas of focus include:

- refining existing tools, processes, measurements and risk models to facilitate a more complete risk-based analysis of business decisions and the evaluation of emerging risk-based opportunities
- integrating and consolidating risk management programs
- increasing risk awareness throughout the organization.

Enterprise Risk Management



FCA adopted an **Enterprise Risk Management** (ERM) model in 2004 to provide greater transparency and disclosure of business risks and comply with regulatory directives on the adoption of appropriate governance models.

This methodology defines a risk as any event that could impact the Company's ability to achieve its objectives.

The ERM model which is based on the framework established by The Committee of Sponsoring Organizations of the Treadway Commission (COSO) and adapted to the specific needs of the Group was updated in 2010 to reflect experience acquired over the years and include best practices that emerged from a comparison with other industrial groups. In particular, risk drivers were remapped into new, refined or reformulated clusters to better respond to new requirements or emphasize significant issues (climate change, macroeconomic developments, joint ventures, etc.). Over 50 risk drivers were identified, which are further broken down into approximately 85 potential events.

On the basis of a pilot project conducted in 2013, the ERM model was subsequently revised to make the analysis of potential risks dynamic (through periodic evaluation of the main risks with follow-up and monitoring of mitigating actions identified and/or implemented), predictive (through prospective risk assessment), and cross-functional (through risk assessment with direct involvement of business areas). ERM coordinators are appointed for each region and company of the Group and are responsible for preparing, coordinating and holding cross-functional meetings with the heads of key operating segments. The objectives of these meetings are to facilitate discussion, identify and evaluate potential risks, and formulate risk mitigation plans. The new model continues to be implemented globally, with expected completion during 2016.

On an annual basis, an **enterprise risk assessment** is performed based on a bottom-up approach beginning with the individual business units. Regional/company CEOs, CFOs and COOs review and approve their respective risk assessments and submit these results to the central ERM team. The central team consolidates results into a Group report for review and validation with the Group CFO and Executive Council. As part of the consolidation, global focus risks are identified and risk dashboards created to monitor key risk indicators as well as current and go-forward mitigation efforts. Once validated, the Group CFO submits the report to the Audit Committee, assisting the Board of Directors in their responsibility for strategic oversight of risk management activities.

Key global risks identified in 2015 include those related to the creation and distribution of our vehicles, climate change, regulatory actions, consumer preference for eco-sustainable products, reputational impact in communities where FCA operates and increased energy costs. As in the past, FCA has ensured continuous management of these risks using appropriate and effective actions, including: conducting research and investment toward products with reduced environmental impact; promoting the use of low emission vehicles; improving the ability of the sales force to convey the ecological benefits of FCA vehicles to customers; implementing efficiency initiatives to reduce energy consumption at plants; and using energy from renewable sources.

Starting in 2014, deforestation risk is also included in FCA's risk map as it is considered significant to the global analysis of environmental risks.

GRI: G4-DMA, G4-2, G4-14, G4-45, G4-46, G4-47, G4-49, G4-50, G4-58, G4-EC2, G4-EC7, G4-EC8

Business Continuity Management

FCA has Business Continuity Plans in place to ensure continuity of operations following a potential disruption or catastrophic event, such as a natural disaster, pandemic, or cyber-attack, including similar events within its supply chain.

The **Business Continuity Management process** is comprised of four major elements:

- conducting an enterprise risk assessment, during which facilities and functions are analyzed in terms of their relative vulnerability and potential impact of disruptions. Reputational, operational and financial risks are taken into account, and a heat map is developed to enable prioritization for the business continuity plan
- undertaking a **Business Impact Analysis** (BIA) for each facility or function, beginning with the higher-risk entities. In a BIA, all major buildings, equipment, processes, human resources, suppliers and IT systems are identified, rated based on their criticality in achieving operational objectives, and an estimated time to recover is determined
- developing a **Business Continuity Plan** (BCP), which specifies the procedures for business recovery
- testing the BCP, generally through a simulation exercise.

Additional information on the management of financial risks is provided in FCA's 2015 Annual Report monitored by entities with the appropriate technical expertise.

By the end of 2015, Business Continuity Plans had been developed for 13 higher-risk plants in the United States, Canada and Mexico and for five supporting corporate functions that most directly impact operations. FCA also initiated and developed a customized relational database to improve the efficiency and accuracy whereby business continuity data, plans, and risk mitigation actions are created, tracked, and shared across the enterprise.

The results and priorities of the Business Continuity Management process are reviewed regularly by a steering committee comprised of members of FCA US senior management.

In a similar way, **FCA Services Business Continuity Plan** follows the best practices and requirements of International Standards (**FCA Services is ISO 27001:2013 certified**) and focuses on the safety of employees and on continuity of services.

The continuity of the Business is ensured through a continuous improvement cycle that includes:

- Policies and Procedures followed by all FCA Services countries
- Enterprise Risk Assessment and Business Impact Analysis: to identify financial, reputational, operational risks and key resources needed
- Business Continuity Plan with all steps and actions to be taken in case of a disruption event
- disruption scenarios to be prepared against several different adverse situations
- continuous control and monitoring of events that can impact the business
- testing, from simulation exercises to full testing, to ensure the validity of the plan and involve and train our employees.

All Business Continuity activities are reviewed every year by a Steering Committee as well as by internal and independent external auditors to assure the correctness and continuous improvement of the FCA Services Business Continuity Plan.

Management of Pure Risk

Pure risks are risks resulting from natural causes or accidental or malicious acts (fire, explosion, floods, etc.) that may result not only in damage to goods or facilities, but also lead to a short- or long-term disruption in operations. FCA takes active measures to prevent risks that could result in damage to the Company's physical assets or disruption in operations.

The four pillars of the Group's Pure Risk Management are:

- preventing accidents or mitigating their effects
- adopting higher international standards for risk prevention
- minimizing the cost of risk by optimizing loss prevention, investment, self-insurance and risk transfer programs
- centralizing and consolidating the relationships with global insurance markets.

The **FCA Pure Risk Management** entities cover all aspects of pure risk, including identification, analysis, treatment, and loss prevention. Specific activities include monitoring and insuring against pure risks - such as fire, explosions, and natural disasters - and playing a central role in managing events that could potentially impact the continuity of operations or integrity of physical assets at the Group's 1,174 sites worldwide.[4]

The entire Pure Risk Management process is conducted with the support of consulting firms specialized in industrial risk that, through field audits, help guarantee an impartial, in-depth and continuous assessment of risk across the Group.

During 2015, FCA's risk management entities were responsible for managing 224 sites worldwide, representing 89% of total insured value.

To ensure that industrial risk is adequately and efficiently monitored, 100% of sites are surveyed at least once every three years and more than 50% are surveyed annually. In 2015, a total of 100 sites (representing approximately 77% of FCA's industrial activities) and 450 new projects were inspected or monitored to ensure conformity with international standards in loss prevention. Among the new projects inspected by the loss prevention team was the Goiana plant in Brazil and its supplier park. This large industrial complex took two-and-a-half years to build and is the most advanced FCA plant in the world to date. From the initial stages of the plant and supplier park (hosting 16 proximity suppliers), a dedicated team was formed to ensure the full alignment to both Brazilian and internationally recognized loss prevention standards.

During project development, €18 million was invested in fire protection equipment, more than 1,500 loss prevention engineering hours were dedicated to manage 120 fire protection projects, and 15 special surveys were conducted to verify the correct installation and validate the protection systems.

In addition, FCA invested approximately €30 million in loss prevention and risk mitigation measures during the year.[5] Of that total, €28 million were related to improvements needed to align certain sites with FCA's loss prevention standards, and the other €2 million were related to major expansions and greenfield investments.

The €28 million in targeted investments reduced loss expectancies by approximately €2.7 billion and resulted in a Global Efficiency Index (GEI) of 1,[6] which is in line with the highest international standards.

The Group's risk management entities apply forward-looking, risk engineering approaches and solutions. This includes specific projects that highlight the contribution of risk management in addressing climate change issues.

Current projects include:

- FCA approach to insurable environmental risks
- earthquake risk re-engineering project
- flood risk re-engineering project.

[4] Number of insured sites covered by the insurance programs in 2016.
[5] Figures relate to the insurance year from July 1, 2014 to June 30, 2015.
[6] Global Efficiency Index for loss mitigation (GEI = cost of protection/reduction of expected damage) is recognized as a measure of best practice for industrial risk management.

GRI: G4-DMA, G4-2, G4-14, G4-45, G4-46, G4-47, G4-EC2, G4-EC7, G4-EC8

Insurable Environmental Risks

GRI: G4-DMA, G4-EC2

FCA has developed an innovative risk management methodology in collaboration with Environment, Health and Safety (EHS) departments across the Group, a major international consultancy and certification firm, and an insurance partner. This methodology enables FCA to:

- obtain an objective and quantified assessment of its insurable environmental exposures
- improve risk profiles based on the EHS strategies for each business unit
- understand and clearly communicate priorities and benefits
- inform the insurance market of activities to prevent and mitigate potential environmental losses
- obtain environmental insurance coverage appropriate to the level of risk exposure and potential loss
- execute prevention activities in line with Group strategies.

Forty-eight percent of FCA's total insured value was analyzed and quantified using this methodology.

To validate information collected through self-assessments, 22 on-site visits have been conducted (seven visits in 2015) at sites considered representative of the Group in terms of size, activity and geographical distribution. The surveys, organized by the EHS department for each operating company, are conducted by environmental risk engineers from a leading global environmental risk insurer to validate the consistency of the self-assessment check lists and identify possible improvement opportunities.

These activities provided the basis for development of the Group's first environmental maps. These maps provide a quantification of the overall level of risk using a scientifically-based certified self-assessment tool. The results were presented to the insurance market and confirmed that **FCA's environmental risks** have been adequately identified and quantified and are properly managed. These results also enabled the Group to put comprehensive global insurance coverage in place.

This program has become a consolidated pillar within the loss prevention activities of FCA. In 2015, results of the program included the following:

- the self-assessment check list tool was reviewed and upgraded using the experiences gained over the past five years of audits
- the in-scope geographical perimeter will be enlarged to the geographical areas jet not completely monitored
- a general review of the complete FCA portfolio will be launched, using the updated self-assessment checklist.

Earthquake Risk Project

GRI: G4-DMA, G4-EC2

Recent seismic events affecting industrialized countries (e.g., Japan, 2011; Emilia, 2012) demonstrate that the implementation of a structured Risk Engineering program, based on a sound risk estimation, is vital to control exposure of a large industrial company to potential property damage and business interruption. More specifically, a modern risk management decision-making process requires quantitative estimates of expected losses due to seismic events.

A working group composed of FCA Risk Management, AXA MATRIX Risk Consultants, and the University of Naples Federico II developed the "Integrated Approach to Seismic Risk Assessment and Management," a multilevel framework allowing simultaneous advanced **seismic risk assessment** and rational allocation of available resources. Instead of the traditional approaches to seismic risk, which rely heavily on qualitative (macro seismic) estimates of the damage from past earthquakes or which consider only the seismic hazard (i.e., the frequency and intensity of earthquakes) of the site, the developed methodology encompasses the individual quantification of the three basic components of the seismic risk: the seismic hazard of the site, the building structural response, and values at risk.

In 2015, the project reached the application stage using an integrated approach for selected FCA plants worldwide.

In addition, standardized output forms were defined, allowing the collection and reporting of results in a concise and easy-to-communicate way.

Flood Risk Project

GRI: G4-DMA, G4-EC2

Ten years after the launch of the first flood risk re-engineering project, FCA Risk Management formed a new working team to verify whether the FCA methodologies to identify and quantify flood exposures are still the most advanced available. The team consists of specialists from the loss prevention engineering departments of four recognized global leaders in the fields of insurance and reinsurance.

The reinsurance companies, due to their natural hazard research centers, provide their mapping tools based on geomorphological satellite imagery and mathematical modeling. These tools are used to carry out the first macro analysis of the risk portfolio.

The engineering departments of the insurance companies, specializing in field assessments, can provide their risk analysis based on visual and instrumental interpretation techniques along with field checks. With this project we defined an agreed state-of-the-art methodology for industrial **flood risk assessment**.

In 2015, the operative procedures and tools to be used before, during, and after the loss prevention survey by the field engineer were developed.

The new methodology has been tested with the FCA EMEA portfolio (106 sites), identifying the sites where a second flood risk study was recommended. All these sites have been included in the 2016 and 2017 loss prevention visit schedule. The flood team also completed three ad hoc flood surveys to test the correctness and efficiency of the new process.

Supply Chain Risks

Supply chain risk management, with an internal and external focus, is becoming a more standard management priority. It is well-established that a company proactively handling its risk should not only focus on its own risk but also on risk in its supply chain. Through a series of steps, FCA Purchasing, Risk Management and the Sustainability teams work together to define methods for the detection and mitigation of supplier risks.

The first step of this mapping process begins with a simplified, semi-quantitative approach, using information already available, to prioritize suppliers. This helps to focus engineering resources on the most crucial suppliers relative to potential impact or loss likelihood on FCA supply chains. In addition, a list of "critical" suppliers is also created, taking advantage of the information the field engineer collects during the plant survey conducted with the senior plant management.

A second step entails a methodology and supporting tool that allows FCA to assign a **risk management maturity index** to the supplier risk management processes, assuming that a supplier that has mature risk management practices will be able to manage its risks and minimize the probability of an extended production stoppage in one of its key manufacturing plants. Selected suppliers are approached with the aim of working together on the development and testing of a risk management evaluation tool.

The team's next step is to conduct focused loss prevention audits with targeted suppliers to identify and quantify risks that could impact the supply of components to FCA and develop adequate action plans to mitigate the risks.

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Stakeholder Engagement

Commitment to Stakeholders

Operating responsibly requires continuous engagement with stakeholders at the local and global levels.

As a global enterprise with a complex, intricately connected value chain, FCA's success depends on the effectiveness with which we listen to and respond to the needs and expectations of stakeholders who, directly or indirectly, affect the activities of the Group or are impacted by them.

These stakeholders include employees, customers, suppliers, dealers, institutions, trade unions and associations, investors, and local communities and their surrounding area. Our sustainability-focused stakeholder initiatives help us to better identify risks and opportunities, and adapt our strategic objectives to social, technological and regulatory changes around the globe. We communicate with stakeholders worldwide through many channels, including the dedicated global email address: stakeholder.dialogue@fcagroup.com. Our stakeholder engagement and development of **materiality** is conducted in accordance with the principles of the Global Reporting Initiative (GRI-G4), the AA1000 Principles Standard, the AA1000 Materiality Report guidelines, the AA1000 Stakeholder Engagement Standard and the <IR> Materiality Background Paper. FCA has adopted Stakeholder Engagement Guidelines which state that it "firmly believes that this engagement process, backed by a clear commitment, is a key element for maximizing the opportunities and managing the potential risks affecting our business which could arise from the interaction with the various categories of stakeholders."

The Guidelines continue with this statement, "Also, the Group ensures steady information flow through a transparent, direct and systematic communication with the global investment community aimed at increasing the markets' appreciation of the company's business strengths, strategy, competitive situation and investment attractiveness, complying with the most stringent regulations in the relevant financial markets."

Starting in 2012, the Group launched targeted stakeholder engagement activities focused on sustainability topics, fostering dialogue by developing a variety of events and increasing the number and categories of stakeholders engaged each year.

Stakeholder Engagement Guidelines

Map of Relevant Topics for Stakeholders

Major common topics raised during regional discussions

- Development of innovative sustainable mobility solutions and alternative fuels
- Road safety and related social impact
- Sharing sustainable practices along the supply chain
- Optimizing fuel consumption and reducing vehicle CO_2 emissions
- Spreading a culture of sustainability in society

2012

70 Total stakeholders involved

EMEA and NAFTA

70 Internal stakeholders

Survey

First survey launched: employees from various functions and geographic areas involved

2013

72 Total stakeholders involved

EMEA

23 External stakeholders

First FCA Sustainability-focused event

MAIN TOPICS RAISED

- Promotion of a culture of sustainability through partnerships with the world of education and other players
- Encouraging new models of mobility

LATAM

25 External stakeholders

Sustainability-focused event

MAIN TOPICS RAISED

- Responsible managment of end-of-life products
- Improvement of quality and accessibility of services through participation in the development of public policies

NAFTA

24 External stakeholders

Survey and open discussion

Sustainability-focused event

MAIN TOPICS RAISED

- Promotion of new mobility models

Map of Relevant Topics for Stakeholders

Major common topics raised during regional discussions

- Development of new sustainable mobility solutions
- Introduction of mobile connectivity and new technologies in vehicles
- Involvement of suppliers in sustainability aspects

2014

381
Total stakeholders involved

EMEA

221 Internal stakeholders

Survey and open discussion

Seven Sustainability-focused events

MAIN TOPICS RAISED

- Institutions engagement for the promotion of a culture of sustainability
- Promotion of responsible use of energy
- Responsible use of recycling and recycled materials

NAFTA

126 Internal stakeholders

Survey and open discussion

Six Sustainability-focused events

MAIN TOPICS RAISED

- Promotion of new mobility solutions
- Focus on vehicle connectivity and vehicle sharing
- Management of traffic reduction in congested urban areas

APAC

34 Internal stakeholders

Survey and open discussion

Sustainability-focused event

MAIN TOPICS RAISED

- Promotion of a culture of sustainability
- Promotion of flexible working hours and improvement of work-life balance
- Reduction of resource consumption during vehicle production

Map of Relevant Topics for Stakeholders

Major common topics raised during regional discussions

- Focus on safety
- Improvement of vehicle fuel economy

2015

4,623
Total stakeholders involved

EMEA

Open discussion

External stakeholders

FCA Global Sustainable Mobility Partner for Expo Milano 2015. Six Sustainability-focused events

MAIN TOPICS RAISED

- Environmental performances
  Promotion of natural resources protection and biodiversity
- Innovation and 3D printing
- Promotion training and educational initiatives
- Improvement of innovative and ecological material

WORLDWIDE

Survey

Internal and external stakeholders

Stakeholders engaged for an online survey

EMEA and NAFTA

Open discussion

External stakeholders

Universities and High School presentations

MAIN TOPICS RAISED

- Promotion of a culture of sustainability
- Engagement of local communities
- Reduction of resource consumption during production processes
- Sustainability engagement in the supply chain

APAC

Open discussion

External stakeholders

Sustainability-focused event

MAIN TOPICS RAISED

- Engage with business partners, guiding them to reach higher quality standards
- Cooperation with the Government to set higher standards on quality improvements and emissions reduction

LATAM

Open discussion

Internal stakeholders

Sustainability-focused event

MAIN TOPICS RAISED

- Promotion of responsible use of water
- Involvement of suppliers in sustainability aspects

In 2015, FCA engaged more than 4,600 **internal** and **external stakeholders worldwide** through an online survey about sustainability topics. **Engagement events**, **workshops** with subject matter experts and **online surveys** helped continue the dialogue on sustainability topics, **understand region-specific differences** and **gain new insights**. FCA's sponsorship as an official mobility partner at Expo Milano 2015 presented a unique opportunity to share our sustainability approach and commitments with an international audience. Six events were organized in collaboration with various organizations across the Group, focusing on the environment and natural resources, innovation and education topics.

Stakeholder events conducted in previous years had raised the issue of helping to educate youth about sustainability. To this end, in 2015, FCA collaborated with **universities** and **high schools** in Italy on several occasions to bring sustainability into the classroom.

FCA at Expo Milano 2015

In the LATAM region, sustainability-focused stakeholder events were held in Pernambuco and Betim where the Company has assembly plants. Water conservation was the major topic raised during discussions with the 170 employees who participated, due to the scarcity of this natural resource in that area.

In 2015, FCA's APAC region conducted its first multi-stakeholder Sustainability Engagement dedicated to external stakeholders. The event involved 14 participants from three stakeholder categories: suppliers, dealers and university representatives. The discussions were primarily focused on the importance of vehicle quality, and engaging business partners to reach higher quality standards.

The FCA supply base was the focus of sustainability engagement in the NAFTA region. In 2015, the FCA Innovation Team facilitated a day-long workshop with the FCA Supplier Sustainability Panel to develop concrete deliverables with tangible impact.

Also in the U.S., representatives from the FCA sustainability team served as instructors for two live case courses at the University of Michigan Ross School of Business. Students were tasked with analyzing a supply chain sustainability-related business challenge and offering creative solutions.

Related content

Ongoing Dialogue with Suppliers >

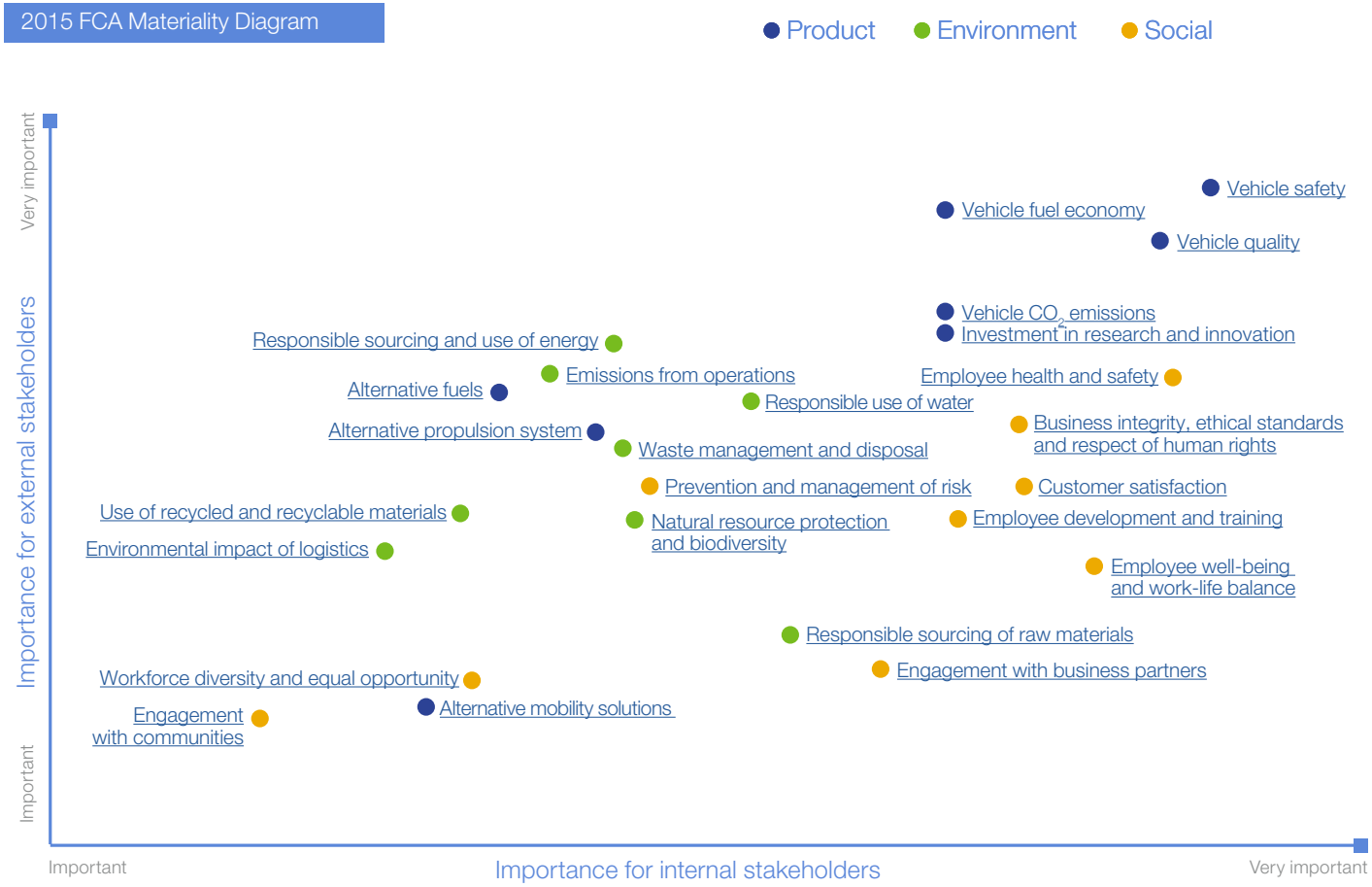
Materiality

FCA's sustainability reporting focuses on those topics that have been determined to be material.

In 2015, material topics identified in prior years were subjected to a thorough review and the **FCA Materiality Diagram** was updated accordingly. In addition to the results from our stakeholder engagement activities, the determination of materiality also took into account strategic priorities, corporate values, competitive activities and social expectations.

An analysis of the scope of each material aspect confirmed that each has impacts throughout the entire organization and across all operating segments and regions. In addition, each aspect has impacts outside the organization in geographical areas where the Group operates and for all stakeholder categories identified.
The scope of this Sustainability Report covers all companies consolidated by FCA N.V. at December 31, 2015.

2015 FCA Materiality Diagram



GRI: G4-18, G4-19, G4-20, G4-21, G4-27

Employees

Attitude to Excellence

Engaged and accountable employees are at the heart of the Group's ability to build a sustainable enterprise that creates value for our many stakeholders inside and outside of our offices and factories. In order to attract, develop and retain a committed workforce, FCA strives to create an environment that is attractive to those who seek to contribute their talents and aspirations to shaping the future of both the Group and larger society.

Employees at all levels are expected to bring their knowledge, creativity and experience to their areas of work in order to solve problems and identify opportunities.

FCA business leaders are called to act as catalysts for change so that the Group can adapt, react quickly to the market and outpace the competition. Leaders are also counted on to help nurture the potential of those they lead, while helping ensure observance of business ethics and behavioral expectations set forth by the FCA Code of Conduct. Consistent with these goals, the Human Resources function supports robust processes designed to both secure the talent required by the business and also provide employees opportunities during the entire career life cycle from recruiting to retirement.

Recruiting and hiring processes are supported worldwide by modern tools aimed at finding the best talent - both internally and externally. Through the use of internal and external job posting systems, career websites, recruiting platforms, and, in certain situations, specialized service providers, employees and potential candidates can access opportunities for advancement.

The Group's annual evaluation process for assessing employee leadership and performance is vital to the development of our workforce worldwide.

Compensation and benefits are provided by the Company as part of the total reward system and, in concert with other elements, make FCA attractive to employees.

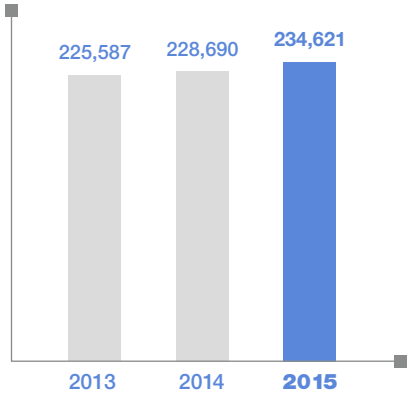
To maintain its appeal as an employer throughout the final stages of an employee's career, FCA supports the transition from employment to retirement. For example, detailed pension estimator tools, savings plan reinvestment initiatives and retirement seminars, webinars and retirement counseling are made available in certain countries.

GRI: G4-DMA, G4-LA10

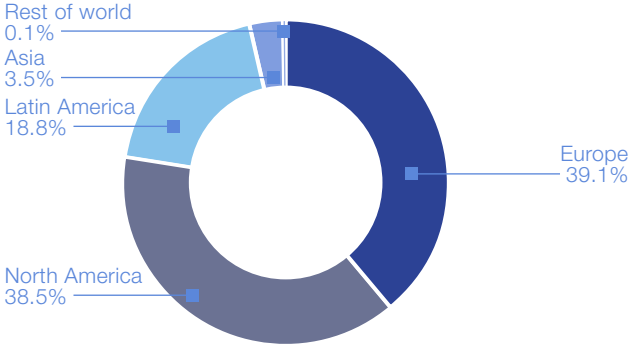
Employees in Numbers[1]

FCA activities are carried out through seven segments[2] with each one reporting revenues and earnings. The steady growth in FCA's production and sales volumes has generated increased employment and economic opportunities in the countries in which the Group operates. As of December 31, 2015, the Group employed 234,621 people, a 2.6% increase over year-end 2014.

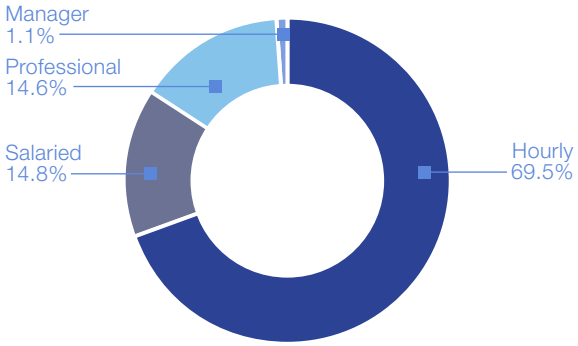
Employee Trend by Year
FCA worldwide (no.)



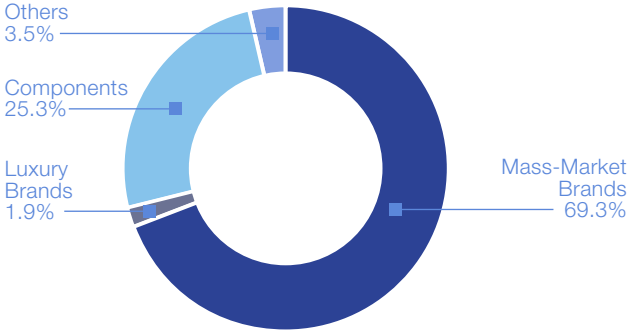
Employees by Geographic Area
FCA worldwide



Employees by Category
FCA worldwide



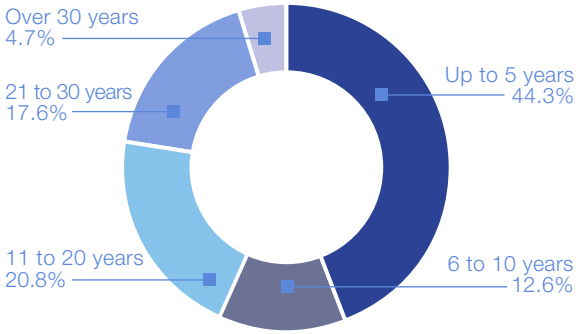
Employees by Operating Segment
FCA worldwide



[1] *Unless otherwise specified, workforce data is calculated at year-end.*
[2] *Four regional mass-market vehicle segments (NAFTA, LATAM, APAC and EMEA), two global luxury brand segments (Ferrari and Maserati) and a global components segment (Magneti Marelli, Comau and Teksid).*

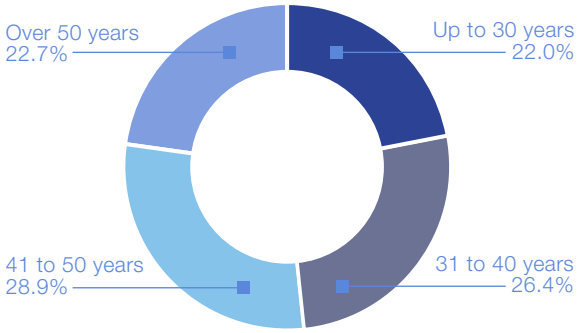
Worldwide, the highest concentration of Group employees remained in the 41-50 age group and approximately 44% of the workforce has been employed for five years or less.
With respect to education level, there was a continuous increase of both men and women having higher levels of education, with 24.7% of employees holding a university degree or equivalent qualification. During 2015, efforts continued toward improving educational reporting for all employees; as a result the percentage of untracked employees decreased to 6.2% compared with 21.3% in 2014.

Employees by Length of Service
FCA worldwide

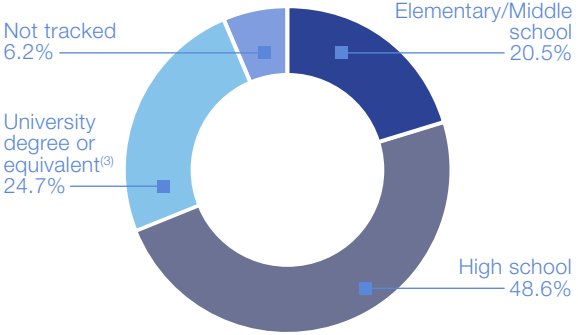


In 2015, about 95% of Group employees were covered by an unlimited-term employment contract and about 98% were employed full-time. Fixed-term contracts were kept to a minimum.
In 2015, about 4,200 temporary contracts were converted into unlimited-term contracts (of which approximately 35% were female employees). A total of 2% of the Group workforce is employed part-time, of which about 57% are women.

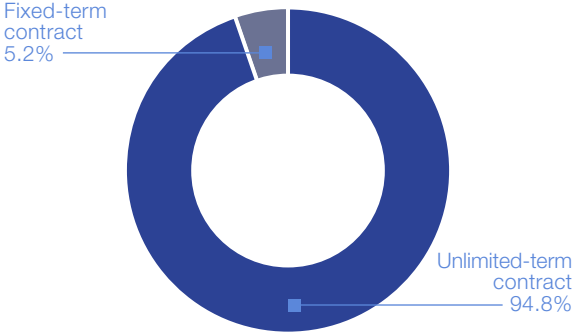
Employees by Age
FCA worldwide



Employees by Level of Education
FCA worldwide



Employees by Contract Type
FCA worldwide



(3) Calculation subject to approximation resulting from the comparison of academic qualifications among different countries.

GRI: G4-DMA, G4-9, G4-10, G4-LA1, G4-LA12, G4-SO1

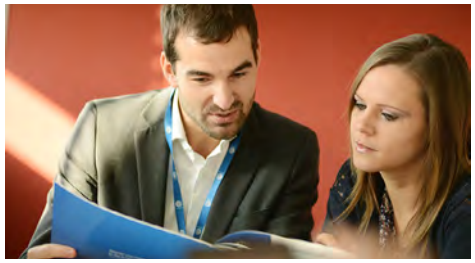
Management and Development

FCA recognizes that its success depends on people at every level embracing shared core values.

The Group's approach to leadership and development is embodied in the commitment to five **key principles**:

- merit must always be recognized and employed
- leadership is a worthy calling which enhances people's lives
- taking on the competition is the stimulus for aiming ever higher
- best-in-class performance is the goal we want to achieve
- keeping our promises is what makes us credible and reliable.

These principles are the basis for every decision including the appointment of leaders.



Performance and Leadership Management (PLM) is the appraisal system adopted worldwide to assess FCA employees (manager, professional and salaried).Through PLM, specific targets are established to guide and assess employees in relation to their results, attitudes and behaviors.

In 2015, the PLM process went through a global refresh to focus on the key elements of the Company leadership model. This unique skills mapping and evaluation process, which is the basis for variable compensation,[4] is supported by information systems that enable managers to constantly access up-to-date data on the people within their organizational unit. The PLM process serves not only as the basis for all personnel-related management decisions, but is also a fundamental element in talent management, succession planning and the orientation of our culture around sustainability principles. Sustainability targets are part of the performance management review of individuals with responsibility for related projects, including top management members and second-level reports to heads of operating sectors and certain central functions.

Complete performance and leadership mapping processes were conducted during 2015 for approximately 62,400 FCA employees, including all managers and professionals and the vast majority of salaried employees.

100% of hourly workers complete a pre-employment screening and an initial probationary evaluation through the WCM performance management system.

The importance of the evaluation process to the Company's success is also evidenced by the dedication of top management. Each year, the FCA Chief Executive Officer, Chief Human Resources Officer, Regional Chief Operating Officers and supporting business heads devote three days to analyzing and validating the results of the PLM process, with particular emphasis on senior managers. Decisions regarding career development for individuals are also discussed and confirmed, resulting in organizational changes, cross-region and cross-company transfers, and several key positions being filled largely by internal candidates.

[4] The PLM process is the basis for the individual contribution element for manager and professional employees' variable compensation.

The PLM Assessment Cycle

GRI: G4-DMA

At the beginning of each year, managers and employees discuss and agree upon individual targets for the year, both in terms of individual performance and their development plans. Throughout the year, managers and employees are encouraged to discuss ongoing performance and feedback on demonstrated behaviors. Then, at year-end, individuals are evaluated on performance (i.e., achievement of business targets) and leadership (i.e., the ability to lead change, work as part of a team and manage people). The final results are discussed in a meeting between the manager and the employee, during which an open dialogue on areas identified for improvement contributes toward validating the employee's performance and strengthening the bond with the organization. Upon completion of this process, employees can access their evaluation form online, add details on their professional aspirations and request specific actions to address identified areas of improvement through a variety of resources (e.g., coaching, exposure to senior management).

Talent Management and Succession Planning

The Group addresses the challenges of the industry with increasing flexibility and firmly believes that success can be achieved by engaging empowered individuals in the organization and appointing the people with the right skills to **key positions**. Talent management paves the way toward these objectives by identifying the most talented employees and closely managing their development.

Highly talented individuals are identified and offered professional opportunities that allow them to gain experience in other geographic or business areas and greater exposure to senior management. The succession planning process focuses on ensuring that all key leaders develop both a short- and long-term **succession plan**. Through this process, attention is directed toward less experienced individuals who are not yet widely known within the organization, but who warrant investment as potential leaders for the future. On average, half of posted positions are filled with internal candidates. Key individuals, selected on the basis of their professional profile (in terms of performance and leadership) and potential for growth in positions of increased responsibility, are evaluated through a process that directly involves management, ranging from their immediate supervisor to senior management representatives.

Learning Management

Operating in a competitive environment of constant change, the Group's workforce at all levels needs to be open to constant learning. For this reason, **learning agility**, leadership capacity and awareness of the workforce, are provided through job rotations, coaching, mentoring and training. Training activities are monitored and measured on an ongoing basis in order to evaluate both effectiveness and efficiency.

The Group invested about €61 million in training during 2015. FCA is committed to measuring the business impact of its training. An example is the Cost Deployment of Training model adopted in 2012 within the World Class Manufacturing program. WCM applies this model to a portion of the total training costs. By monitoring the on-the-job training and the associated generation of process improvements, FCA identified savings of about €3.7 million enabled by a training cost of about €1.3 million in 2015.

During the year, a total of 2.8 million hours of training were provided to approximately 159,500 Group employees.

Investments in classroom, online and on-the-job training focused primarily on the Group's four core training concepts: development of job-specific know-how (75%), managerial skills (8%), cross-cultural awareness and language skills (10%) and corporate campaigns, rules and commitments (7%).

The Company regards diversity, including regional differences and cultural aspects, as a strength because it brings viewpoints that reflect the markets in which the Group operates. FCA emphasizes collaboration across different organizations and regions, employing such approaches as business-driven workshops.
These global or region-wide initiatives are aimed at improving team-building, cross-cultural awareness and adoption of common approaches to business goals and challenges. In addition, cross-cultural training (languages, cultural and practical tips) are provided to expatriates and their families.

Dialogue with Employees

FCA seeks to foster a Company culture where **new ideas** are encouraged and valued at every level. This atmosphere of openness provides the basis for a constant flow of suggestions and feedback to improve processes and products on a continual basis. Formal opportunities for exchange and dialogue include organization town halls, employee meetings, team building events and department gatherings.

This openness also reflects FCA's commitment to employee satisfaction, the quality of the working experience within the Company and expectations for the future. To assess these attitudes, surveys are conducted worldwide according to local requirements and constraints. Outcomes of surveys are used to plan and address specific actions aimed at maximizing overall employee satisfaction.

During 2015, various initiatives were completed to explore **employee satisfaction** and well-being at selected locations. In total, satisfaction surveys were conducted with more than 46,000 employees. Below is a summary of the most significant initiatives in 2015:

Information derived from these initiatives is under evaluation for development of appropriate actions.

The Company expects all of its employees to embrace the need for constant change. To foster a bottom-up innovation process, several tools and programs are in place worldwide to collect suggestions from employees.

Relevant examples are:

- The World Class Manufacturing (WCM) program offers the largest worldwide example of employee engagement: in 2015 more than 2.2 million WCM suggestions were collected to foster shared learning and best-in-class performance.
- In the LATAM region, BIS, Haz Máz and MAIS programs generated about 66,000 suggestions.
- The STEP-UP! program implemented by FCA Services in Brazil received more than 1,600 suggestions.
- The iPropose program in the EMEA region facilitated the collection of around 3,800 improvement proposals.

Magneti Marelli continued its employee satisfaction monitoring activity, involving more than 34,500 employees worldwide.

Comau performed an engagement survey involving more than 1,260 employees in the U.S., China, India and Mexico.

About 50 young professionals were selected within Maserati and Alfa Romeo to participate in a survey focusing on engagement and retention.

EMEA

A compensation and benefit online survey reaching more than 5,200 employees was performed and an additional 1,000 employees were involved in a people satisfaction survey across Italy and Poland.

NAFTA

More than 1,400 employees were surveyed through department surveys.

LATAM

More than 160 selected hourly and salaried employees took part in a people satisfaction survey.

APAC

The region involved almost 2,000 employees in engagement surveys across China, Korea, Japan, Australia, Singapore and India.

Compensation and Reward

In its commitment to ensure an inclusive work environment and equal opportunities for all employees, the Group adopts a progressive total compensation system based on equitable and fair criteria.

At the heart of the Company's compensation philosophy lies the concept of **meritocracy**, which embraces the value of a high performance culture and the importance of a market-driven approach.

To support these elements of meritocracy, the Company has defined a compensation system that comprises a number of different components. This comprehensive package rewards employees for their contribution to the Company's results, provides development opportunities and allows them to share in the business success they help create.

Base salary, benefits and long-term incentives are determined by market-driven benchmarks, thereby ensuring fair and objective treatment for employees in the different markets around the world. The specific criteria for adjustments focus on closing competitive gaps with respect to market position, giving priority to top performers. Variable compensation and career development are impacted by individual contribution, which is vigorously evaluated through a performance and leadership management program that is consistently deployed throughout the entire organization.

The same metrics and methodology are applied in this assessment of annual performance to all eligible employees worldwide. Additionally, the Group employs a formal process to monitor application of its core equity and fairness principle to compensation levels, annual salary reviews and promotions. In particular, these reviews are based on standard criteria, and do not allow manager discretion of those receiving compensation actions.

Combined, all of these actions are designed to ensure the Company's total compensation system, in line with all other internal processes related to people management, promotes equal opportunity.

Benefits

GRI: G4-DMA, G4-EC3, G4-LA2

The Group's compensation and benefits packages are aligned with international best practices and are pursuant to fair and attractive economic rewards for employees. FCA offers a broad range of benefits depending on an individual's grade level, country of employment and local policies. In October 2015, FCA conducted its annual analysis of various company compensation and benefits (on a sample of about 99% of the workforce).

Findings show that more than 66% of employees are eligible for a pension plan and, during 2015, around 71% of these employees joined this type of plan. This last figure represents 47% of the total population mapped.

Supplementary pension plans provided by the Group fall into two categories:

- defined contribution pension plans, for which contributions (by employees, the company or both) are defined at the outset, and benefits depend on the total sums allocated to the fund supporting the plan and the financial returns of the fund itself
- defined benefit pension plans, in which the future benefits paid out to employees are defined at the outset, and contributions may vary over time to guarantee payment of the pre-defined benefits.

Most existing pension plans at Group companies are defined contribution plans.

Company-provided health plans are also available to FCA employees, and about 62% of the surveyed population was found to have joined a health plan. Childcare services are also offered at some locations to help employees achieve work-life effectiveness by responding to the needs of the family.

The Group also promotes a healthy lifestyle in certain areas through comprehensive wellness programs and access to dedicated fitness facilities.

Principal Employee Benefits

FCA worldwide (% of employees entitled to benefit)

Pension plans	66
Company-provided health plans	78
Life insurance	64
Financial support for disability/invalidity	65
Employee cafeteria or lunch vouchers	62
Childcare services[5]	31
Wellness and nutrition programs[6]	64
Gym/fitness services[7]	39
Others[8]	31

[5] Includes kindergarten, free gymnasium access for children, assistance with homework, summer camps/holidays, and other services dedicated to childcare.
[6] Includes nutrition coaching, smoking cessation training, medical check-ups, medical screening, and other wellness programs.
[7] Includes free gymnasium access, gym/fitness courses and other sports initiatives.
[8] Includes benefits such as company cars, housing, interest free loans.

Turnover

Every Group region places a strong emphasis on employee cohesion, engagement and inclusion. In 2015, a total of 33,984 people were hired, 50.5% of whom were in North America, which continued to be the area particularly benefiting from increased production volumes. Employees who left FCA totaled 28,493. During 2015, the EMEA region experienced a recovery of the automotive industry ahead of expectations. Among FCA brands, Jeep recorded a strong performance with the launch of new models that have been welcomed by the regional markets.

These factors positively influenced the FCA turnover rate in EMEA, which improved slightly to 2.6% (2.7% in 2014). Focusing on the Italian market, which represents about 76% of the working population of the region, the turnover rate was 1.5%, well below the Italian market median of 2%.

Turnover in the NAFTA region increased in 2015 versus 2014 due to a number of contributing factors, including a very strong economy that led to a general decrease in unemployment and corresponding increased demand for talented professionals, especially those with engineering skills critical for the automotive sector.

FCA recorded 2015 turnover rates slightly above the market median both in China and India, which represent our two largest employee populations in the APAC region. Despite the economic slowdown in both markets, the competition for talent remains strong. The expansion of local production, including that for Jeep vehicles, provides an opportunity for FCA to attract and retain talent in both markets.

In 2015, the LATAM region experienced an unexpected industry decline with uncertain duration, the intensification of competitive pressures from non-major OEMs and currency devaluation. Those three factors impacted the market and affected turnover performance. Despite the tough market conditions, the FCA turnover rate in the region decreased to 1.5% compared with the 2.4% of 2014.

Employee Turnover

FCA worldwide (no.)

Employees at December 31, 2014	228,690
New Hires	33,984
Departures	(28,493)
Δ scope of operations	440
Employees at December 31, 2015	**234,621**

Related content

Management of Production Levels >

Work-Life Balance

FCA recognizes the importance of supporting employees in balancing their personal and professional lives. The Group helps its employees manage this balance in line with local requirements and constraints.

Arrangements and initiatives to improve work-life balance include flextime (starting/quitting times), job-sharing, part-time or reduced hours, telecommuting, compressed workweek/summer hours, parental leave and other leaves.

Depending on the company, flexible arrangements may be formal agreements approved by the Human Resources department or the result of an informal agreement with the local manager. These flexible work arrangements are subject to considerations such as staffing needs, job responsibilities, business climate, mutual agreement or other factors.

An assessment of Group companies revealed that in 2015, roughly 16% of employees were covered by one or more of the available flexible working arrangements. Specifically: 2% of the workforce is employed part-time of which about 57% are women; 2.6% took parental leave related to childbirth and care; approximately 8.7% participated in other types of leaves;[9] and 2.2% were covered by other types of work schedule flexibility (e.g., flexible working hours, working from home, job-sharing).

The actual figure may be considerably higher, as this percentage does not include participation resulting from an informal agreement with local managers, and consequently is not formalized or tracked.

The Group supports equitable choices for maternity, paternity and adoption benefits which encourage employees to balance parental responsibilities with their careers. FCA provides parental leave to employees in compliance with local regulations (labor law requirements may vary from country to country). In some instances, the Group actually exceeds local requirements with dedicated policies (e.g., Canada, Serbia and Denmark).

Return-to-work and retention rates following parental leave are two key indicators of the mid- and long-term capability of the Company to provide employees with career growth opportunities and achieve balance between their home and work lives.

Related content

Return to work after parental leave >

[9] *Other types of leaves are those not related to child birth or childcare.*

Technology Connects Employees

GRI: G4-EN6, G4-EN19

FCA endeavors to make the most efficient tools, devices and technologies available to its employees to support their daily efforts and connect them regardless of their location around the world. To support its global operations, the Group uses telepresence videoconferencing extensively. In 2015, the integrated system of 207 meeting rooms equipped with high-quality conference screens registered more than 80,500 hours of teleconferencing. The availability of this communication method enables employees to communicate effectively with their counterparts at other locations while reducing business travel and its related financial and environmental impacts. To minimize the need for travel, the use of audio and videoconferencing and instant messaging systems was further extended to reach some 99,400 FCA employees. In 2015, on a daily basis there were approximately 290,000 peer-to-peer instant messaging sessions with about 2.2 million exchanged messages, 12,300 peer-to-peer collaboration sessions (audio/video/application sharing) and 3,400 multi-party conferences (audio/video/instant messaging).

The Group is also committed to reducing the environmental impact of Information Technology (IT).

Equipment is replaced regularly so that it is more efficient and increases productivity. In 2015, FCA continued to replace office hardware with more efficient equipment. Since 2010, the move to more efficient monitors has resulted in electricity savings of 848 MWh and has avoided approximately 425 tons of CO_2.[10]

In addition, server consolidation and virtualization work continued in 2015 reducing power consumption and related CO_2 emissions.

[10] The conversion factor used for EMEA is 1 kWh = 0.52 kg of CO_2 (source: Carbon Trust, Conversion Factors, 2011); the conversion factor used for NAFTA is 1 kWh = 0.739 kg of CO_2 (source: Emissions & Generation Resource Integrated Database eGRID, 2014-2010 RFCM).

Culture of Diversity and Inclusion

FCA promotes a company culture where every individual is encouraged to reach his or her full potential, regardless of gender, ethnicity or cultural background. This diversity is considered a distinct competitive advantage as each individual is encouraged to contribute his or her unique perspective and strength to the whole, while respecting and learning from the experience of others.

As stated in the FCA Code of Conduct, "The Group is committed to maintaining a fair, secure, productive and inclusive workplace for all members of our workforce, one in which everyone is valued for their unique contributions to the Company."

FCA does not tolerate discrimination, including discrimination based on race, gender, sexual orientation, physical and health conditions, disability, age, nationality, religion or personal beliefs. Due to the Group's global presence, there may be significant differences in legislation among countries and different levels of employee awareness, concern and capability in applying the principles of non-discrimination.

Ensuring gender equal rights and opportunities in the workplace is a fundamental principle of FCA human resources management. This commitment is in line with the UN Gender Equality Seal (GES) definition of gender equality. The Company believes that the contribution of all employees, regardless of gender, is essential for long-term success as it creates a wider, more diverse pool of talent and improves the Company's understanding of its customer base.

The promotion of equal opportunities between men and women in the workplace has always been a common objective for both the FCA Group and its employees. This theme is a subject of social dialogue in the various countries, consistent with the procedures established by local regulations and practice.

Of the 252 trade union agreements stipulated at the company level worldwide in 2015, five also deal with equal opportunity matters.

Enabling career opportunity and advancement that is free from discrimination and harassment and respecting and enhancing diversity are commitments highlighted in the Group Guidelines on Human Rights and Human Capital Management and local policy such as the FCA US Discrimination and Harassment Prevention Policy.

The commitment to equal opportunities stated in the FCA Code of Conduct also drives the Company's compensation philosophy that is based on the concept of meritocracy, which emphasizes the value of a high performing culture and the importance of a market-driven approach. Additionally, the Group employs formal processes to monitor application of its core equity and fairness principles to compensation levels, annual salary reviews and promotions.

Women Employees by Category

FCA worldwide (%)

	2015	2014	2013
Hourly	**19.4**	18.9	18.0
Salaried	**28.3**	28.5	28.9
Professional	**19.1**	18.5	18.3
Manager	**13.1**	13.1	13.1
Total workforce	**20.6**	**20.3**	**19.6**

At FCA, more than 14% of leading positions are held by women, while female representation over the entire workforce reaches 20.6%.

Several initiatives are in place across the Group to foster a diverse and inclusive work environment among employees. The FCA US Diversity Council works to improve the representation of women and ethnic minorities. Meetings with Senior Leadership and Human Resources align to integrate diversity and inclusion within the talent review process and support HR drivers of recruitment, development, retention and succession planning. Diversity within North America is also represented by the long-standing Employee Resource Groups (ERGs). FCA US ERGs (African American Network, Latins in Connection Network, Asian Network, First Nations Network, Gay and Lesbian Alliance, Women's Forum and the FCA Veterans' Group) provide multicultural learning opportunities, mentoring and networking for employees, and support for community outreach initiatives and charitable events. Participation in ERG-sponsored activities is encouraged and open to all salaried employees from all facilities.

FCA Brazil continued to be a partner of Minas Pela Paz (MPP), a non-governmental organization that works toward building a culture of peace in society through social inclusion, with an emphasis on transforming the lives of socially vulnerable people, including former prison inmates.

Employees with Disabilities

GRI: G4-DMA, G4-LA12

FCA strives to provide a work environment in which everyone is valued based on their personal contribution and that is fair, productive and free from discrimination. In line with this commitment, the Group continues to offer suitable employment **opportunities for individuals with disabilities**. In 2015, the employment level of the disabled among the Group's workforce was surveyed across 38 countries, covering 62% of the total workforce.

In certain countries, legislation requires that companies employ a minimum percentage of disabled workers. These requirements may only apply to companies or sites with headcount over a certain threshold.

In some countries employers may, as an alternative, elect to **contribute to specific funds** for the disabled, reach an agreement with the relevant authorities to **hire disabled workers gradually**, or **benefit from exemptions provided by the law**.

In the countries where regulatory constraints exist (16 out of 38 involved), the minimum level of disabled workers varies between 1.6% and 7%. In 2015, the percentage of the Group workers with disabilities was 2.9%, of which 0.6% were women. The country with the greatest share of disabled Group employees remains Venezuela with 5% of the total workforce. The data provided does not include individuals who have been assessed by a medical professional and/or administrative authority as only being fit to perform specific tasks. In such cases, the Company assigns the worker to an activity appropriate to their specific condition.

To support the concept of inclusion, FCA participates in various initiatives such as the Brazilian government's Inclusão Eficiente and PCD programs that work to facilitate the hiring of disabled workers.

In many other countries (including Argentina, Australia, Belgium, Canada, India, Mexico, United Kingdom and United States), there are no statutory quotas for hiring disabled workers. However, other mechanisms exist to support the integration of disabled workers. This may include, for example, special consideration for working hours and working environment, and benefits or tax incentives for companies employing disabled workers. In countries where employees and applicants are not legally required to disclose a disability, there are objective limitations to reporting the number of disabled workers. This information is considered confidential and often subject to data protection legislation. Consequently, U.S. mapping is partially reported and Canada mapping was not included in the survey.

In 2015, as a result of recent regulatory changes, FCA US invited all current employees to confidentially self-identify whether they are an individual with a disability and/or a protected veteran. Disclosure is strictly voluntary; however, disclosure will help the Company meet federal requirements and better assess and manage employment practices.

Even where no specific regulations exist, Group companies are proactive in ensuring adequate accessibility to facilities and adaptation of workstations for the disabled.

Return to Work Specialists at FCA plants in the U.S. and Canada serve as an example of how the Company handles employees suffering from diminished work capacity. Within the bounds of the legal and contractual requirements, these specialists evaluate safe and suitable work opportunities for the physically impaired individuals including, if necessary, assignment to a different activity. For individuals whose conditions make continued employment impossible, FCA frequently works with state or local authorities to retrain the individuals so they can find work elsewhere.

Occupational Health and Safety

In every area of activity and country were we have operations FCA gives paramount importance to achieving the highest standards of workplace health and safety.

Principal pillars of FCA's commitment to health and safety are a continuous reduction of accidents in terms of both severity and frequency; an alignment of all FCA plants and facilities to the international standards (OHSAS 18001); and the promotion of a culture of health and well-being for all employees.

Operating according to these international standards requires an integrated approach to the management of health and safety in our plants and offices. The Group's commitment to health and well-being extends not only to employees but also suppliers, service providers and local communities.

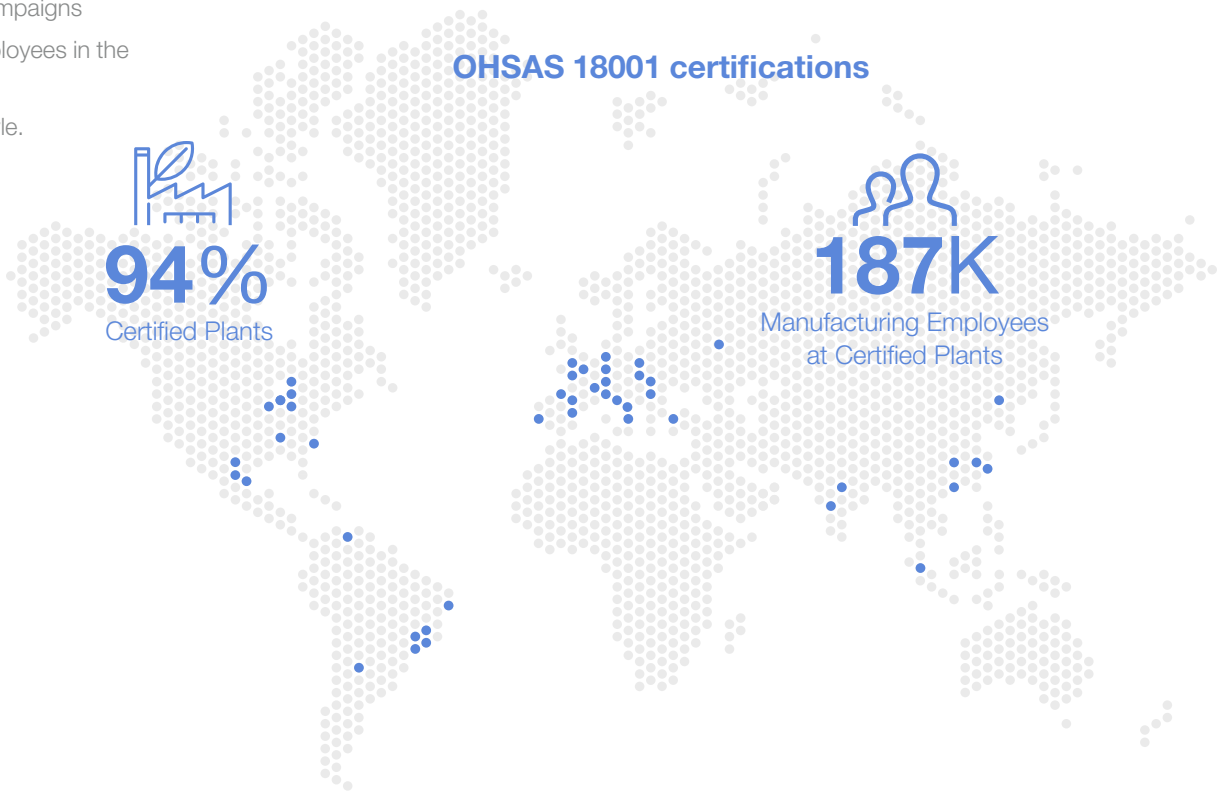
€291 M
for safeguarding health and safety

FCA is active in a number of areas, including:

- definition of standardized procedures for identifying and assessing risk
- adoption of preventive measures for continuous improvement of working conditions
- application of robust safety and ergonomic standards in plants and equipment design
- promotion of safe behavior through training initiatives and awareness campaigns
- active involvement of all employees in the improvement process
- promotion of a healthy lifestyle.

At the Group level, Environment, Health and Safety (EHS) managers are responsible for establishing health and safety guidelines, procedures and standards and for supporting local EHS professionals in implementing health and safety policies and guidelines. In addition, they are responsible for monitoring national and local legislation, as well as applicable health and safety rules and regulations.

FCA has committed that all of its plants operating worldwide in 2020 will be OHSAS 18001 certified. At the end of 2015, 136 Group plants (including all those in scope in 2013), representing 94% of manufacturing employees,[11] were OHSAS 18001 certified.



Spending on Occupational Health and Safety
FCA worldwide

	2015	2014	2013
Spending on Occupational Health and Safety (€ million)	**291**	230	194
Percentage of personnel costs	**2.5%**	2.3%	2.1%

[11] *Manufacturing employees are those directly or indirectly involved in manufacturing processes.*

Engagement in Prevention

Effective implementation of health and safety standards at FCA facilities is made possible through a combination of preventive measures and the collaboration of employees. Employees are involved in the process through training and initiatives designed to increase safety awareness, and by participating in a comprehensive system for gathering feedback and suggestions.

During 2015, employees submitted more than 2.2 million suggestions, of which 241,000 were related to improvement of health and safety conditions. The best ideas were put into practice, shared across multiple facilities and incorporated into FCA's Occupational Health and Safety Management System (OHSMS). Recognition was given to the employees who proposed them.

241,000
suggestions to improve health and safety conditions

One of the objectives of the Safety Pillar of World Class Manufacturing is to contribute to continuous improvement in the workplace and the progressive reduction of all objective and behavioral risks that could result in accidents, injuries and occupational diseases. The basic principle of this pillar is that bold objectives can only be achieved by establishing a strong safety culture throughout the entire organization.

Delivering on this core value requires a broader approach in which employee health and safety are not simply considered as a lack of illness or risk factors, but are considered more broadly in terms of the workers' well-being.

1 M
training hours on safety aspects

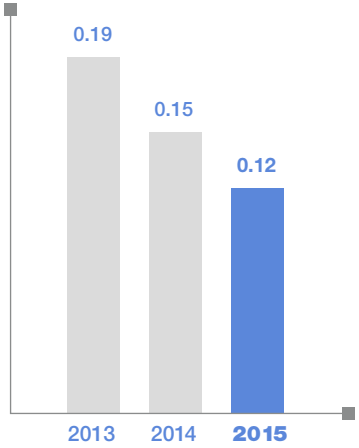
Improvement of employee health and safety is also one of the issues of ongoing dialogue with the employee-representative bodies in accordance with current laws and the collective agreements applied in the various countries in which the Group operates.

The analysis carried out in 2015 covering 96.1% of FCA employees worldwide (including the joint operation Sevel S.p.A. in Atessa, Italy) revealed that 82.1% are represented on issues such as health and safety through organized bodies that monitor health and safety programs and provide advice where needed.

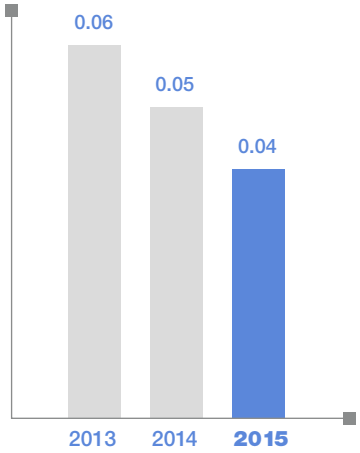
Safety Insights

FCA has significantly reduced the **frequency** and **severity** of **work-related injuries**, through application of the tools and methodologies provided by the Occupational Health and Safety Management System (OHSMS) and the WCM Safety pillar, together with the active involvement of employees, development of specialized know-how and targeted investment.

Frequency Rate[12]
FCA worldwide
(accidents per 100,000 hours worked)



Severity Rate[13]
FCA worldwide
(days of absence due to accidents per 1,000 hours worked)

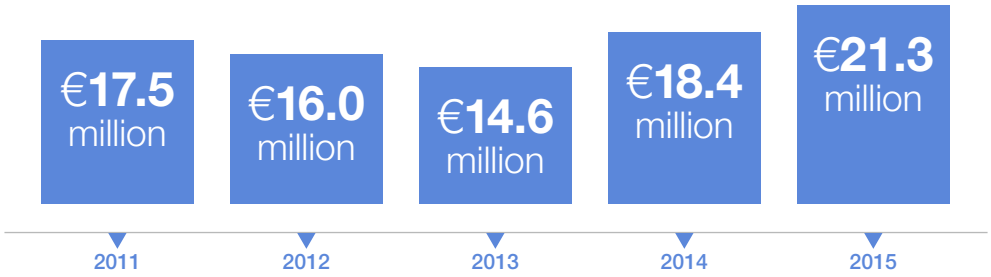


Work-related injuries are analyzed to determine the contributing causes and to take appropriate measures to avoid recurrence. Injuries are categorized according to frequency, severity and gender of the employee involved. Additional statistics are also kept by site and production line/process.

In 2015, the primary indicators improved for the ninth consecutive year. The **Frequency Rate** was reduced by 20% over the prior year to 0.12 accidents per 100,000 hours worked and the **Severity Rate** was reduced by 20% to 0.04 days of absence per 1,000 hours worked.

In Italy, investment in health and safety, combined with other measures, has resulted in a progressive reduction in the level of risk attributed to FCA plants by INAIL, the national accident and disability insurance agency. As a result, the Group was eligible for "good performer" premium discounts, which enabled savings of about €88 million between 2011 and 2015.

Insurance Premium Discounts in Italy



Near misses[14] are also analyzed so that the appropriate preventive measures can be taken, including implementing best practices and correcting potentially high-risk behaviors. In 2015, approximately 27,000 near misses were identified and analyzed.

[12] *The Frequency Rate is the ratio of the number of injuries reported (resulting in more than three days of absence) to the number of hours worked, multiplied by 100,000.*
[13] *The Severity Rate is the ratio of the number of days of absence due to accidents to the number of hours worked, multiplied by 1,000.*
[14] *A near miss is an event that did not result in injury or illness but had the potential to do so.*

In 2015, there were three fatal accidents involving Group employees: one at the Magneti Marelli plant in Mexico and two at an assembly plant in the U.S.
The circumstances were analyzed in detail and the FCA companies took necessary actions to prevent future incidents of a similar nature and assisted local authorities with the accident investigations.

Occupational illnesses refer to diseases that develop gradually over time as a direct consequence of insured work activities carried out by an employee. FCA monitors trends of occupational illness on a continuous basis.

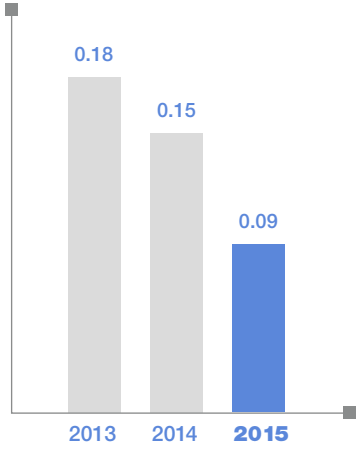
From a statistical point of view, occupational illnesses occurring in the manufacturing environment fall into two distinct categories. First are the cases under investigation, which are being reviewed by insurers to verify, in accordance with the applicable regulations, the existence of a disease and a causal link with work activities carried out. The second category includes cases for which the insurer, upon completion of an investigation, has confirmed that the conditions exist.

Fatalities
FCA worldwide

	2015	2014	2013
Fatal accidents involving Group employees (no.)	**3**	1	2

In 2015, there were 382 confirmed cases worldwide. The **Occupational Illness Frequency Rate** was 0.09 cases per 100,000 hours worked (0.15 in 2014).
This indicator (and changes from year to year) typically bears a low correlation to recent or current preventive measures because, unlike the accident indicators, occupational illness can relate to issues that originated years or even decades prior to being confirmed. In fact, occupational illnesses are quite complex and are usually related to historical working methods or environmental conditions that have long since been eliminated. There is currently no evidence of a high incidence or high risk of occupational illness related to FCA employees.

Occupational Illness Frequency Rate
FCA worldwide
(cases per 100,000 hours worked)



Health Promotion Program

FCA considers the health of its workers a top priority for all of its companies and all the countries in which it operates. In 2015, the Health Promotion Program (HPP) continued, including several projects promoted at the central and local levels to support and monitor employees as they strive to adopt a healthy lifestyle. In 2015, the program was expanded to 125 plants in 18 countries, continuing to address regional issues where appropriate.

The HPP is based on experiences reported both inside and outside FCA, and follows the health and safety principles of the main international organizations, including the World Health Organization (WHO), the U.S. Occupational Safety and Health Administration (OSHA), the European Agency for Safety and Health at Work (EU-OSHA), and the International Labour Organization (ILO).

The four top-priority areas where the HPP seeks to intervene are:

- screening and vaccination including services such as blood pressure, blood sugar level and cholesterol monitoring
- nutrition education initiatives, including counseling on healthy eating in the workplace and providing healthier food options on the cafeteria menu
- promotion of physical exercise through sports teams or clubs, and advice on how to increase daily exercise. For example, dedicating special areas of the Company to sports activities and/or entering agreements with local sports centers for use by employees and their families
- smoking cessation programs through awareness campaigns on smoking-related issues, including long-term health risks and the creation of support groups.

Customers

Understanding Customers

FCA's efforts to create lasting relationships with customers are focused on every step of the ownership experience from purchase consideration and vehicle sale to after-sales support and services. Customer feedback and opinions are monitored on an ongoing basis regarding not only satisfaction with the vehicle and dealer experience but also to integrate consumer insight into areas such as Vehicle Planning, Design and Engineering.

At FCA, **market research** experts deliver insights across all regions to help shape new concepts and product design; identify consistent actions to improve vehicle brand perceptions and experiences; and track automotive after-sales and services.

In 2015, FCA US launched Mobility Trend research spanning multiple generations and exploring five key trend areas: Connected Car, Autonomous Vehicles, Urban Mobility, Shared Economy, and Electric/Alternative Powertrains. The study surveyed 18,000 U.S. consumers to measure behaviors, opinions and outlook against these key automotive industry trends. Findings will quantify consumer demand for new technologies, products and services.

In addition to the Mobility Trend research, a variety of product insight clinics and benchmarking events are conducted on a regular basis to gather consumer feedback. In EMEA, FCA is also investigating customer interest related to innovation in several areas. Consumers take part in testing experimental features and their requirements for connectivity, and autonomous technologies are targeted by several projects.

Customer Experience

Customer experience is based on interactions with Company products, services and representatives.

Realizing that the dealer network is the primary connection with customers, FCA uses both customer and other external feedback to enhance dealer programs specifically designed for each market focused on improving customer experience and satisfaction.

An example of this process is the Customer First program launched in 2015 to FCA dealers in the U.S. The program supports improving the **customer experience** as the primary means to retain customers and focuses on the dealer network's important role in the process. The program was created in partnership with J.D. Power and the U.S. National Dealer Council. Customer First concentrates on five key pillars including facility maintenance, employee engagement, sales and service process consistency, customer advocacy measures and employee training. The goal is to take a long-term relational approach to both customer and employee engagement by placing emphasis on processes, training, and facility comfort and convenience.

In 2014, FCA redesigned the sales processes in the main European markets and developed the Branded Sales Process (BSP), concentrating on **customer satisfaction**, individual brand values and availability of interactive tools. The overall goal was to redefine the network strategy to deliver an improved, consistent customer experience across all brands and markets involved.

The structure of the Branded Sales Process includes eight customer-facing processes: acquisition, welcome, interview, experience, negotiation, purchase, delivery and loyalty. The program also covers internal dealer processes such as marketing and communication, showroom management, order management and sales staff management. The enhancements are expected to lead not only to higher Net Promoter Scores and sales, but also to improved sales capabilities and, ultimately, to a competitive advantage.

A variety of communication channels are used to support the program including a Sales Process Portal which offers manuals, communication guidelines and video tutorials on the applications developed by FCA that support the sales consultants and customer-facing personnel. In addition, dealership training has been deployed to strengthen the processes used by both sales and after-sales dealer personnel.

Several measures have also been implemented over time to improve processes, customer service standards and service quality for the Group's dealer network in Brazil. In order to improve the customer experience, FCA developed a structured quality management system called Service Standards, which is tailored to local network characteristics and customer expectations. To achieve certification from FCA, dealers must participate in meetings at the regional branch office, undergo on-site audits, implement measures recommended during the certification assessment process and, finally, achieve the minimum level for each indicator. In 2015, external audits were conducted for 263 dealers for certification according to Service Standards.

Customer Feedback

FCA measures on a regional basis how satisfied customers are with both the sales and after-sales service experience, as well as how likely they are to recommend our dealers and brands to family and friends. Results are integrated into dealer sales and service processes, customer contact center management and training programs. Regional customer feedback examples include **Net Promoter Score** (NPS), **Customer Experience Initiative** (CEI) and the **Customer Satisfaction Poll**.

Net Promoter Score is the internationally recognized measure used in the EMEA region to evaluate customer satisfaction throughout the vehicle sales and service experience. With improvements to the dealer network processes, NPS increased by three points (on a scale from one to 10)[1] in 2015 and the number of customers providing feedback increased by 39% compared with 2013. The overall feedback process covers a total of 19 markets within the EMEA region, providing extensive insights from customers.

Customer Experience Initiative, an ongoing FCA internal tracking system, is used in the U.S. to survey customers at several points during the first three years of ownership. The CEI survey process provides insight into customer advocacy and satisfaction with the brand, the vehicle and the dealership sales and service experience. In 2015, over 1.4 million completed surveys were received from U.S. sales and service customers.

The Customer Satisfaction Poll program in Brazil also focuses on gathering customer feedback. In 2015, over 800,000 customers were surveyed about dealers, vehicles and Company perception. Focusing on customer experience, while incorporating a regional approach, supports customer satisfaction and contributes to improved loyalty across the regions.

[1] Data refers to NPS after-sales across all EMEA markets covered by Customer Feedback Sales and Services (general distributor, Finland, Ireland, Middle East, South Africa, and Turkey not included).

Interactive Tools

FCA offers a variety of **communication tools** for the dealer network to support **interacting with customers** during both the sales and service processes.

Sales Communication

FCA provides sales consultant **product presentation platforms** in its main markets. These tools include video, graphics and animation to engage the potential vehicle buyer and communicate product information, vehicle accessory details, competitive comparisons, and include the ability to virtually build a vehicle to suit the wants and needs of the customer. In the U.S., the iShowroom tool displays vehicles that are currently available in that dealer's inventory.

Vehicle Delivery Communication

Owner Support Lite and Owner Support+ are electronic tools designed for sales professionals to provide vehicle specific **product information** to new vehicle owners at the time of delivery. To increase relevancy, the content is derived from features that have been identified as difficult to understand by both the Quality organization and customer feedback to the FCA Customer Contact Center.

Service Communication

To promote communication and enhance the **customer service experience**, FCA provides the industry-leading service tool, wiADVISOR. Dealerships actively utilizing wiADVISOR in their service lane provide customers with a complimentary vehicle health check consisting of basic vehicle diagnostics, vehicle software updates, factory-required maintenance information, as well as a walk-around inspection. This technology simplifies the service write-up process and provides customers with an accurate, consistent and transparent service experience.

Supporting Customers

FCA places customers and their needs at the center of its activities across the various stages of the ownership experience. Customer satisfaction depends not only on the vehicle, but can also be impacted by interactions with Company representatives and services. The digital age has elevated customer expectations regarding both the timeliness and accessibility to information. To be successful in this environment, we are focusing our efforts on our ability to respond quickly and appropriately to improve **customer satisfaction** and ultimately **customer loyalty**.

To support our customers, the Mopar owner site is available in the U.S. and a majority of countries in the EMEA region. FCA customers can access Mopar products, accessories and services, including various features available on a regional basis, such as Remote Vehicle Services, including lock and unlock doors; Vehicle Health and Maintenance Recommendations; Warranty and Roadside Assistance; and Vehicle-Specific Recall Information.

There are many touch points throughout the vehicle ownership process that can impact customer experience. FCA offers a variety of services and information to support not only our current customers but also potential customers.

Mopar owner site

Financial Services

FCA facilitates access to vehicle purchases in Europe through FCA Bank S.p.A.[2] which offers customers a wide range of **financial products** and **insurance services** at competitive terms.

FCA Bank Satisfaction Index in selected EMEA Major Markets
Score: Min 1 to Max 5

	2015	2014
Italy	**4.06**	3.98
Germany	**4.37**	4.26
U.K.	**4.41**	4.48
France	**4.12**	3.90

Web-based tools are developed and used to suggest the financial plan that best suits customers' needs and budget, including Financial Calculator and Find Your Car.

In 2015, FCA Bank issued more than 600,000 new financial contracts. By offering **attractive tailored options** to refinance existing or purchase new vehicles, FCA Bank strengthens customer loyalty and contributes to their overall satisfaction. FCA Bank engages its customers through surveys and polls, surveying more than 16,000 customers by phone in 2015.

All products and services are offered to customers through clear and transparent information, in alignment with the principles of transparency, fairness and responsibility, as well as in full compliance with applicable laws and regulations.

Financial calculator
Find you car

Customer Contact Centers

To ensure strong and global management of customer activities worldwide, dedicated Customer Care functions have been established in all four operating regions: EMEA, NAFTA, LATAM and APAC. Customer Contact Centers (CCC), together with dealers, are the main channels of communication between customers and the Company. The Group's Head of Mopar Service, Parts and Customer Care is globally responsible for the Mopar brand and its Customer Contact Centers. There are 26 CCCs worldwide, with roughly 1,400 agents who handle nearly 16 million customer contacts per year. The CCCs offer a variety of services including **information**, **complaint management** and, in some locations, **roadside assistance**. They provide multilingual support with a strong focus on employing native speakers of **30 different languages**.

[2] In January 2015, FCA Italy and CA Consumer Finance S.A. announced the creation of FCA Bank S.p.A. which, following receipt of its banking license in Italy in 2015, became the parent of an international banking group with operations in 16 European markets.

FCA Customer Contact Centers

Customer Contact Center Performance	EMEA	NAFTA[3]	LATAM	APAC
Contacts managed (million)	4.3	8.7	1.4	1.5
Customers participating in satisfaction surveys	12.0%	6.0%	4.5%	5.0%
Satisfaction index (scale 1-10) Information	7.5[4]	8.5	8.0[5]	8.7[6]
Satisfaction index (scale 1-10) Complaints	6.2[4]	6.9	6.1[5]	7.2[6]
% of calls answered within 20 seconds	81.8%	72.0%	89.6%	88.0%
Information: cases settled in a single call	92.2%	94.0%	90.2%	97.0%
Complaints: % cases settled within 5 business days	64.8%	78.0%	45.7%	77.0%

[3] NAFTA region decrease in call center response (as measured by the % of calls answered by call center within 20 seconds) and increase in abandoned calls is mainly due to a 44% increase in recall call volume year-over-year, with spike levels reaching as high as an 85% increase.
[4] EMEA markets monitored through Customer Satisfaction Index are Austria, Belgium, France, Germany, Italy, the Netherlands, Poland, Portugal, Russia, Spain, Switzerland, and United Kingdom.
[5] LATAM markets monitored through Customer Satisfaction Index are Argentina and Brazil.
[6] APAC markets monitored through Customer Satisfaction Index are India, Japan and South Korea.

FCA Customer Contact Centers manage the entire process, from the first contact with the customer until a response has been given, ensuring resolution in the shortest possible time.

The NAFTA region CCCs handled approximately 8.7 million customer contacts in 2015 with nearly 750 personnel for all Mass-Market Brands through separate and dedicated brand teams.

In the LATAM region, the Group has three Customer Contact Centers that handle around 1.4 million customer contacts per year, with 144 agents.

With approximately 500 personnel, the EMEA region Customer Contact Centers handled more than four million contacts in 2015. During the year, the volume of contacts increased by almost two million compared with 2014 due to new outbound campaigns to engage prospective customers.

In 2015, the APAC Customer Contact Centers managed about 1.5 million customer contacts with 68 agents covering the full range of FCA brands. The countries within the APAC region are very diverse in terms of culture, language, vehicle population and automotive industry penetration.
To respond to these regional differences, the current customer care strategy is for each main country, i.e., India, China, South Korea, Japan and Australia, to have its own CCC.

FCA believes that **skilled**, **knowledgeable and motivated agents** are essential for a high level of customer satisfaction and help reduce employee turnover. For this reason, in 2015 the Group offered a total of 40,000 hours of agent training on new products, behaviors and processes, as well as systems and new procedures.

Hours of training per person[7] in each region
EMEA: **34**
NAFTA: **14**
LATAM: **32**
APAC: **23**

Focusing on proactive communications, FCA uses innovative **digital channels** and new **customer touch points** to provide consistent, detailed and up-to-date information on products and services worldwide.
To strengthen connections with our customers and address customer complaints, FCA launched **social media listening teams** to monitor digital media channels, such as Facebook, Twitter and automotive blogs.

[7] *Training hours do not include training dedicated to new hires.*

Customer Education

Supporting our customers includes more than just communicating with them. FCA uses a variety of channels worldwide to educate customers about **vehicle safety**, including a wide and expanded array of courses aimed at improving **driver behavior and control over the vehicle**. The courses vary by brand, focusing on the individual vehicle attributes and include topics such as accident prevention and vehicle safety.

One example of an advanced driving course is the Mopar Road Ready program in the U.S. The course is designed to teach safe and defensive driving techniques. Sponsored by the FCA Foundation and supported by Mopar, the program is dedicated to training and educating teenage drivers. Each session provides a brief classroom review of basic driving topics, including proper seat positioning, hand positioning and basic vehicle dynamics. Advanced behind-the-wheel training is then provided to teens during five on-track courses, including accident avoidance, distraction, panic stop, wheel drop and wet skid pad.

In addition to the safe driving courses, FCA encourages safe and eco-friendly driving through awareness campaigns and software tools like eco:Drive. The eco:Drive feature offers personalized tips to drivers based on driving style with the objective of helping them reduce fuel consumption and emissions.

eco:Drive

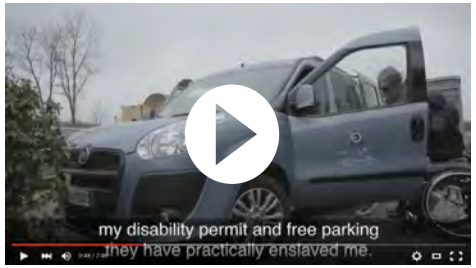
Autonomy

Challenged Mobility

FCA strives to address the needs of a wide range of customers, including those with special needs. At FCA, Autonomy and **Automobility programs** are founded on the principle that mobility accessible to everyone is a fundamental pre-condition for the economic and cultural development of modern society.

Since 1995, the Autonomy program has been offering a range of tailored solutions that make it possible for people with disabilities to drive Fiat, Lancia, Alfa Romeo, Abarth, Jeep and Fiat Professional brand vehicles. For anyone with a disability, accessible mobility can be a very important step toward independence and FCA is committed to offering technical solutions that meet specific individual and collective transportation needs. In 2015, 1,700 people benefited from the services offered through the Autonomy program's 19 Mobility Centers in Italy. These Centers are managed in collaboration with local associations, rehabilitation centers, health authorities and the department of motor vehicles. The services offered include assistance with a range of administrative, legal and technical issues, fitness-to-drive screening assessments, and information on test drives. In addition, 17,777 Autonomy vehicles were sold to customers in Europe and Brazil. In Italy, revenues from the sale of Autonomy vehicles totaled about €144 million in 2015.

The other Group initiative designed to improve mobility and enhance vehicle accessibility is the Group's Automobility program in the U.S. Automobility is a financial assistance program that was launched in 1987 to help customers with permanent disabilities get in and out of, and/or operate, a new vehicle. The program helps cover up to about €900 of the expense for installing adaptive driver or passenger equipment on most Chrysler, Jeep, Dodge, Ram or Fiat vehicles. It also helps customers locate assessment centers and vehicle modifiers or adaptive equipment installers to ensure new products meet their needs. Since 2000, the program has provided nearly 100,000 Automobility Program customer assistance grants.



Interacting with Customers

The Group takes great care in processing and **protecting personal data** of customers and others stakeholders, as set out in the FCA Data Privacy Guidelines and in compliance with applicable laws and regulations.

Data Privacy Guidelines

In 2014, the Alliance of Automobile Manufacturers and the Association of Global Automakers submitted to the U.S. Federal Trade Commission the Consumer Privacy Protection Principles for Vehicle Technologies and Services. As a member of the Alliance, FCA US committed to the implementation of seven Principles, which include transparency; choice; respect for context; data minimization, de-identification & retention; data security; integrity & access; and accountability. The Principles represent a unified responsibility to continue enhancing benefits to customers while respecting their privacy and are increasingly important as customers and vehicles become more connected. This connectivity may include information such as location of vehicles or how drivers operate their vehicles.

The Privacy Principles acknowledge that technologies and services are increasingly designed to enhance vehicle safety, performance and the driving experience, and rely upon information from vehicle systems.

Consumer Information

● GRI: G4-DMA, G4-PR3, G4-PR6

FCA regularly engages with stakeholders to provide information regarding the **proper use of our products and services**, including potential risks or hazards. With our global focus, the Group sells its products and services to consumers in approximately 150 countries worldwide, excluding markets where they are prohibited.

Given the nature of its activities, FCA is subject to numerous laws and regulations governing product information. One example is the Directive 1999/94/EC in Europe which establishes specific requirements relating to the availability of consumer information on fuel economy and CO_2 emissions for new passenger cars. Similar requirements are adopted in other markets where local requirements are less severe. In keeping with those requirements, the Group communicates that information to consumers through a variety of channels, including product materials in dealer showrooms, product advertisements, brand websites, etc.

In the U.S., the Environmental Protection Agency (EPA) supervises compliance with fuel economy labeling requirements on new vehicles. In addition to information on fuel economy, the label format also provides consumers information about annual fuel costs and environmental performance, including smog and greenhouse gas ratings. Consumers can also scan the QR Code on the label with a smartphone to access additional fuel economy information about the vehicle.

In China, the Ministry of Industry and Information Technology (MIIT) enforced the fuel consumption label for new light vehicles, and standard GB 22757-2008 established specific requirements relating to the availability of information on the label. Also, MIIT set up a website to publish fuel consumption information on vehicle types sold to consumers in China.

The Group communicates other information including safety and usage instructions and warnings that are either required by law or provided on a voluntary basis. This information is provided through owner and maintenance manuals, information labels and product advertising, as well as through the dealer and service network, Customer Contact Centers and other channels. Consumers are provided detailed information on areas such as the proper use of active and passive safety features (e.g., seat belts, airbags, child seats), environmental performance of the vehicle, driving behavior that can affect fuel consumption and emissions and responsible disposal of materials following maintenance (e.g., used oil, filters, etc.).

● GRI: G4-DMA, G4-PR8

Dealer and Service Network

Building the Network

Dealers are key business partners, providing a direct link with customers and playing a pivotal role in developing relationships and building trust. The Group works closely with dealers to enhance their competitiveness, processes and opportunities for development.

FCA redesigned the sales processes in the main markets across the EMEA, NAFTA and LATAM regions to provide a positive ownership experience while accommodating local requirements and different customer needs.

FCA offers extensive opportunities to expand the skills of dealer network personnel and those who may join the network in the near future. Specific training initiatives and educational programs also focus on increasing the quality of service offered and product-related knowledge.

With the aim to reduce the network's environmental impact, in 2015, FCA continued to develop and propose initiatives in the various regions, based on local network characteristics.

Customer First Award

Focusing on **customer satisfaction** and the quality of customer experience, in 2015 FCA announced the Customer First Award for Excellence for the U.S. dealer network. Created in partnership with J.D. Power and our U.S. National Dealer Council, the Award can be earned by dealers who show exemplary performance in five key pillars: facility maintenance, employee engagement, sales and service process consistency, customer advocacy measures and employee training. The goal is to take a long-term relational approach to both customer and employee engagement by placing emphasis on processes, training, and facility comfort and convenience. As a part of the program, a team of J.D. Power-trained consultants is available for dealers to seek help on implementing process changes that can increase customer satisfaction and advocacy in their stores.

FCA Dealer Council

Providing regular channels of communication with the network helps strengthen the relationship between FCA and our dealers, as well as contribute to improving customer satisfaction and financial success. One channel is the FCA Dealer Council which serves as the foundation for FCA dealers in the U.S. to submit feedback within their area or business center. All dealers are given the opportunity to submit their ideas and suggestions through a feedback tool located on the DealerCONNECT portal, the website connecting dealers and FCA. The National Dealer Council also addresses areas of common concern in an effort to find a more efficient and productive way to conduct business.

Minority Dealer Network

GRI: G4-EC8

The Network Diversity and Dealer Development Group was developed in the U.S. in 1983 to create dealership opportunities for persons of African American, Hispanic, Asian, Native American and Alaskan descent with a demonstrated entrepreneurial spirit. The mission focused on developing a culturally diverse dealer network in the U.S. that represents FCA's customer base and the communities the dealers serve. FCA canvasses the market in search of qualified ethnic minorities with automotive retail experience, a proven track record and access to capital for dealership opportunities. FCA continued its commitment by establishing one of the most diverse dealer networks in the industry with Fiat brand dealerships, in addition to awarding the Alfa Romeo franchise to nearly half of the minority-owned Fiat dealers.

World Class Dealer

Built on the extensive knowledge and best practices consolidated within the World Class Manufacturing program, FCA launched the World Class Dealer (WCD) program to promote dealership operational efficiency, including identifying improvements in performance and developing related strategies. The purpose of WCD, which has been active in Brazil since 2013, is to help dealers develop the most competitive dealer network. This in turn contributes to improving profitability, market share and customer satisfaction, while reducing loss and waste.

The program addresses four pillars: finance, market, processes and people. WCD is deployed through on-site consultant visits over a six-month period. To support dealerships adopting this program, FCA covers 50% of the deployment cost. WCD was implemented at seven dealer organizations in 2013, 10 in 2014 and 13 in 2015, covering 160 points of sale and representing more than one-third of Fiat sales in Brazil.

Related content

World Class Manufacturing >

Supplier World Class Manufacturing >

Standard Monitor Tool

In Brazil, the Standard Monitor tool is used to evaluate several areas of dealership performance, including services provided, personnel, image and facility/equipment. Two questionnaires are used with specific focus on sales and after-sales processes. Aspects assessed are clustered in five main categories: sustainability, facility, image, technology and processes. In 2015, Standard Monitor questionnaires were completed by 92.7% of the sales network and by 94.3% of the after-sales. The results from the Standard Monitor questionnaires are also included in the Qualitas Excellence award program.

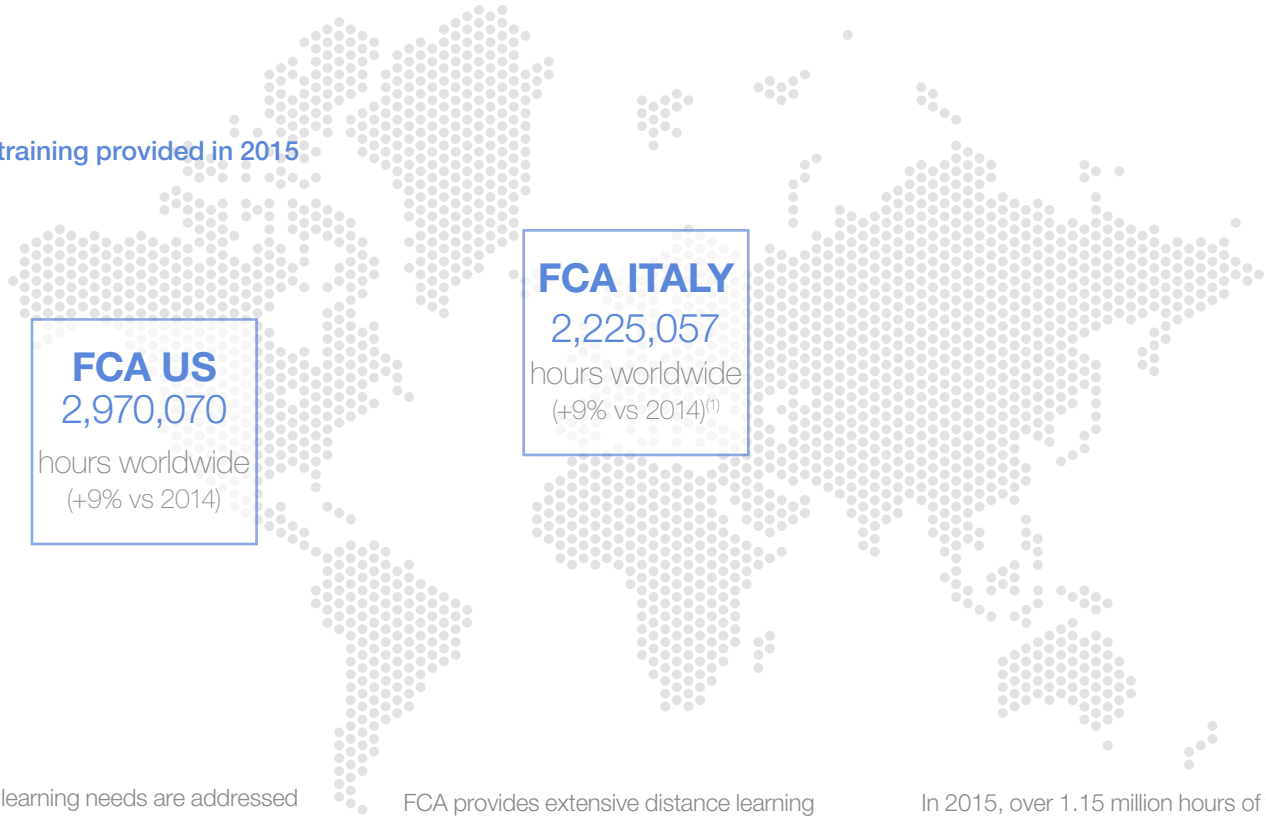
Qualitas Excellence

The Qualitas Excellence award in Brazil recognizes top sales and service personnel in the dealer network, helping them gain visibility and build a positive reputation. In line with the World Class Dealer concepts, the Qualitas Excellence develops the same four pillars. The award is organized according to dealership size and area. A variety of both monthly indicators, such as Customer Satisfaction Index, and annual activities, including Service Standard certification, are used to determine overall results. In 2015, 4,500 professionals from 111 dealers received the award.

Training the Network

In 2015, FCA continued to develop training opportunities as well as skills assessment and certification of sales personnel and technicians. Focusing on these areas helps to grow the **quality of service offered** by dealerships as well as their operations and product-related knowledge. The two main Group training organizations, Unetversity and the FCA Performance Institute, standardize skill levels across the network and offer targeted training to dealership personnel, sales and after-sales professionals and technicians worldwide.

Hours of training provided in 2015



A variety of learning needs are addressed for technical and sales issues faced by the dealer network, such as **customer relationship management** processes; product and **vehicle systems knowledge**; and **environmental and safety features** of the Group's vehicles.

In 2015, continued progress was made in the area of online training through internal multimedia platforms. The knowledge and information was readily accessible to everyone in the network, saving time and money and limiting the environmental impact of travel.

FCA provides extensive distance learning solutions for all dealership positions. These web-based courses are tailored for those network professionals who are not located near live course offerings. The Company offers various online tools and performance support, including virtual classroom, online training, web portals, tablet applications, in-dealership touch-screen kiosks and smartphone-optimized tools and resources.

In 2015, over 1.15 million hours of training were delivered online through web courses or virtual classrooms to FCA Italy sales, after-sales and technical personnel worldwide. This represents 52% of total training provided. FCA US worldwide online training accounted for an additional 1.6 million hours, representing 55% of total training. With the objective of offering solutions close to the participants, FCA offers 52 Technical Training Centers located across the NAFTA region, 34 in EMEA, 22 in LATAM and six in APAC to cover the training needs of local dealership personnel.

[1] 2014 data restated to be consistent with 2015 scope.

Customer Relationship Focus

GRI: G4-EC8

In 2014, FCA deployed the Branded Sales Process (BSP) training in 18 European markets for the Fiat and Jeep brands. Sales and after-sales training were based on this approach for the Jeep Renegade and Fiat 500X launches. Sales process training in 2015 included dedicated sessions to introduce Alfa Romeo sales personnel to BSP and also involved on-site coaching activities at 289 dealerships in nine markets (Italy, Spain, France, U.K., Germany, Switzerland, Austria, Belgium and the Netherlands).

The coaching methodology was developed by external specialists and involved all dealer principals/owners, sales managers, sales consultants and customer-facing personnel, with the following main goals:

- knowledge transfer: train staff on the Branded Sales Process, highlighting the key success factors that impact customer experience
- application tutorials: explain main features of the tablet applications and support front-office personnel to switch from desktop-based tools to tablet-based selling
- sales process implementation: determine gaps between the current process and the ideal process, identifying individual solutions to ensure a seamless and effective transition
- people mindset: assist front-office personnel to develop more customer-oriented behavior, sharing tips and techniques to make the customer experience more enjoyable
- data-driven culture: build and promote the culture of data analytics, helping staff become more familiar with customer feedback results.

Each dealership was evaluated before and after the coaching sessions using several processes such as Mystery Shopping visits. This helped determine the success of the program.

Service consultants also play an important role in building relationships with customers. In the EMEA region, new customer-oriented training courses were developed, along with local training events, for the launch of the Fiat 500X. These events covered not only product content but also extensive vehicle test drives on the road and test tracks; presentation of safety and infotainment features; and services and accessories.

These training events contributed to the more than 500,000 hours of training to FCA Italy after-sales personnel worldwide, of which approximately 340,000 hours were delivered through distance learning.

Environmental and Safety Focus

GRI: G4-EC8

The Group dedicates considerable resources to support environmental and safety training in our dealer and service network.

Worldwide, the sales force received specific training on topics related to the reduction of fuel consumption and CO_2 emissions, eco-friendly technologies, alternative fuels and the latest generation engines. In addition, when possible, test drives were organized to demonstrate the characteristics of the new models and their competitive advantages. For example, at the 2015 Jeep Training Day held in Italy, sales personnel had the opportunity to test safety systems such as Forward Collision Warning and Adaptive Cruise Control. In addition, personnel received specific training on the Uconnect system, including services such as eco:Drive and My Car which support more sustainable driving.

In 2015, FCA US delivered more than 308,000 hours of training to the sales force on environmental and safety features, or around 27% of the training hours delivered. On the same topics, training delivered to the FCA Italy sales force amounted to approximately 548,000 hours, or around 56% of the training.

Worldwide training for service technicians continued with a focus on developing know-how in the repair and maintenance of eco-friendly engines and safety and environmental-related features. This training is essential to ensure engine efficiency and reduce fuel consumption and emission levels. In addition, the increased availability of safety features on vehicles was supported by specific training covering these topics for the after-sales staff in the dealerships.

Based on the needs of the network, in 2015, more than 536,000 hours or around 36% of the total training hours were dedicated to training on diagnosis, repair and maintenance of eco-friendly engines and safety-related product features delivered to FCA US technical personnel worldwide. FCA Italy technical personnel worldwide received over 375,000 hours on these subjects, or around 51% of the total training hours.

Enhancing Network Skills

GRI: G4-EC8

Building our network goes beyond providing training and communication tools for our existing network employees - it means looking forward and supporting the development of the next generation of dealership personnel.

Through Strayer University, FCA launched the Degrees@Work and Degrees@Work Family programs in the U.S. in 2015. FCA US is not only the first company in the automotive industry to offer the programs, it's also the first U.S. company of any type to provide a no-cost, no-debt college degree to both dealership employees and their immediate families. Through this partnership with Strayer University, employees at participating dealerships are offered the opportunity to receive relevant Associate's, Undergraduate, and Master's degrees at no cost. The programs will enable dealerships to attract top talent, improve the skillset of existing employees, lessen the burden of paying for college for families and increase employee retention.

The Mopar Career Automotive Program (MCAP) provides FCA dealerships in the U.S. with a competitive method to recruit and train entry-level technicians to sustain and grow the dealer service operations. MCAP is a national study and internship program offered by a network of schools that utilize FCA-specific curriculum to train high-potential, entry-level automotive technicians for employment at FCA dealerships. MCAP has created strategic partnerships with automotive technical colleges and technical schools in selected locations throughout the U.S. The program provides a competitive and structured career training path for students so that dealers can attract the best future technician applicants. Through partnerships with community colleges and technical schools, FCA offers technician candidates college-level instruction and internship experience, which creates awareness of skilled technician careers and helps support customer experience.

Improving Network Sustainability

Reducing the environmental impact of the dealer network is one way FCA approaches sustainability issues across the entire value chain. Working together with dealers toward this goal is also an opportunity to establish dialogue with customers, touching on all aspects of the Group's commitment to sustainability. The Group's dealer network consists of sales points in approximately 150 countries. FCA is committed to support the monitoring and progressive reduction of the network's environmental footprint although the majority of the dealer network is privately-owned. To reach this goal, in 2015 FCA continued to develop and expand methods and initiatives in the various regions, based on local network characteristics. Actions taken or proposed at dealerships were mainly related to increasing awareness on sustainability topics, including reducing energy consumption, atmospheric emissions and natural resource consumption, and improving waste management.

At Italian Company-owned dealerships, total energy consumption, including both electricity and heating, was reduced by 12% versus the 2012 baseline year and around 13.5 TJ of energy saved.

Environmental awareness is communicated to the private dealer network through the use of ecologically sound solutions included in the Corporate Identity and in the standards developed by the Company. Since 2012, in the EMEA region, around 50,000 square meters of anti-bacterial and anti-pollution tiles have been installed. The titanium dioxide content of these tiles contributes to creating an improved indoor air quality, a better atmosphere and a cleaner environment. The advanced floor installed has the same pollutant degradation capacity as a 835,000 square meter greenfield.

-12%
energy consumption

In the U.S., sustainability is promoted to our dealers through a dedicated website that encourages dealers to:

- upgrade existing facilities
- lower energy costs by installing LED lighting
- optimize dealership operations by increasing efficiencies
- lower maintenance costs by installing easy-to-clean tile floors
- use low Volatile Organic Compounds (VOC) paints when updating color schemes
- use building materials with recycled content.

The website also includes a guide for dealers to renovate or build a new facility, a virtual tour of the prototypical dealership and completion photos of recent dealer facilities.

Along with promoting sustainability to our dealers through a dedicated website, 255 U.S. dealers participated in the Dealer ECO Survey in 2015. Dealers provided survey information and reports on their sustainability initiatives, energy efficiency, waste recycling and community programs. Some of the best practices reported were solar farms, LED light conversions, recycled building material usage, waste oil heating systems and water-based parts washers. From the survey results, four finalists were chosen to participate in the FCA Dealer Environment, Health and Safety (EHS) Leadership Award application process and one winner was selected.

In 2015, the Sustainability Award for Brazilian Fiat Dealers was established. Dealers were asked to submit best practices and initiatives in three categories: rational use of natural resources, social responsibility and process sustainability. The award ceremony took place during the Qualitas Award Convention to promote and present their initiatives to the rest of the network.

Related content

Environmental impact reduction in plants >

Environmental impact reduction in logistics processes >

Suppliers

Supplier Management

Suppliers provide more than 75% of the components used in our vehicles.
They are strategic partners who contribute to improving our products while working toward achieving responsible and sustainable development goals even in the face of challenges resulting from globalization.

Our suppliers' level of quality, understanding of the market and readiness to innovate are critical to our ability to distinguish our products from those of our competitors. We strive to create relationships that benefit both sides in order to work together to develop responsible development practices. These practices help limit exposure to unexpected events and supply disruption, while building long-term core competence that can drive sustainable growth over time.

With respect to **green procurement**, FCA has a general quality specification under all supply contracts requiring every material's adherence to environmental, health and safety requirements, including ingredients, formulas and handling procedures where relevant. Those requirements are extended to our procurement practices through the use of tools such as the International Material Data System and Life Cycle Analysis.

Group Purchasing, the organization responsible for supplier management, sets global purchasing strategies and oversees the integration of processes worldwide. This organization also works with peers and counterparts to integrate key environmental, social, and governance considerations into global purchasing decisions.

Our buying teams within the Chemical, Metallic, Electrical, Powertrain, Indirect and Mopar commodity groups work with suppliers and internal colleagues within the various functional areas to develop and execute sourcing strategies. In addition to the buying teams, other departments support the ongoing selection, management and development of our automotive supply base. These teams include Supplier Quality, Supplier Relations and Product Development.

The Company evaluates the effectiveness of its management approach through periodic benchmarking activities of major competitors, external audits and feedback from various stakeholders.

No relevant areas of concern were identified through media monitoring, stakeholder commentaries and other public information, as reported by the major rating agencies responsible for assessing the FCA supply chain management processes.

Our supplier base is highly concentrated, with the top 141 strategic suppliers accounting for approximately 61% of total purchases by value. The Group classifies suppliers as strategic through a formal process based on the following criteria: allocated spending amount; production and spare parts capacity; absence of technical and commercially-viable alternatives; and the value of Group procurement orders as a percentage of the supplier's annual turnover.

In 2015, we extended our supplier base to 328 new suppliers. In general, there were no other significant changes in our supply chain's structure or in any notable outsourcing activities.

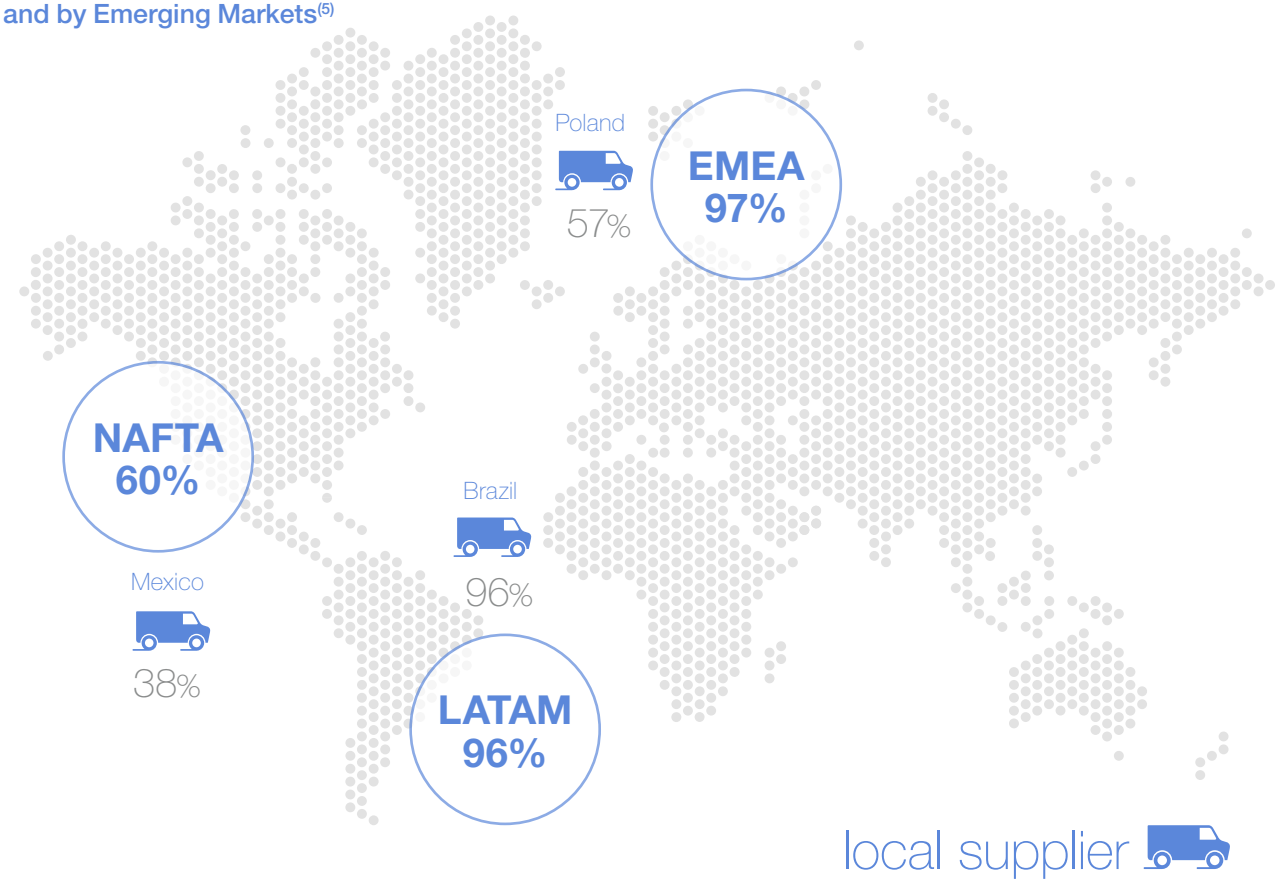
Highlights Group Purchasing[1]

Worldwide

	2015
Direct and indirect material purchases managed by Group Purchasing (% of total FCA purchases)[2]	~100
Direct material suppliers (no.)	2,347
Concentration of direct material purchases (% of purchases from top 141 suppliers)	60.7
Value of purchases from direct material suppliers (€ billion)[3]	62.0
Value of purchases from indirect material suppliers (€ billion)[4]	16.5

We are aware that our operations impact local economies. Whenever possible, we utilize local suppliers at major locations of operation (based on the amount of spending allocated) in order to generate direct and indirect income and employment opportunities in the communities where the business is located. This emphasis also serves to minimize transport-related environmental impacts. The term local suppliers refers to suppliers operating in the country where an FCA plant is located.

Concentration of FCA Annual Purchase Value (APV) on Local Suppliers at Major Locations of Operation and by Emerging Markets[5]



[1] *Value of purchases from direct and indirect material suppliers totals roughly €78.5 billion.*
[2] *Refers to the monetary value of purchases managed by Group Purchasing.*
[3] *Direct materials are pre-assembled components and systems used in assembly.*
[4] *Indirect materials are services, machinery, equipment, etc.*
[5] *Refers to markets where FCA plants are located (source for "Emerging Markets": Dow Jones Indices Country classification system, effective September 2011).*

Supplier Risk Management

GRI: G4-DMA, G4-EC8

The financial strength of our supply base is one of the key elements of the supply chain selection and management strategy. FCA has a **Supplier Risk Management** (SRM) function that ensures the assessment of suppliers' financial status both for potential new orders and contracts in progress.

Existing risk management tools have been recently upgraded and enhanced to support risk identification and mitigation in a proactive way. The SRM global tools combine a worldwide database and common methodologies that enable financial risk analysis of our supply chain, including providers of both direct and indirect products and services. The evaluation is based on suppliers' public financial reports and other information provided by the suppliers themselves.

A financial risk rating is issued for each supplier and only low risk suppliers are considered eligible for new contracts; however, in specific cases (e.g., technological constraints), suppliers with a lower rating can be selected by implementing corrective action plans and stricter monitoring.

The condition of the supply base is constantly monitored through regular meetings with the relevant departments of our operating segments; the cases potentially at risk are examined to define strategies and corrective action plans where needed.

Related content

Supply Chain Risks >

Culture of Sustainability

GRI: G4-DMA, G4-EC8

The support of FCA employees at all levels is critical to fully realize our goals for sustainability across the supply base.

FCA has created a global project called **Destination 2020** to help transform the organization and support long-term goals, including sustainability targets. One of the project areas addresses supplier relationships and is built around our **Foundational Principles**. These principles are being rolled out both internally and to our suppliers through training materials and publications. The long-term goal is that all supplier relationships will reflect these Foundational Principles.

A supplier survey program has been created to support the process of getting feedback from suppliers. Feedback is collected after interactive events, and then turned into actionable projects. Progress is then communicated within and outside FCA Purchasing as a further means to improve supplier working relationships.

A Global Scorecard with metrics standardized across all regions is under development. This tool will be used for Supplier Performance Management (One Voice), Commodity Strategies, Qualitas Awards Selection and to augment the Quality First Sourcing Process.

FCA Purchasing Foundational Principles

Integrity
Trust and be trustworthy

Mutual Transparency
Share expectations and information

Proactive Collaboration
Work together effectively and efficiently

Personal Accountability
Take ownership and accept responsibility

Empathy & Advocacy
Respect and support each other

Sense of Urgency
Act quickly and decisively

Continuous Improvement
Share best practices

Long-Term Mindset
Make decisions that foster sustainable relationships

Supplier Standards

FCA suppliers are selected based on the quality and competitiveness of their products and services, and on their respect of social, ethical and environmental principles.

Commitment to responsibility is a prerequisite to becoming an FCA supplier and developing a lasting business relationship with us. For this reason, and in order to address, prevent, and mitigate any potential impacts, **contractual clauses** have been progressively introduced since 2009, and new agreements require suppliers to comply with both the principles set forth by the FCA Code of Conduct and specific Sustainability Guidelines.

If a supplier fails to follow these principles, the Group can require the supplier to implement a corrective action plan, which is then verified through audit activities, and reserves the right to terminate the business relationship. Our General Terms and Conditions require compliance with environmental, social and governance clauses in 100% of new agreements.

Supplier Sustainability Guidelines are available on the FCA corporate website and on the supplier portal. They focus on the following principles:

Human rights and working conditions

- rejection of the use of forced or child labor in any form
- recognition of the right to freedom of association in accordance with applicable laws
- freedom from harassment and discrimination
- safeguarding of employee health and safety
- guarantee of equal opportunities, fair working conditions, appropriate working time, equal compensation, and the right to training for employees.

Respect for the environment

- optimization of the use of resources
- responsible waste management
- management of substances of concern in the manufacturing process
- development of low environmental impact products
- use of an environmentally sustainable logistics system.

Business ethics

- high standards of integrity, honesty and fairness
- prohibition of corruption and money laundering.

Our suppliers are monitored on their governance structure and level of ethics and integrity.

Any noncompliance on the part of the supplier is brought to the attention of a sustainability committee, established within FCA Purchasing. The committee's role is to review performance and to identify the appropriate actions for noncompliant suppliers in order to prevent and mitigate actual and potential adverse impacts. The committee consists of the FCA Purchasing's Processes Compliance Manager, Supplier Quality Engineering Head, and General Counsel.

Supplier Diversity

In 2015, FCA US was selected by Black Enterprise magazine as one of the 30 Top Companies for Supplier Diversity. Inclusion in this list is based on our demonstration of best practices through the diverse representation within our supply chain.

FCA was also awarded the Top Corporation Award by the Women's Business Enterprise National Council, the Excellence in Supplier Diversity Award from the Great Lakes Women's Business Council and Corporation of the Year from the Michigan Hispanic Chamber of Commerce for Development and Training.

One of the ways FCA supports inclusion is through the Matchmaker event, which creates **opportunities for diverse suppliers**. Completing its 16th year, the annual **Matchmaker** provides minority-owned, women-owned and veteran-owned businesses access to FCA US Tier 1 suppliers and to decision-makers within the FCA US procurement organization.
The 2015 Matchmaker event attracted more than 3,000 participants, and more than 184 minority-owned, women-owned and veteran-owned suppliers participated.

The **High Focus program**, established in 2011, focuses on suppliers with greater potential for diverse spend and equips them with the tools and support to achieve their diversity targets. The diversity spend status of each supplier is monitored monthly and reviewed quarterly with them. Since the program's inception, 143 suppliers have improved their minority purchasing by more than 10 times (€1.2 million).

Evidence of the Company's commitment toward supplier diversity is in the inclusion of both minority and women sourcing performance at the Tier 2 level as a criterion on the supplier's scorecard.

With a world-class supplier diversity and development program that spans 32 years, FCA US spent €6.3 billion with minority suppliers in 2015, representing 19% of its total annual purchasing value. Women-owned businesses, which are tracked separately, accounted for €2.2 billion of FCA US spending, representing 6.6% of its total annual purchasing value.

The Company continues to support several organizations that assist Tier 1 suppliers in achieving their minority-owned and women-owned sourcing goals. These organizations include the National Minority Supplier Development Council, the Canadian Aboriginal and Minority Supplier Council, the Women's Business Enterprise National Council, WBE Canada and WECONNECT International. In addition, we support veteran-business ownership through membership with the National Veteran-Owned Business Association.

Supplier Assessment Process

FCA aims to prevent or mitigate adverse environmental or social impacts that may be directly linked to our own business activities or to products and services from our suppliers. As partners, suppliers play a key role in the continuity of our activities and can have a significant impact on external perceptions of our social and environmental responsibility. As such, the Group is aiming by 2020 to conduct **sustainability audits** or assessments of all Tier 1 suppliers with potential exposure to significant environmental or social risks.

The **Supplier Sustainability Self-Assessment** (SSSA) covers environmental, labor practice, human rights, compliance, ethics, diversity, and health and safety aspects. The results of the SSSA and other criteria are used to create a risk map for the purpose of identifying suppliers that may be at risk and, therefore, require further investigation through focused audits.

Supplier Quality and Supplier Relations departments are responsible for managing the supplier assessment process.

The assessment of supplier compliance with sustainability criteria is conducted through three phases over the course of 12 months. The first phase consists of the Supplier Sustainability Self-Assessment (SSSA) questionnaire adopted since 2014 in all four operating regions. This standardized tool was developed by the Automotive Industry Action Group (AIAG) with the contribution of a work group that included FCA and other automakers and suppliers. It has a two-fold purpose: to communicate expectations to suppliers; and to determine the effective level of sustainability activity within the supply base. Moreover, it represents an effective and efficient tool that reduces the burden of multiple and similar information requests received by suppliers. FCA suppliers can complete the SSSA online by accessing it via the **eSupplier Connect portal**.

In 2014, the SSSA questionnaire was expanded with an increased emphasis on water and environmental stewardship.

The second phase of determining supplier compliance is the creation of the **risk map**.

The primary factors taken into account in building the risk map are:

- supplier's turnover
- country risk associated with the supplier's home country, with particular emphasis on countries with a poor human rights record[6]
- supplier's financial risk
- supplier's SSSA score
- supplier's exposure to commodity risk
- location of supplier's main production activities (where available or known).

The final risk map score, which is based on a weighted average of all factors, provides an indicator of a supplier's overall risk level (high, medium or low) and is used to select which suppliers have to be audited. Active direct material suppliers are assessed yearly and their risk level analyzed.

[6] *With reference to the EIRIS "Countries of Concern for Human Rights" List.*

GRI: G4-DMA, G4-EN32, G4-EN33, G4-HR4, G4-HR5, G4-HR6, G4-HR10, G4-HR11, G4-LA14, G4-LA15, G4-SO9, G4-SO10

On-site supplier audits represent the third and most intensive phase for confirming supplier compliance, and may be conducted by either internal Supplier Quality Engineers or external auditors. If any critical issues are identified during an audit, a supplier may be placed on "watch status" or, in particularly severe cases, the relationship with the supplier may be suspended or terminated. Where areas for improvement are identified, a supplier corrective action plan is developed. Action plans establish specific responsibilities within the supplier's organization, activities and deadlines for implementation. The status of implementation and effective achievement of targets assigned through the action plan are monitored on a periodic basis.

For each supplier, the level of compliance and any recommended action plans following the self-assessments and on-site audits are reported in the Supply Quality Performance (SQP) system. The SQP divides suppliers into three groups: compliant (green); compliant but with recommendations for improvement (yellow); and noncompliant (red code). On a monthly basis, the SQP system also generates an updated Bid List which provides a qualitative assessment (including sustainability rating) of suppliers eligible to participate in competitive tenders.

Assessing Potential Suppliers

Before FCA does business with a company, an evaluation helps determine their suitability based on a broad scope of criteria. Through the **SEA (Supplier Eligibility Assessment)** the Company identifies potential suppliers' strengths, weaknesses and capabilities to produce a product of the required quality, performance and cost, and whether a supplier has the potential to be a high-performing supplier for FCA.

The SEA is conducted during the procurement phase for those suppliers who are not currently providing parts or services for us.

Potential suppliers must demonstrate that they have adopted a program that promotes sustainability, both internally and along the supply chain, a code of conduct, a certified system for managing employee health and safety, and a certified environmental management system. These conditions ensure that they monitor and manage environmental aspects, labor practices, human rights, and their impact on society.

The SEA consists of an audit carried out at the supplier's facility and is generally preceded by the completion of a Supplier Data Profile. Subsequently, if required, corrective actions, responsibilities, and target dates for resolution can be defined for all identified items. In 2015, more than 130 new suppliers were evaluated worldwide through this process.

GRI: G4-DMA, G4-EN32, G4-EN33, G4-HR4, G4-HR5, G4-HR6, G4-HR10, G4-HR11, G4-LA14, G4-LA15, G4-SO9, G4-SO10

Ongoing Dialogue with Suppliers

Continuous dialogue is encouraged with suppliers at all levels of management, including forums such as the **Global and Regional Supplier Advisory Councils** (SAC). The SAC meets quarterly, and involves 15-20 supplier executives that provide feedback on strategic topics. FCA also uses a dedicated supplier internet portal, **eSupplier Connect**, to share information on technical requirements, supply planning, supplier quality and the results of compliance tests conducted on new components. Suppliers use this portal to communicate with the Company, enter contract bid details and specify the origin of components. eSupplier Connect also includes a section dedicated to supply chain sustainability, including best practice articles highlighting supplier initiatives that provide inspiration to companies with less experience in implementing sustainability programs.

As in previous years, initiatives for the exchange of ideas and information continued, including **local conferences** (about 124 in 2015) and **Technology Days** (26 meetings in 2015), attracting an average of approximately 1,000 participants worldwide. At these events, leading suppliers in terms of innovation, technology, and quality address specific topics and share some of their latest technological developments. In the NAFTA region, regular **Supplier Town Hall meetings**, attended by an average of 500 suppliers either in person or worldwide via webcast, continue to be a major enabler of two-way communication.

FCA encourages dialogue with and within the supply base also by working closely with many industry and supplier organizations. One such group is the **Automotive Industry Action Group** (AIAG), which a predecessor to FCA US helped found in 1982. AIAG is a cooperative forum for the auto industry focused on improving business processes and practices involving trading partners and peers throughout the supply chain. In addition to a leadership role on the Board of Directors and co-chairing the Corporate Responsibility Steering Committee, FCA US employees are engaged in 45 work groups, many of which focus on sustainability issues within the supply chain and on streamlining tools and metrics across the industry.

FCA US hosts **Supplier Training Week** twice a year, covering numerous subjects from Purchasing, Quality, Supply Chain Management, Manufacturing, Finance, and Engineering. The agenda also includes specific classes on sustainability-related topics such as responsible working conditions, environmental impact and ethics.

FCA seeks to improve and expand training opportunities every year. Our supply base is a critical element of the FCA organization and it is imperative that timely training is developed and deployed to our supplier partners worldwide. Training initiatives addressed to suppliers increased during 2015 in the EMEA region, China and Mexico. Specific training for indirect suppliers was also developed to address the needs of this specialized segment of the FCA supply chain.

Within eSupplier Connect, a **new supplier Learning Center** was launched in late 2015 to improve learning opportunities and create a more robust system overall. As the supply base continues to expand globally, it is necessary to effectively manage training information to enable development, delivery and use of this material.

GRI: G4-DMA, G4-EC8, G4-EN34, G4-LA16, G4-HR12, G4-SO11

Additional in-depth training on responsible working conditions is offered to suppliers in partnership with AIAG. This training is developed and updated collaboratively with other automakers and is designed to help protect the rights and dignity of the workers who make vehicle components. In 2015, full-day, interactive training sessions were conducted in Mexico, Brazil and China. The classes, which were funded by the OEMs, covered human rights, environmental concerns, health and safety, and ethics. The classes reached approximately 156 supplier companies, with the additional requirement that all attending suppliers cascade the material to their next-tier suppliers, expanding the reach even further. Almost 1,600 participants took the web-based training, which is available is seven languages and which is a high-level version of the same concepts.

FCA is also committed to promoting entrepreneurial growth by providing entrepreneurs the practical capacity-building training they need, which enables subject matter experts to achieve a higher level of sustainability knowledge. With this aim, an on-site basic sustainability training course was delivered in 2015 at FCA's EMEA headquarters to 120 select suppliers.

To address existing and emerging sustainability issues, the FCA US **Supplier Sustainability Panel** represents a cross section of the supplier base with participants from companies of different sizes, footprints and commodities. Topics addressed include ways in which FCA and its suppliers can work together on sustainability initiatives, gap assessment and resolution, benchmarking site visits, and training and communication throughout the supply chain. In 2015, the Panel held a day-long workshop with the help of the FCA Innovation Team to develop concrete deliverables with tangible impact. The member companies as well as representation from industry associations defined and prioritized work teams and projects, all led by the suppliers themselves. These ongoing projects will be used to engage with other industries, create training materials for suppliers and expand our reach into the sub-tier supply chain.

We encourage supplier innovation through various initiatives to find ways to reduce costs. **The Technical Cost Reduction (TCR) SUPER (SUpplier Product Enhancement Reward) Program** encourages a proactive approach with suppliers whereby economic benefits are shared when innovative manufacturing technologies and leaner component designs are implemented.

The TCR department underwent reorganization during 2015 to a decentralized structure. This change prompted a TCR strategy focus with Purchasing and the supply base. Each of the purchasing commodity areas held workshops to generate savings ideas and a new process was developed to manage internal and external idea generation. All supplier-initiated ideas are incorporated into the SUPER program. For example, approximately 36 ideas were implemented by suppliers in the EMEA region, resulting in shared economic benefits of approximately €1.1 million.

The **Supplier Innovation Gateway** is an initiative whose goal is to stimulate ideas leading to benchmark systems. It provides a streamlined process to review, investigate, and approve supplier innovations in the NAFTA region.

Dedicated email addresses enable suppliers to request information (sustainability_supplychain@fcagroup.com) or report situations of noncompliance in the supply chain (bpo@fcagroup.com). Additional FCA channels are also in place to report a violation or suspected violation.

In 2015, no violations or suspected violations were received about environmental, labor practices, human rights or social impacts.

GRI: G4-DMA, G4-EC8, G4-EN34, G4-LA16, G4-HR12, G4-SO11

Supplier WCM

GRI: G4-DMA, G4-EC8

FCA Purchasing has established a program to expand the World Class Manufacturing methodology to its suppliers. FCA Purchasing, with the support of the WCM Academy, developed a new program strategy called **WCM 2.0** to better support the target to achieve "perfect quality products and services that enable FCA to exceed all corporate objectives." The main drivers enabling suppliers to meet the target are: quality, service level, financial rating, innovation, competitiveness, time-to-market, partnership and sustainability. To maximize the effectiveness of the program for FCA and its final customers, suppliers and commodities are prioritized based on importance from the customer's point of view, the purchasing strategy, and the supplier's current performance. Furthermore, the program is tailored to offer suppliers a wider range of scenarios: Light (Basic Training), Intermediate (Advanced Training), Award, and Focused Problem Programs.

The new strategy's intent is to increase the suppliers' medium- and long-term performance according to the evaluation tools already in place.

The suppliers involved in WCM 2.0 in EMEA significantly outperformed the overall population of suppliers. On average, WCM 2.0 suppliers closed 35% of their gap to a perfect score of 100, compared with other suppliers which averaged a 12% gap closure.

Other initiatives during 2015 include:

- convergence of Supplier Quality tools to WCM as a result of a global training program
- special project initiatives with methodological and technological knowledge sharing that allowed suppliers to access FCA plant standards and processes
- green and brownfield projects through which FCA helped suppliers developing new plants to consider best practices and have a systemic approach to the development of the plant.

Through the WCM program, Tiberina Sangro reached the Bronze level award in 2015 and was honored at the WCM Awards Ceremony in the U.S. as the first supplier ever to reach this level. The plan for 2016 is to continue to share best practices and put in place actions to help an increasing number of FCA suppliers to reach this level of excellence.

Supplier Awards

In 2015, FCA again honored top-performing suppliers during the **Supplier Qualitas Award** ceremonies held in each of the four operating regions. Several suppliers were recognized for their outstanding achievement in social and environmental responsibility performance. In the category of Sustainability, the top winners in 2015 were Continental Automotive Guadalajara Mexico, S.A. de C.V. for the NAFTA region and PPG Industries for the EMEA region.

These companies and others were recognized for their commitment to sustainability and the breadth and depth of their related initiatives and programs. In the EMEA region, the Qualitas event was **ISO 20121 certified** as a sustainable event. All CO_2 emissions generated from it were offset by planting 500 fruit trees in Kenya and Haiti as part of the **Treedom project**, for a total of about 100,000 kg of CO_2.

Treedom project

Deep-dive Supply Chain Study

A tightly focused study of the supply chain was completed in 2015 in which the supply chains of several complex modules were analyzed from completed assembly upstream through each tier, finishing with the raw material source. The purpose of the study was to understand the degree of transparency and sustainability practices within each tier of the supply chain. Each tier was assessed by means of an expanded Supplier Sustainability Self-Assessment (SSSA) and through direct interviews. The study, which included 146 suppliers throughout five tiers, revealed both diminishing adherence to and understanding of sustainability practices at each tier. It also showed the impact of personal engagement when partners at any point of the supply chain encourage their next tier suppliers. This pilot study will be expanded into other commodity groups. Outcomes and lessons learned will continue to be used for employee, supplier and student training.

Supplier Environmental Performance

FCA's commitment to fighting climate change cannot exclude the involvement of suppliers. Suppliers are screened to verify their commitment to a wide array of environmental concerns. Suppliers must optimize the use of resources; minimize polluting emissions and greenhouse gases; properly manage waste treatment and disposal; and adopt logistics processes with minimized environmental impact.
FCA encourages suppliers to implement an environmental management system aligned to international standards.

As directed by globally regulated substance restrictions such as REACH (regulation on Registration, Evaluation, Authorization and Restriction of Chemicals), our direct suppliers are required to use chemicals whose contents meet our current standards for the management of substances of concern.

If a risk to the environment is identified, the Group conducts thorough on-site audits to examine the **supplier's environmental management** methods. These audits include a rigorous inspection of proper environmental management system documents and their mode of distribution in the work environment; accountability for ensuring compliance with the environmental management system; methods by which information or training programs are provided to employees; goals to improve environmental performance; and any environmental certifications held by the company. In order to prevent, mitigate or redress a negative impact encountered during inspection, a joint action plan is developed with the supplier.

Because we believe that water scarcity could impact business continuity and that water conservation is essential, in 2014 the Group led an update to the AIAG Supplier Sustainability Self-Assessment questionnaire, which now includes an increased focus on **water and environmental stewardship**. Specifically, questions were added related to water policy, strategy or management plan focused on discharge water quality improvement; water-related targets or goals; and operations located in water-stressed areas. FCA is also continuing to pursue opportunities to partner with our suppliers and local communities to establish sustainable water stewardship that supports access to clean water in water-stressed areas, such as certain areas in India.

GRI: G4-DMA, G4-EN32, G4-EN33

CDP Supply Chain Program

FCA recognizes the importance of collaboration for improving the environmental sustainability of supplier products and processes, and provides comprehensive support through a variety of initiatives.

For example, in an effort to raise the awareness of suppliers on climate change issues with a particular focus on the reduction of their greenhouse gas emissions, 210 suppliers were invited to participate in the **CDP supply chain program** in 2015. One hundred-thirty suppliers disclosed (62% response rate), attaining an average disclosure score of 77 and an average performance band of D.

About 89% of responding suppliers reported scope 1 and scope 2 emissions. This successful response rate was due in part to the dedicated supplier and buyer training webinars FCA provided in cooperation with the CDP supply chain organization to support this engagement.

By 2020, the Group is committed to monitoring 90-100% of top Group **suppliers' CO_2 emissions** (accounting for about 57% of annual purchases by value) through the CDP supply chain program.

IMDS

GRI: G4-DMA, G4-PR3

To help manage environmental impacts related to vehicles and components, FCA uses the International Material Data System (IMDS). Suppliers are required to submit detailed information on the materials and substances used in their components through this online platform so that substances can be traced back to the specific component. In this way, FCA can monitor, control, reduce, or eliminate regulated chemical substances which are restricted or prohibited in one or more markets.

In 2015, FCA US launched the IMDS/Substances of Concern Compliance Portal application to improve data relevant to global material content reporting requirements and chemical substance prohibitions. This application, which is accessed through the eSupplier Connect portal, allows suppliers and release engineers to utilize a centralized platform to view IMDS status and chemical substance prohibitions lists, resulting in increased compliance knowledge and improved collaboration in developing parts that are globally compliant.

More than 108,600 material data sheets were completed in 2015 for FCA vehicles.

Supplier Labor Practices

Sustainability standards and performance along the value chain also include aspects related to **international human rights standards and labor laws**.

Suppliers at every tier of the supply chain carry much of the management responsibility; nevertheless FCA is aware of the role that the Company can play in preventing human rights violations and promoting sound working conditions. FCA's approach over the years has been built on systematic assessments and competency-building initiatives.

Self-assessment questionnaires are used to monitor the suppliers' management systems with respect to basic human rights, health and safety in the workplace and fair working conditions. Suppliers are also expected to establish an occupational management system to systematically assess occupational health and safety risks, to measure performance through key indicators; and to extend their health and safety policies to their contractors.

Lastly, FCA expects suppliers to take appropriate steps in preventing child labor and forced or compulsory labor, as well as recognizing the right to freedom of association and collective bargaining.

Conflict Minerals

Many geopolitical experts believe that conflicts may increasingly arise over access to raw materials. For this reason, FCA places a high priority on **responsible sourcing** and the integrity of its suppliers. The Group monitors events very closely in countries considered politically or economically unstable for potential disruptions in the supply chain that could compromise the ethical availability of essential raw materials that are difficult to replace.

FCA promotes socially responsible sourcing by making reasonable effort to **trace the source of conflict minerals** contained in our products in order to avoid knowingly using conflict minerals from sources that support or fund inhumane treatment, including human trafficking, slavery, forced labor, child labor, torture and war crimes in known regions of conflict.

The complex global challenge of managing multiple layers of suppliers is a driving force in working with peers to address ethical and social sourcing risks. In collaboration with the Automotive Industry Action Group (AIAG), FCA has developed strategies addressing Section 1502 of the Dodd-Frank Act, as well as subsequent rules promulgated by the U.S. Securities and Exchange Commission (SEC), regarding conflict minerals. The rule requires companies to determine whether tin, tantalum, tungsten, or gold (3TG) in their supply chain originated from the Democratic Republic of the Congo (DRC) or surrounding countries, and if the sale of those minerals supported the armed conflict in the DRC.

In addition, FCA has supported AIAG in creating a common automotive process to obtain conflict minerals reporting information through the **iPoint Conflict Minerals Platform** (iPCMP), a web-based data management tool based on the Conflict Minerals Reporting Template.

By acquiring this information, FCA fulfills its due diligence obligation under the SEC conflict minerals rule. Being subject to U.S. SEC regulation, FCA US filed its first annual conflict minerals report with the SEC in May 2014. FCA, however, will not file a report in 2015, but will file its first report for the 2016 year in May of 2017 to follow SEC obligations.

FCA is also working closely with the **Conflict-Free Sourcing Initiative** (CFSI) and the **Conflict Free Smelter Program** (CFSP). The CFSP audits smelters around the world to designate whether they are conflict free. To date, more than 144 smelters have been audited as conflict free, and the CFSP is increasing its auditing efforts. We provide significant resources to support the CFSP and will continue to do so in the future.

Since supply chain management is an essential part of responsible sourcing, FCA provides suppliers with the necessary support to understand and comply with regulations on conflict minerals, including guidance for using the appropriate tools to trace their origin. A working group was formed to ensure close collaboration between the EMEA and NAFTA regions, with members including representatives from the Purchasing, Legal and Global Materials Lab organizations.

Ethical Sourcing

Certain raw materials could become scarce in the near future, as happened in 2010 with rare earth elements (REE) following the decision by China, the world's predominant supplier, to restrict production and export.

FCA also continued mapping use of raw materials and noble metals that could threaten the industry's sourcing stability due to the potential lack of availability. The objective is to develop alternative solutions, either through substitution or recycling, and identify opportunities for recycling or reuse through collaboration with other industries. FCA's Global Materials Lab personnel are actively involved in the EU's Horizon 2020 research and innovation program as experts in support of the search for viable solutions in this area.

Trade Unions

Social Dialogue and Collective Bargaining

FCA recognizes and respects the right of its employees to be represented by **trade unions** or by other representatives elected in accordance with current local legislation and practices and in line with the practices of the various trade unions. FCA maintains relationships with trade unions and employee representatives that are based on mutual respect and constructive dialogue. During 2015, that dialogue included achieving consensus-based solutions to respond quickly and decisively to changes in market conditions.

At the European level, EU regulations require that all Community-scale undertakings establish a **European Works Council** (EWC), which ensures workers the right to information and consultation. FCA first established an EWC in 1997 on the basis of the agreement signed in 1996 wich was subsequently renewed (with amendments and modifications).

In 2015, collective bargaining, conducted in accordance with local law and practices, resulted in various agreements with trade unions on both wage and employment conditions.

Worldwide,[1] 85% of FCA employees are covered by **collective bargaining agreements** and 252 such agreements were stipulated at the company or plant level.

In Italy, all FCA employees are covered by collective bargaining agreements.

Outside Italy, approximately 79% of all employees are covered by collective bargaining agreements. That percentage varies from country to country on the basis of local practice and regulations. For the remaining non-unionized companies, more than 80% of employees not covered by collective bargaining benefit from conditions that are supplemental to, or better than, the minimum required by law.

In 2015, an analysis was carried out in those countries that have not ratified **ILO Conventions** on freedom of association and/or the right to organize and collective bargaining. It covered approximately 92% of employees of Group companies in Brazil, the United States, Canada, Mexico, China and India, and showed that the application of these rights and principles is ensured through the implementation and application of local legislation.

Collective agreements signed during the year at company/plant level

FCA worldwide (no.)

	2015	2014
Collective agreements	**252**	255

Main issues covered under the agreements

FCA worldwide (no.)

	2015	2014
Operating issue	**61.5**	51.4
Wage issue	**40.5**	29.0
Restructuring	**3.6**	14.5
Occupational Health and Safety[2]	**11.1**	9.0
Training	**4.4**	3.5
Equal opportunities	**2.0**	0.4
Other	**13.5**	13.3

Considering the economic context of countries within the European Union, the 2015 wage negotiations aimed at not increasing the labor cost, but at providing conditions based on specific company performance metrics, where conditions are met.

[1] The survey covered 98.6% of Group workforce, including Sevel (Italy).
[2] Including work-related stress.

Italy

GRI: G4-DMA, G4-HR4

In Italy, on July 7, 2015, the **company-specific collective labor agreement (CCSL)** was renewed with the Trade Unions FIM-CISL, UILM-UIL, FISMIC, UGL Metalmeccanici and Associazione Quadri e Capi Fiat.

The main provisions of the four-year agreement (2015-2018) include an innovative performance-based compensation scheme which has been first introduced in the Automobiles sector (Ferrari excluded) and it was subsequently extended to all FCA companies. It was effective retroactively from January 1, 2015 through December 31, 2018, and incentivizes all employees toward achievement of the productivity, quality and profitability targets established in the 2014-2018 Business Plan for the 2015-2018 period by adding two additional variable elements to base pay:

- an annual bonus calculated on the basis of production efficiencies achieved at the employee's plant, together with a coefficient reflecting the plant's World Class Manufacturing (WCM) level, that is to be paid in February of the year following the reference year
- a variable component linked to the achievement of the financial targets established in the 2015-2018 period of the Business Plan for the EMEA region (Business Plan Bonus), including the activities of the premium brands Alfa Romeo and Maserati. A portion of the Business Plan Bonus is a guaranteed amount based on employees' base salaries and is paid over four years in quarterly installments, while the remaining portion is to be paid in March 2019 to active employees as of December 31, 2018, with at least two years of service during 2015 through 2018.

Other major innovations introduced at FCA by the agreement include an experimental classification system for new hires, with the existing eight levels being reduced to three.

The new agreement also introduces certain important changes in relation to work hours and new work-time flexibility which aim to improve employee work-life balance. In addition, a continuous shift cycle (with a total of 20 shifts per week) based on the successful model already in place at FCA's Melfi plant, was introduced.

The industrial relations process and the system of participation have also been significantly revised.

United States

GRI: G4-DMA, G4-HR4

In the United States, the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW) is the principle union representing FCA's U.S. hourly and certain salaried employees.

The UAW is also the principle union representing U.S. hourly employees at General Motors and Ford Motor Company.

Agreements at all three companies included a common termination date of September 14, 2015.

In 2015, Company and the UAW reached an initial tentative agreement on September 15, 2015, which was rejected by the UAW membership. Consequently, the UAW and FCA re-entered negotiations reaching a second tentative agreement on October 7, 2015, which was later ratified by the UAW membership. As negotiations continued beyond the September 14 termination date, the agreements at GM and Ford were formally extended pending resolution of the FCA agreement.

At the conclusion of the UAW-FCA negotiations, the UAW entered into discussions with GM and then Ford with both having a new agreement ratified on November 20, 2015.

Key achievements of the **UAW-FCA Agreement**:

- maintained FCA's ability to remain competitive within the U.S. automobile manufacturing industry through the agreement period
- provision for different pay structures / payouts for traditional and in-progression employees (i.e., general wage increases, up-front lump sum bonus and performance bonus)
- improved workforce stability through resolution of the unsustainable two-tier wage structure by means of a combination of fixed and variable compensation
- investment in the workforce to recognize and reward employees for their engagement and commitment to achieving Company business objectives, including World Class Manufacturing
- work rules were strengthened, enabling increased workforce flexibility and efficiency, including improvements related to the utilization of temporary employees to support the manufacturing process.

The new Agreement has a termination date of September 15, 2019.

Brazil

GRI: G4-DMA, G4-HR4

In Brazil, **collective bargaining** for companies located in the State of Minas Gerais was initially conducted by the Federation of Industries of the State of Minas Gerais, FIEMG (Federação das Indústrias do Estado de Minas Gerais). Negotiations ended the year 2015 without a Collective Agreement for the Betim region.

However, a union agreement was reached for the FCA Betim plant and 17 suppliers. The agreement mainly provides for the adjustment of wages. To the special shift work arrangements (alternate shifts, continuous shift, third shift on Sundays), the companies paid an allowance of R$1,000.00 per capita. Profit sharing was also negotiated.

Collective bargaining at the Goiana plant lasted more than one year, with an agreement reached aimed at strengthening the competitiveness of the plant. Negotiations at the Campo Largo plant were guided by the premise of maintaining the company's competitiveness in the region, where other automakers are located. In December, the collective labor agreement was signed. The Agreement follows the guidelines for collective bargaining in Betim. It also covers operating issues such as the provision for compensatory time off and the possibility of implementation of the third-shift and continuous shift.

Collective bargaining at Fiat Chrysler Participações Brasil S.A. provided for the alignment of salaries with inflation.

France

Spain

Portugal

Poland

Romania

Serbia

Mexico

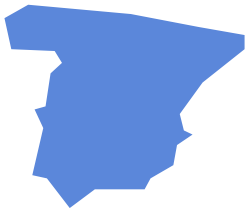
Argentina

Venezuela

France

In France, the annual negotiation concluded with wage increases in line with inflation, except for the Magneti Marelli plant in Châtellerault, where the reference parameters for 2015 had already been agreed with the trade unions in 2012.

Comau France signed an agreement for the introduction of a performance-based compensation scheme for the period 2015-2018 substantially similar to the one introduced in Italy. In January, 2015 an agreement was signed with trade unions aimed to improve competitiveness of the Magneti Marelli plant in Châtellerault for the period 2016-2018. The agreement provides for measures concerning work organization aimed at introducing greater labor flexibility and defines specific employment policies. For the period 2016-2018, the agreement provides for wage increases within 1%. The company has confirmed its commitment to maintain the same employment level for the reference period.



Spain

In Spain, wage negotiations at FCA Spain were carried out and implemented with the objective of containing labor cost by assessing the results obtained in 2015 and introducing, for the first time, biennial collective bargaining, which also lasts through 2016 with a wage increase aligned to the recovery of purchasing power.

Portugal

In Portugal, 2015 wage negotiations at Funfrap referred to the expected inflation level for the year and to specific company performances. The agreement provides for a structural percentage of wage increase and a variable element (to be paid in February 2016) related to the achievement of trading profit targets, quality, measurement of employee involvement, and the WCM score obtained at the end of the year within the audit. If the “zero accidents” target is reached at the end of the year, the agreement also provides for the payment of a percentage in addition to the variable remuneration.

France

Spain

Portugal

Poland

Romania

Serbia

Mexico

Argentina

Venezuela

Poland

In Poland, company-level wage negotiations led to salary increases substantially in line with inflation within the Group companies with increasing volumes of business.

In July 2015, FCA Poland and the majority of the trade unions reached an agreement on the introduction of a performance-based compensation scheme for the period 2016-2018 which is similar to the model defined in Italy.

Romania

In Romania, the renewal of the collective labor agreement applied to Comau calls for the introduction of a new 2015-2018 performance-based compensation scheme similar to the one introduced in Italy.

Serbia

In Serbia, FCA Services d.o.o. and Magneti Marelli d.o.o. in Kragujevac reached an agreement with the trade union for the definition of the company-level agreement, which covers both salary and regulatory conditions.

Within FCA Srbija, Magneti Marelli and FCA Services, wage negotiations have acknowledged the lack of context and company-specific conditions for proceeding with collective wage increases. The Company defined criteria for the determination of the “Christmas Bonus,” which is based on actual hours worked.

France

Spain

Portugal

Poland

Romania

Serbia

Mexico

Argentina

Venezuela

Mexico

In Mexico, the annual contractual negotiation at Teksid Hierro de Mexico concluded with a 5% wage increase in line with inflation. The agreement also provides for actions aimed at increasing employee awareness about health and safety, skills-development training, as well as the levels of certain benefits granted to employees.

The agreement reached in 2015 at the Comau facility in San Martin Obispo recognized a 4.5% wage increase.

Argentina

In Argentina, historically, union negotiations are conducted directly with the local union with the aim of ensuring competitive advantages. In 2015, the wage adjustment applied to hourly employees in FCA Automobiles Argentina was 19.78% and represents greater competitiveness of labor cost compared with the rate recognized by competitors.

Venezuela

For Venezuela, in 2015 there were no wage negotiations as they had already been regulated by the agreement signed in 2012. For 2015, the company has practiced the recovery of inflation through wage increase in six-month periods, as practiced throughout the region.

Management of Production Levels

In 2015, the EMEA region returned to profitability one year ahead of plan. The contrasting levels of market demand for certain models has had a particular impact on production capacity in Italy, leading to production stoppages in certain instances and increased production in others. The Company, however, has continued with its policy for the protection of employment by taking advantage of temporary layoff schemes or schemes defined by collective bargaining or company policies.

The drop in shipments recorded in 2015 in the LATAM region reflects continued macroeconomic weakness in the region resulting in poor trading conditions in Brazil and Argentina. In Brazil, nonetheless, the Group remained the market leader, and competitiveness of the plants was also supported by the trade union agreements reached.

In the NAFTA region, again in 2015, market share in the U.S. confirms the growth trend and, in Canada, FCA was the market leader. The company continues to meet unprecedented vehicle production demand through flexible operating patterns at NAFTA facilities. FCA US has correspondingly increased the number of manufacturing employees to support current and anticipated production volumes, as well as adding engineering, research and development, and other highly skilled employees to support product development, sales, marketing and other corporate activities.

Italy

GRI: G4-DMA, G4-HR4

In Italy, the use of **temporary layoff benefit schemes** (significantly reformed by Italian D.Lgs. 148/2015) allowed drops in production to be managed and various restructuring and reorganization activities linked to Group investments, to be implemented including through use of “Contratti di Solidarietà.”[3]

In 2015, the use of temporary layoff benefit schemes and “Contratti di Solidarietà” by Group companies considerably decreased compared to 2014 (-45.6%), which confirms the continuation of the upturn in production and return of workers to the plants.

During the year, the company largely completed the plan for investment in, and reorganization of, the Avvocato Giovanni Agnelli plant in Grugliasco (Turin), which produces the Maserati Quattroporte and Ghibli. A new investment plan was implemented for the Mirafiori Plant aimed at better preparing the site for the production of new premium-brand models.

Activities related to the reorganization and restructuring of the FCA Italy plant in Cassino and the Mirafiori Presse, Pratola Serra and Termoli plants also continued. They are now prepared for the gradual implementation of the initiatives linked to the FCA Business Plan.

For FCA Melfi (which produces the Fiat 500X and Jeep Renegade) and Sevel in Atessa (a joint venture with PSA-Peugeot Citroën for the production of light commercial vehicles), there were excellent results in terms of volumes due to commercial success. This led both to the need to implement new solutions in terms of work organization and to the hiring of over 2,000 workers.

[3] *A government benefit scheme which provides for a temporary reduction in work time and pay (partially compensated by the protection of workers' income).*

Freedom of Association

FCA employees are free to join any trade union provided they do so in accordance with local law and the rules of the trade union concerned. The Group recognizes and respects the right of its employees to be represented by trade unions or other representatives in accordance with local applicable legislation and practice.

Representative bodies, generally elected by local plant workers, are entitled to be informed and/or consulted and/or to negotiate on specific issues as provided by law or applicable collective agreements. In the European Union, the law provides for the establishment of employee representative bodies at companies and/or sites having more than a specified minimum number of employees. In North America, these representatives are only present at sites where trade union representation has been established. In China, there are currently no laws requiring that trade union representation be established; however, employees are free to form a representative council in accordance with national labor laws.

Based on those national labor laws, in order to regulate the trade union representation structures, many cities and provinces throughout China have issued rules and regulations which only apply locally.

In Italy, the Workers' Statute (Law 300/1970) ensures representation at FCA companies through company or plant-level union representatives (RSA). At the end of December 2015, 926 RSAs were present at Group companies in Italy. Under the 2015-2018 company-specific collective labor agreement (CCSL), the industrial relation process has been significantly revised. To further enhance the level of coordination and collaboration between trade unions, the CCSL provides for the establishment of a joint representative body at each plant ("Consiglio delle RSA").[4]

Each of these bodies serves as the sole liaison with the Company and represents members' interests on an absolute-majority basis.

There were also important innovations in relation to the system of participation. The roles and duties of the joint bodies and joint committees set up for matters which are considered relevant, such as work safety and training, were enhanced. The system of participation provided for by the CCSL is structured into various joint committees and implements the common objectives of recognition of human resources, broadening of opportunities for dialogue, and reduction and prevention of conflict, while dealing with the problems of common interest in a constructive manner. Issues addressed by the committees which operate at the plant level are occupational health and safety, organization and production systems, company services and monitoring of absenteeism. In plants with over 1,500 employees, the CCSL also provides for setting up the Plant Efficiency and WCM Committee,[5] assessing the specific issues related to WCM and the efficiency targets linked to the new performance-based compensation scheme. In December, specific training started focused on WCM and its pillars, with a detailed look into Cost Deployment and audit results. This training, which is comprised of five modules to be completed in February 2016, is addressed to trade union members of the Plant Efficiency and WCM Committee.

At the national level, the CCSL provides for establishment of a Bilateral Welfare Committee, an Equal Opportunities Committee and the National Bilateral Committee which, among others, will annually examine the Sustainability Report (with particular reference to production and employment trends).

In some countries, such as France and Germany, surveys on the level of trade union membership is not possible since the decision to join a union is considered a personal matter for employees, who are not required to inform the company. FCA conducts regular surveys only in countries where the Group has a significant presence and that information is not considered sensitive.

[4] "Executive Committee" in plants with more than 900 employees.
[5] Up to 1,500 employees, the duties of the Plant Efficiency and WCM Committee are assigned to the Organization and Production Systems Committee.

Italy

United States

Canada

Mexico

Venezuela

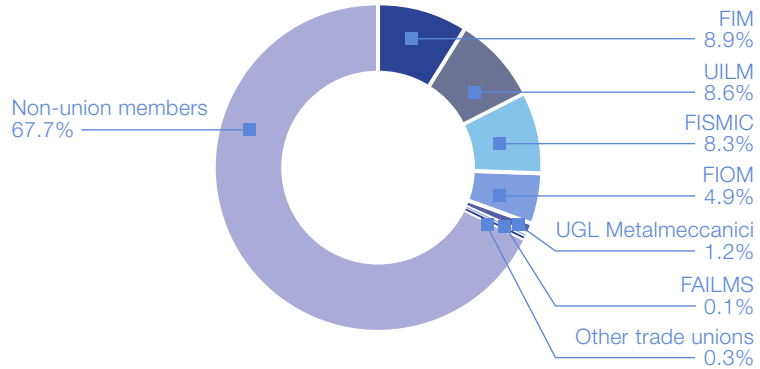
China

Italy

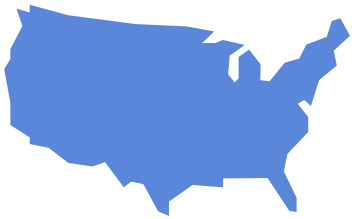
In 2015, a survey revealed that 32.3% of workers are trade union members (compared with 33.2% in 2014). In addition to the rights granted by the CCSL agreement to all Italian trade unions and workers on freedom of association, FCA provides an additional service to its employees by paying trade union dues on behalf of those employees who are members of trade unions that are signatories of the CCSL. Trade union dues for employees who are members of trade unions that are not signatories of the FCA CCSL are paid either directly by employees or via deductions from employee wages[6] by the Company.

Union Membership Italy

FCA in Italy (% of total workforce, excluding managers)



[6] *"Cessione del credito retributivo".*



Italy

United States

Canada

Mexico

Venezuela

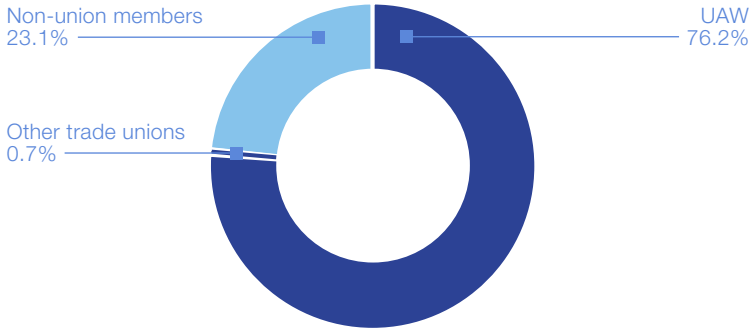
China

United States

In 2015, 76.9% of Group employees are union members, almost all with the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW). The UAW represents approximately 41,000 hourly workers and nearly 3,300 salaried workers.

Union Membership United States

FCA in the United States *(% of total workforce, excluding managers)*



Italy

United States

Canada

Mexico

Venezuela

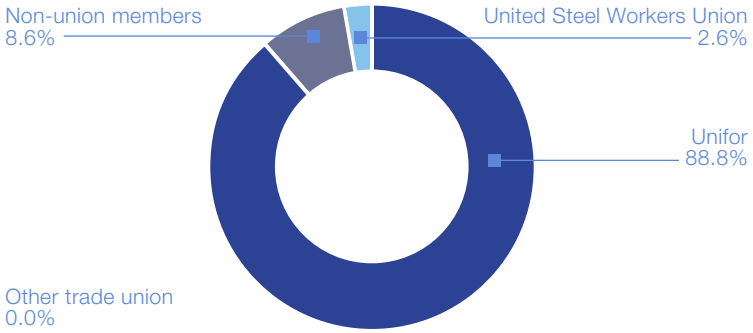
China

Canada

The Unifor trade union represents 10,500 hourly workers and more than 100 salaried workers.

Union Membership Canada

FCA in Canada *(% of total workforce, excluding managers)*



Italy

United States

Canada

Mexico

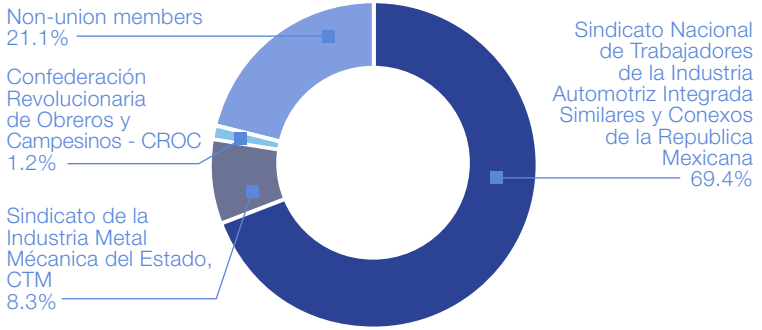
Venezuela

China

Mexico

The Sindicato Nacional de Trabajadores de la Industria Automotriz Integrada trade union represents approximately 9,600 hourly workers.

Union Membership Mexico
FCA in Mexico (% of total workforce, excluding managers)



Sindicato Nacional Crom De Trabajadores Y Empleados De La Industria Productora, Transformadora, Metalica, Derivados Y Conexos
0.0%

Other trade union
0.0%

Italy

United States

Canada

Mexico

Venezuela

China

Venezuela

The Sindicato de Trabajadores de Chrysler de Venezuela, L.L.C. trade union represents 735 employees (corresponding to 82.2% of the workforce).

Italy

United States

Canada

Mexico

Venezuela

China

China

FCA companies in China comply in all material respects with applicable laws and regulations. They adopt advanced labor practices relating to: contracts, working conditions, safety, introduction and establishment of union representation and involvement in the Company's decision-making process. Where representation exists, trade unions are ensured the appropriate conditions to operate internally. Where union representation is not established (usually in small companies where there is no legal requirement or employee request), the Human Resources department implements and applies the main regulations and adopts advanced practices, informing employees on relevant labor and other issues.

Restructuring and Reorganization

In Italy, the use of temporary layoff benefit schemes in 2015 enabled the Group both to manage market weakness as well as **restructuring and reorganization activities** related to the Group's investment programs. Redundancy plans activated during the year, in agreement with trade unions, affected 64 workers[7] who will become eligible for retirement during the period covered by the redundancy scheme.[8]

In 2015, a total of 19 workers affected by redundancy schemes left the Group as a result of trade union agreements. As in prior years, these individuals received an additional leaving incentive as established in the relevant trade union agreements.

In 2015, the Mirafiori Plant was affected by an extraordinary temporary layoff benefit scheme for reorganization, and during the year training courses were held for employees' professional qualification. Training courses also continued for employees at the Cassino plant affected by this extraordinary temporary layoff benefit scheme for restructuring.

The training encompassed a number of areas, including: World Class Manufacturing (WCM), technical updating, ergonomic and working methods, organization and managerial soft skills.

WCM, in particular, has been central to the new change process within the organization and to technical developments involving the creation of the new models assigned to the two production sites.

In the Cassino plant, certain training initiatives were implemented through on-the-job training at other Group operating locations and in special areas set up within the plant.

Starting from the Work Place Integration (WPI) process, know-how and experience from previous launches were used to design the most efficient, ergonomic and error-free workstations possible.

The various training methods, were continued in 2015, with more than 500,000 training hours at each plant.

Elsewhere in Europe, there were minimal stoppages and no significant restructuring or reorganizations directly related to fluctuations in demand.

Labor Unrest

In Turkey, a series of mobilizations affected the plants of the main automakers, with a ripple effect from the city of Bursa. Protests and unrest started at Oyak Renault and then spread to Ford and Tofas (a joint venture between FCA and the Turkish group Koç Holding), as well as to several component companies, including FCA Group companies, with a consequent stop in production for a number of days. The reason for the protest was mainly related to a claim for salary increases in line with those agreed between Bosch and the Türk Metal trade union at the company level.
The dispute was resolved with the recognition of a one-off payment.
Otherwise, again in 2015, the level of labor unrest and local labor action in other countries was negligible and mostly related to local issues at individual plants.

[7] Including the employees of Sealing and Brake Hoses Extrusion S.r.l.(company not consolidated under the L.L. consolidation method).
[8] A redundancy scheme ("mobilità") is a government benefit scheme applicable to employees affected by collective redundancies. The benefit period depends on worker age and on geographical location of the company and provides for the protection of workers' income.

Minimum Notice Period

Within the European Union, Directive 2001/23/EC stipulates that, in the event of transfer of an undertaking, business, or part of an undertaking or business as a result of a legal transfer or merger, a disclosure and consultation process must be implemented with employee representatives.

The procedure must be initiated reasonably in advance of the transfer. FCA companies comply with this Directive as implemented by the relevant laws and regulations of each EU member state.

In addition, the establishing agreement for the FCA European Works Council sets out the specific condintions under which employees are to be informed and consulted. These include fundamental changes in the organization; the introduction of new working methods and new manufacturing processes significantly affecting the Group as a whole; and reductions in size or the closure, relocation of production, or merger of companies or business units having a substantial impact on employment at the global level. Outside the European Union, local laws and practices apply.

In the United States, a federal law known as the Worker Adjustment and Retraining Notification Act (WARN), which applies to both unionized and non-unionized sites, requires an employer to give a minimum of 60 days' notice of any action that will cause at least 50 employees or 33% of the workforce to lose their jobs.

In Canada, notice-of-termination regulations vary by province. In Ontario, where the majority of the Canadian workforce is employed, notification must be given at least eight weeks prior to termination for employees with eight years or more of service. The remaining FCA Canada LLC employees are located in Alberta and Quebec, where the maximum notice requirement is eight weeks for employees with more than 10 years of service. At unionized sites and/or plants in the United States and Canada, the level of union involvement is normally defined by the collective bargaining agreement signed between the Company and the trade union and applicable at the plant level, and usually also sets out the information and consultation procedures to be followed in such circumstances. At nonunionized plants, it is common practice to make a company-wide announcement to all employees of organizational changes relating to outsourcing, giving reasonable prior notice of the operation.

In Mexico, companies are required to notify the Federal Arbitration and the Conciliation Board, as well as the trade unions, prior to any large-scale employee layoffs or plant closures. In agreement with Federal Labor Law, prior to any large-scale employee layoffs or plant closures, companies are also required to inform the Federal Labor Agency. According to FCA's Union Bargaining Agreement, in case of any large-scale employee layoff, the Company and the union will agree to the terms and conditions applicable to such layoff. However, no notification period is expressly defined in Mexican labor law.

In Venezuela, the notice period varies based on length of service.

Communities

Supporting Communities

FCA embraces our responsibility to contribute constructively to the greater community. The conviction that the Group can and should be an agent of positive change is deeply embedded in the Company culture. The commitment to society is also reflected in the way FCA encourages the workforce to donate its time and skills to help build strong, self-reliant communities.

The Company's corporate citizenship efforts primarily target areas where we have operations, as this is where we can be most effective. Our presence in these communities enables us to best assess particular needs and challenges related to social, economic and cultural aspects. Our ongoing engagement and strong relationships with community, academic and local leaders enables us to develop programs for the benefit of all.

Social initiatives primarily take the form of investment in **targeted projects**, planned in collaboration with local stakeholders, which contribute to the **long-term development of the local community**. In addition to monetary contributions, the Group's investment often includes employees **volunteering** their time and knowledge on projects that address community development, education, the environment and basic social needs.
During 2015, Group employees around the world volunteered many thousands of hours during work time.

FCA has set **long-term targets to advance education** and **training among youth**, with a particular focus on programs designed to expand science, technology, engineering and math skills, including initiatives that address innovation, mobility and environmental issues.

The Group Community Investment Guidelines provide guidance for the development and implementation of community initiatives to build a coherent and consistent approach for the Group worldwide. They offer information to manage the various initiatives to benefit the communities and remain consistent with each brand's core characteristics and positioning. Initiatives may be managed at the plant, company and brand level, and those that are financially significant are approved at the corporate level.

A portion of the Group's charitable activities is operated through the **FCA Foundation**, which supports a wide variety of charitable and community-based organizations. The Foundation is supported by FCA US and is governed by a Board of Trustees consisting of corporate executives.

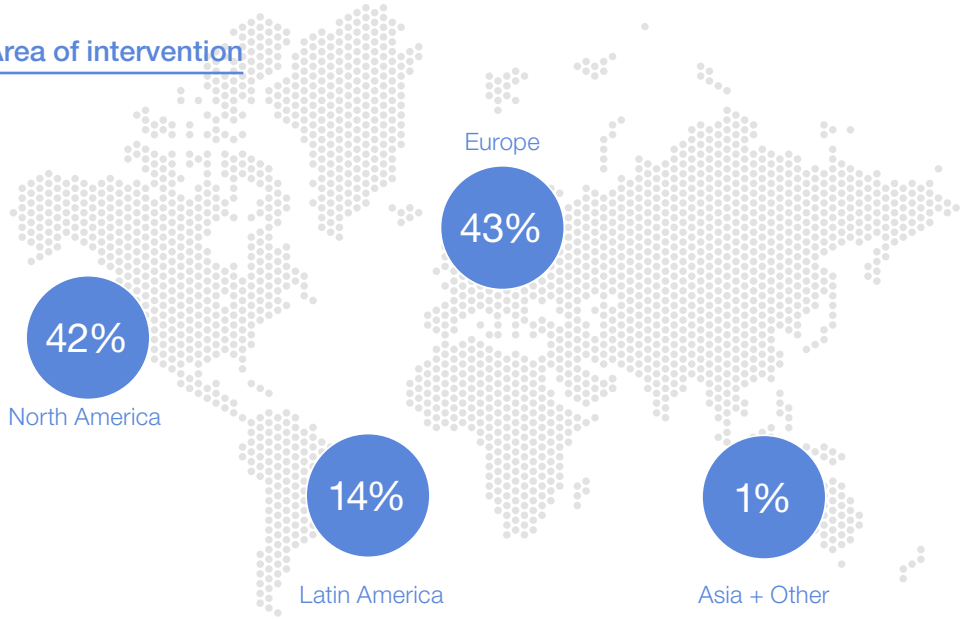
Group Community Investment Guidelines

Specific indicators may be used to measure the impact of initiatives to evaluate the benefit for the local community. This helps to ensure that the Group's activities remain aligned and relevant to the current needs of the regions involved. In addition, these metrics assist in evaluating potential opportunities for development or extension of programs, as well as turning successful individual activities into long-term commitments.

In 2015, the Group committed resources for a value of more than € 22 million[1] to benefit local communities.

[1] Based on non-accounting data and calculation methods. Also includes estimates. Amounts in currency other than Euro were converted based on exchange rate at December 31, 2015. The reported figure does not include initiatives whose sole purpose is to promote a brand. Amounts refer to all FCA companies worldwide consolidated on a line-by-line basis at December 31, 2015.

Area of intervention



In order to make a sustainable improvement in local communities, the Group prefers investments designed to enhance community development over a simple donation of money.

The Group's 2015 activities destined to benefit local communities are focused on a variety of causes: 53% for promotion of education, culture and art (scholarships represented around 40% of educational spend);[2] 23% for social welfare projects addressing issues such as disability, eldercare, etc.; 1% for emergency relief efforts; and 23% for other areas, such as health (representing 18%).

From a regional perspective, the Group primarily made investments in Europe where 43% of the total resources were donated. North America followed with 42% of investments and the remaining funds were donated in Latin America (14%), Asia and the rest of the world (1%).

Type of contributions

75%	17%	7%	1%
Cash contribution	Volunteer work	Donation in-kind	Management cost

Destination of initiatives

53%	23%	18%	5%	1%
Education including 40% for scholarships	Social welfare	Health	Other support	Emergency relief

[2] *Includes scholarships granted within the corporate program and other initiatives at the local level.*

Impacting Development

At each location, FCA is committed to operating in a way that generates local growth while respecting the interests of the various stakeholders. To achieve this self-sustaining development, three conditions must be met:

- identify and develop local assets
- establish processes to plan and implement change
- encourage a local mindset to promote growth.

These three conditions require a relationship of mutual trust between FCA, the local community and its institutions. FCA continues to evolve and develop its relationship with the core communities where it does business.

One significant example that is impacting local development is the **Árvore da Vida** program in Brazil where FCA is the highest-selling automaker. Developed in 2004, the Árvore da Vida program promotes social, cultural and economic growth by encouraging independence and empowerment of people living in the community of Jardim Teresopolis, an area near the FCA plant in Betim. More than 21,500 people have benefited from the program since it started. The program initially began with a study that revealed a low rate of education, low family income, high violence rates and a flat social structure. Consequently, the program focused on sports, socio-educational initiatives, professional qualification programs and support for entrepreneurship and community development. The success of the program has led to the creation of a Vision of the Future for the next decade, including four priorities for the next 10 years: Education, Culture, Community Integration and Safety.

Another program that focuses on local entrepreneurial activities to generate income is the **Cooperarvore**, a social cooperative formed by women from the community in 2006. The Cooperarvore not only contributed to recycling more than 25 tons of material, such as seat belts and automotive fabric, it also increased the average income of cooperative members by 249%, from 2007 to 2015.

The Motor Citizens corporate volunteer program allows FCA employees in the NAFTA region the chance to positively impact communities through a variety of engagement activities. Salaried employees in the U.S., Canada and Mexico have 18 hours of paid time off each year to volunteer for eligible charitable organizations of their choosing, as well as for Company-sponsored initiatives. In 2015, one of the many Motor Citizens projects was a Detroit city neighborhood revitalization initiative in partnership with the nonprofit organization Life Remodeled. FCA US employees helped refurbish homes, board up abandoned properties and beautify vacant lots along with a variety of other clean-up efforts for which we were awarded the Spirit of Detroit Award from the Detroit City Council.

GRI: G4-EC7, G4-EC8, G4-HR8, G4-SO1, G4-SO2

Educating Generations

FCA believes that one of the key factors to accelerate economic growth and promote employment is to ensure that younger generations have the **needed skills to succeed in the labor market**. The Group pursues the goal of helping students complete their schooling through a variety of education and training initiatives in communities around the world. In the EMEA region, FCA's partnership agreement with Politecnico of Turin extends to 2018, including a commitment from FCA to provide €7.4 million in funding and other resources. For the academic year 2014-2015, 169 students completed the Laurea Magistrale and five received a dual Master's degree from Politecnico and the University of Windsor in Canada. Teachers with automotive experience conducted 35% of the training and collaborated on a number of joint research programs, in addition to being involved in workshops, summer courses and student projects. FCA personnel also provided a total of 88 hours of instruction, of which 40 were focused on environmental sustainability issues to support additional educational initiatives for the students.

The demand for skilled professionals continues to grow across the industry. To train graduates for a role within the Italian manufacturing industry, Comau collaborated with Politecnico of Turin to organize a Masters in Industrial Automation which was funded by the Region of Piedmont. The objective of the two-year postgraduate program is to attract the best graduates in engineering from Italian and foreign universities. These students will be provided specialized training in industrial automation to prepare them for a two-year advanced apprenticeship with the Group. The curriculum also includes a focus on environmental sustainability and approaches used to reduce vehicle emissions. The program is taught in part by Comau managers and is conducted entirely in English with 540 hours of theory in the first year and 660 hours of project work at Comau in the second year. The success of the program is visible by the 79 engineers hired from the first four graduating classes and the additional 20 students enrolled in the 2015 program.

FCA has a long tradition of engagement in education programs in the LATAM region. The consolidated Árvore da Vida Jardim Teresópolis program focuses on educating youth near the FCA Betim plant (Brazil). Together with the efforts of government, NGOs and the community, the program helped improve education results measured by key indicators.

For example, the Basic Education Development Index increased by 20.5% between 2005 and 2013, going from 4.5 to 4.88. In addition, the students who benefited from the Árvore da Vida program showed an increase in passing their final exams which climbed from 87% in 2010 to about 96% in 2015.

GRI: G4-EC7, G4-EC8, G4-SO1, G4-SO2

Another educational initiative is the Qualiescola project, located near the FCA plant in Pernambuco (Brazil).

The Qualiescola project was launched in 2015 to train elementary school teachers and administrators of schools to improve public education. In total, 178 teachers and administrators from 43 public schools each received more than 90 hours of training.

FIRST Robotics was created in 1989 to inspire high school students to explore and pursue careers in science, technology, engineering and mathematics.
By encouraging interest in these critical fields at a young age, *FIRST* (For Inspiration and Recognition of Science and Technology) is helping develop the technical skills necessary for the workforce of the future.

In 2015, the **FCA Foundation** awarded approximately € 270,000 in grants to *FIRST* programs in the U.S. and Canada. In addition, FCA employees in the U.S. and Canada served as team mentors to guide 59 student teams at the high school and middle school levels to design, build and program robots to perform prescribed tasks against a field of competitors. Through this process, students learn basic physics, electrical and mechanical engineering and machining skills.

In the APAC region, Fiat India Automobiles Private Limited (FIAPL) has a venture in Pune (India) between FCA Italy and Tata Motors in collaboration with Don Bosco Vyawasaik Prashikshan Kendra. One of the programs, called Diksha, is focused on providing education and technical training to youth, particularly for those who are disadvantaged and have limited opportunities.
The goal of this initiative is to help the students become self-sufficient and able to earn a self-supporting income. FIAPL supports Diksha through:

- improving the knowledge, capability, and competencies of trainers and teachers
- offering company training internships for trainers and students
- supporting practical experience through donations of vehicles, components, workshop equipment, teaching materials and training aids
- on-the-job factory training, the dealership network and train-the-trainer programs.

Since 2013, approximately 450 students have participated in the program with about 98% of qualified students employed in the automobile sector.

TechPro² Social Return on Investment Analysis

GRI: G4-EC7, G4-EC8, G4-SO1, G4-SO2

TechPro² is an international FCA project in association with Salesian Vocational Training Centers (CNOS-FAP) that has been in operation since 2008. The project offers young people, who are often from **disadvantaged backgrounds**, with continuing education to become specialized operators for automotive repair centers and the dealer network. The three-year program provides selected students with theoretical and practical knowledge from CNOS-FAP instructors who have received professional training through FCA employees.
The training centers are designed and equipped by FCA and reflect the same service standards as the FCA dealer network. Second and third-year students gain important hands-on experience through internships and apprenticeships. In 2015, 694 students in Italy were enrolled in apprenticeships, with 36% of them within the FCA dealer network. In addition, approximately 3,100 students took part in the program around the world, receiving more than **three million hours of training** in seven different languages and 52 locations.

TechPro²

CNOS-FAP conducts an annual survey to assess the effectiveness of the initiative. In 2015, the survey involved 399 students who had completed the program the previous year and, despite the employment challenges in the automotive industry, 35% of the students in Italy had found employment. The successful results of the program have encouraged FCA to further investigate the benefits in terms of improvements to the social condition and employability of the program's participants. FCA's investigation has shown that for every euro spent by the Company on TechPro², it has a **social return of about €6**. The Social Return on Investment (SROI) analysis estimates the social and economic costs and benefits of our services, comparing resources invested to value generated across a panel of selected stakeholders, including FCA, the Italian government, local communities and students participating in TechPro². For data consistency, the analysis was limited to the TechPro² program in Italy from 2009 to 2014. This time period allows the opportunity to evaluate the **social benefit** both during and after completion of the training program. The results of this investigation also confirm the importance of investing in the education of future generations as a means of **generating value**.

Products and Processes

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Product Innovation and Responsible Mobility

Responsible Products

FCA endeavors to reduce the environmental impact of its vehicles over their entire life cycle, while responding to consumer demands in each market where we do business. In January 2016, the Group updated our 2014-2018 Business Plan to better reflect these demands. The updated plan addresses the unique regulatory requirements of each region, and includes actions to improve vehicle fuel efficiency, including further applications of battery/electric technologies, such as the **Chrysler Pacifica Hybrid** which was unveiled at the beginning of 2016.

FCA's approach to providing mobility solutions strives to minimize the impact on people and the environment, by focusing on:

- improving the fuel efficiency of vehicle and powertrain technologies, both conventional and alternative
- directly involving drivers in reducing environmental impacts of vehicles during use
- developing and promoting new concepts that improve the mobility experience.

Emissions and Efficiency

FCA vehicles must comply with comprehensive local, regional and national laws and regulations with respect to vehicle emissions and fuel economy. The Group develops technologies that respond to the regulatory requirements of each market, while at the same time addressing vastly different consumer preferences and demands across the world.

FCA's efforts to reduce CO_2 emissions and fuel consumption have focused on:

- vehicle/powertrain combination
- vehicle energy demand (aerodynamic efficiency, weight, tire performance, etc.)
- customer driving style and usage.

To optimize vehicle energy efficiency, FCA addresses each of these areas at the start of the product development process.

For more information on emissions and fuel economy regulations in the various markets, see the FCA 2015 Annual Report on Form 20-F.

FCA 2015 Annual Report on Form 20-F

GRI: G4-DMA, G4-EN7, G4-EN27

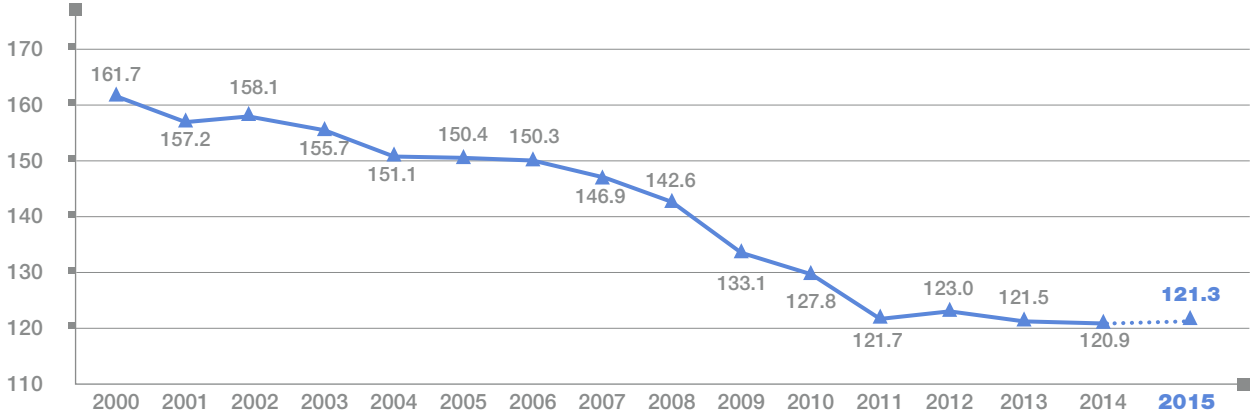
European Union

GRI: G4-DMA, G4-EN7, G4-EN27

In the European Union, the average CO_2 emissions of the Group's Mass-Market Brand cars is 121.3 g/km in 2015. This represents a 19% decrease compared with 2006 (the benchmark year used in EU regulations to set the 2012-2015 and 2020 targets), and a 25% reduction compared with 2000, which was the first year the EU Commission monitored average emissions.

Average CO_2 Emissions for Newly registered Passenger Cars

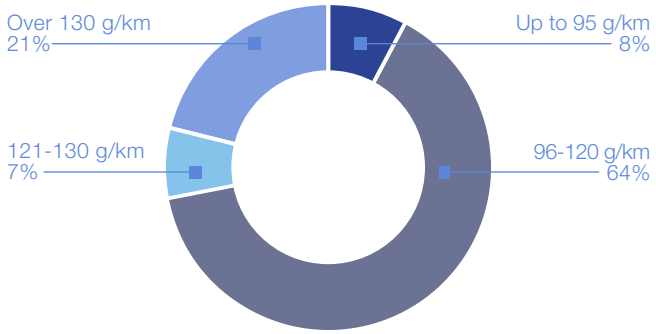
FCA (Mass-Market Brands) in the European Union (g/km)[1]



Approximately 72% of the Group's newly registered cars of Mass-Market Brands emitted 120 g/km of CO_2 or less in the European Union, while 79% emitted 130 g/km of CO_2 or less.

New Car Registrations by CO_2 Emission Levels

Mass-Market Brands in the European Union



In 2014, the European Union implemented new regulations that established CO_2 emission targets for light commercial vehicles (LCV) and, accordingly, FCA continued to monitor LCV data and established appropriate systems based on regulation requirements.

In 2015, FCA continued to be compliant with both passenger car and LCV regulations.

[1] *Source: 2000-2014 EU Commission data; 2015 FCA estimate.*

Other Emissions

As part of its environmental commitment, FCA's work to reduce fuel consumption and CO_2 emissions is paired with an even greater effort to develop technologies that reduce polluting emissions, including particulates and oxides of nitrogen (NOx).

The Group has developed solutions to reduce emission levels to comply with the Euro 6 standard. This standard introduces mandatory, more stringent limits, particularly on diesel NOx emissions, for all new type-approved passenger cars in Europe as of September 2014, and for all new registrations as of September 2015 (one year later for LCV). For diesel engines, FCA's MultiJet II technology represents an important step toward compliance with Euro 6 emission standards, as it ensures better combustion while lowering the need for exhaust gas aftertreatment.

In 2015, compliance to the **Euro 6** standard was completed for the entire FCA passenger car lineup.

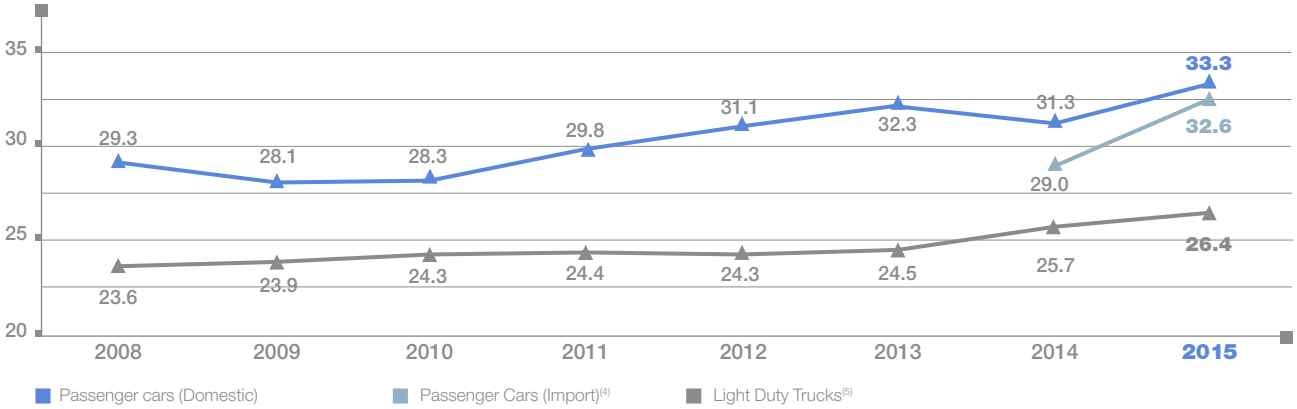
Further requirements of Euro 6 have been developed by the EU institutions and are expected to be implemented on September 1, 2017. In addition, a new test procedure has been defined to directly assess the regulated emissions of light duty vehicles under real driving conditions and is expected to be put into effect for new passenger cars on September 1, 2017 and for all passenger cars on September 1, 2019 (one year later for LCV).

United States

GRI: G4-DMA, G4-EN7, G4-EN27

In the U.S., vehicle fuel efficiency is measured by fuel economy expressed in miles per gallon (mpg). Actual fleet performance is dependent on many factors, including the vehicles and technologies FCA offers, as well as the mix of vehicles consumers choose to buy.

Fuel Economy[2] of Vehicles Sold in the U.S. according to Corporate Average Fuel Economy - CAFE[3]
Mass-Market Brands in the U.S. (mpg)



Trucks, including SUVs, pickup trucks and minivans, accounted for more than three-quarters of FCA sales in the U.S., and their truck fuel economy improved 2.7% from 2014 to 2015, increasing from 25.7 mpg to 26.4 mpg. Domestic passenger car fuel economy improved 6.4%, from 31.3 mpg in 2014 to 33.3 mpg in 2015, and import passenger car increased from 29.0 mpg to 32.6 mpg. The 2015 model year launch of the Jeep Renegade and Chrysler 200, as well as the continued expansion of the more fuel-efficient 8-speed transmission across the vehicle lineup contributed to these improvements.

[2] Refers to fuel consumption in miles per gallon, which, by applying an appropriate conversion factor, corresponds to the kilometers traveled with consumption of a liter of fuel. Therefore, an increase in fuel economy corresponds to an increase in vehicle efficiency and a reduction of fuel consumption and CO_2 emissions.
[3] Data is reported to the U.S. National Highway Traffic Safety Administration (NHTSA) and provided by model year, meaning the year used to designate a discrete vehicle model, irrespective of the calendar year in which the vehicle was actually produced, provided that the production period does not exceed 24 months. CAFE standards from NHTSA are set independently for passenger cars and light duty trucks. Fuel economy is based on the most recent NHTSA required submission, which for 2015 reflects mid-model year data. Previous year data is adjusted to reflect final EPA/NHTSA reports.
[4] FCA's import passenger car fuel economy was reported for the first time in 2014, and includes both Mass-Market and Luxury Brands sold in the U.S., including Fiat, Maserati and Ferrari brand vehicles.
[5] Vehicles for the transportation of passengers and/or goods with specific characteristics defined by the U.S. National Highway Traffic Safety Administration – NHTSA (e.g., SUVs, MPVs and pickups).

Other Markets

GRI: G4-DMA, G4-EN7, G4-EN27

In countries in the APAC and LATAM regions, including those without specific regulations governing CO_2 emissions or fuel consumption, FCA offers vehicles with leading-edge technology designed to reduce both.

Brazil

In Brazil, the major market in the LATAM region, more than 462,000 Flexfuel and TetraFuel vehicles were registered[6] in 2015, accounting for approximately 96% of vehicles licensed by the Group. FCA participates in the government's INMETRO vehicle fuel consumption monitoring program (PBEV - Brazilian Labeling Program Vehicle). For PBEV 2015, 51 Fiat brand vehicles were involved.

As a result of technological improvements, the 1.8-liter E.torQ engine with Flexfuel technology earned the EVO designation. One of these technologies is the Continuously Variable Cam Phaser (CVCP), which contributes to a reduction in fuel consumption and greenhouse gas emissions. This engine is available on the Jeep Renegade in the LATAM market. Other powertrain upgrades, such as a new cylinder head and piston, new camshaft, variable oil pump and new air intake manifold led to increased performance at lower engine speed. In addition, a new variable intake system, designated VIS, was introduced on the 1.8-liter E.torQ EVO VIS which further contributes to a reduction in fuel consumption and greenhouse gas emissions by improving the overall engine torque profile. This engine is available on the Fiat Toro in the LATAM market.

China

In China, where the Corporate Average Fuel Consumption (CAFC) regulation set targets for fuel efficiency starting in 2015, the Group is committed to launching fuel efficient products, with technologies that have been upgraded and adapted to address the specific characteristics of the market. In 2015, the import of diesel engine models, including Jeep Wrangler, Jeep Grand Cherokee and Dodge Journey, resulted in a positive contribution to the fleet CAFC. Diesel engine models represented approximately 15% of total FCA imports in 2015. To respond to the more stringent 2016 CAFC regulation, technical solutions such as Engine Stop-Start (ESS) technology were introduced on selected 2016 model year vehicles.

The 2.0-liter diesel engine, developed to respond to Chinese regulations and local market needs, was launched in 2015 on the Dodge Journey.

[6] *Official data communicated to Brazil's INOVAR-Auto program.*

Efficient Powertrains

FCA's commitment to reduce vehicle CO_2 emissions and improve fuel economy is reflected in the long-term targets that we have established. To fulfill these commitments, the Company has adopted a selective approach that applies the most suitable technologies considering market and regulatory requirements, as well as customer expectations with respect to level of technology and cost.

Product Targets

A key enabler to this approach is FCA's global powertrain organization that leverages regional strengths and develops plans from a global perspective.

FCA's distinctive technologies such as MultiAir II and MultiJet II have continued to evolve. In combination with other technologies such as direct injection and variable displacement oil pumps, this has led to the development of efficient powertrain architectures.

In addition, FCA and supplier capabilities are being optimized through ongoing improvements in the co-development process, from the design phase through the start of production.

Gasoline Engines

GRI: G4-EN7, G4-EN27

To respond to widely varying consumer demands across the regions, FCA offers a broad portfolio of gasoline engines.

FCA launched MultiAir technology in Europe in 2009 and applied it to the Fully Integrated Robotized Engine, or FIRE, engine family. Since production began at our plant in Termoli, Italy in 1984, more than 20 million FIRE engines have been produced at that plant. In 2011, we also launched the FIRE MultiAir naturally aspirated and turbo engines in North America from our engine plant in Dundee, Michigan.

The FIRE family now offers a complete lineup in terms of displacement, fuel, air management and valve actuation, including the latest variant on the Jeep Renegade and Fiat 500X, the 1.4-liter Turbo MultiAirII.
The second generation of MultiAir technology further improves fuel efficiency thanks to the combination of innovative camshaft profiles and control strategies.
In the EMEA region, the portfolio starts with the 0.9-liter engine. The Engine Stop-Start (ESS) system was extended in 2015 to the 8-valve, 1.2-liter versions of the Fiat 500 and Lancia Ypsilon, further reducing CO_2 emissions generated.
The E.torQ engine family is a 1.6-liter gasoline-powered EVO engine (Euro 6) with ESS and smart alternator produced in Brazil. It is now available for the European market on the Jeep Renegade and Fiat 500X.

Development continues on a new family of small gasoline engines designed to improve vehicle fuel economy and emission levels. This engine family covers a large range of vehicle applications with different power outputs. It introduces new features and technologies to improve efficiencies, focusing on a reduction in friction and thermal management to maximize the efficiency of the engine's internal combustion. This engine's output is aligned with the expected evolution of regulations and the foreseeable trends in market and customer needs.

FCA's Pentastar V-6 engine, originally launched on the Jeep Grand Cherokee in 2010, now powers almost six million vehicles. In 2015, the Pentastar was upgraded with a focus on improving efficiency and providing greater customer satisfaction. Depending on the application, the redesigned engine can offer more than 6% fuel economy improvement. During development, potential improvements were measured right down to the component level, with the final solution being a combination of features that deliver the greatest benefits in the widest operating range. Enhancements include two-step variable valve lift (VVL), cooled exhaust-gas recirculation and innovative weight reduction strategies. The VVL system is designed to remain mostly in low-lift mode until the customer demands more power; then it responds by switching to high-lift mode for improved combustion. The result is less overall pumping work, which on its own, accounts for a fuel-economy improvement of up to 2.7%. And, in spite of added content, the redesigned components reduce overall engine weight by four pounds.

Diesel Engines

GRI: G4-EN7, G4-EN27

FCA's lineup of diesel engines was further expanded with the recent launch of the **2.2-liter MultiJet four-cylinder engine**. The passenger car range now extends from the in-line 1.3-liter to the V-6 3.0-liter, with three additional in-line displacements: 1.6-liter, 2.0-liter and 2.2-liter.

The primary 2015 launches of new diesel Euro-6 applications for passenger cars and light commercial vehicles comprise the 1.3-liter in the Fiat 500L, Qubo and Fiorino; the 1.6-liter in the Alfa Romeo Giulietta and Fiat Doblò; and the 2.0-liter in the Giulietta and Jeep Cherokee.

The new 2.2-liter turbodiesel was launched at the beginning of 2015 on the Jeep Cherokee in Europe. This new engine, which was right-sized for application on specific models, offers a balance between performance and fuel economy.

With respect to CO_2 emissions, the 500X equipped with the 1.6-liter engine achieves a value of 109 g/km (consumption of 4.1 liters/100 km, combined cycle). To reach this level, **eco-friendly technologies** were incorporated, including a smart alternator, which modulates energy output based on actual energy demand and battery charge level; optimization of the engine cooling circuit to reduce warm-up time; and a variable displacement oil pump that improves energy efficiency by regulating oil pressure based on actual operating conditions. The vehicle is also equipped with Engine Stop-Start technology. Low-viscosity oil is used to minimize friction on the engine and transmission.

The exhaust gas treatment system on the 1.6-liter and 2.0-liter engines incorporates close-coupled diesel particulate filter technology, which provides efficient integration between the oxidizing catalytic converter and the particulate filter. The oxidizing catalytic converter also incorporates advanced NOx Storage Catalyst (NSC) technology which reduces NOx emissions by as much as 60% through a special chemical process coupled with sophisticated software-controlled injection strategies. Adoption of this technology has made it possible to meet the strict Euro 6 emissions standards.

On the combustion side, enhanced control of injection parameters together with optimization of combustion bowl shape represented a key step in mitigating the formation of pollutants and enhancing fuel economy. In terms of aftertreatment systems, research and development activities mainly focused on passive and active NOx reduction technologies and the study of real driving conditions. Advanced aftertreatment systems for the reduction of NOx emissions are under development both for passenger car and light commercial vehicle applications.

FCA's flagship diesel engine is the 3.0-liter V-6. The Euro 6-compliant version with selective catalytic reduction (SCR) technology to cut NOx emissions is available in the Maserati Ghibli and Quattroporte models, as well as the Jeep Grand Cherokee. The SCR has also been adopted in the light commercial vehicle range on the Euro 6 version of the Fiat Ducato with the 2.3-liter engine.

In the U.S., this engine and aftertreatment technology, named EcoDiesel, is available on the Jeep Grand Cherokee and Ram 1500 pickup. In December 2015, the EcoDiesel was named one of "Ward's 10 Best Engines" for the third consecutive year. The EcoDiesel was the only representative of clean diesel engine technology among Ward's 10 Best Engines. In 2015, FCA further improved the fuel economy of the Ram 1500 EcoDiesel HFE (for high fuel efficiency). The U.S. Environmental Protection Agency (EPA) rates the Ram 1500 pickup at 21 miles per gallon (mpg) city, 29 mpg highway and 24 mpg combined. On the Ram 1500, the engine delivers the highest fuel economy among all full-size truck competitors.

On the Jeep Grand Cherokee, the EcoDiesel offers fuel economy of 30 miles per gallon highway with a driving range of more than 730 miles. Green Car Journal named the **Jeep Grand Cherokee EcoDiesel its 2015 Green SUV of the Year** for its lower environmental impact, as well as comfort, power, functionality and driving range.

Transmissions

GRI: G4-EN7, G4-EN27

FCA offers a well-balanced transmission portfolio that includes manual transmissions, automated manual transmissions, dual dry clutch transmissions (DDCT) and automatic transmissions. This broad offering is designed to meet market demands and regulatory requirements in the different regions where we operate, and to achieve the right vehicle performance characteristics for our individual brands. The use of DDCT, a core technology for the Group, will be extended in 2016 to new applications in order to improve fuel economy and offer driveability advantages in markets where customers value this technology.

The Group has established a leadership position in automatic transmission technology, offering 8- and 9-speeds to gain efficiency, performance and refinement. These advanced TorqueFlite transmissions contribute to a 6 - 10% improvement in fuel economy over their 4-, 5- and 6-speed predecessors. Particular focus is placed on optimizing the engine-transmission pairings. The objective is to develop the most efficient powertrain solutions for each vehicle segment in order to significantly reduce fuel consumption and CO_2 emissions. Since their launch, more than one million 8-speed and 9-speed transmissions respectively have been produced.

Maserati's sustainable innovation

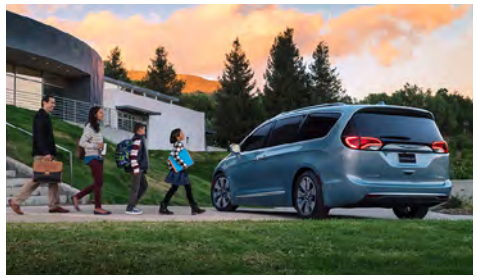
In a year of consolidation and in the run-up to the launch of the **Levante SUV** scheduled for 2016, Maserati upgrated all current engines to the Euro 6 standard and added exclusive new contents for the Ghibli and Quattroporte sedans.

For gasoline engines (V-6 Twin Turbo from 330 up to 410 hp and V-8 Twin Turbo with 530 hp), the introduction of Euro 6 homologation and advanced Engine Stop-Start contributes to a reduction in CO_2 emissions and fuel consumption of up to 8%, and unchanged performance compared with the previous Euro 5 engines.

On the V-6 diesel engines, consumption as well as performance remain unchanged, while to address Euro 6 homologation Maserati introduced AdBlue (Urea) technology, with a dedicated on-board tank to significantly reduce NOx emissions.

Other areas to benefit from new content are driver aids and safety, with the Blind Spot Alert and Rear Cross Path system, and the user-friendliness of the Power Trunk (motorized trunk opening and closure with hands-free activation). Maserati is also continuing to work on the development of a new hybrid powertrain that can be incorporated in future Maserati vehicles to allow full-electric driving and further reduce CO_2 emissions to address new stringent emissions targets.

Electric and Hybrid Technologies



The updated FCA 2014-2018 Business Plan presented in January 2016 reconfirmed the **Company's commitment to battery/ electric technologies**. The technologies under development will be applied as needed in a range of electrified vehicles, including conventional hybrids, plug-in hybrids, fully electrified and range-extended electric vehicles. We also continue to research vehicle applications for improving the use and re-use of thermal energy, thereby reducing energy consumption, and extending the range for hybrid electric and all-electric vehicle models.

FCA's first battery electric vehicle for mass production, the **Fiat 500e**, began production in late 2012.

The **Chrysler Pacifica Hybrid** was unveiled in January 2016 and is expected to be available in the second half of the year. The Pacifica Hybrid, which can be configured to accommodate seven occupants, is the industry's first electrified minivan and is expected to achieve an estimated range of 30 miles on electric power from a 16-kWh lithium-ion (Li-ion) battery. In city driving, it is expected to achieve an efficiency rating of 80 MPGe based on U.S. Environmental Protection Agency standards. The Pacifica Hybrid was designed to respond to the driving behaviors and multipurpose nature of the minivan segment.

This vehicle pairs the upgraded and specially-adapted 3.6-liter Pentastar V-6 gasoline engine with an electrically variable transmission (EVT).
The EVT features two electric motors, which are both capable of driving the vehicle's wheels. Conventional electrification designs dedicate one motor to serve as a generator and a second motor – usually much larger – to deliver torque to the wheels. The Chrysler Pacifica Hybrid, however, uses a one-way clutch that allows the motor typically used only as a generator also to deliver torque to the wheels, depending on driving conditions. The result is increased efficiency, refinement and improved component packaging.

When the battery's energy is depleted, the Pacifica Hybrid becomes a part-time electric vehicle, like a conventional hybrid. Power to the wheels is supplied by the electric drive system or supplemented by the Pentastar engine. The battery pack may be fully recharged in as little as two hours using a 240-volt plug-in system. Deceleration triggers the motor to turn into a generator, which creates electricity to send back to the battery pack.

FCA is also developing a **mild hybrid using belt starter generator (BSG) technology**. BSG offers improvement in fuel economy and a reduction in CO_2 emissions at a relatively low cost. This technology utilizes an electric motor which acts like a modified alternator that generates current, but also doubles as a starter to restart the engine when the vehicle is stationary. BSG is expected to be applied to FCA vehicles within the next two years.

FCA supports public and private sector pilot projects aimed at overcoming existing barriers and testing the market potential for widespread application of electric vehicles, particularly for urban use. In Europe, a car-sharing service was established with the City of Turin. FCA provided a fleet of eight all-electric Fiat 500e vehicles, which have traveled roughly 42,000 km around the city center. The Fiat 500e was also part of the fleet supplied to **Expo Milano 2015 by FCA**, as **Official Global Partner for sustainable mobility**.

These 10 Fiat 500e vehicles traveled nearly 26,000 km during more than 8,000 trips, providing the Company with extensive real-world data on vehicle usage and consumer preferences.

FCA's collaboration with McMaster University in Canada is in its second of three phases. This project was announced in 2014, and is a five-year, €13.7 million partnership with the university in Hamilton, Ontario, with funding support from the Canadian government. Besides advancing FCA's electrification strategy, the project has made available to the Company a valuable pool of skilled new employees. During 2015, the project focused on developing, designing and testing components that are improved in terms of cost, efficiency and lower density, and integrating them into a powertrain system for near-term launch.

A number of other hybrid/electric projects are also in process. Among these are:

- a collaborative project involving FCA's research and development center, CRF, called OPTEMUS. This project is aimed at extending the driving range of electric and plug-in hybrid cars and leveraging low energy consumption and energy harvesting.
- an energy storage technology project in partnership with cell suppliers and pack integrators.
- an innovation project on next generation power electronics in partnership with microprocessor and electronic suppliers. This project seeks to combine unrelated technologies to improve performance. The first phase has been completed.
- a collaborative development of wireless charging for plug-in hybrid electric and battery electric vehicles.

Alternative Fuels

In addition to electric and hybrid technology, FCA invests heavily in solutions that optimize the use of available natural resources. From natural gas to biofuels, the Company aims to offer technologies that are aligned with the fuels available in the various markets, and that reduce vehicle emissions.

Natural Gas

GRI: G4-EN7, G4-EN27

FCA believes that natural gas is one of the best existing solutions for reducing urban pollution levels and CO_2 emissions.

It is one of the most economical fuels available and a viable alternative to traditional fuels. Specifically, natural gas:

- produces a low level of harmful emissions, from particulate matter (reduced to essentially zero) to the most reactive hydrocarbons that result in the creation of other pollutants
- generates 23% less CO_2 emissions compared with gasoline
- has the potential to become a renewable fuel source in the form of biomethane.

Natural gas is also a key element in the European Union's strategy for sustainable mobility. At FCA, alternative fuels form a key pillar of our strategy, as illustrated by our collaboration with the Fuel Choices Initiative, an Israeli program aimed at reducing the transport industry's dependence on oil. In February 2015, Israel's Prime Minister's Office, through the Israel Fuel Choices Initiative, signed a non-binding Memorandum of Understanding with Fiat Chrysler Automobiles (FCA), Iveco (a brand of CNH Industrial) and Magneti Marelli (FCA Group) for co-operation in the development of natural gas-based technologies.

Israel Fuel Choices Initiative

Market Leadership

GRI: G4-EN7, G4-EN27

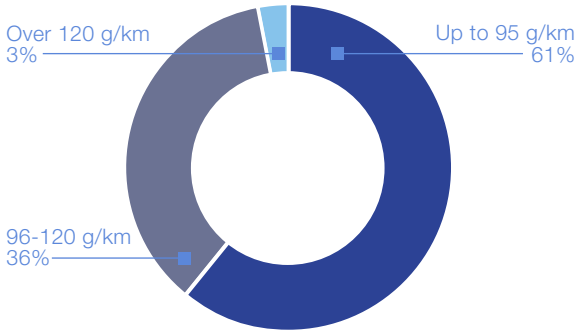
FCA has been Europe's leading producer of Original Equipment Manufacturer (OEM) natural gas vehicles for more than 15 years. The Group continues to invest in this technology and offers a wide range of eco-friendly, bi-fuel (natural gas/gasoline) vehicles that meet the needs of private and commercial consumers.

The range includes the new Doblò and new Ducato 140 Natural Power, both available since early 2015. In 2015, the new Ypsilon was offered with an 80 hp, 0.9 cm^3, bi-fuel (methane and gasoline), TwinAir Turbo version.

Consumer safety and comfort have been taken into account, as the natural gas tanks are designed to be fully integrated into the vehicle's structure. In 2015, FCA's European leadership was reconfirmed, with more than 44,000 natural gas vehicles registered, representing a share of about 50%. Since 1997, the Group has sold more than 690,000 natural gas-powered cars and commercial vehicles.

For the Fiat and Lancia brands, natural gas cars accounted for 10% of their combined 2015 sales in Italy by volume.

Newly Registered Natural Gas Cars by CO_2 Emission Levels
Fiat and Lancia in Europe



In the U.S., FCA remains the only automaker to offer an OEM-built natural gas pickup, the Ram 2500 Heavy Duty CNG. Together with another automaker, the Company is partnering with Argonne National Laboratory on a dual-fuel engine project funded by the U.S. Department of Energy. The key objectives of this two and a half-year investigation into in-cylinder gasoline/compressed natural gas (CNG) blending include improved engine efficiencies over both gasoline and natural gas-only operation; a more than 50% petroleum reduction through efficient CNG combustion and displacement of gasoline; and the ability to operate on gasoline only, CNG only, or a combination of both.

Biomethane: a Renewable Fuel Source

GRI: G4-EN7, G4-EN27

Biomethane, which is produced by upgrading biogas, has the same properties and uses as fossil natural gas. Biogas is derived from organic materials such as manure, crop residues and organic municipal waste. A natural gas vehicle can also run on biomethane and, on a well-to-wheel basis, a vehicle running on biomethane produces roughly the same level of CO_2 emissions as an electric-powered vehicle running on electricity generated from renewable fuel.

During 2015, FCA was engaged in several projects to promote biomethane as a sustainable solution for transportation. Among these initiatives was the Company's participation in the (Bio)Methane, The Road to Sustainable Mobility conference in Brussels in partnership with CNH Industrial, the European Natural Gas Vehicles Association (NGVA) and the European Biogas Association. The event presented the opportunity for the principal representatives of European institutions and industry to come together to explore new developments and the benefits of biomethane.

In addition, during Expo Milano 2015, Fiat Chrysler Automobiles (FCA), together with CNH Industrial and Air Liquide, launched a project to promote the introduction of biomethane throughout Europe's natural gas distribution infrastructure network. To this end, 3.64 GWh of Biomethane Green certificates were bought under the UK GreenGas Certification Scheme. This quantity of biomethane is equivalent to about 340,000 m^3 of natural gas for the Fiat 500L vehicles and Iveco Buses provided at Expo 2015. By using these quantities of biomethane in place of natural gas, 118 tons of CO_2 can be avoided, which is equal to the absorption of a forest composed of 160 trees throughout their life span.

BIOMETHAIR Project

The Biomethair Project, co-funded by the Piedmont Region as part of the Automotive Platform program, was concluded in October 2015. A prototype version of the TwinAir CNG engine was optimized to exploit fuel characteristics, leading to a dedicated configuration with a higher compression ratio. The unit was coupled with a mild hybrid 48V system providing hybrid functionalities such as enhanced Engine Stop-Start and energy recovery during deceleration. A Fiat Panda Natural Power vehicle was used as the base. The project also investigated the fuel production process: through a collaboration with ACEA Pinerolese and Environment Park, a pilot plant was completed that efficiently converts urban residual **biomass waste** into **biomethane and biohydrogen**, demonstrating the potential to locally self-produce a clean and sustainable fuel from waste residues.

Biomethair Project

Biofuels

GRI: G4-DMA, G4-EN7, G4-EN27

In Brazil, FCA has a full range of Flexfuel vehicles that run on varying blends of gasoline and **bioethanol**. FCA's innovation in this field is also exemplified by the TetraFuel engine (patented by Magneti Marelli), the first in the world capable of running on four different fuels: bioethanol, Brazilian gasoline (refined crude oil and 22% anhydrous ethanol), gasoline and natural gas. Brazil has an extensive bioethanol distribution network, supported by long-standing government policies and readily available raw materials.

In 2015, more than 462,000 Flexfuel and TetraFuel vehicles were registered[7] in Brazil, accounting for approximately 96% of vehicles licensed by the Group.

In Europe, all engines sold are compatible with blends of up to 10% bioethanol with gasoline (E10), and up to 7% biodiesel with diesel (B7). In the NAFTA region, FCA produced more than 900,000 2015 model year vehicles capable of running on E85 flexible fuel, which contains 85% ethanol, or biodiesel blends of up to 20% (B20).

[7] *Official data communicated to Brazil's INOVAR-Auto program.*

Design for Efficiency

FCA continually works to identify opportunities to reduce emissions and improve fuel economy. In addition to powertrain and alternative fuel engine innovations, a number of technologies are being integrated into our vehicles to optimize energy demand, including improving aerodynamic efficiency, reducing weight, minimizing tire drag, offering Engine Stop-Start systems and using thermal control technologies.

Magneti Marelli products that are intended to improve energy efficiency (including hybrid systems, Xenon and LED lights, gasoline direct injection systems and automated manual transmissions) contributed €2.1 billion in revenues for 2015.

Improved Aerodynamics

GRI: G4-DMA, G4-EN7, G4-EN27

Fuel economy can be improved by optimizing vehicle aerodynamic performance. FCA strives to reduce the aerodynamic drag of its vehicles, and also uses active aerodynamic technologies that are automatically activated under certain conditions. Depending on the vehicle, these active technologies may include active grille shutters and adjustable height suspension, such as those found on the Ram 1500 pickup.

From the earliest development stage, the aerodynamic performance of every vehicle profile is measured, optimized, tested and certified in the world-class, full-scale, aerodynamic wind tunnels of the Group. Due to a combination of honed surfacing and aero-enhancing application, the new Fiat Tipo delivers a drag coefficient (Cd) of 0.29. Fiat Tipo was designed without extensive aerodynamic add-ons. This aerodynamic performance was achieved working with the virtual simulation capabilities of FCA's design center, Centro Stile.

The principal parts optimized were:

- front wheel coverings
- A-pillar shaping
- rear windshield angle
- rear trunk shape (particularly the tailgate).

The FCA Wind Tunnel at the Orbassano (Italy) Aerothermal Technical Center, renovated in 2014, was used for the Fiat Tipo project.

The new Chrysler Pacifica, unveiled in January 2016, underwent more than 400 hours of wind tunnel testing and achieves a 0.300 co-efficient of drag (Cd). The vehicle's aerodynamic performance contributes to its fuel efficiency and is the result of a wide range of enhancements, including an active shutter system and aero optimization of the windshield angle, mirrors, front end, sill claddings, placement of belly pans and windshield wipers.

Weight Reduction

GRI: G4-DMA, G4-EN7, G4-EN27

FCA adopts a number of weight reduction solutions in order to manage vehicle energy demand and improve fuel economy. The new Chrysler Pacifica is lighter by approximately 250 pounds on a model-to-model basis than the outgoing model. This result has been achieved through strategic use of aluminum and advanced, hot-stamped/high-strength steels, the application of lightweight structural adhesives where necessary and an intense focus on mass optimization.

For the new Fiat Tipo, through a product/process integrated approach, it was possible to implement lightweight design solutions that offer high performance with minimal weight. These solutions deliver a competitive weight/volume ratio in its market segment.

Vehicle Lightweighting Technologies Research

CRF, the Group's European research center, is a partner in a collaborative research project, called ALIVE,[8] funded by the European Community. ALIVE aims to develop key vehicle lightweighting technologies, based on advanced metal and hybrid materials, such as the latest generation aluminum, alloys and composites.

ALIVE Project

The target is to achieve an average of 45-50% weight reduction of the Body-in-White (BiW) compared with the benchmark vehicle,[9] plus a 25-30% weight saving in the hang-on parts, chassis and main interior subsystems.

Another lightweight research project focused on the application of composite materials in automotive systems is ENLIGHT. CRF is involved in the design of a composite-based solution for central floor and cross car beam, and coordinates the activity on multi-material junctions.

ENLIGHT Project

Minimizing Tire Rolling Resistance

GRI: G4-DMA, G4-EN7, G4-EN27

FCA uses a variety of solutions to reduce rolling resistance, which contribute directly to improvements in fuel efficiency and CO_2 emissions. Low rolling resistance tires, for example, are offered on selected versions of the Ram 1500 pickup, Jeep Grand Cherokee, Fiat 500, Fiat Professional Doblò and Ducato.

[8] EU 7th Framework project "ALIVE: Advanced High Volume Affordable Lightweighting for Future Electric Vehicles."
[9] Compared with EVs benchmark.

Engine Stop-Start (ESS)

FCA has been progressively introducing Engine Stop-Start (ESS) in order to further reduce fuel consumption. ESS technology turns off the engine and fuel flow automatically when the vehicle comes to a halt and re-starts the engine upon acceleration. ESS is being integrated in several models worldwide: in 2015, it was added in the U.S. as standard equipment on the 2015 Jeep Cherokee with the 3.2-liter Pentastar V-6 engine. The feature, along with other technologies, contributed to an improvement in fuel economy of up to 6%.

Fuel Saver Technology

FCA's Fuel Saver Technology helps improve fuel economy on our V-8 5.7- and 6.4-liter HEMI eight-cylinder engines. By means of cylinder deactivation, the system seamlessly alternates between high fuel economy four-cylinder mode when less power is needed and V-8 mode when more power is required. Vehicles with multiple displacement systems automatically shift to accommodate different driving conditions and needs. This technology is found in automatic transmission versions of the Jeep Grand Cherokee; Chrysler 300; Dodge Durango, Charger, and Challenger; and Ram 1500.

LED Lighting

More efficient lighting systems are also being adopted in our vehicles, particularly LED lighting, which decreases electrical power demand, thus reducing the engine power required by the alternator in comparison with conventional lighting. LED lighting, for example, is found on the Chrysler 300, Dodge Charger and Jeep Cherokee, among others.

Air Conditioning System Improvements

Efficient air conditioning systems can contribute to reducing vehicle emissions. Improvements are achieved through technologies that reduce the load on the vehicle's engine when the air conditioning is in operation, such as higher efficiency evaporators and condensers, pulse width modulated fan controls and humidity sensors. FCA has also accelerated introduction into our vehicles of a refrigerant fluid that reduces the Global Warming Potential (GWP) by 99.7% compared with the replaced fluid.

Thermal Control Technologies

FCA also integrates technologies into our designs that help decrease CO_2 emissions by reducing the energy required to obtain the required thermal comfort inside the vehicle. These technologies, including active seat ventilation and passive ventilation controls, reduce power demand of the air conditioning system, thus improving fuel economy.

Active Engine and Transmission Warm-Up

Many FCA vehicles include heat exchangers which speed the warm-up of engine and transmission oils, thereby reducing friction within the engine and transmission. Examples include the Pentastar engine which makes use of both integrated exhaust manifolds and oil heat exchangers.

Connected Mobility

As driver expectations change and mobility scenarios evolve, FCA has devoted resources to research, development and experimentation of innovative technologies, including a **growing number of connectivity and mobility solutions and autonomous-vehicle technology**.

By participating in initiatives like TEAM (Tomorrow's Elastic Adaptive Mobility), CRF - FCA's research and development center in Italy - has joined partners such as telecommunication providers, research institutes and traffic managers to design solutions to connect vehicle drivers, travelers and infrastructure operators. The goal is to connect the vehicles into the mobility network by taking advantage of new communication technologies, e.g., V2X. Developing mobility and connectivity solutions involves not only technology but also understanding vehicle owner habits and trends, and involving them in the process.

TEAM Project

FCA has been engaged in research on future social and technological trends that will affect nearly every aspect of our business - from design to manufacturing, marketing and human resources. In 2015, we initiated the **Global Connected Car of the Future** research project focusing on the consumer experience inside the vehicle, along with emerging consumer trends. The project spanned globally across five countries, focusing on cities where consumer technology is leading edge: Berlin, Germany; Tokyo, Japan; Vancouver, Canada; Stockholm, Sweden and San Francisco, U.S. This worldwide market perspective will inform long-term connected car strategies.

As connectivity and mobility options evolve, so does the attention on autonomous vehicle technology. We continue to demonstrate our commitment to advancing the development of autonomous vehicle technology by offering **Advanced Driver Assistance Systems**. We are progressing from single function automation, such as Adaptive Cruise Control and the more recent Lane Keep Assist, to multi-function automation where two functions work together. As an example, our Full-Speed Forward Collision Warning-Plus system blends radar and camera technologies to identify potential impact scenarios. The system not only detects potential frontal collision conditions - it detects, then confirms before activation occurs. Confirmation occurs when the two technologies - radar and camera - agree that an obstacle is present.

Involving the Customer

FCA believes that an automaker's environmental responsibility should extend beyond the production line to the way customers drive their vehicles. Eco:Drive is a software system that offers personalized tips to drivers based on driving style with the objective of helping them reduce fuel consumption and emissions. In 2015, eco:Drive was extended to the 2016 500L in North America and is available in Europe, Brazil, the U.S. and Canada for most Fiat and Fiat Professional models. In Europe, the data collected from eco:Drive's best users confirmed that fuel consumption can be reduced by up to 16% using this system. By the end of 2015, more than 102,200 customers, including more than 3,800 new users, had used this software.

Features are being developed to make eco:Drive more effective and engaging. As an example, the **eco:Drive LIVE** application displays information to help owners monitor their eco-driving performance in real time. Using advanced technologies like those incorporated in the Uconnect LIVE infotainment system on the Fiat 500 and 500X, Jeep Renegade and the new Lancia Ypsilon,[10] the connected car concept of communicating with the world has been expanded. For example, eco:Drive data is automatically uploaded and accessible via the cloud.

Uconnect LIVE also includes direct access to the my:Car application. The application gives owners everything they need to manage vehicle maintenance, including maintenance alerts, scheduled service reminders and access to the owner's manual on the system's touch screen display. In addition to these features and functionality, the eco:Drive Mobile application, compatible with Android smartphones and Apple iPhone, is also available. It provides users with immediate, direct feedback using their mobile devices.

eco:Drive

eco:Drive LIVE

UconnectLIVE

Alternative Mobility Solutions

Among the topics discussed during the Group's Stakeholder Engagement activities was the concept of new ways to use vehicles. Vehicles today are more flexible and customized than ever before, and are designed for both city and country driving. Looking toward the future of mobility and the potential response to a changing market environment, FCA has launched various initiatives that illustrate the Group's commitment to meeting these new challenges.

[10] *In the EMEA region.*

Enjoy

GRI: G4-DMA, G4-EN27

FCA has launched a variety of initiatives to respond to customer needs, particularly in the urban environment. Enjoy is a **car-sharing service** that offers a fleet of high efficiency vehicles to urban drivers. It was launched in Milan (Italy) by ENI at the end of 2013,[11] in partnership with FCA which provided more than 1,900 vehicles.

Since the service was launched, approximately 420,000 individuals in Milan, Rome, Florence and Turin have signed up to use it and five million rentals have been logged. The operations, from registration to use, are managed online using special smartphone applications. All cars have a low emission level (less than 120 g CO_2 per km) and are equipped with the latest security technologies and other innovations.

Engaging Students in Sustainable Mobility

GRI: G4-DMA, G4-EN27

In collaboration with the Italian Departments of Education and the Environment, FCA launched the **Fiat Likes U** project in 2012.
The project represents the first time in Europe that an automaker has worked with universities on an initiative to promote environmental awareness and the use of eco-friendly cars through a three-pronged approach: Mobility (free car-sharing service for students), Study (university scholarships and seminars conducted by FCA managers) and Work (paid internships within the Group). In addition to the 10 Italian universities involved, the second phase of the Fiat Likes U project (April 2014-December 2015), was extended to six additional countries,[12] reaching more than 720,000 students. The initiative proved to be very successful with more than 4,000 students using the car-sharing service, which includes a fleet of Fiat Pandas and 500Ls, logging more than 715,000 kilometers.

Fiat Likes U

Fiat Likes U is just one of the projects FCA is pursuing to promote awareness among young people regarding sustainable mobility. In 2015, FCA EMEA promoted an open innovation contest, “Millennials and Cars: the future of the car and the car of the future,” in collaboration with the Second University of Naples (Italy) and the University of Cassino and Southern Lazio (Italy). The goal was to engage young millennials, who are extremely comfortable with social networking and technology, to propose projects that reflect their vision for the car of the future. Proposals included how they would like to spend their time in a car, what innovations they hope manufacturers will introduce, and how the relationship between car and driver can be improved.

[11] *Expanded to Rome and Florence in 2014 and to Turin in 2015.*
[12] *Netherlands, Spain, Poland, Denmark, Romania and Slovenia.*

Expo Milano 2015: FCA Global Partner

FCA, as Official Global Partner of Expo Milano 2015, provided a sustainable fleet[13] of vehicles for the delegations of the 40 countries hosted. Thirty-five natural gas-powered 500Ls equipped with Uconnect systems were offered with the Share&Drive car-sharing service. The success of the initiative can be seen in the numbers: 6,700 rentals with approximately 26,000 hours of use, representing more than 270,000 km traveled.[14] In addition, by incorporating the eco:Drive recommendations for conscious driving, the Expo 2015 delegations were able to reduce fuel consumption and CO_2 emissions.

The **Magneti Marelli Telematic Box**, or TBOX, also contributed to the car-sharing program at Expo 2015 by the telematic box communicating with the service center to locate the vehicle.
The TBOX also enabled functions such as opening and closing the vehicle doors, starting the vehicle only by authorized people who were authenticated via a smartphone application, and reading the on-board system data as well as providing real-time information about the status of the car.

Improving Traffic Management

Traffic flow is a key factor that can be optimized to reduce travel time and traffic congestion, along with the resulting fuel consumption and air pollution. The cutting-edge applications offered by FCA are an expression of our commitment to encourage efficient mobility.

Uconnect LIVE infotainment system features TomTom™ LIVE with voice command interface and connected navigation services. Drivers with the system benefit from a highly accurate traffic service, which receives more than 100 million kilometers of real-time traffic measurements every day, with updates every two minutes. Utilizing superior routing engines and live traffic data, the Uconnect system suggests the smartest route to the selected destination and delivers a reliable estimate of arrival time.

Similarly, on the FCA US Uconnect system, customers of select vehicles receive traffic and travel information services via satellite through SiriusXM. The service provides both safety and convenience to the drivers by including information such as accident, construction and road closure alerts and updated directions to avoid congested roads. In 2015, FCA US launched two new Uconnect features to help customers stay in touch with their vehicles through their smartphones. The Vehicle Finder feature locates the vehicle in a crowded parking lot and will pinpoint the location on a map and provide directions. The Send `n Go to Vehicle feature lets customers search for locations and points of interest on their phones, then send those locations to the Uconnect Touchscreen to get distance estimates and route maps.

Magneti Marelli is also committed to sustainable mobility through telematics and infotainment technologies, including being a charter member of GENIVI.
GENIVI is a nonprofit industry alliance focused on developing In-Vehicle Infotainment (IVI) in a collaborative environment. IVI covers many types of vehicle infotainment applications including navigation and location services, internet services, music, news, etc.

GENIVI

[13] *Including 71 natural gas/biomethane Fiat 500Ls and 10 Fiat 500e electric vehicles.*
[14] *Data is related only to Share&Drive service.*

Research and Innovation

The Group's emphasis on innovation plays a key role in product research and development, including our product strategy.

In 2015, our stakeholders confirmed research and innovation as one of the key material topics for FCA. The global innovation and product development activities are centrally coordinated by the Chief Technology Officer (CTO), Powertrain Coordinator, Product Portfolio Management responsible and Design responsible who are members of the Group Executive Council, an FCA operational decision-making body. In particular, the CTO leads FCA Research & Development (R&D) and is responsible for stimulating opportunities for synergies and technology transfer across the entire enterprise.

At year-end 2015, the Group's research and innovation activities involved approximately 20,000 individuals at 85 locations worldwide. In the EMEA region, the **CRF** in Orbassano, Italy is the primary R&D facility. In the NAFTA region, research and development activities are primarily carried out at the **Chrysler Technology Center i**n Auburn Hills (U.S.), and the **Automotive Research and Development Centre** in Windsor (Canada).

During the year, the Group invested approximately €4.1 billion in R&D,[15] representing around 3.7% of net revenues from Industrial Activities.

The Group's innovation activities have generated a significant intellectual property portfolio over the years and, at year-end 2015, FCA had a total of 8,462 registered patent applications and 4,251 protected product designs.

All innovation activities worldwide are coordinated through a common framework, the FCA Global Innovation Process (GIP). Developed in collaboration with input from the Group's four operating regions, the GIP covers all phases of the innovation process, from idea generation to pre-competitive development, including:

- the Research Agenda, defining medium- to long-term priorities and enabling technologies and relevant action plans at the global and regional level
- the Road Maps, showing the development and vehicle application of innovative systems and components which were upgraded from the regional to the global context.

CRF

CRF, is a focal point for FCA research activities and has the mission to:

- develop and transfer innovative powertrains, vehicle systems and features, materials, processes and methodologies together with innovation expertise in order to improve the competitiveness of FCA products
- represent FCA in European collaborative research programs, joining pre-competitive projects and promoting networking actions
- support FCA in the protection and enhancement of intellectual property.

Also cooperating with a pan-European and global industry and academia network, CRF conducts collaborative research initiatives at the national and international levels. The initiatives are in partnership with key public and private stakeholders concerned with sustainable mobility, targeting specifically the industrial exploitation of research.

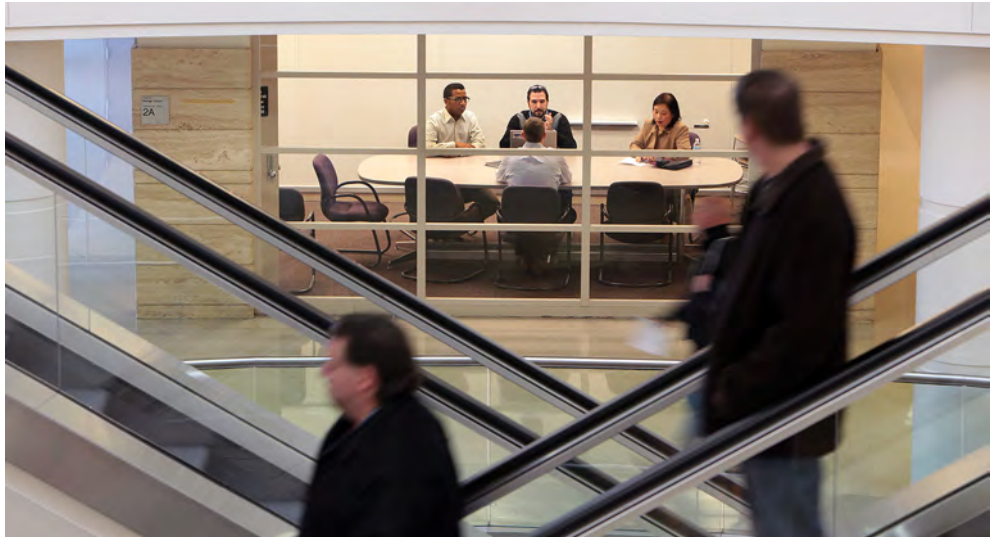
ARDC

Core to our technology and product advancement efforts is our state-of-the-art Automotive Research and Development Centre (ARDC) located in Windsor, Ontario, Canada. The ARDC is equipped with six road-test simulators and a range of research and development support facilities. Key activities within the ARDC are dedicated to advancing automotive technology, quality and safety (Road Test Simulators, Automotive Coatings Research, Design Group and Steering Column Lab).

CRF

[15] *Includes capitalized R&D and R&D charged directly to the income statement (Ferrari included in the scope).*

Innovation and Collaboration



FCA fosters innovation by encouraging creativity among our workforce, as well as through collaboration with external organizations such as universities, research centers and other institutions.

Employee creativity is a key factor in Group innovation. FCA promotes internal projects aimed at collecting suggestions and ideas for product and process improvement. In 2015, the World Class Manufacturing program that promotes employee suggestions to improve processes produced more than 2.2 million suggestions. The best suggestions were implemented and the project owners were recognized for their contributions.

During 2015, the NAFTA region's Innovation Space served as the forum for nearly 100 training and workshop activities, involving over 1,000 employees. The tools and techniques used in the Innovation Space are designed to promote creative alternative thought processes, along with developing advanced strategy, processes, product features and problem solutions. The NAFTA Innovation Team also traveled to the EMEA, APAC and LATAM regions to replicate the innovation techniques and further promote the exchange of innovation within and among the four regions. Internally, the Team worked with NAFTA Manufacturing to train and assist in the development of innovation within the World Class Technology (Manufacturing Engineering) and World Class Manufacturing (WCM Academy) organizations.

Universities and Research Centers

GRI: G4-DMA, G4-EN27

The Group engages in long-standing collaborations with universities and research centers through research groups and joint projects. These close ties with the academic world are instrumental to encouraging creative thinking and rewarding talent in young people. Collaboration is promoted in many different ways by the individual companies and across the Group.

The collaboration in the EMEA and NAFTA regions with Politecnico of Turin (Italy) and the University of Windsor (Canada) continues to demonstrate our commitment to strengthen common research and internationalization, primarily through the availability of the International Dual Master Degree (IDMD) Program. Specific activities were also carried out to involve a larger number of students at U.S. and Canadian universities to extend the IDMD Program. Also, the memorandum of understanding was extended until 2018 between FCA and Politecnico of Turin.

In the NAFTA region, FCA is cooperating on a number of initiatives with many universities, including, among others, Massachusetts Institute of Technology, Michigan State University, University of Wisconsin, The Ohio State University and Oakland University. FCA's collaboration continued in 2015 with McMaster University, a public research university in Hamilton (Canada). This project is working on the development of next-generation, energy-efficient, high-performance electrified powertrains and powertrain components.

USCAR

FCA US is a member of the United States Council for Automotive Research (USCAR), the collaborative technology organization aimed at strengthening the technology base of the U.S. auto industry through cooperative research and development. Participation in USCAR provides the Company with access to nearly 445 projects with national laboratories, research centers, industry and universities in conjunction with USDRIVE, a consortium of the U.S. Department of Energy and Transportation, energy and utility companies. USCAR is also involved, through collaboration with the United States Advanced Battery Consortium (USABC), with 13 advanced battery technology programs with a total cost shared value of over $33 million. The USCAR/USABC/DOE collaboration allows for a total of $12 million of cost shared funding over a five-year period for the advancement of battery technology.

CAMP

FCA US is a member of the Crash Avoidance Metrics Partnership (CAMP) under the U.S. Federal Highway Administration (FHWA) Vehicle to Infrastructure (V2I) Collaboration Agreement. CAMP provides an auto manufacturer-oriented organization under which stakeholders can collaborate on pre-competitive research projects of mutual interest. The CAMP V2I Consortium is focused on developing safety, mobility, and environmental applications for vehicles that are enabled through information provided by roadside infrastructure components of the Connected Vehicle Environment.

Collaborative Research Projects

GRI: G4-DMA, G4-EN27

CRF, the Group's European research center, joins collaborative research activities with academic and research institutions at the national and European level.

During 2015, CRF was involved in 122 collaborative research projects. For many years, CRF has also played an active role in various European Technology Platforms and other stakeholder organizations that support the European Commission in defining research priorities and guidelines in the mobility/transport sector. The principal organizations CRF is involved in are:

European Research Organizations in which CRF is Actively Involved

European Technology Platforms	ERTRAC: Road transport
	EPoSS: Smart system integration
	EuMaT: Advanced engineering materials and technologies
	MANUFUTURE: Manufacturing and production processes
	NANOfutures: initiative for sustainable development by Nanotechnologies
Public-private partnerships	Green Cars Initiative
	Factories of the Future
	ECSEL (Components and electronic systems)
Research and development organizations	EUCAR: European Council for Automotive R&D
	ERTICO-ITS Europe: network of Intelligent Transport Systems and Services
	EIT ICT Labs: Knowledge & Information Community on ICT
	Human Factors and Ergonomics Society - Europe Chapter

Innovations for Real World Driving

Alfa Romeo Giulia

On June 24, 2015, the 105th anniversary of the Alfa Romeo brand, the Giulia was unveiled in a world preview at the Museo Storico Alfa Romeo. The Alfa Romeo Giulia offers a wide range of gasoline and diesel engines combined with manual or automatic transmissions from 6 to 8 speed. All the engines, conceived in the Alfa Romeo technical center in Modena with core modules manufactured in dedicated Alfa Romeo areas at Group plants in Italy, combine superior performance with efficiency, delivering at the same time improved fuel economy and reduced environmental impact.

Distinctive Italian Design & Aerodynamics Performance

State-of-the-art, Engines

Innovative Materials and Perfect 50/50 Weight Distribution

Unique Technical Solutions: the vehicle's electronic "Brain"

Distinctive Italian Design & Aerodynamics Performance

An Alfa Romeo springs from the perfect balance of heritage, speed and beauty.

It is the expression of Italian style in the automotive world. The aerodynamic performance of the Giulia contributes to the Cx result of 0.25 obtained by employing advanced engineering techniques, merging experiments and simulations.

State-of-the-art, Engines

Three innovative aluminum engines for the Alfa Romeo Giulia.

The new 2.9-liter V-6 BiTurbo gasoline engine dedicated to the Quadrifoglio flagship version is the top performing engine fully developed by Alfa Romeo Powertrain Engineering. Its power density of 175 CV/l with cylinder deactivation system provides a next-level customer experience combined with significant fuel efficiency performance.

The Alfa Romeo new 2.0-liter gasoline engine is designed to reach competitive levels in terms of performance and fuel economy thanks to the implementation of technological content such as the MultiAir electrohydraulic Variable Valve Actuation system.

The Alfa Romeo 2.2-liter diesel engine is the first to feature an aluminum block. Efficiency is maximized as a result of a wide range of friction reduction measures and an improved thermal management strategy.

Innovative Materials and Perfect 50/50 Weight Distribution

A characteristic of the new Giulia is the management of weights and materials to obtain a 50/50 distribution across the two axles. Ultra-light materials are used such as carbon fiber, aluminum, aluminum composite and plastic materials. Many technical solutions are distinctive and unique, such as the innovative front suspension architecture.

Unique Technical Solutions: the vehicle's electronic "Brain"

The Alfa Chassis Domain Control (CDC) is the "supervisor" of the vehicle's dynamics: hardware and software manage the vertical and longitudinal dynamics, chassis control, safety devices and all the active systems of the car. The CDC on the Giulia Quadrifoglio also manages the Active Aero Splitter on the front end of the car, which actively controls the negative lift, allowing for better grip and performance, even at high speeds.

Related content

Alfa Romeo Giulia >

Design for Vehicle Life

FCA's design approach places emphasis on the environmental footprint of products throughout their life cycle. This approach provides the opportunity to reduce that footprint through the use of eco-compatible materials and through design choices that maximize recovery and recycling for end-of-life vehicles.

The Group monitors the **recyclability** and **recoverability** of its products leveraging the competencies of CRF's Group Materials Labs, based in Italy and the Automotive Research and Development Centre (ARDC) in Canada.

In Europe, all type-approved vehicles sold are monitored in terms of recyclability and recoverability according to the standard set by the European Union.[16] In 2015, all Group vehicles sold in Europe were 95% recoverable and 85% recyclable by weight, in compliance with the **EU's Reusability, Recyclability, Recoverability directive (Directive 2005/64 EC)**, which establishes minimum levels for both recoverability and recyclability. Recycled materials accounted for an average of 40%[17] of the weight of Group vehicles type-approved in Europe in 2015; while the average weight of renewable materials was 8.4 kg. This was achieved in part through participation in several international projects researching innovative uses for recycled materials and biomaterials, such as testing the behavior of recycled carbon fibers - technology originating from the aeronautics industry.

Most material innovation and development is conducted by CRF's Group Materials Labs (GML), which monitor changes in legislation and assess potential implications on the Group's products and processes. They are also responsible for FCA compliance in such areas as the REACH regulation in Europe.[18] This regulation restricts the use of certain substances, regularly publishing a Candidate List that contains Substances of Very High Concern (SVHC) that may be subject to authorization or restrictions in the future.

Information on the composition of suppliers' products can be entered in the **International Material Data System** (IMDS) directly by FCA suppliers. In all four operating regions, the Group uses IMDS data to track and monitor the composition of suppliers' products. This data is used by the FELIS system, another tool that FCA uses to monitor product content, including the presence of SVHCs. Both IMDS and FELIS are crucial for tracking vehicle recyclability and recoverability, as well as monitoring substances of concern included on the **Global Automotive Declarable Substance List (GADSL)**.

Material Data System

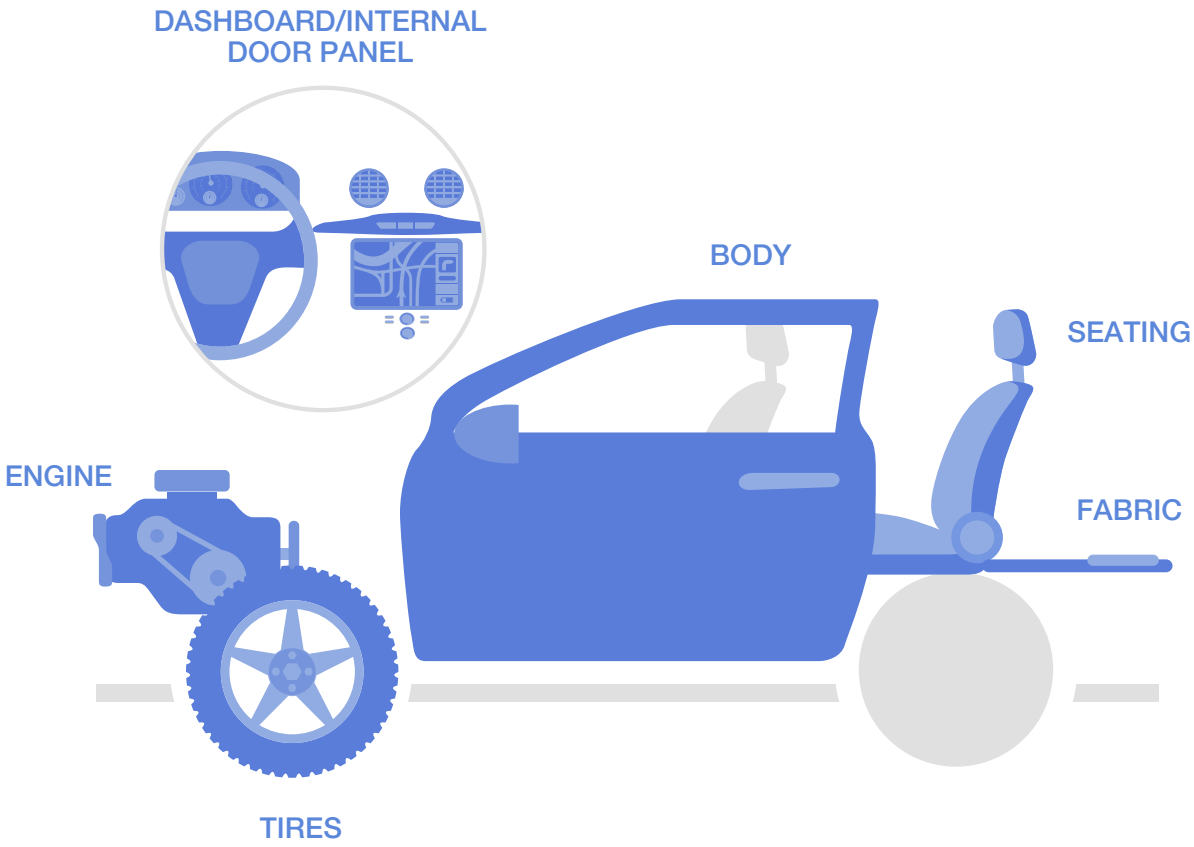
GADSL

The composition of vehicle components is also monitored for minerals such as rare-earth elements used in permanent magnets. Due to growing global demand, these elements may present supply chain challenges in the future as well as concerns around unsustainable mining practices. CRF is engaged in the EU's **Horizon 2020** research and innovation program and is a partner of the Novamag project aimed at developing permanent magnets with low rare-earth content.

This year, the FCA US Organic Materials Engineering organization approved an additional 10 materials that contain recycled content, lower density or low emission polymers as sustainable material options for various components. These materials have been added to the internal index that tracks specific grades of plastic materials approved for use in various FCA US programs.

[16] *Directive 2005/64/EC of the European Parliament and of the Council of October 26, 2005.*
[17] *Estimated figures according to the Company's best knowledge refer to the average weight of type-approved vehicles in 2015 in Europe, according to Directive 2005/64/EC.*
[18] *http://ec.europa.eu/environment/chemicals/reach/reach_en.htm*

The following list represents a selection of ongoing research activities and/or innovative solutions already available for selected models:



Related content

Material used >

Remanufactured Parts

GRI: G4-EN2

FCA has developed specific product lines of remanufactured parts to support the after-market needs of customers. These parts simultaneously reduce the cost of vehicle ownership for customers and decrease the volume of salvageable materials heading to landfills. This also helps the recovery of materials and saves energy during the production process due to the employment of used parts (i.e., cores) or components which can be remanufactured and sourced from the service network.

In the EMEA region, the remanufactured product lines account for more than 1,000 unique product codes - a list that is continuously expanding. To date, the program covers 25 product types that include engines, turbochargers, injectors, injection pumps, air flow meters, gearboxes, flywheels, air compressors, starters and alternators.

In the NAFTA region, the Group is also expanding its offerings of high-quality remanufactured parts. The selection includes more than 4,300 unique parts, 220 of which were added in 2015, and includes remanufactured brake calipers, starters and alternators, electronic control modules, steering and suspensions, and air compressors, as well as engine and transmission product categories.

FCA certifies the production of remanufactured parts in order to provide a repair solution equivalent to original equipment parts, and that carry the same warranty conditions as new parts.

Sustainable Materials

GRI: G4-DMA, G4-EN1, G4-EN2, G4-EN27, G4-PR1, G4-PR3

The primary mission of CRF's Group Materials Labs is to ensure regulatory compliance while contributing to continuous reductions in FCA's environmental footprint. In 2015, the Labs' main activities were related to the development of **biomaterials applications**, the assessment of material recycling and solutions for weight reduction.

Natural fibers and biologically-derived polymers derived from renewable sources have significant potential for the vehicles of the future. CRF has partnerships with companies specializing in the application of these materials for automobiles and works with several major research institutes to monitor scientific developments and potential applications for biomaterials.

One example is the partnership with **BRIGIT**, a European project whose objective is to develop a cost-competitive and environmentally-sustainable process to produce bio-based composites (biopolymers in combination with natural fibers). The composites properties may include durability, strength and fire resistance that will enable them to be used in place of existing petroleum-based materials on passenger cars and commercial vehicles.

In 2015, CRF began work with the **GreenLight Project**, which is funded by the European Commission as part of the Horizon 2020 program. The purpose of this five-year project is to demonstrate the applicability of an affordable **bio-based carbon fiber** developed from waste polymers found in the paper industry. The fiber may be used in reinforced composites that deliver enough strength properties for large-volume automotive applications.

GreenLight Project

BRIGIT

Monitoring Substances of Concern

GRI: G4-DMA, G4-PR1, G4-PR3

FCA works to eliminate or reduce the use of Substances of Concern (SOC) that can impact human health or the environment.

We use the International Material Data System (IMDS) to track the composition of individual materials and components in our vehicles. Data from IMDS is then fed into the FELIS system, which is used internally to monitor the content of all vehicles and identify the presence of SOCs.

FCA's global standard of restricted and prohibited SOCs provides uniform worldwide requirements that minimize market-specific uncertainty or interpretation, while increasing transparency and clarity. This allows us to apply a global standard to our products, regardless of where the products are ultimately sold or marketed.

Great attention is given by FCA to substances identified in globally regulated substance restrictions such as the **REACH** regulation (article 56) that includes phthalates, DecaBDE and Borates. This level of awareness and commitment to compliance is also critical to FCA suppliers. The majority of FCA suppliers confirmed that these phthalates had already been removed.

Some REACH aspects are currently under revision. To address these issues, FCA conducted a two-day workshop in Turin (Italy) that involved worldwide automotive industry representatives and REACH Competent Authorities.

Application of Life Cycle Assessment

Companies are being challenged to assess the environmental impacts of their products more rapidly and effectively. Life Cycle Assessment (LCA) is the methodology adopted as a voluntary measure to evaluate the **environmental impact of materials**, **components and production processes**. Factors taken into account by this methodology relate to energy and other resources consumed in production; use and recycling; and waste generation, according to the principles of the **ISO 14040/44** standard. Paying specific attention to both the overall performance of each vehicle and the environmental performance in any life cycle stage, vehicle LCAs continue to make a significant contribution to the development of new, more **environmentally-friendly products**.

In 2015, FCA completed Life Cycle Assessments for:

- Jeep Cherokee
- new Chrysler Pacifica vs Chrysler Town & Country
- Fiat 500e electric vs Fiat 500 gasoline.

All vehicle studies were submitted for a **critical review** by a third-party certification firm for compliance verification with ISO 14040/44.

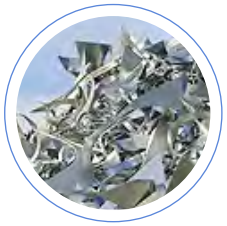
Teams of experts with the technical knowledge to perform LCA analysis are spread across FCA regions, close to production and engineering sites. Collaborations with universities aim to improve LCA methodology deployment. In 2015, a collaboration with the Politecnico of Turin was launched to develop an advanced parameter model on the LCA software to extend its applicability on all FCA vehicles in the near future. Collaborative LCA applications are also in place within several international funded projects related to materials, processes and functionalized surface treatments.
Significant results have been achieved in the NANOPIGMY EU-funded project, the DRAPO' Regional project, and the MATRECO project in Italy.

NANOPIGMY Project

DRAPO' Project

CHEROKEE

Cherokee 3.2 Gasoline



RAW MATERIAL

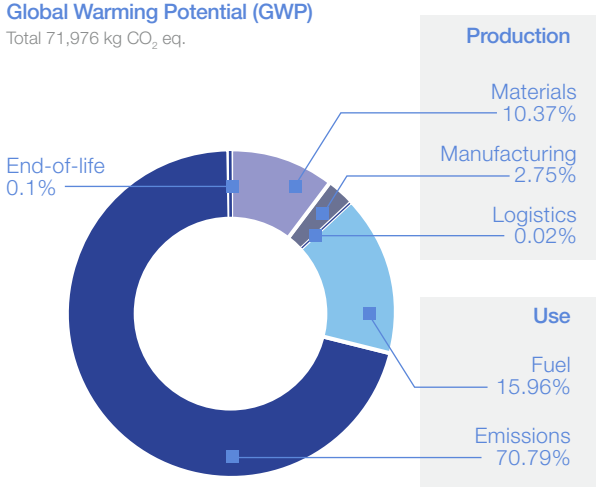
MANUFACTURING[19]

USE (200,000 km)

END-OF-LIFE

Global Warming Potential (GWP)

Total 71,976 kg CO_2 eq.



Data refers to LCA performed on 1 vehicle (Functional Unit = 1).

[19] *Includes assembly operations and transmission and engine manufacturing.*

Magneti Marelli LCA Analysis

GRI: G4-DMA, G4-EN27

In 2015, Magneti Marelli extended the scope of its LCA activities to new areas. Three additional projects were completed during the year. The purpose of these projects is to compare existing and new technologies relative to:

- traditional throttle body vs an innovative lighter version
- dashboard with different filler for the plastic support
- steel crossbar compared with different innovative scenarios.

These assessments confirmed that during a component's life cycle the highest impacts come from raw materials and the use phases. In 2015, specific attention was given to the end-of-life phase to better understand the impact of disposed materials. As key partners in the effective implementation of LCA, suppliers have been highly involved in these projects in both data collection and collaboration toward a common LCA approach.

Vehicle End-of-Life Management

Vehicles that reach the end-of-life stage and are not suitable for continued use generate millions of tons of waste. As an example, every year, end-of-life vehicle (ELVs) generate more than 16 million tons of steel and other materials in the United States that can be reused and recycled (source: www.autoalliance.org).

To minimize the environmental impact and to guarantee the correct use of discharge materials and improve energy efficiency, the European Union defines how vehicles should be designed and how to manage the waste generated.

The focus on components' reuse, material recycling and recovery as part of end-of-life vehicle (ELV) management is also referenced in the **Circular Economy** package introduced by the European Commission in 2015. The emphasis FCA places on its approach to ELV management plays a significant part in achieving the targets set by the European Union and other countries for minimizing the environmental impacts of end-of-life vehicles.

FCA plays a role in the NAFTA region by providing recyclability and recoverability information on vehicles they export to countries with end-of-life vehicle regulations.

Circular Economy package

Also in the NAFTA region, the Vehicle Recycling Laboratory at the ARDC plays an important role to support vehicle end-of-life research and development. The laboratory is equipped with material identification equipment, vehicle fluid removal equipment, unique vehicle dismantling equipment, and advanced data analysis equipment. The ARDC performs vehicle teardowns to satisfy International Dismantling Information System requirements.

In 2015, the Group continued to work with Company-owned dealerships to monitor independent dealerships within the FCA network and to analyze the environmental performance of the dismantler network.

In the U.S., the Group commitment to the recycling and recovery of end-of-life vehicles resulted in the establishment of the End-of-Life Vehicle Solutions Corporation (ELVS). Collectively, this industry collaboration continues to promote the industry's environmental efforts in recyclability, education and outreach on issues such as disposal of elemental mercury from automotive switches and end-of-life high voltage batteries from electric and hybrid vehicles.

Research Projects

GRI: G4-DMA, G4-EN4, G4-EN17, G4-PR3

Extensive research on material recovery from end-of-life vehicles and automotive shredder residue (ASR), or "fluff," has led to the development and testing of new compounds derived from ELVs. In one example, CRF worked with the Tyrec4Life project, funded under the European Union's LIFE+ program, which developed innovative technologies using rubber from end-of-life tires (ELT) in road paving. Several roads in the Piedmont area (Italy) have now been treated with recycled ELT rubber and demonstrate that this technical solution is suitable for asphalt applications. The next step will examine ELT applications as a surface for new road construction. CRF was also involved in several European R&D projects (e.g., ALIVE, Enlight) analyzing various end-of-life scenarios for innovative lightweight materials to optimize the entire cradle-to-grave environmental footprint.

Tyrec4Life Project

Finally, FCA measures CO_2 emissions and the associated energy consumption resulting from end-of-life vehicle treatment. In 2015, CO_2 emissions amounted to approximately 210 kg of CO_2eq per vehicle, while energy consumption was 1,616 MJ (PED - Primary Energy Demand per vehicle).[20]

ALIVE Project

ENLIGHT Project

[20] *Life Cycle Assessment according to ISO 14040-14044; performed with Gabi 7 software, using CML 2001 method (updated April 2015) in order to calculate the Global Warming Potential (GWP) of the end-of-life of an average FCA vehicle. This result was multiplied for the number of vehicles sold worldwide during 2015. The results take into account the environmental debits due to the following ELV management activities: depollution (oil, fluids), dismantling for component reuse and material recycling, shredding activities, landfilling of the Automotive Shredder Residue. The environmental credits due to the reuse, recycling and recovery of the materials sorted are out of the scope of the LCA.*

Vehicle Safety

At FCA, our dedication to vehicle safety is consistent with our commitment to being a good corporate citizen, one that judges itself not only on its ability to grow as a global enterprise but also by its ability to make a positive, lasting impact on our communities and on society as a whole. In 2015, FCA US continued to focus efforts on refining recall processes and procedures and entered into a consent order with the National Highway Traffic Safety Administration (NHTSA) to undertake specific actions to improve its recall execution. The Company also engaged an independent third-party consultant to conduct a comprehensive review and evaluation of existing processes and procedures for compliance with the Safety Act and regulations thereunder and to assist in the development of best practices. In addition, as a public safety advocate, we committed our efforts to support industry and consumer outreach and education.

In early 2016, FCA US further reaffirmed its commitment to vehicle safety by signing an agreement, the **Proactive Safety Principles**, along with 18 other automakers, to leverage their knowledge and collaborate to enhance safety of the traveling public. The Principles include Enhance and Facilitate Proactive Safety; Enhance Analysis and Examination of Early Warning Reporting Data; Maximize Safety Recall Participation Rates; and Enhance Automotive Cybersecurity.

The FCA US Vehicle Safety and Regulatory Compliance organization made important moves in 2015 to amplify our commitment to safety, more than doubling the number of assigned professionals. Among the organization's primary activities is a substantial investment in the use of predictive analytics as a tool to more quickly identify potential vehicle safety issues. The organization is led by a vice president who reports directly to the CEO of FCA US, ensuring a high level of information flow and accountability. This structure establishes a focal point for working with consumers, regulatory agencies and other partners to enhance real-world vehicle safety. Another important move in 2015 was the announcement of the newly established position of Safety Advocate. The Safety Advocate role is responsible for promoting greater awareness of vehicle safety - both internally with FCA US employees, and externally with regulators, industry observers and trade associations. In addition to highlighting the Company's vehicle safety engineering achievements, the Safety Advocate will share insights about proposed legislation and the evolution of the vehicle safety landscape.

From a global perspective, the safety organizations in the four FCA regions continuously share information and best practices in order to harmonize design guidelines and processes where possible, given the regulatory environment. Safety design concepts are implemented from the early phases of every new model through the release of detailed design specifications to all the providers of subsystems for the vehicle. Our approach recognizes that safer highways, improved traffic management and driver education all have a role to play in enhancing safety on the road. That is why we strive to connect our safety efforts to a collective goal we share with our employees, customers, dealers, suppliers, law enforcement, regulators, researchers, educators and others who have a stake in driver, passenger and pedestrian safety. All share a collective responsibility to make our roads safer.

FCA's commitment to transportation safety includes engineering active and passive features for diverse drivers and vehicle segments. In some cases, such as restraint systems, global regulations are very similar and we have developed a worldwide restraint system standardization plan. In other instances, government regulations and third-party ratings standards vary from region to region. Even with this variance, our safety centers continuously collaborate with suppliers to meet internal safety standards designed to address quality and reliability goals.

Within FCA, responsibility for safety is not limited to the designated safety organizations, but cuts across many departments. Numerous individuals at FCA, as well as at our dealerships and within our supply chain, are engaged in tracking and understanding how vehicles perform on a day-to-day basis on the road. This work includes examining accident data in order to understand factors that may need closer investigation and understanding. Within our organization, many centers of expertise contribute to the technological advancement on safety issues by cooperating with public institutions, suppliers, universities and other organizations on research and development into innovative solutions.

Safety Research

FCA actively participates in national and international organizations that develop new and improved safety standards and examine real-world results. For example, the EMEA safety organization is a member of IGLAD (Initiative for the Global Harmonization of Accident Data), a consortium of auto manufacturers that collects and analyzes traffic accident data to improve road and vehicle safety. In the U.S., FCA collaborates with other automakers to identify technical issues and conduct research related to vehicle safety through the U.S. Council for Automotive Research (USCAR).

In Europe, FCA has continued the activities in the Harmonization Group on Prospective Effectiveness Assessment for Road Safety (PEARS). The objective of the group is to provide an open platform to discuss methodologies to evaluate the real-world effectiveness of advanced driver assistance systems in potentially hazardous traffic scenarios through virtual simulation. This cooperative research and development initiative involves major automakers, universities and automotive research institutes in Europe. We use these types of collaborations and research projects as tools to advance our vehicle safety efforts.

Group Safety Centers

A team of specialized engineers located in Orbassano and Pomigliano in Italy, and in Auburn Hills and at the Chelsea Proving Grounds in the U.S. develops and assesses effective safety systems, concentrating on various aspects including safety levels in front, rear and side collisions for vehicles from different segments; protection of vulnerable road users; and integration of active and passive safety systems. These efforts result in the continual implementation of upgrades to our testing equipment and methodology. In 2015, the Orbassano Safety Center launched new impact simulators that simulate vehicle pitching in frontal impact and real intrusion in side impact. In addition, new benches test health and safety impacts for our vehicle models before launch.

Our advanced engineering organization at the Pomigliano Technical Center applies upfront virtual reality methods and innovative technological solutions for virtual and physical tests. By analyzing the performance of vehicle safety systems in real-world collisions, we are able to develop future active and passive safety systems. In 2015, more than 1,000 real accidents were reviewed to support vehicle safety.

Regulatory Compliance

FCA stands behind the quality and safety of our products. When potential vehicle safety issues arise, we promptly investigate and take effective corrective action, including initiating recall campaigns when appropriate. Because we are diligent about vehicle safety performance, our safety recalls are self-initiated and tend to be early in the product cycle. By quickly initiating appropriate safety recalls, we address safety issues more quickly and inconvenience fewer customers. In 2015, there were 102 safety and regulatory compliance campaigns involving 19,165,638 vehicles in our four regions (EMEA, NAFTA, LATAM and APAC).

Focusing on communication during every interaction, the FCA US Customer Contact Center agents proactively notify customers of incomplete recalls affecting each caller's vehicle, and have been empowered to assist with parts procurement and scheduling of appointments for recall repair completion. In addition, FCA US recently launched "Recall Central," a new internet portal consolidating safety recall campaign information so dealers may better assist customers - a key variable in the recall-completion equation. We also bolstered our mobile, social media and web self-service experiences for our customers affected by safety recalls. Every safety recall launched by FCA US is also communicated through a statement posted on the media site since these campaigns can have implications for vehicles outside the NAFTA region. The Company continues to work - along with NHTSA and the industry - to increase recall completion rates and improve the overall customer experience.

In EMEA, recall campaigns are managed by informing customers through written communication. The entire process is designed to minimize inconvenience to the customer and vehicle downtime. Moreover, a customer can obtain additional information on the work to be carried out, the location of service centers and other services that may be available, by contacting the **FCA Customer Contact Center** (CCC) at any time. The CCC can be contacted through one of the available channels including brand-specific toll-free numbers, emails, links on websites and social networks, as well as more traditional means of contact such as letters and faxes.

Independent Safety Ratings

Independent agencies rate the comparative safety of vehicles across the industry in different regions. While the specific criteria vary, these ratings are generally based on some form of evaluating the level of safety provided for occupants during a crash as well as a vehicle's ability to avoid a crash through the use of technology. A number of FCA vehicles have earned top ratings based on performance during assessments. These ratings help validate our continuing efforts to deliver the latest advancements in both passive and active safety technologies.

In the U.S., the 2016 Dodge Challenger earned 5-star overall safety ratings in the U.S. NCAP conducted by the National Highway Traffic Safety Administration (NHTSA). The Insurance Institute for Highway Safety (IIHS), which recently upgraded its protocol, named the 2016 Fiat 500X and 2016 Chrysler 200 a Top Safety Pick+ rating. Front Crash Prevention systems are a prerequisite to achieve IIHS Top Safety Pick+ status.

In the APAC region, the Jeep Grand Cherokee was awarded a 5-star rating by the Australian NCAP. In Latin America, the locally manufactured Jeep Renegade gained a 5-star Latin NCAP rating for adult and child protection in 2015.

Product Enhancements

Addressing the challenge of distracted drivers is one of the major safety issues facing all vehicle safety stakeholders today. Consumers are accustomed to connectivity in their everyday lives - sending text messages, talking on the phone, participating in social media or accessing the vast amount of content available on the internet. The task for auto manufacturers is to account for these consumer expectations in a way that enables drivers to maintain their focus on the task of driving.

FCA currently makes use of a number of technologies such as **Full-speed Forward Collision Warning-Plus, Lane Departure Warning, and Adaptive Cruise Control** that are designed to alert distracted drivers. In addition, voice-recognition technology enables hands-free phone calls, text-message dictation and navigation-system inputs. We are focused on improving the user experience and merging the mobile world with the mobility world, an effort that includes continuing work on the development of specific devices that help to warn distracted drivers.

In terms of passive safety advancements, we are continually working to optimize protection for vehicle occupants of all ages and abilities. For example, FCA, through CRF and Magneti Marelli, continues to be actively involved in several research activities for vehicle-to-vehicle and vehicle-to-infrastructure communication (V2X) technologies and systems. In the field of **tertiary safety** in the EMEA region, in 2015, the Group continued to deliver emergency rescue sheets[21] which provide information to rescue teams or first responders on special design elements and the position of components to be considered when assisting the occupants of vehicles involved in an accident.

Better understanding of driver behavior helps us focus on the most relevant factors to improve vehicle safety on the road. Like some other automotive concepts, the definition of vehicle safety is evolving with consumers. Vehicle safety was traditionally defined as a degree of protection from injury during crashes. Over time, vehicle reliability grew in importance. More recently, features related to autonomy levels have become a part of the consumer perception of vehicle safety. As consumers evaluate advanced technology products, they rely on trusted brands to make purchase decisions. In 2015, FCA conducted research in the U.S. to understand the link between vehicle safety perceptions and trusted brands.

To minimize distracted driving and enhance the customer experience, the Group's Human Machine Interface efforts focus on new connectivity features using the on-board equipment to incorporate interfaces for vehicle safety communications.
The Group has enhanced the voice command recognition which enables hands-free operation of phones and media players. As an example, two **Uconnect** features were introduced on FCA US vehicles to allow customers to stay connected to the information they want and need while remaining focused on the road. The Siri Eyes Free feature allows drivers to speak natural language voice commands to send text messages, play music, set reminders, place phone calls and access turn-by-turn directions. The Do Not Disturb feature routes all incoming mobile calls to voicemail and suppresses text messages. If the driver enables the Do Not Disturb feature, they also have the ability to send a default or customized response when a call or text message is received.

[21] *ISO 17840 part 1, part 3 and part 4.*

Active Safety

Active safety systems help drivers avoid crashes by assisting them to control their vehicles or alerting them to potentially hazardous situations. These systems monitor surroundings, the status of the vehicle and driver behavior. They include **semi-automated technologies** that provide assistance to drivers in certain instances, with the driver retaining control as needed. There is a growing list of active safety features available on FCA vehicles.
The features and options listed here are available depending on models and markets:

Full-speed Forward Collision Warning-Plus

Radar and camera technology combine to determine if frontal impact with another vehicle appears imminent; if so, system pre-fills brakes, then transmits audible and visual warnings for driver to intervene; no driver response triggers brief brake application as tactile alert; if driver remains unresponsive and frontal collision risk remains, brakes are applied to slow vehicle before impact; system may bring vehicle to full stop if imminent frontal collision detected at speeds below 25 mph.

Lane-Departure Warning with Lane-Keep Assist

Lane-Departure Warning with Lane-Keep Assist alerts and assists the driver by leveraging electric power steering to deliver subtle steering-wheel input when the system detects a need for course correction.

Blind-spot Monitoring

Blind-spot Monitoring uses dual radar sensors to aid the driver when changing lanes, passing or being passed. The presence of a vehicle in the blind spot is signaled by illuminated icons in side-view mirrors and a driver selected audible chime.

Adaptive Cruise Control-Plus with Full Stop

Adaptive Cruise Control-Plus with Full Stop helps maintain distance from the vehicle ahead. Under certain traffic conditions, it can briefly bring a vehicle to a full stop without driver intervention.

Rear Cross Path Detection

Rear Cross Path Detection warns drivers of lateral traffic when backing out of parking spaces. It automatically activates any time a vehicle is in reverse gear; the driver is alerted of an approaching vehicle via illuminated icons on side-view mirrors and a driver-selected audible chime.

ParkSense and ParkView

ParkSense park assist systems with stop and release use ultrasonic sensors to detect stationary objects while driving in reverse at low speeds. If a collision is imminent, it provides a momentary, autonomous brake pulse, and at speeds below seven kilometers per hour, it will bring a vehicle to a stop before releasing. ParkView rear backup camera provides a wide-angle view of the area immediately behind the vehicle when the transmission is shifted into reverse.

Electronic Park Brake with SafeHold

Electronic Park Brake with SafeHold automatically activates the parking brake if the driver's seatbelt is unlatched and the driver's door is open while forward or reverse gears are engaged.

Surround View Camera

Expected to be available on the new Chrysler Pacifica in 2016, this feature uses four cameras positioned around the vehicle to provide a bird's-eye perspective of the vehicle and its immediate surroundings. Driver can also select other views, including front or rear cross path views.

Passive Safety

Passive safety systems help mitigate the effects of a crash. These include occupant restraint technology and the use of more advanced materials that enable us to improve crash energy management. There is a growing list of passive safety features available on FCA vehicles. The features and options listed here available depending on models and markets:

Active Head Restraints

Active head restraints deploy during a collision to help reduce injuries by minimizing the gap between an occupant's head and the head restraint.

Advanced Multistage Airbags

Advanced multistage driver and front-passenger airbags inflate with force appropriate to the severity of the impact and meet advanced airbag requirements for smaller, out-of-position occupants.

Occupant Restraint Controller

Occupant restraint controller detects changes in vehicle velocity during crashes and determines if an airbag should be deployed and to what degree.

Energy-absorbing Steering Column

Energy-absorbing steering column helps manage energy during an impact. The manual-adjust steering column features two hydroformed coaxial tubes that move relative to each other to allow for enhanced energy absorption. The power-adjust steering column uses a calibrated bending element that deforms during impact for optimal energy management.

Crumple Zones

Front and rear crumple zones are specially formed structural members that crumple and absorb energy in a collision, helping protect the occupant cabin.

Safety Cage Body Structure

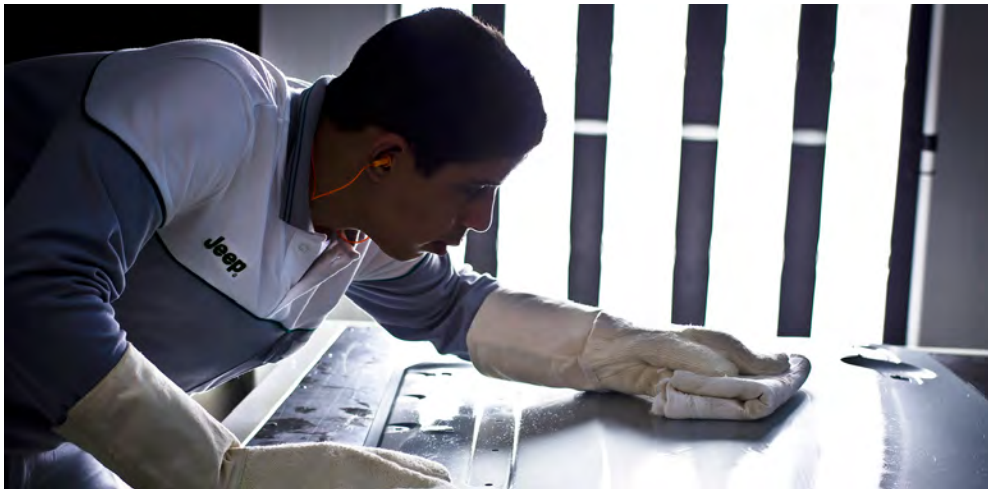
Safety cage body structure helps protect occupants by managing and controlling energy in the event of an impact.

Compatible Front End[22]

Three front load paths designed from high-strength steel help maintain structural integrity.

[22] Feature referred to as "Energy Management System" for FCA US vehicles.

Vehicle Quality



Producing high quality vehicles is central to FCA's goal of earning and maintaining the trust and loyalty of customers.

At the earliest stages of vehicle creation, before designers' sketches have evolved into clay models, research is conducted to collect, analyze and integrate the voice of the customer into a new vehicle concept. A **"customer first" approach** to quality keeps the customers' needs at the forefront of decision-making and planning through all stages of vehicle development.

Thousands of people "touch" some aspect of every vehicle, from raw material production to final delivery. High priority is given to sharing our quality vision and targets with everyone in the extended organization, which includes not only employees, but also our suppliers, dealers and other business partners.

Consistent with the critical importance of the role, the Head of Quality reports directly to the Group CEO and is also a member of the Group Executive Council, the highest decision-making body outside of the Board of Directors. He is responsible for ensuring **consistency** and **rigor** across the four FCA operating regions (EMEA, NAFTA, LATAM and APAC). The quality departments for each region report to both the Head of Quality and the respective regional Chief Operating Officer.

As part of our commitment to vehicle quality, FCA has set a target of a**chieving top quartile placement for the vehicle portfolio by 2020**, based on the relevant competitive benchmark for each geographic region. This includes vehicle reliability as measured by rate of repair and survey results related to vehicle functionality and design. In 2015, the rate of repair in the first 90 days of ownership improved on average by 15% globally. Things Gone Wrong (TGW) is an internal and external survey process which evaluates customer needs and behaviors related to vehicle functionality and design issues. In 2015, TGW at 90 days of ownership improved in two regions and globally remained stable.

By enhancing our processes we have improved vehicle quality across the regions, including a 25% better-than-target result for the Jeep Renegade, based on initial customer feedback in the LATAM region. In J.D. Power's 2015 U.S. Initial Quality Study (IQS), 13 out of 16 FCA products in the survey improved their respective IQS scores, while in India, FCA vehicles improved for the second consecutive year in the region's J.D. Power's IQS.

Quality Processes

For every vehicle we make, quality considerations from customer expectations to functional requirements are addressed from the earliest stages of design.
The validation process begins with **virtual simulations** that not only enable optimization of the design earlier in the development, but also significantly reduce development time and cost. This is followed by validation of physical prototypes and manufacturing, which is another crucial element in the quality process.

Some of the most punishing vehicle tests involve the **Road Test Simulator** (RTS). It recreates the abuse vehicles endure at the hands of a 95th percentile customer – meaning a customer who drives the vehicle in more severe conditions than 95% of all drivers. The RTS mimics a wide range of on-road and off-road driving surfaces and puts a lifetime of wear and tear on a vehicle in only one month's time. The thousands of simulated and laboratory tests conducted set the foundation for the regimented reliability, capability and durability testing that continues at FCA's proving grounds around the world.

In addition to the extensive testing facilities at the proving grounds in Chelsea (U.S.) and Balocco (Italy), the Group also conducts extreme weather testing at FCA's Arizona Proving Grounds (U.S.) and the Arjeplog (Sweden) Proving Grounds within the Arctic Circle. At the Florida Evaluation Center (U.S.), vehicles undergo coast-down testing to assess overall frictional drag, aerodynamics and tire rolling resistance. Engineering and Quality teams also study how vehicles perform in less predictable environments. Reliability test fleet vehicles are driven day and night on public road surfaces, at high and low altitudes and through blizzard conditions, as well as dry, desert heat and hot, humid locations all over the globe.

Inside an assembly plant's Quality Assurance Center, randomly selected vehicles undergo audits and detailed technical measurements on more than 400 vehicle functions, such as heating, cooling, emissions, and fit-and-finish. FCA assembly plants also employ state-of-the-art metrology centers, a high-tech laboratory with a clean-room environment. The metrology labs use **laser scanners** and a complex set of fixtures that mimic the body shop's process so that engineers and technicians can find the root cause of any build variations even when components appear perfect to the naked eye. All these tools are used to find and resolve any issues before vehicles are shipped to dealers. In addition, all Group plants have adopted a **Quality Management System** that is ISO 9001:2008 certified and all powertrain plants in Europe are also ISO/TS 16949:2009 certified.

Along with monitoring at specific points throughout the product development process, two other quality assurance programs are conducted before and after product launch to rapidly identify and resolve any potential issues with new models and ensure customer satisfaction from the first day of ownership. The first is an internal process known as "fleet fast feedback" in which **employees are asked to evaluate and comment on pre-launch vehicles**, which helps assess customer reaction. The second involves **monitoring performance** of a sample of customer vehicles by a cross-functional team for the first several months after a new model launch.

Across the globe, customer expectations vary significantly from market to market due to differences in driving experience (fuel prices, speed limits, road surfaces, etc.) and/or local preferences such as vehicle size, fuel type, automatic vs manual transmission, seat position and switch controls, etc. When differences in regulatory requirements or customer expectations have an impact on quality standards, we normally apply the **most stringent specifications for all markets**. These market-based differences add complexity and make close cooperation across regions an essential part of the process. To support global quality collaboration, the Global Issue Management (GIM) system was launched in 2015. GIM is a single repository that is available in five languages to help expedite issue resolution across functional groups and regions. By replacing multiple systems with one global system, not only is awareness of issues improved but a more consistent resolution is achieved. Benefits of the GIM system extend beyond our internal resources by providing our supply chain access to view and address supplier-related issues.

Plants

Environmental Protection

FCA believes that a robust commitment to manage environmental aspects rests on the combination of efforts toward sustainable products and processes. In its production facilities, FCA strives to minimize the environmental impact of its manufacturing processes. Efforts at the plant level include reducing CO_2 emissions, water consumption and waste generation. Achieving strong employee engagement and continuous improvements in environmental performance at the plant level is an essential part of FCA's strategy and ability to generate sustainable, long-term value for stakeholders.

Environmental protection at FCA is managed through its Environment, Health and Safety (EHS) and Energy organizations. EHS and Energy managers at each company within the Group are responsible for overseeing facility environmental activities and directing capital investments dedicated to specific action plans. They monitor developments with national and local laws and regulations related to the environment. They ensure that senior management and plant environmental professionals understand the potential impact of new or revised policies on their operations, and they conduct periodic compliance audits.

As an integral part of FCA management of industrial processes, the Company is committed to implementing and maintaining its **Environmental Management System (EMS)** at its production plants, compliant with the ISO 14001 standard. At the end of 2015, 146 Group plants, representing 100% of industrial revenues and 97% of manufacturing employees, were **ISO 14001** certified. The plants still awaiting certification have adopted an EMS which complies with the ISO 14001 standard. These plants are regularly audited by the central Environment, Health and Safety (EHS) unit, which verifies compliance prior to third party audits.

With respect to the **Energy Management System (EnMS)**, as of December 31, 2015, the vast majority of Group plants were **ISO 50001** certified, representing approximately 94% of the Group's total energy consumption.

ISO certifications

GRI: G4-DMA, G4-EN19, G4-EN24, G4-EN31

The Group EMS and EnMS are certified by accredited third parties. Together with **World Class Manufacturing (WCM)** methodologies and tools, they contribute to steady and continuous reduction in the impact of manufacturing processes, as well as to the achievement of environmental objectives.

In place for more than 10 years, WCM is a structured, rigorous and integrated methodology that covers every aspect of the production process: from workplace safety to environmental protection, from maintenance to logistics and quality, from people development to process innovation. The WCM system is aimed first and foremost at improving production processes to ensure product quality with the aim of meeting or exceeding customer expectations.

At year-end 2015, a total of 135 FCA plants have implemented WCM, which now covers 97%[1] of our plants: 50 have achieved a bronze level of implementation and performance, 15 silver and five gold.

97% of FCA plants apply **WCM**

4,300
Environmental Projects in 2015

€65M
saved in 2015

[1] *Percentage based on the total manufacturing cost base.*

The projects developed within WCM are designed to achieve the broadest engagement of employees and to systematically reduce losses and waste, aiming to ultimately reach **zero accidents, zero waste, zero breakdowns** and **zero inventories**.

The WCM system combines the ultimate goal of process efficiencies and excellence standards with the respect for the environment and attention to other sustainability aspects. The WCM Environment pillar, for instance, is an integral part of the Group's EMS and EnMS. In 2015, about 3,300 specific energy projects were implemented, resulting in approximately 315,000 fewer tons of CO_2 emissions. The roughly 4,300 environmental projects started during the year resulted in cost savings of €65 million.

To manage and **minimize environmental and safety risks**, a preventive and proactive approach is employed. In the event of an incident, WCM calls for a rigorous analysis of the causes and application of the most appropriate procedures to reduce the risk of recurrence.

The success of WCM is highly dependent on the participation of employees, who are involved in targeted training programs in order to properly apply WCM methods. All Group plant employees worldwide are encouraged to make suggestions, each of which is assessed for potential application. In 2015, FCA plant employees submitted a total of more than 2.2 million suggestions for improving processes, representing an average of 14.3 proposals per employee.

Extending the most effective processes to all plants is enabled by sharing innovative **best practice projects**, with more than 14,000 approved and disseminated across the Group's plants through 2015.

WCM tools and methods are also applied to business processes other than production. FCA is transferring WCM principles and best practices into its Logistics, Manufacturing Engineering, design activities, Dealers and Suppliers as well, to integrate this approach in other areas of the Company. By involving suppliers in the application of WCM principles, we minimize the environmental footprint along our entire value chain while spreading a sustainability culture.

Action plans and related short-, mid-, and long-term projects aimed at reducing the environmental footprint and ensuring financial sustainability are in place at our plants. In 2015, expenditures and investments for the environment amounted to almost €94 million,[2] demonstrating the Group's commitment to environmental protection. This commitment is illustrated by the fact that **no significant spills** were reported for the Group in 2015.

Data reported as a measure of FCA's impact on the environment consists of both absolute values, directly correlated to production volumes and reporting boundaries, and normalized values.

Normalized environmental performance indicators are presented in order to ensure data comparability from year to year and enable operational trends to be evaluated. Due to the significant variation in types of production lines (vehicles, engines, components, etc.), it is not possible to present normalized data at the Group level. Even within certain companies, such as Teksid, normalized data is calculated differently for different production lines.

The only normalized data presented in this chapter are for energy, air emissions, water and waste for the Mass-Market Brand assembly and stamping facilities (which account for more than half of total impacts).

The year 2010 is used as the baseline to measure progress to our environmental goals because this was the first year FCA US (formerly known as Chrysler Group) was included in the scope of the Group.

For information on the performance and targets of each Group company, see the Facts & Figures section.

Related content

WCM Suppliers >

[2] *€93.9 million, of which 72.6% for waste disposal, emissions treatment, and remediation costs, and 27.4% for prevention and environmental management costs.*

New Plant Landscape

FCA believes that innovation plays a crucial role in creating value for the business through the execution of new ideas in both products and processes. The identification of emerging technologies, trends and opportunities, while targeting those with the greatest potential, is embedded within the organization at various levels.

In the manufacturing area, for example, great effort recently led to the development of a new Information and Communication Technology (ICT) infrastructure deployed in major plant renovations and in greenfield projects. This infrastructure, called New Plant Landscape, is leading to a number of innovative changes.

NPL brings the most advanced ICT solutions to the Group plant landscape in order to achieve high manufacturing assembly and quality standards. New technology impacts manufacturing quality; vehicle tracking and traceability to the supplier who manufactured the parts; workplace safety; and material management, while introducing a technologically modern environment.

This new infrastructure, developed together with major global providers of hardware and software, has already been adopted in the following plants: AGAP, Cassino, Mirafiori, Melfi (Italy), Pernambuco (Brazil) and Guangzhou (China) and will be further deployed over the next few years to other Group plants. Updates and new, innovative features are already under development to continue enhancing our production processes.

NPL is one example among many through which the ICT function guides and supports the other business areas to foster an innovation culture by leveraging both internal resources and an external network of sources that includes universities and research centers, start-ups and providers.

Energy Consumption

Consuming energy responsibly is the basis of FCA's commitment to **reduce energy demand** and to employ energy solutions with an ever-decreasing impact on the environment. This commitment is embodied in the World Class Manufacturing (WCM) Energy sub-pillar which focuses on identifying and implementing energy reduction and efficiency measures.
Our efforts to reduce energy consumption (and related CO_2 emissions) resulted in a year-over-year decrease in the amount of energy consumed in 2015. This reduction was achieved despite stable vehicle production volumes globally.

During the year, the Group implemented several initiatives to improve the energy efficiency of systems and equipment, including overhauls or upgrades to existing equipment that contributed savings of approximately 1,100 TJ in energy and 95,000 tons in CO_2 emissions.

Direct and Indirect Energy Consumption
FCA worldwide (TJ)

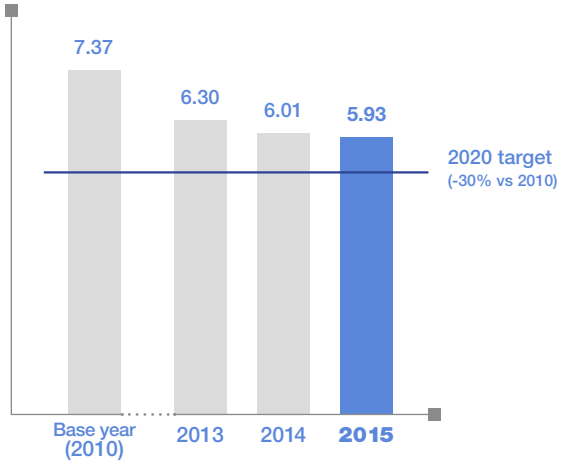
	2015	2014	2013
Plants	*147*	*145*	*142*
Electricity	**21,742**	21,615	21,272
Natural gas	**19,993**	21,260	20,957
Other fuels	**924**	1,133	1,234
Other energy sources	**5,786**	4,636	4,860
Total energy consumption	**48,444**	48,645	48,322

Organizational measures such as process redesign and optimization of plant capacity, also had a major impact, generating energy savings of around 2,200 TJ and avoiding some 190,000 tons in carbon emissions.
In addition, initiatives to increase energy awareness among employees led to actions that resulted in a further 400 TJ in energy savings and 30,000 tons of CO_2 emissions avoided.

At Mass-Market Brand assembly and stamping plants, the **energy consumption per vehicle produced** showed a decrease of 1.3% compared with last year, from 6.01 GJ in 2014 to 5.93 GJ, and by 19.5% compared with 2010 (from 7.37 to 5.93 GJ).

-19.5%
energy consumed

Direct and Indirect Energy Consumption per Unit of Production
Mass-Market Brand assembly and stamping plants worldwide
(GJ per vehicle produced)



Related content

- Energy consumption by Group segment >
- Reduction in energy consumption – dealerships >
- Reduction in energy consumption – warehouses >

GRI: G4-DMA, G4-EN3, G4-EN5, G4-EN6, G4-EN19

CO_2 Emissions

FCA's engagement in the **fight against climate change** is demonstrated by the general downward trend in CO_2 emissions from our production processes compared with the 2010 baseline.

In 2015, total CO_2 emissions were well below the amount reported in previous years, aided by the 3,300 energy projects that were launched in 2015, which saved €57 million.[3]

€57 M
saved

Emissions of CO_2 per vehicle produced at Mass-Market Brand assembly and stamping plants decreased 23.4% in the last five years, falling from 0.616 tons per vehicle produced in 2010 to 0.472 tons per vehicle produced.

-23.4%
CO_2 emitted

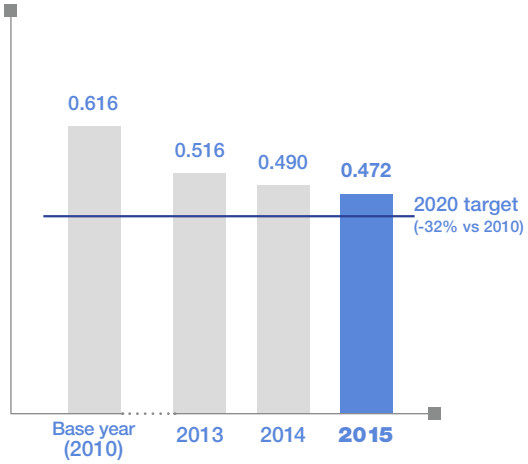
Direct and Indirect CO_2 Emissions

FCA worldwide (thousands of tons of CO_2)

	2015	2014	2013
Plants	*147*	*145*	*142*
Direct emissions	**1,121**	1,203	1,198
Indirect emissions	**2,962**	3,079	2,980
Total CO_2 emissions	**4,084**	**4,283**	**4,178**

Direct and Indirect CO_2 Emissions per Unit of Production

Mass-Market Brand assembly and stamping plants worldwide (tons of CO_2 per vehicle produced)



In 2015, FCA continued to make considerable use of **energy from renewable sources**. In Europe, the vast majority of renewable energy purchased for consumption by the Group is certified by the supplier, covering 100% of Italian plants' electricity. In Brazil, South America's major market, electricity purchased for consumption is certified as originating almost entirely from hydroelectric sources. In addition, several Group plants use solar power for electricity and/or heating.

Energy from renewable sources used in Group production processes covered 21.9% of the total electricity consumption in 2015.

21.9%
from renewables

One example of FCA's commitment to **renewable energy** is our operations in India where over the past four years **wind-generated power** has been used to meet 26.6% of our electricity needs at FCA joint venture plants. This reduced CO_2 emissions by more than 40,000 tons and generated savings in excess of €600,000.

Related content

CO_2 emissions by Group segment >
Dealership CO_2 emissions >
Logistics CO_2 emissions >
Warehouse CO_2 emissions >
Vehicle CO_2 emissions >

[3] *Data is prorated to also include carry-over from projects launched in 2014.*

Water Management

Water scarcity is one of the primary challenges facing governments, communities, businesses and individuals in many parts of the world. Because water scarcity also exposes companies to business risk, it is a factor that needs to be managed promptly and effectively.

FCA sees water as one of the most important natural resources to be protected. Internal policies and procedures provide the principles for sustainable management of the entire water cycle and emphasize reducing consumption, especially in water-stressed regions where availability is critical to the surrounding environment and population.

FCA periodically maps the availability of water resources around the world, correlating the quantity of water available with the quantity consumed in each region.

This risk assessment identified 12 plants located in areas where water is considered a limited resource.[4]

Accordingly, these plants took appropriate measures to improve water reuse and recycling.

As a result of **improvements in water cycle management** and measures taken to reuse water in industrial processes, in 2015 FCA reduced overall water consumption by 1.4% compared with 2014 (from 25.3 to 24.9 million m^3) and by 27.1% compared with 2010 (from 34.2 to 24.9 million m^3). Projects to cut the quantity of water consumed led to an overall savings of about €2.7 million in 2015.

Water Withdrawal and Discharge

FCA worldwide (millions of m^3)

	2015	2014	2013
Plants	*147*	*145*	*142*
Total water withdrawal[5]	**24.9**	**25.3**	**24.9**
Total water discharge[5]	**19.6**	**16.7**	**16.2**

Water recycling resulted in 2.3 billion m^3 of water saved, equivalent to the amount of water that flows over Niagara Falls during a two week period.

Water Recycling Index

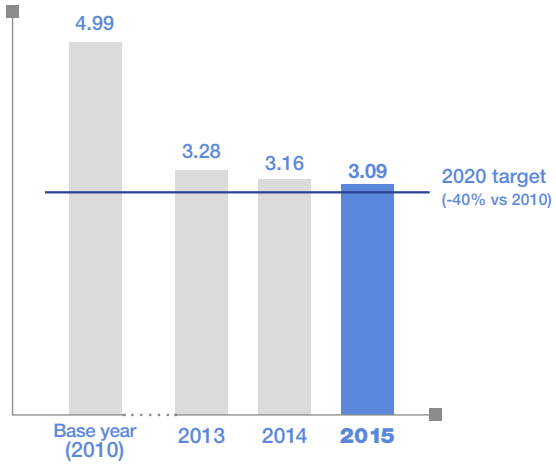
FCA worldwide (millions of m^3)

	2015	2014	2013
Total water requirement	**2,361.6**	3,291.2	2,155.6
of which covered by recycling	**2,336.7**	3,266.5	2,130.6
of which water withdrawal	**24.9**	24.7	24.9
Recycling index[6]	**98.9%**	**99.3%**	**98.8%**

[4] Water availability <1,700 m^3/(person per year). Source: Food and Agriculture Organization's (FAO) global information system.
[5] Data restated for 2014 due to a miscalculation.
[6] The recycling index is calculated on the basis of total water requirement, which is the sum of water withdrawn and water recirculated in the plants.

Water Withdrawal per Unit of Production

Mass-Market Brand assembly and stamping plants worldwide
(m^3 per vehicle produced)



In 2015, Mass-Market Brand assembly and stamping plants reduced **water consumption per vehicle produced** by 2.2% compared with the previous year (a 38.1% reduction compared with 2010).

-38.1%
water consumed

The Group pairs reducing consumption of water resources with **optimizing wastewater treatment processes** and constant monitoring of relevant parameters. In 2015, analysis conducted on water discharged from FCA plants worldwide revealed levels of Biochemical Oxygen Demand (BOD) up to 96% below regulatory requirements, while levels of Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) were up to 89% and 97% below required limits, respectively.

In addition to any legal requirements, FCA regularly measures and analyzes the presence in its wastewater of certain heavy metals such as nickel (Ni), zinc (Zn), lead (Pb), cadmium (Cd) and copper (Cu). These analyses provide a comprehensive view of FCA's overall impact on water quality to maintain levels well below legal limits.

Of 147 total plants active in 2015, 145 (which generate 99.97% of FCA's wastewater) were serviced by either an internal or external wastewater treatment system. The manufacturing activities of the remaining two plants generate wastewater classifiable as domestic and/or not requiring treatment.

Related content

Water consumption by Group segment >

Reduction in water consumption – warehouses >

Waste Management

FCA has long been committed to reducing waste generation in its production activities according to the concept of the circular economy. **Reusing and recovering materials** is widely practiced throughout the Group. We strive to recycle what cannot be reused. If neither reuse nor recovery is possible, waste is disposed of using the method available that has the least environmental impact (waste-to-energy conversion or treatment) with landfills used only as a last resort.

Actions to improve this important environmental factor resulted in a 15.3% reduction in waste generated in 2015 compared with 2014. In the past two years, the amount of waste generated has decreased by 18.3%. Projects to cut the quantity of waste generated led to savings of about €4 million and revenues of about €17 million in 2015.

The Group also carefully manages the level of waste defined as hazardous which is generated during manufacturing processes, in accordance with the applicable regulations in each jurisdiction. Particular importance is given to reducing the generation of such waste, since by its very nature it is often less suitable for recovery. Through appropriate environmental practices, hazardous waste decreased by 4.0% in the last year and by 41.3% compared with 2010 levels.

Waste Generation and Management

FCA worldwide (tons)

	2015	2014	2013
Plants	*147*	*145*	*142*
Waste generated			
Non-hazardous waste	1,441,983	1,706,542	1,770,029
Hazardous waste	36,241	37,766	39,069
Total waste generated	**1,478,223**	**1,744,308**	**1,809,098**
of which packaging	119,219	94,655	121,837
Waste disposed			
Treatment	42,017	42,888	31,055
Sent to landfill	220,169	295,358	438,741
Total waste disposed	**262,186**	**338,246**	**469,796**
Waste recovered			
Waste-to-energy conversion	19,170	18,361	23,750
Waste recovered	1,196,868	1,387,701	1,315,552
Total waste recovered	**1,216,038**	**1,406,062**	**1,339,302**

In Mass-Market Brand assembly and stamping plants, the quantity of **waste generated per vehicle produced** in 2015 decreased by 15.8% compared with the prior year (from 203.4 to 171.3 kg/vehicle produced), and by 21.1% compared with 2010 (from 217.2 to 171.3 kg/vehicle produced). **Hazardous waste per vehicle produced** decreased 17.2% compared with 2014 (from 2.9 to 2.4 kg/vehicle produced) and 70.7% compared with 2010 (from 8.2 to 2.4 kg/vehicle produced).

In 2015, the **waste recovery rate** in Mass-Market Brand assembly and stamping plants was 96.7% (compared with the FCA average of 82.3%) and the percentage of **waste sent to landfill** was 1.4% (compared with the FCA average of 14.9%).

-21.1%
waste generated

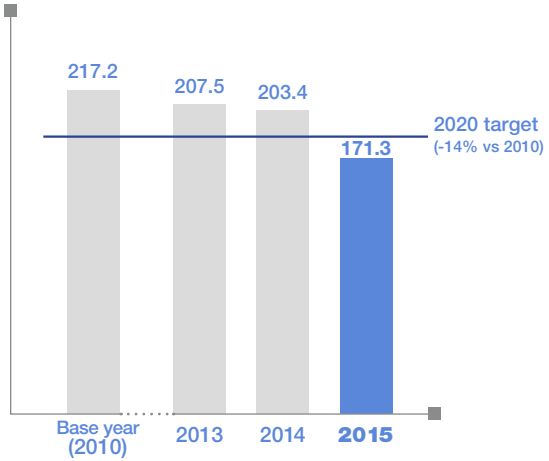
-70.7%
hazardous waste

96.7%
waste recovered

GRI: G4-DMA, G4-EN23, G4-EN25

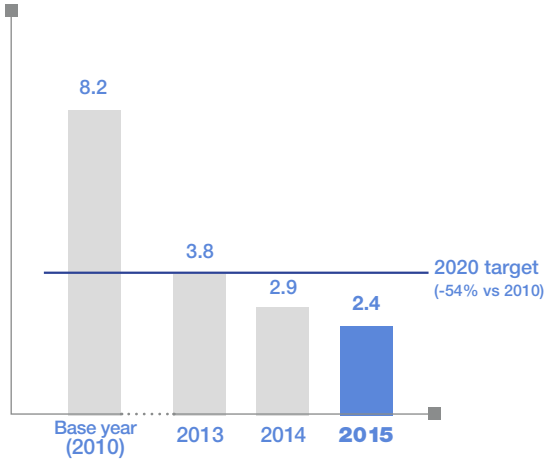
Waste Generated per Unit of Production

Mass-Market Brand assembly and stamping plants worldwide
(kg per vehicle produced)



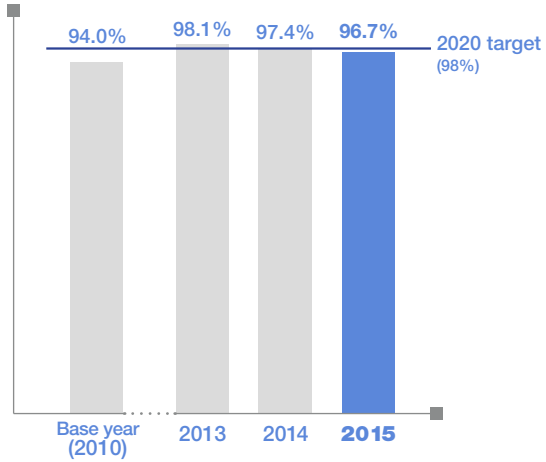
Hazardous Waste Generated per Unit of Production

Mass-Market Brand assembly and stamping plants worldwide
(kg per vehicle produced)



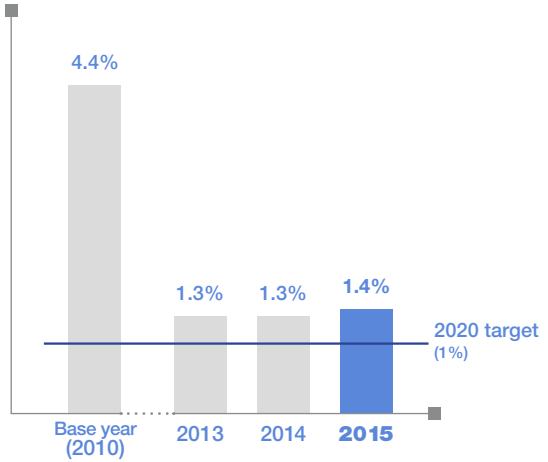
Waste Recovery Rate

Mass-Market Brand assembly and stamping plants worldwide



Waste Sent to Landfill

Mass-Market Brand assembly and stamping plants worldwide



The quantity of waste sent to landfills by the Group is significantly influenced by a single type of waste: Teksid's inert industrial process sand, which must be sent to landfill at the present time due to technological constraints. However, Teksid has several specific projects in progress aimed at optimizing the management of this type of waste.

In alignment with the terms of the **Basel Convention**, 64 tons of hazardous waste were exported from Canada to the United States for recycling (paint shop-related waste), representing 0.004% of all waste generated by FCA.

Related content

Waste generation by Group segment >

Reduction in waste generation – logistics >

Reduction in waste generation – warehouses >

Logistics

Transport Flow Management

Every year, FCA manages the movement of millions of automotive parts, materials and vehicles around the world. The Group is focused on two main areas of intervention:

- the optimization of logistics flows and the adoption of low-emission transport vehicles to improve performance and minimize impacts on the environment
- the implementation of emerging solutions and technologies to protect parts and decrease the use of packaging and protective materials to save resources.

The FCA Global Supply Chain Management acts as a bridge between Group plants, the supplier network and dealers managing transports among all parties involved. Processes are continuously being improved through the re-engineering of material flows and the application of just-in-time methodology. Immediate benefits are the reduction of stock and material handling and the delivery of only what is needed, where it is needed, at the right time. In addition, World Class Logistics (WCL) is the program used to define logistics processes at plants and warehouses. Through its extensive approach, WCL helps to meet safety, ergonomics and eco-compatibility requirements as well as transport flow optimization.

Logistics Flows

GRI: G4-DMA

The movement of vehicles, materials and parts are handled by a variety of internal and external operators, depending on the origin and destination of the goods.

Component and material delivery to Group plants (upstream transport) and spare parts transport to Mopar warehouses and distribution centers are generally handled either by external transport providers engaged by the Company or managed directly by the material suppliers themselves. External logistics operators handle the shipment of spare parts to dealers.

In addition to external operators, the U.S. and Canada operations utilize the Company-owned fleet, FCA Transport, for moving materials to select plants.

Finished vehicle distribution from plants to dealers (downstream transport) is handled by external transport providers contracted by the Company or by the Group-owned fleets, i-FAST Automotive Logistics in the EMEA region, and Auto Transport Services (ATS) in NAFTA.

In every region, FCA strives to use the most environmental and cost-efficient fleet possible, both with respect to the Company-owned fleet and those of our external providers.

Environmental Impacts

To maximize efficiency and minimize the environmental impact of our logistics operations, FCA has adopted Green Logistics Principles that summarize the Group commitment to reduce the environmental impact of Logistics globally while delivering on-time goods to and from plants and finished vehicles to markets.

FCA monitors logistics performance to detect areas of improvement and actions needed, and communicates transparently its environmental and social impacts to stakeholders. In 2015, the scope of this monitoring was further expanded to include operations across Brazil, the main country of presence within the LATAM region. The increase in reporting scope enabled a more thorough analysis, both from the regional and global perspectives.

In 2015, volumes transported in relation to vehicle production and delivery increased by 21% and total emissions only by 14%. This was possible due to a decrease of 6% in the emissions per vehicle.

Related content

CO_2 emissions in logistics processes >

Emissions reduction in plants >

Environmental impact reduction in dealerships >

GRI: G4-EN17, G4-EN18, G4-EN30

Low-Emission Transport

FCA Transport is the NAFTA Group-owned trucking fleet composed of 325 tractors and almost 1,300 trailers servicing plants located in Michigan and Ohio (U.S.), and Ontario (Canada). In 2015, FCA Transport launched its new fleet in Detroit (U.S.) of 179 tractors to operate on **Compressed Natural Gas** (CNG) rather than traditional diesel fuel. This transition reflects the balance of profitability, social responsibility and community development, as well as environmental stewardship. The fleet conversion provided a solid business case, clear environmental benefits and an opportunity to invest in the FCA Transport facility and workforce.

FCA invested €1.6 million to enable its maintenance facility to handle the new CNG-powered fleet. The on-site fueling station is the largest private CNG station in North America. 2015 was a transition year of building the CNG fleet. The upstream carbon emissions for the FCA Transport fleet have shown an improvement of approximately 5% due to the launch of CNG. In 2016, there will be a full-year impact of carbon reduction.

In EMEA, FCA's internal fleet of trucks delivering finished vehicles by road is composed of 91% (compared to 88% in 2014) Euro V- or Euro VI-compliant trucks following the Group's purchase of 16 new Euro VI trucks in 2015. Continued investment in more efficient trucks is expected for 2016.

Auto Transport Services (ATS) predominantly services the Windsor (Canada) and Detroit (U.S.) plant cross-border finished vehicle distribution. ATS continuously investigates processes and technologies that reduce carbon emissions, improve efficiency, and promote overall sustainability, and has already implemented Autostart Systems on trucks to avoid running the engines while adjusting decks during loading and unloading. Additionally, the fluid heater system allows trucks to start in sub-freezing temperatures and reduces idling to keep the engine and cab warm. These initiatives contribute to saving approximately 140,000 liters of diesel fuel per year.

Access to European plants is prohibited for vehicles with emission levels that do not meet the Euro III standard. To further help reduce the environmental impact of Group-managed transport in EMEA, **contractual clauses** continued to be progressively introduced in 2015, requiring that at least 50% of supplier fleets consist of vehicles compliant with Euro V or stricter standards. This makes it possible to extend the same standards required for Group-managed transportation to supplier fleets as well. In 2015, external providers were asked to complete a **Sustainability Self-Assessment**, which provided an added method to evaluate the upstream and downstream carriers. Data collected allows us to rank carriers within the different means of transport.

FCA is a partner with the U.S. and Mexican government agencies through SmartWay and Transporte Limpio respectively. All U.S. and Canadian inbound carriers participate in SmartWay reporting. The SmartWay partnership is a collaboration between the U.S. Environmental Protection Agency and the freight industry designed to help companies reduce the carbon footprint of their transport operations. In 2015, FCA US queried its carriers to understand gaps and opportunities as well as to identify success stories within the carrier base. Of the carriers contacted, 87% responded with initiatives for reducing carbon emissions. As a standard practice, FCA US issues a questionnaire to all new carriers which seeks information on the availability of **alternative fuel equipment** in their fleets.

Related content

FCA's compressed natural gas vehicles >

Emissions reduction in plants >

Environmental impact reduction in dealerships >

Warehouse WCL

The Group's commitment to reducing the impact of its transport operations also extends to avoiding the waste of resources used in our logistics processes. World Class Logistics (WCL) helps to significantly reduce the environmental footprint of logistics activities at Mopar warehouses or Parts Distribution Centers (PDCs), while at the same time exhibiting a productive and efficient high-volume flow of goods and materials.

In 2015, EMEA Central Parts Distribution Centers in None and Volvera (Italy) - which are at the heart of the regional network of 19 other PDCs - were awarded the **World Class Logistics Bronze Level**.
This achievement comes from the daily efforts of the 650 people working in the complex. The priorities aimed at continuous improvement encompass process productivity, environmental stewardship, service quality and health and safety in the workplace.

All Mopar Parts Distribution Centers located in the U.S., Canada and Mexico are ISO 14001 certified, with five of those sending zero process waste to landfill.

Environmental performance of the Group Parts Distribution Centers is monitored on a monthly basis. Results are communicated and shared among employees to increase their level of awareness and encourage direct involvement in initiatives aimed at improving sustainability performances.

Related content

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World Class Manufacturing >

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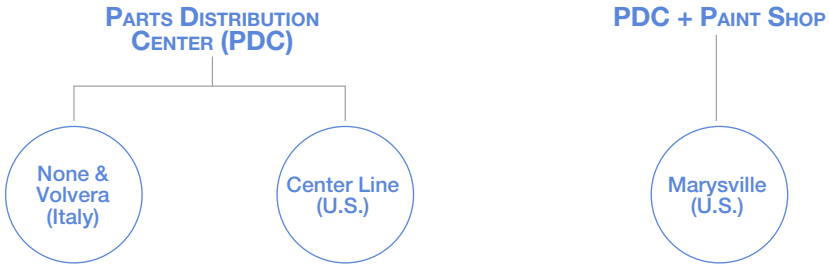
Enviromental Results for Global Source Warehouses that have implemented WCL (2015 vs 2011)



Transport Modes

In order to reduce traffic congestion and CO_2 emissions, the Group explores alternative solutions to road transport for both material and vehicle distribution through a variety of options such as rail and ocean, especially for long distance shipments. FCA continues to evaluate its network for potential new rail and sea routes on an ongoing basis. Depending on plant and dealer locations, as well as existing infrastructure, movements may require a significant percentage of road transport.

Efforts were made in 2015 to implement new **intermodal solutions** or extend existing ones.

The expansion of the rail routes to deliver materials from Poland to the plants in southern Italy, as well as the vehicle distribution from the Melfi plant to the Civitavecchia port, are two examples of intermodal solutions where **rail transportation** replaced road transport. This led to important savings from both the economic and environmental perspective, with approximately 7,200 tons of CO_2 emissions avoided in 2015.

As a result of these projects and others in 2015, FCA rail transport kilometers traveled in the EMEA region increased by 28% versus 2014, while sea transport kilometers traveled increased by 39%.

In the NAFTA region, the total rail transportation accounted for 64% while truck transport share was 36% of the total kilometers. This represents an increase of over 3% in rail and a corresponding decrease in truck transportation from the prior year.

At the Brampton Assembly Plant (Canada), a new rail ramp has been implemented. The ramp and associated tunnel were needed to avoid disruption of current inbound traffic at the plant. This ramp allows increased utilization of rail transport and requires fewer shuttles to an off-site yard, resulting in less traffic congestion due to fewer trucks on the road around the plant and in the Toronto area. In 2015,185 tons of CO_2 emissions were eliminated because of the new ramp.

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Transport Capacity

Optimization of transport capacity is another way the Group reduces the environmental impact of logistics operations while simultaneously containing shipping costs.

In the NAFTA region, FCA optimizes the management of **returnable containers** through a Regional Container Pool Center for upstream freight. This process directs containers efficiently where needed, resulting in a reduction in transportation costs, travel time for containers, handling costs, and possible double handling. In 2015, the Regional Container Pooling Initiative avoided approximately 1,200 tons of CO_2 emissions.

For finished vehicles, a **smart-loading** method is also used to increase the number of units on rail cars by combining vehicles of various dimensions to fully utilize rail capacity. This process of optimizing the loads reduces the number of rail cars necessary and thereby, increases efficiency and reduces cost as well as carbon emissions. In 2015, optimizing the rail loading process at several plants in NAFTA reduced the total amount of rail car CO_2 emissions by 2,900 tons.

Leveraging World Class Logistics methods, Mopar implemented improved trailer loading standards in late 2015 to improve cube utilization for dealer referral order lanes. A reduction of about 45,000 kilometers per month on transportation of referral loads has been registered. The Group also continued efforts to reduce CO_2 emissions by continuing the use of **shared services** on transport. By engaging other automakers and non-automotive companies to combine delivery services and share the transportation costs among all parties, CO_2 emissions are reduced for all participants.

In the EMEA region, projects to increase **material transportation capacity** led to savings of approximately 1,500 tons of CO_2. The Collapsible Container project, developed together with i-Fast Container Logistics - an FCA company - substituted metal boxes with collapsible plastic containers. This has led to a reduction in total weight on each round trip and an increase in the quantity of empty containers per trip, thus reducing the number of trips needed. In addition, the Container Optimization program replaces disposable packaging with collapsible and returnable containers, optimized to increase capacity.

An additional tool used by FCA to improve transport capacity is the design process to increase the **density** of special racks for specific parts of new vehicle models. For example, the average part density per rack for a new model in the startup phase in 2015 in the EMEA region was improved by over 40% compared with similar models in previous years.

Related content

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Packaging and Protective Materials

FCA strives to minimize packaging and protective materials and increase reusable containers, while meeting quality requirements. Where reusable containers are not the optimal solution, the Group ensures that recovery processes are applied.

Even for international shipments of materials and parts, the Group continues to optimize the packaging process. In 2015, disposable wood boxes were replaced with **returnable wooden crates** for parts shipped from Italy to the FCA plant in Saltillo, Mexico. Where the substitution was possible, a 48% reduction in the use of wood per cubic meter of material shipped was recorded.
The Group also minimized the consumption of **plastic protective materials** on the same route. Utilization of polythene film material was reduced by approximately 27,000 tons during the year.

In the NAFTA region, the amount of **cardboard** arriving at assembly plants in 2015 was reduced to 6.89 kg per vehicle as a result of a large investment in standard containers. As production volumes increase year-over-year, the additional containers allow for greater flexibility in scheduling and reduce cardboard quantity. The amount of cardboard arriving at assembly plants in the EMEA region totaled 8.29 kg per vehicle with an increase in the scope of plants monitored compared with the previous year.

The Manufacturing Logistics Management (MLM) group in NAFTA engaged in a collaborative effort in 2015 that collected more than 7,000 returnable containers from the Company's manufacturing facilities. These containers, valued at €1.35 million, were placed back in circulation, helping to reduce the need for alternative disposable packaging. Container Awareness Week was intended to not only capture misused or lost containers, but to educate plant staff on the importance of correct use of these assets as well as the impact of improper management.

MLM staff also did container assessments at 365 supplier locations, resulting in the recovery and proper allocation of over 125,000 returnable containers, further reducing the need for expendable cardboard packaging. This initiative will be expanded in 2016 to include more supplier locations throughout the NAFTA region.

In EMEA, Mopar continues to enhance packaging materials for inbound and outbound inter-depot flows. Mopar increased the number of plastic returnable containers in use, and where this solution is not possible, converted from wood containers to cardboard packaging. The ratio between the weight of disposable packaging used compared with the shipped net tons decreased by 7.7%. This allowed a reduction in the consumption of auxiliary material (cardboard and wood) used for packing and shipping, saving approximately 145 tons of materials compared with 2014 despite an increase of 5.6% in operations.

FCA's commitment to measure, report and communicate in a transparent way its impacts and results is shown also by participation in the CDP Forest initiative which assesses a company's management and prevention of the deforestation risk. In 2015, FCA was recognized with a "notable mention and ahead of others in its sector."[1]

Related contents

Environmental impact reduction in plants >

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[1] *CDP Global Forest Report 2015.*

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Details by Product

Investments and Patents

Public Funding for Research and Development
FCA worldwide (€ million)

	2015	2014
Grants	36	36
Loans	496	6
of which subsidized loans	8	6
of which EIB[1] loans	488	-

Patents
FCA worldwide

Total patents registered at December 31, 2015	8,462
of which: registered in 2015	704
Patents pending at December 31, 2015	3,316
of which: new patent applications filed in 2015	434

Designs
FCA worldwide

Design rights registered at December 31, 2015	4,251
of which: registered in 2015	664

Materials Used

Materials Used in Type-approved Vehicles in Europe[2]

	Average Weight of Materials Used (kg)	Average Composition of Vehicles by Material (%)	Average Weight of Recycled Materials Used (kg)	Average Percentage of Recycled Materials Used (%)
Steel	761.7	54.7	299.3	39.3
Cast iron	94.0	6.7	84.8	90.2
Light alloys	108.9	7.8	88.2	81.0
Other metals	35.0	2.5	32.3	92.3
Polymers	178.2	12.8	62.2	34.9
of which thermoplastics	154.6	11.1	62.2	40.2
of which thermosettings	23.6	1.7	-	-
Elastomers	54.6	3.9	-	-
Glass	36.8	2.6	1.3	3.4
Fluids	79.9	5.7	-	-
Other	43.7	3.1	15.3	35.1
Total	**1,392.6**	**100.0**	**583.4**	**41.9**

[1] *European Investment Bank.*
[2] *Average for 2015 existing range of type-approved vehicles in Europe, based on Directive 2005/64/EC.*

Details by Processes[1]

Energy

Direct Energy Consumption by Source
FCA worldwide (GJ)

2015	FCA	Mass-Market Brands: Assembly and Stamping	Mass-Market Brands: Engines and Transmissions	Mass-Market Brands: Casting	Mass-Market Brands: Others	Luxury Brands: Maserati	Luxury Brands: Ferrari	Components: Magneti Marelli	Components: Teksid	Components: Comau
Plants	*147*	*35*	*22*	*2*	*9*	*2*	*2*	*57*	*5*	*13*
Non-renewable sources										
Natural gas	19,992,801	14,670,476	1,479,625	782,570	418,695	297,620	318,626	806,821	1,104,191	114,176
Coal	754,949	-	-	-	-	-	-	-	754,949	-
Diesel	62,671	2,716	-	-	-	110	-	4,526	53,761	1,558
LPG	105,958	55,729	442	-	-	-	-	48,074	-	1,712
Other (HS and LS fuel oil)	97	-	-	-	-	-	-	97	-	-
Total non-renewable sources	**20,916,475**	**14,728,921**	**1,480,067**	**782,570**	**418,695**	**297,730**	**318,626**	**859,518**	**1,912,901**	**117,446**
Renewable sources										
Biomass	-	-	-	-	-	-	-	-	-	-
Photovoltaic	4,873	-	3,890	-	-	-	983	-	-	-
Solar-thermal	638	-	638	-	-	-	-	-	-	-
Total renewable sources	**5,510**	**-**	**4,527**	**-**	**-**	**-**	**983**	**-**	**-**	**-**
Total direct energy consumption	**20,921,985**	**14,728,921**	**1,484,594**	**782,570**	**418,695**	**297,730**	**319,609**	**859,518**	**1,912,901**	**117,446**
2014										
Plants	*145*	*35*	*20*	*2*	*7*	*2*	*2*	*58*	*5*	*14*
Non-renewable sources										
Natural gas	21,259,513	15,739,635	1,696,702	746,509	379,968	348,918	421,382	747,228	1,038,679	140,491
Coal	952,258	-	-	-	-	-	-	-	952,258	-
Diesel	73,237	4,729	-	-	-	139	-	4,807	62,119	1,443
LPG	107,525	69,368	457	-	-	-	-	34,860	-	2,840
Other (HS and LS fuel oil)	132	-	-	-	-	-	-	132	-	-
Total non-renewable sources	**22,392,665**	**15,813,732**	**1,697,159**	**746,509**	**379,968**	**349,057**	**421,382**	**787,028**	**2,053,056**	**144,774**
Renewable sources										
Biomass	-	-	-	-	-	-	-	-	-	-
Photovoltaic	2,070	-	1,221	-	-	-	849	-	-	-
Solar-thermal	-	-	-	-	-	-	-	-	-	-
Total renewable sources	**2,070**	**-**	**1,221**	**-**	**-**	**-**	**849**	**-**	**-**	**-**
Total direct energy consumption	**22,394,735**	**15,813,732**	**1,698,380**	**746,509**	**379,968**	**349,057**	**422,231**	**787,028**	**2,053,056**	**144,774**
2013										
Plants	*142*	*33*	*18*	*2*	*4*	*2*	*2*	*61*	*6*	*14*
Non-renewable sources										
Natural gas	20,956,720	15,546,304	1,708,396	736,521	443,501	280,846	350,297	792,492	950,348	148,015
Coal	1,109,418	-	-	-	-	-	-	-	1,109,418	-
Diesel	79,234	6,854	-	-	-	280	-	4,692	66,223	1,185
LPG	44,942	126	-	-	-	-	-	43,261	-	1,554
Other (HS and LS fuel oil)	117	-	-	-	-	-	-	117	-	-
Total non-renewable sources	**22,190,431**	**15,553,284**	**1,708,396**	**736,521**	**443,501**	**281,126**	**350,297**	**840,562**	**2,125,988**	**150,755**
Renewable sources										
Biomass	-	-	-	-	-	-	-	-	-	-
Photovoltaic	1,564	-	776	-	-	-	788	-	-	-
Solar-thermal	-	-	-	-	-	-	-	-	-	-
Total renewable sources	**1,564**	**-**	**776**	**-**	**-**	**-**	**788**	**-**	**-**	**-**
Total direct energy consumption	**22,191,995**	**15,553,284**	**1,709,172**	**736,521**	**443,501**	**281,126**	**351,085**	**840,562**	**2,125,988**	**150,755**

[1] In this section, the data relative to 2011 includes FCA US (formerly known as Chrysler Group) for the full year. The data relative to 2010 has been restated to include FCA US (formerly known as Chrysler Group) and to exclude companies demerged into CNH Industrial S.p.A. The per unit data has been recalculated on the basis of reporting scope applicable for 2015.

Details by Processes

Indirect Energy Consumption by Source

FCA worldwide (GJ)

2015	FCA	Mass-Market Brands: Assembly and Stamping	Mass-Market Brands: Engines and Transmissions	Mass-Market Brands: Casting	Mass-Market Brands: Others	Luxury Brands: Maserati	Luxury Brands: Ferrari	Components: Magneti Marelli	Components: Teksid	Components: Comau
Plants	*147*	*35*	*22*	*2*	*9*	*2*	*2*	*57*	*5*	*13*
Electricity										
Non-renewable sources	**16,991,042**	8,273,649	4,008,955	587,058	431,789	6,282	409,545	2,151,834	1,014,751	107,179
Renewable sources	**4,748,383**	1,604,553	1,209,858	-	147,265	89,371	63,871	783,386	836,389	13,690
Total electricity	**21,739,425**	**9,878,202**	**5,218,813**	**587,058**	**579,054**	**95,653**	**473,416**	**2,935,219**	**1,851,140**	**120,869**
Thermal energy										
Non-renewable sources	**4,514,783**	3,637,849	325,056	-	34,639	62,393	121,536	90,385	242,925	-
Renewable sources	**3,663**	-	-	-	-	-	-	3,660	-	3
Total thermal energy	**4,518,446**	**3,637,849**	**325,056**	**-**	**34,639**	**62,393**	**121,536**	**94,045**	**242,925**	**3**
Other energy sources										
Non-renewable sources	**1,264,617**	899,028	203,414	-	68,239	-	83,257	10,679	-	-
Renewable sources	**-**	-	-	-	-	-	-	-	-	-
Total other energy sources	**1,264,617**	**899,028**	**203,414**	**-**	**68,239**	**-**	**83,257**	**10,679**	**-**	**-**
Total indirect energy consumption	**27,522,487**	**14,415,079**	**5,747,283**	**587,058**	**681,932**	**158,046**	**678,209**	**3,039,943**	**2,094,064**	**120,872**
2014										
Plants	*145*	*35*	*20*	*2*	*7*	*2*	*2*	*58*	*5*	*14*
Electricity										
Non-renewable sources	17,204,725	8,224,424	4,306,059	580,048	391,390	58,333	390,229	2,179,235	965,943	109,064
Renewable sources	4,409,051	1,748,094	818,601	-	117,055	43,665	61,290	676,174	930,477	13,695
Total electricity	**21,613,777**	**9,972,518**	**5,124,660**	**580,048**	**508,445**	**101,998**	**451,519**	**2,855,409**	**1,896,420**	**122,759**
Thermal energy										
Non-renewable sources	3,830,196	3,166,909	302,769	-	12,636	49,368	-	104,341	194,173	-
Renewable sources	4,690	-	873	-	-	-	-	3,813	-	4
Total thermal energy	**3,834,886**	**3,166,909**	**303,642**	**-**	**12,636**	**49,368**	**-**	**108,154**	**194,173**	**4**
Other energy sources										
Non-renewable sources	801,462	604,030	143,115	-	35,653	396	-	18,269	-	-
Renewable sources	-	-	-	-	-	-	-	-	-	-
Total other energy sources	**801,462**	**604,030**	**143,115**	**-**	**35,653**	**396**	**-**	**18,269**	**-**	**-**
Total indirect energy consumption	**26,250,125**	**13,743,457**	**5,571,417**	**580,048**	**556,734**	**151,762**	**451,519**	**2,981,832**	**2,090,593**	**122,763**
2013										
Plants	*142*	*33*	*18*	*2*	*4*	*2*	*2*	*61*	*6*	*14*
Electricity										
Non-renewable sources	16,632,997	7,989,155	3,830,463	530,803	332,601	152,819	357,378	2,166,039	1,165,730	108,008
Renewable sources	4,637,829	1,802,108	835,678	-	-	7,200	101,925	695,909	1,181,261	13,748
Total electricity	**21,270,826**	**9,791,263**	**4,666,141**	**530,803**	**332,601**	**160,019**	**459,303**	**2,861,949**	**2,346,991**	**121,757**
Thermal energy										
Non-renewable sources	4,035,758	3,174,584	381,320	-	-	111,922	-	128,349	239,583	-
Renewable sources	5,223	-	-	-	-	-	-	5,219		4
Total thermal energy	**4,040,981**	**3,174,584**	**381,320**	**-**	**-**	**111,922**	**-**	**133,567**	**239,583**	**4**
Other energy sources										
Non-renewable sources	818,530	619,038	145,104	-	-	3,049	-	51,340	-	-
Renewable sources	-	-	-	-	-	-	-	-	-	-
Total other energy sources	**818,530**	**619,038**	**145,104**	**-**	**-**	**3,049**	**-**	**51,340**	**-**	**-**
Total indirect energy consumption	**26,130,337**	**13,584,885**	**5,192,565**	**530,803**	**332,601**	**274,990**	**459,303**	**3,046,856**	**2,586,574**	**121,761**

Details by Processes

Direct and Indirect Energy Consumption
FCA Worldwide (GJ)

2015	FCA	Mass-Market Brands				Luxury Brands		Components		
		Assembly and Stamping	Engines and Transmissions	Casting	Others	Maserati	Ferrari	Magneti Marelli	Teksid	Comau
Plants	*147*	*35*	*22*	*2*	*9*	*2*	*2*	*57*	*5*	*13*
Electricity	**21,741,662**	9,878,202	5,220,067	587,058	579,054	95,653	474,399	2,935,219	1,851,140	120,869
Natural gas	**19,992,801**	14,670,476	1,479,625	782,570	418,695	297,620	318,626	806,821	1,104,191	114,176
Other fuels	**923,674**	58,445	442	-	-	110	-	52,697	808,709	3,270
Other energy sources	**5,786,335**	4,536,877	531,743	-	102,878	62,393	204,793	104,724	242,925	3
Total energy consumption	**48,444,473**	**29,144,000**	**7,231,878**	**1,369,629**	**1,100,627**	**455,776**	**997,818**	**3,899,461**	**4,006,965**	**238,318**
2014										
Plants	*145*	*35*	*20*	*2*	*7*	*2*	*2*	*58*	*5*	*14*
Electricity	21,615,847	9,972,518	5,125,881	580,048	508,445	101,998	452,368	2,855,409	1,896,420	122,759
Natural gas	21,259,513	15,739,635	1,696,703	746,509	379,968	348,918	421,382	747,228	1,038,679	140,491
Other fuels	1,133,152	74,097	457	-	-	139	-	39,800	1,014,377	4,283
Other energy sources	4,636,348	3,770,939	446,756		48,289	49,764	-	126,423	194,173	4
Total energy consumption	**48,644,859**	**29,557,189**	**7,269,797**	**1,326,557**	**936,702**	**500,819**	**873,750**	**3,768,860**	**4,143,648**	**267,537**
2013										
Plants	*142*	*33*	*18*	*2*	*4*	*2*	*2*	*61*	*6*	*14*
Electricity	21,272,390	9,791,263	4,666,917	530,803	332,601	160,019	460,091	2,861,949	2,346,991	121,757
Natural gas	20,956,720	15,546,304	1,708,396	736,521	443,501	280,846	350,297	792,492	950,348	148,015
Other fuels	1,233,711	6,980	-	-	-	280	-	48,070	1,175,641	2,739
Other energy sources	4,859,511	3,793,622	526,424	-	-	114,971	-	184,907	239,583	4
Total energy consumption	**48,322,332**	**29,138,169**	**6,901,737**	**1,267,324**	**776,102**	**556,116**	**810,388**	**3,887,418**	**4,712,563**	**272,515**

Details by Processes

Direct and Indirect Energy Consumption per Unit of Production FCA worldwide (GJ/unit of production)	Targeted Reduction 2020 vs 2010	2015	2014	2013	Base Year (2010)	Unit of Measurement
Mass-Market Brand assembly and stamping	-30%	**5.93**	6.01	6.30	7.37	GJ/vehicle produced
Mass-Market Brand engines and transmissions	n.a.	**0.81**	0.81	0.80	0.90	GJ/unit produced
Mass-Market Brand casting	-40%	**6.65**	6.87	7.84	10.92	GJ/unit produced
Mass-Market Brand others[2]	-40%	**0.19**	0.19	0.22	0.34	GJ/hour of production
Maserati	-3%	**0.06**	0.09	0.17	0.19	GJ/hour of production
Ferrari	n.a.	**n.a.**	n.a	0.14	0.13	GJ/hour of production
Magneti Marelli	-21%	**0.12**	0.12	0.13	0.15	GJ/hour of production
Teksid (cast iron)	-0%	**9.85**	9.92	9.72	9.68	GJ/ton produced
Teksid (aluminum)	-15%	**35.69**	37.29	41.79	51.52	GJ/ton produced
Comau	-30%	**0.017**	0.019	0.022	0.028	GJ/hour of production
FCA	**up to -40%**					

[2] *Refers to NAFTA region plants.*

Details by Processes

CO_2 Emissions

Direct and Indirect CO_2 Emissions
FCA worldwide (tons)

		Mass-Market Brands				Luxury Brands		Components		
2015	**FCA**	Assembly and Stamping	Engines and Transmissions	Casting	Others	Maserati	Ferrari	Magneti Marelli	Teksid	Comau
Plants	*147*	*35*	*22*	*2*	*9*	*2*	*2*	*57*	*5*	*13*
Direct emissions	**1,121,480**	757,748	76,412	38,982	21,066	16,792	17,875	48,639	137,347	6,619
Indirect emissions	**2,962,094**	1,563,657	740,707	83,222	59,025	7,697	56,288	289,657	149,009	12,831
Total CO_2 emissions	**4,083,574**	**2,321,405**	**817,119**	**122,204**	**80,091**	**24,489**	**74,163**	**338,296**	**286,356**	**19,451**
2014										
Plants	*145*	*35*	*20*	*2*	*7*	*2*	*2*	*58*	*5*	*14*
Direct emissions	**1,203,290**	810,943	87,290	37,191	19,037	19,585	23,640	44,486	152,956	8,163
Indirect emissions	**3,079,279**	1,597,295	843,477	90,340	27,270	10,549	52,884	293,687	150,611	13,165
Total CO_2 emissions	**4,282,568**	**2,408,238**	**930,767**	**127,531**	**46,307**	**30,134**	**76,524**	**338,173**	**303,567**	**21,328**
2013										
Plants	*142*	*33*	*18*	*2*	*4*	*2*	*2*	*61*	*6*	*14*
Direct emissions	**1,198,185**	796,895	87,833	36,685	22,136	15,776	19,652	47,545	163,173	8,490
Indirect emissions	**2,980,135**	1,573,897	739,064	82,891	45,232	26,145	48,432	299,201	151,968	13,305
Total CO_2 emissions	**4,178,320**	**2,370,792**	**826,897**	**119,576**	**67,368**	**41,921**	**68,084**	**346,746**	**315,141**	**21,795**

Details by Processes

Direct and Indirect CO_2 Emissions per Unit of Production

FCA worldwide (tons of CO_2/unit of production)

	Targeted Reduction 2020 vs 2010	2015	2014	2013	Base Year (2010)	Unit of Measurement
Mass-Market Brand assembly and stamping	-32%	**0.472**	0.490	0.516	0.616	tons of CO_2/vehicle produced
Mass-Market Brand engines and transmissions	n.a.	**0.091**	0.104	0.097	0.115	tons of CO_2/unit produced
Mass-Market Brand casting	-35%	**0.593**	0.660	0.740	0.992	tons of CO_2/ton produced
Mass-Market Brand others[3]	-35%	**0.015**	0.012	0.019	0.030	tons of CO_2/hour of production
Maserati	-2%	**0.005**	0.006	0.013	0.014	tons of CO_2/hour of production
Ferrari	n.a.	**n.a**	n.a	0.011	0.014	tons of CO_2/hour of production
Magneti Marelli	-24%	**0.011**	0.011	0.012	0.014	tons of CO_2/hour of production
Teksid (cast iron)	-0%	**0.767**	0.757	0.710	0.690	tons of CO_2/ton produced
Teksid (aluminum)	-15%	**1.911**	2.320	2.622	3.350	tons of CO_2/ton produced
Comau	-40%	**0.0014**	0.0016	0.0017	0.0027	tons of CO_2/hour of production
FCA	**up to -40%**					

Electricity from Renewable Sources

FCA worldwide

	2015	2014	2013	2010
Mass-Market Brand assembly and stamping	**16.2%**	17.5%	18.4%	17.9%
Mass-Market Brand engines and transmissions	**23.2%**	16.0%	17.9%	9.3%
Mass-Market Brand casting	**-**	-	-	-
Mass-Market Brand others	**25.4%**	23.0%	-	-
Maserati	**93.4%**	42.8%	4.5%	-
Ferrari	**13.7%**	13.6%	22.2%	-
Magneti Marelli	**26.7%**	23.7%	24.3%	23.8%
Teksid	**45.2%**	49.1%	50.3%	53.9%
Comau	**11.3%**	11.2%	11.3%	0.9%
Average FCA	**21.9%**	20.4%	21.8%	20.1%
Average excluding FCA US	**43.3%**	41.2%	42.7%	35.8%

[3] *Refers to NAFTA region plants.*

Details by Processes

Other Emissions and Impacts

Presence of Ozone-Depleting Substances in Equipment

FCA worldwide (Kg)

		Mass-Market Brands				Luxury Brands		Components		
2015	**FCA**	Assembly and Stamping	Engines and Transmissions	Casting	Others	Maserati	Ferrari	Magneti Marelli	Teksid	Comau
Plants	*147*	*35*	*22*	*2*	*9*	*2*	*2*	*57*	*5*	*13*
CFCs	**2,847**	1,910	918	-	19	-	-	-	-	-
HCFCs	**50,973**	40,363	6,496	454	2,289	-	-	1,111	-	260
Halons	**-**	-	-	-	-	-	-	-	-	-
Methyl bromide	**-**	-	-	-	-	-	-	-	-	-
Other CFCs fully halogenated	**1,550**	612	-	-	938	-	-	-	-	-
Total	**55,370**	**42,885**	**7,414**	**454**	**3,246**	**-**	**-**	**1,111**	**-**	**260**
2014										
Plants	*145*	*35*	*20*	*2*	*7*	*2*	*2*	*58*	*5*	*14*
CFCs	1,320	1,100	56	121	41	-	-	1	-	-
HCFCs	66,499	51,248	9,162	1,405	2,240	-	180	1,949	-	315
Halons	-	-	-	-	-	-	-	-	-	-
Methyl bromide	-	-	-	-	-	-	-	-	-	-
Other CFCs fully halogenated	-	-	-	-	-	-	-	-	-	-
Total	**67,819**	**52,349**	**9,218**	**1,526**	**2,282**	**-**	**180**	**1,950**	**-**	**315**
2013										
Plants	*142*	*33*	*18*	*2*	*4*	*2*	*2*	*61*	*6*	*14*
CFCs	1,250	1,094	85	13	20	-	-	38	-	-
HCFCs	77,459	65,661	2,614	928	2,157	20	2,012	3,571	42	454
Halons	56	-	-	22	-	-	-	34	-	-
Methyl bromide	-	-	-	-	-	-	-	-	-	-
Other CFCs fully halogenated	1	-	-	-	-	-	-	1	-	-
Total	**78,766**	**66,755**	**2,699**	**963**	**2,177**	**20**	**2,012**	**3,644**	**42**	**454**

Details by Processes

Emission of Nitrogen Oxides (NO_x)[4]

FCA worldwide (tons)

	2015	2014	2013
Mass-Market Brand assembly and stamping	855	900	894
Mass-Market Brand engines and transmissions	90	98	99
Mass-Market Brand casting	34	32	32
Mass-Market Brand others	20	18	19
Maserati	35	41	31
Ferrari	38	50	41
Magneti Marelli	100	92	98
Teksid	184	179	163
Comau	14	17	18
Total	**1,370**	**1,428**	**1,396**

Emission of Sulfur Oxides (SO_x)[4]

FCA worldwide (tons)

	2015	2014	2013
Mass-Market Brand assembly and stamping	3	4	4
Mass-Market Brand engines and transmissions	-	-	-
Mass-Market Brand casting	-	-	-
Mass-Market Brand others	-	-	-
Maserati	-	-	-
Ferrari	-	-	-
Magneti Marelli	1	1	1
Teksid	116	143	166
Comau	-	-	-
Total	**121**	**149**	**172**

Emission of Dust[4]

FCA worldwide (tons)

	2015	2014	2013
Mass-Market Brand assembly and stamping	37.9	41.3	40.6
Mass-Market Brand engines and transmissions	3.6	4.3	4.4
Mass-Market Brand casting	2.5	2.4	2.4
Mass-Market Brand others	1.3	1.2	1.4
Maserati	-	-	-
Ferrari	-	-	-
Magneti Marelli	0.1	0.1	0.1
Teksid	17.4	21.7	25.2
Comau	-	-	-
Total	**62.7**	**70.9**	**74.1**

Emission of Volatile Organic Compounds (VOC)

FCA worldwide (g/m^2)

	Targeted Reduction 2020 vs 2010	2015	2014	2013	Base Year (2010)
Mass-Market Brand assembly and stamping	-25%	24.7	25.8	28.3	32.4
Mass-Market Brand engines and transmissions[5]	n.a.	n.a.	n.a.	n.a.	n.a.
Mass-Market Brand casting[5]	n.a.	n.a.	n.a.	n.a.	n.a.
Mass-Market Brand others[5]	n.a.	n.a.	n.a.	n.a.	n.a.
Maserati	-19%	32.4	33.9	55.3	55.3
Ferrari	n.a.	39.3	35.3	35.1	35.1
Magneti Marelli	-10%	29.0	41.2	48.3	48.1
Teksid	-68%	48.4	89.2	50.5	198.5
Comau	-0%	12.6	12.2	12.6	14.1
Total	**up to -68%**	**24.9**	**26.3**	**28.8**	**33.2**

[4] Estimated emissions based on direct fuel consumption.
[5] Mass-Market Brand engines and transmissions, Mass-Market Brand casting and Mass-Market Brand others are not equipped with paint shops.

Details by Processes

Water

Water Withdrawal and Discharge

FCA worldwide (thousands of m³)

2015	FCA	Mass-Market Brands				Luxury Brands		Components		
		Assembly and Stamping	Engines and Transmissions	Casting	Others	Maserati	Ferrari	Magneti Marelli[6]	Teksid	Comau
Plants	*147*	*35*	*22*	*2*	*9*	*2*	*2*	*57*	*5*	*13*
Withdrawal										
Groundwater	**7,065**	2,983	806	198	-	185	459	535	1,854	44
Municipal water supply	**17,180**	11,875	2,771	127	388	37	125	1,553	257	46
Surface water	**684**	339	-	-	8	-	-	216	117	4
Other	**-**	-	-	-	-	-	-	-	-	-
Total water withdrawal	**24,929**	**15,197**	**3,577**	**325**	**396**	**222**	**585**	**2,304**	**2,229**	**94**
Discharge										
Surface water	**5,353**	1,798	1,563	-	15	-	-	177	1,795	5
Public sewer systems	**12,375**	8,797	1,478	134	160	136	226	1,334	61	49
Other destinations	**1,838**	1,283	362	12	93	-	-	74	-	13
Total water discharge	**19,566**	**11,878**	**3,404**	**146**	**268**	**136**	**226**	**1,585**	**1,855**	**67**
2014										
Plants	*145*	*35*	*20*	*2*	*7*	*2*	*2*	*58*	*5*	*14*
Withdrawal										
Groundwater	5,979	2,138	733	194	18	247	446	647	1,515	41
Municipal water supply	18,508	13,003	2,932	125	315	61	105	1,546	361	60
Surface water	774	412	1	-	-	-	-	241	119	1
Other	12	9	-	-	-	-	-	3	-	-
Total water withdrawal	**25,273**	**15,562**	**3,665**	**319**	**333**	**308**	**551**	**2,437**	**1,995**	**102**
Discharge										
Surface water	4,400	1,106	1,587	-	1	-	-	138	1,561	7
Public sewer systems	10,624	7,598	1,327	132	115	142	264	901	83	62
Other destinations	1,702	1,162	373	15	30	-	30	83	-	9
Total water discharge	**16,726**	**9,866**	**3,288**	**147**	**146**	**142**	**294**	**1,122**	**1,644**	**78**
2013										
Plants	*142*	*33*	*18*	*2*	*4*	*2*	*2*	*61*	*6*	*14*
Withdrawal										
Groundwater	6,219	2,383	688	178	9	222	543	669	1,482	44
Municipal water supply	17,589	11,998	2,848	115	162	98	131	1,568	606	62
Surface water	1,113	419	-	-	-	-	-	339	355	-
Other	16	13	3	-	-	-	-	1	-	-
Total water withdrawal	**24,936**	**14,812**	**3,539**	**293**	**171**	**320**	**674**	**2,577**	**2,443**	**106**
Discharge										
Surface water	4,586	1,328	1,149	-	-	-	-	82	2,027	-
Public sewer systems	10,352	7,011	1,269	126	84	95	423	913	357	76
Other destinations	1,258	674	458	13	-	-	24	89	-	-
Total water discharge	**16,196**	**9,012**	**2,876**	**139**	**84**	**95**	**447**	**1,084**	**2,384**	**76**

[6] Data restated for 2014 due to a miscalculation.

Details by Processes

Water Withdrawal per Unit of Production

FCA worldwide (m^3/unit of production)

	Targeted Reduction 2020 vs 2010	2015	2014	2013	Base Year (2010)	Unit of Measurement
Mass-Market Brand assembly and stamping	-40%	**3.09**	3.16	3.28	4.99	m^3/vehicle produced
Mass-Market Brand engines and transmissions	-52%	**0.40**	0.40	0.42	0.67	m^3/unit produced
Mass-Market Brand casting	-15%	**1.58**	1.65	1.82	2.07	m^3/ton produced
Mass-Market Brand others[7]	-50%	**0.05**	0.05	0.05	0.10	m^3/hour of production
Maserati	-15%	**6.76**	7.34	15.24	14.68	m^3/vehicle produced
Ferrari	n.a.	**0.18**	0.17	0.21	0.15	m^3/hour of production
Magneti Marelli	-50%	**0.07**	0.08	0.08	0.12	m^3/hour of production
Teksid (cast iron)	-11%	**2.29**	2.68	2.99	3.15	m^3/ton produced
Teksid (aluminum)	-77%	**53.67**	45.92	61.56	154.27	m^3/ton produced
Comau	-50%	**0.007**	0.008	0.010	0.010	m^3/hour of production
FCA	**up to -77%**					

Water Recycling Index

FCA worldwide (thousands of m^3)

		Mass-Market Brands				Luxury Brands		Components		
2015	**FCA**	Assembly and Stamping	Engines and Transmissions	Casting	Others	Maserati	Ferrari	Magneti Marelli	Teksid	Comau
Plants	*147*	*35*	*22*	*2*	*9*	*2*	*2*	*57*	*5*	*13*
Total water requirement	**2,361,596**	1,602,384	597,044	94,604	21,186	12,822	585	30,276	2,602	94
of which covered by recycling	2,336,667	1,587,187	593,467	94,279	20,790	12,600	-	27,972	373	-
of which water withdrawal	24,929	15,197	3,577	325	396	222	585	2,304	2,229	94
Recycling Index (%)	**98.9**	**99.1**	**99.4**	**99.7**	**98.1**	**98.3**	**0.0**	**92.4**	**14.3**	**0.0**
2014										
Plants	*145*	*35*	*20*	*2*	*7*	*2*	*2*	*58*	*5*	*14*
Total water requirement	**3,291,170**	2,473,364	644,280	114,458	7,953	17,443	550	29,298	3,721	102
of which covered by recycling	3,266,518	2,457,803	640,615	114,139	7,620	17,135	-	27,480	1,726	-
of which water withdrawal	24,653	15,562	3,666	319	333	308	550	1,818	1,995	102
Recycling Index (%)	**99.3**	**99.4**	**99.4**	**99.7**	**95.8**	**98.2**	**0.0**	**93.8**	**46.4**	**0.0**
2013										
Plants	*142*	*33*	*18*	*2*	*4*	*2*	*2*	*61*	*6*	*14*
Total water requirement	**2,155,551**	1,377,112	590,564	113,760	10,271	14,717	674	36,876	11,471	106
of which covered by recycling	2,130,615	1,362,299	587,016	113,467	10,109	14,397	-	34,299	9,028	-
of which water withdrawal	24,936	14,812	3,548	293	162	320	674	2,577	2,443	106
Recycling Index (%)	**98.8**	**98.9**	**99.4**	**99.7**	**98.4**	**97.8**	**0.0**	**93.0**	**78.7**	**0.0**

[7] *Refers to NAFTA region plants.*

Details by Processes

Water Withdrawal in Water-stressed Regions

FCA worldwide (thousands of m^3)

Company and plant location	Base Line Year	Fresh Water Consumption of Base Line Year	Fresh Water Consumption in 2015	Variation	Absolute Variation
FCA Italy - Tychy (Poland)	2009	627	371	-41%	-256
FCA Italy - Tychy Dies Shop (Poland)	2010	6	1	-77%	-5
FCA Italy Engines and Transmissions - Bielsko Biala SDE (Poland)	2009	28	17	-39%	-11
FCA Italy Engines and Transmissions - Bielsko Biala Twin Air (Poland)	2011	7	6	-21%	-1
Magneti Marelli - Sosnowiec Ergom PCMA (Poland)	2009	29	7	-75%	-22
Magneti Marelli - Sosnowiec ER.SI. PCMA (Poland)	2009	47	35	-26%	-12
Magneti Marelli - Sosnowiec AL (Poland)	2009	102	63	-38%	-39
Magneti Marelli - Sosnowiec EXH (Poland)	2009	-	4	n.a.	4
Magneti Marelli - Bielsko Biala ShA (Poland)	2009	6	7	20%	1
Magneti Marelli - Bielsko Biala SS (Poland)	2009	11	9	-20%	-2
Comau - Shikrapur (India)	2009	6	9	65%	4
Teksid - Skoczow (Poland)	2009	195	168	-14%	-28
Total		**1,064**	**697**	**-34%**	**-367**

Water Resources Significantly Affected[8] by Water Withdrawal and/or Discharge at Plants

FCA worldwide

Company and plant location	Water Source (Name and Size in m^3/Year)	Use	Protected Water Body	High Biodiversity Value Water Body[9]	Water Withdrawal[10]	Water Discharges[10]
Teksid Carmagnola (Italy)	Gora del Naviglio River - 3.5 million	Process water effluent	no	no	no	45%

[8] Water sources are regarded as significantly affected by water withdrawals and/or discharges if they are designated protected areas or have high biodiversity value, or if the withdrawals and/or discharges of water represent more than 5% of the average annual volume of the water body concerned. Only surface water has been taken into account. In 2015, none of the water withdrawals at any of the plants significantly affected the resources according to the criteria listed in GRI-G4 EN9 and never exceeded the 5% threshold at any site.

[9] There is no known impact on the aquatic habitat, since the receiving water body does not have protected species and is not included on any list of extremely valuable natural habitats.

[10] Representing more than 5% of average annual volume of the water body concerned.

Details by Processes

BOD

Biochemical Oxygen Demand (BOD)[11]
FCA worldwide (maximum level under applicable regulation = 100) percentage of the limit

	2015	2014	2013
FCA Italy assembly and stamping	**18.4**	16.1	16.4
FCA US assembly and stamping	**19.7**	9.8	12.1
FCA Italy engines and transmissions	**25.2**	17.2	15.5
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**7.8**	8.0	15.8
Ferrari	**4.0**	2.4	11.0
Magneti Marelli	**18.4**	50.0	40.4
Teksid	**16.7**	8.3	6.7
Comau	**n.a.**	4.1	3.0

Biochemical Oxygen Demand (BOD)[11]
FCA worldwide (milligram/liter)

	2015	2014	2013
FCA Italy assembly and stamping	**52.7**	46.9	42.2
FCA US assembly and stamping	**39.3**	19.5	24.2
FCA Italy engines and transmissions	**32.4**	40.2	36.5
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**19.4**	20.0	10.0
Ferrari	**10.0**	6.0	12.3
Magneti Marelli	**47.6**	51.7	38.0
Teksid	**23.4**	24.7	31.8
Comau	**n.a.**	29.5	19.4

COD

Chemical Oxygen Demand (COD)[11]
FCA worldwide (maximum level under applicable regulation = 100) percentage of the limit

	2015	2014	2013
FCA Italy assembly and stamping	**23.3**	17.7	23.5
FCA US assembly and stamping	**n.a.**	n.a.	n.a.
FCA Italy engines and transmissions	**38.0**	23.4	46.3
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**11.0**	10.3	42.9
Ferrari	**23.8**	18.2	20.0
Magneti Marelli	**23.7**	50.8	68.4
Teksid	**77.8**	47.2	27.8
Comau	**n.a.**	34.0	20.2

Chemical Oxygen Demand (COD)[11]
FCA worldwide (milligram/liter)

	2015	2014	2013
FCA Italy assembly and stamping	**129.9**	98.3	117.7
FCA US assembly and stamping	**n.a.**	n.a.	n.a.
FCA Italy engines and transmissions	**115.4**	114.7	201.9
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**55.1**	51.5	214.6
Ferrari	**119.0**	90.9	65.3
Magneti Marelli	**142.4**	170.4	107.6
Teksid	**43.0**	39.3	83.7
Comau	**n.a.**	29.6	31.1

[11] Figures take into account worst level registered for all plants in each company.

Details by Processes

TSS

Total Suspended Solids (TSS)[12] FCA worldwide (maximum level under applicable regulation = 100) percentage of the limit	2015	2014	2013
FCA Italy assembly and stamping	**12.3**	13.3	12.8
FCA US assembly and stamping	**13.4**	7.2	11.8
FCA Italy engines and transmissions	**32.5**	20.2	31.6
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**3.3**	2.8	19.7
Ferrari	**11.5**	42.2	12.0
Magneti Marelli	**4.2**	33.6	35.0
Teksid	**56.3**	38.6	8.6
Comau	**n.a.**	24.8	24.8

Total Suspended Solids (TSS)[12] FCA worldwide (milligram/liter)	2015	2014	2013
FCA Italy assembly and stamping	**38.1**	42.6	35.4
FCA US assembly and stamping	**26.9**	14.3	23.5
FCA Italy engines and transmissions	**42.6**	40.8	64.3
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**6.7**	5.7	39.4
Ferrari	**23.0**	84.3	15.9
Magneti Marelli	**19.3**	25.9	15.0
Teksid	**21.2**	20.8	17.9
Comau	**n.a.**	19.4	15.6

[12] Figures take into account worst level registered for all plants in each company.

Details by Processes

Heavy Metals in Water Discharged

Cadmium (Cd)[13] FCA worldwide (maximum level under applicable regulation = 100) percentage of the limit	2015	2014	2013
FCA Italy assembly and stamping	**5.5**	4.0	6.8
FCA US assembly and stamping	**1.4**	18.7	18.7
FCA Italy engines and transmissions	**1.1**	3.0	0.7
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**-**	-	9.9
Ferrari	**5.0**	5.0	5.0
Magneti Marelli	**2.1**	35.0	3.0
Teksid	**15.0**	15.0	15.0
Comau	**n.a.**	n.a.	n.a.

Cadmium (Cd)[13] FCA worldwide (milligram/liter)	2015	2014	2013
FCA Italy assembly and stamping	**-**	-	-
FCA US assembly and stamping	**-**	0.1	0.1
FCA Italy engines and transmissions	**-**	-	-
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**-**	-	-
Ferrari	**-**	-	-
Magneti Marelli	**-**	-	-
Teksid	**-**	-	-
Comau	**n.a.**	n.a.	n.a.

Copper (Cu)[13] FCA worldwide (maximum level under applicable regulation = 100) percentage of the limit	2015	2014	2013
FCA Italy assembly and stamping	**3.1**	2.7	4.0
FCA US assembly and stamping	**4.2**	4.2	4.2
FCA Italy engines and transmissions	**8.0**	6.2	1.8
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**7.3**	7.5	51.6
Ferrari	**6.5**	13.2	2.0
Magneti Marelli	**1.4**	22.3	25.0
Teksid	**39.0**	39.0	28.0
Comau	**n.a.**	n.a.	n.a.

Copper (Cu)[13] FCA worldwide (milligram/liter)	2015	2014	2013
FCA Italy assembly and stamping	**-**	-	-
FCA US assembly and stamping	**0.3**	0.3	0.3
FCA Italy engines and transmissions	**-**	-	-
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**-**	-	0.2
Ferrari	**-**	0.1	-
Magneti Marelli	**0.1**	0.1	-
Teksid	**-**	-	0.1
Comau	**n.a.**	n.a.	n.a.

[13] Figures take into account worst level registered for all plants in each company.

Details by Processes

Heavy Metals in Water Discharged

Lead (Pb)[14]
FCA worldwide (maximum level under applicable regulation = 100) percentage of the limit

	2015	2014	2013
FCA Italy assembly and stamping	**14.1**	7.6	7.6
FCA US assembly and stamping	**20.0**	20.0	20.0
FCA Italy engines and transmissions	**18.5**	17.7	5.2
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**16.1**	16.7	4.0
Ferrari	**3.3**	3.4	3.0
Magneti Marelli	**-**	97.5	9.7
Teksid	**25.0**	-	25.0
Comau	**n.a.**	n.a.	n.a.

Lead (Pb)[14]
FCA worldwide (milligram/liter)

	2015	2014	2013
FCA Italy assembly and stamping	**-**	-	-
FCA US assembly and stamping	**0.2**	0.2	0.2
FCA Italy engines and transmissions	**0.1**	0.1	-
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**0.1**	0.1	-
Ferrari	**-**	-	-
Magneti Marelli	**-**	-	-
Teksid	**-**	-	-
Comau	**n.a.**	n.a.	n.a.

Nickel (Ni)[14]
FCA worldwide (maximum level under applicable regulation = 100) percentage of the limit

	2015	2014	2013
FCA Italy assembly and stamping	**13.1**	11.6	14.2
FCA US assembly and stamping	**6.2**	6.2	6.2
FCA Italy engines and transmissions	**3.4**	4.5	8.4
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**2.4**	2.5	21.4
Ferrari	**1.1**	2.0	4.0
Magneti Marelli	**-**	16.1	10.4
Teksid	**5.0**	5.0	5.0
Comau	**n.a.**	n.a.	n.a.

Nickel (Ni)[14]
FCA worldwide (milligram/liter)

	2015	2014	2013
FCA Italy assembly and stamping	**0.4**	0.4	0.4
FCA US assembly and stamping	**0.3**	-	0.3
FCA Italy engines and transmissions	**0.1**	0.1	0.3
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**0.1**	0.1	0.9
Ferrari	**-**	0.1	0.1
Magneti Marelli	**0.1**	0.1	-
Teksid	**0.1**	0.1	-
Comau	**n.a.**	n.a.	n.a.

[14] Figures take into account worst level registered for all plants in each company.

Details by Processes

Heavy Metals in Water Discharged

Zinc (Zn)[15] FCA worldwide (maximum level under applicable regulation = 100) percentage of the limit	2015	2014	2013
FCA Italy assembly and stamping	**27.7**	20.8	23.9
FCA US assembly and stamping	**1.3**	1.7	1.4
FCA Italy engines and transmissions	**20.9**	12.4	15.6
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**27.1**	26.0	76.7
Ferrari	**23.0**	64.9	15.0
Magneti Marelli	**-**	11.0	21.0
Teksid	**32.8**	44.0	48.0
Comau	**n.a.**	n.a.	n.a.

Zinc (Zn)[15] FCA worldwide (milligram/liter)	2015	2014	2013
FCA Italy assembly and stamping	**0.4**	0.5	0.5
FCA US assembly and stamping	**0.3**	0.4	0.3
FCA Italy engines and transmissions	**0.2**	0.1	0.5
FCA US engines and transmissions	**n.a.**	n.a.	n.a.
Mass-Market Brand casting	**n.a.**	n.a.	n.a.
Mass-Market Brand others	**n.a.**	n.a.	n.a.
Maserati	**0.3**	0.3	0.8
Ferrari	**0.2**	0.7	0.1
Magneti Marelli	**0.4**	0.1	0.1
Teksid	**0.3**	0.3	0.2
Comau	**n.a.**	n.a.	n.a.

[15] Figures take into account worst level registered for all plants in each company.

Details by Processes

Waste

Waste Generation and Management
FCA worldwide (tons)

2015	FCA	Mass-Market Brands				Luxury Brands		Components		
		Assembly and Stamping	Engines and Transmissions	Casting	Others	Maserati	Ferrari	Magneti Marelli	Teksid	Comau
Plants	*147*	*35*	*22*	*2*	*9*	*2*	*2*	*57*	*5*	*13*
Waste generated										
Non-hazardous waste	**1,441,983**	829,942	147,188	45,993	19,687	2,428	6,943	60,075	326,791	2,936
Hazardous waste	**36,241**	12,002	8,572	10	494	232	5,760	7,770	1,130	271
Total waste generated	**1,478,223**	**841,944**	**155,760**	**46,003**	**20,181**	**2,660**	**12,703**	**67,844**	**327,921**	**3,207**
of which packaging	**119,219**	84,401	11,323	-	2,636	2,161	-	17,761	399	539
Waste disposed										
Waste to landfill	**220,169**	11,733	2,278	38	787	-	-	1,483	203,840	11
Waste to treatment	**42,017**	15,694	12,092	1,576	276	164	8,192	3,541	390	92
Total waste disposed	**262,186**	**27,427**	**14,369**	**1,614**	**1,063**	**164**	**8,192**	**5,024**	**204,229**	**103**
Waste recovered										
Waste-to-energy conversion	**19,170**	11,230	3,393	438	362	-	-	2,535	1,062	150
Waste recovery	**1,196,868**	803,287	137,998	43,951	18,756	2,496	4,511	60,285	122,629	2,954
Total waste recovered	**1,216,037**	**814,517**	**141,391**	**44,389**	**19,118**	**2,496**	**4,511**	**62,820**	**123,692**	**3,104**
waste recovered	**82.3%**	96.7%	90.8%	96.5%	94.7%	93.8%	35.5%	92.6%	37.7%	96.8%
waste sent to landfill	**14.9%**	1.4%	1.5%	0.1%	3.9%	0.0%	0.0%	2.2%	62.2%	0.3%
2014										
Plants	*145*	*35*	*20*	*2*	*7*	*2*	*2*	*58*	*5*	*14*
Waste generated										
Non-hazardous waste	1,706,542	986,993	155,055	61,990	17,603	3,941	8,036	54,636	415,026	3,261
Hazardous waste	37,766	14,072	8,176	-	295	399	4,444	8,351	1,809	221
Total waste generated	**1,744,308**	**1,001,065**	**163,231**	**61,990**	**17,898**	**4,340**	**12,480**	**62,987**	**416,835**	**3,482**
of which packaging	94,655	62,949	10,684	-	1,758	3,514	1,307	13,550	399	**494**
Waste disposed										
Waste to landfill	295,358	12,843	2,400	156	798	-	-	2,073	276,923	165
Waste to treatment	42,888	13,541	15,650	5	204	413	6,759	5,715	520	81
Total waste disposed	**338,246**	**26,384**	**18,050**	**161**	**1,002**	**413**	**6,759**	**7,788**	**277,443**	**246**
Waste recovered										
Waste-to-energy conversion	18,361	11,360	3,247	370	185	-	-	1,377	1,517	305
Waste recovery	1,387,701	963,321	141,933	61,460	16,710	3,927	5,721	53,822	137,875	2,931
Total waste recovered	**1,406,062**	**974,681**	**145,180**	**61,830**	**16,895**	**3,927**	**5,721**	**55,199**	**139,392**	**3,236**
waste recovered	80.6%	97.4%	88.9%	99.7%	94.4%	90.5%	45.8%	87.6%	33.4%	92.9%
waste sent to landfill	16.9%	1.3%	1.5%	0.3%	4.5%	-	-	3.3%	66.4%	4.7%

Details by Processes

Waste Generation and Management
FCA worldwide (tons)

2013	FCA	Mass-Market Brands				Luxury Brands		Components		
		Assembly and Stamping	Engines and Transmissions	Casting	Others	Maserati	Ferrari	Magneti Marelli	Teksid	Comau
Plants	*142*	*33*	*18*	*2*	*4*	*2*	*2*	*61*	*6*	*14*
Waste generated										
Non-hazardous waste	1,770,028	942,887	145,877	45,574	14,065	2,635	8,224	53,620	554,213	2,932
Hazardous waste	39,070	16,289	6,543	-	-	270	3,003	8,877	3,629	459
Total waste generated	**1,809,098**	**959,176**	**152,421**	**45,574**	**14,065**	**2,905**	**11,227**	**62,497**	**557,842**	**3,391**
of which packaging	121,837	96,699	8,488	8	1,379	2,545	1,043	10,196	1,026	453
Waste disposed										
Waste to landfill	438,741	12,050	2,071	123	752	-	-	2,952	420,574	219
Waste to treatment	31,055	3,602	11,455	6	-	246	6,052	7,400	1,962	331
Total waste disposed	**469,796**	**15,653**	**13,526**	**129**	**752**	**246**	**6,052**	**10,352**	**422,536**	**550**
Waste recovered										
Waste-to-energy conversion	23,750	18,762	1,871	340	-	-	-	613	1,863	301
Waste recovery	1,315,552	924,762	137,024	45,105	13,312	2,659	5,175	51,532	133,443	2,540
Total waste recovered	**1,339,302**	**943,523**	**138,895**	**45,445**	**13,312**	**2,659**	**5,175**	**52,145**	**135,306**	**2,841**
waste recovered	74.0%	98.4%	91.1%	99.7%	94.6%	91.5%	46.1%	83.4%	24.3%	83.8%
waste sent to landfill	24.3%	1.3%	1.4%	0.3%	5.3%	-	-	4.7%	75.4%	6.5%

Details by Processes

Waste Generated per Unit of Production

FCA worldwide (kg/unit of production)

	Targeted Reduction 2020 vs 2010	2015	2014	2013	Base Year (2010)	Unit of Measurement
Mass-Market Brand assembly and stamping	-14%	**171.3**	203.4	207.5	217.2	kg/vehicle produced
Mass-Market Brand engines and transmissions	-21%	**17.3**	17.9	18.5	21.3	kg/unit produced
Mass-Market Brand casting	n.a.	**223.4**	320.9	282.1	179.0	kg/ton produced
Mass-Market Brand others[16]	n.a.	**3.7**	4.0	4.0	2.4	kg/hour of production
Maserati	-25%	**80.9**	103.5	138.2	147.2	kg/vehicle produced
Ferrari	n.a.	**3.9**	3.8	3.5	3.0	kg/hour of production
Magneti Marelli	-30%	**2.1**	2.1	2.1	3.1	kg/hour of production
Teksid (cast iron)	-8%	**1,062**	1,244	1,307	1,250	kg/ton produced
Teksid (aluminum)	-12%	**348**	394	432	450	kg/ton produced
Comau	-34%	**0.23**	0.26	0.30	0.40	kg/hour of production
FCA	**up to -34%**					

Hazardous Waste Generated per Unit of Production

FCA worldwide (kg/unit of production)

	Targeted Reduction 2020 vs 2010	2015	2014	2013	Base Year (2010)	Unit of Measurement
Mass-Market Brand assembly and stamping	-54%	**2.4**	2.9	3.8	8.2	kg/vehicle produced
Mass-Market Brand engines and transmissions	-75%	**1.0**	0.9	1.1	2.3	kg/unit produced
Mass-Market Brand casting	-0%	**-**	-	-	-	kg/ton produced
Mass-Market Brand others[16]	-0%	**-**	-	-	-	kg/hour of production
Maserati	-25%	**7.1**	9.5	12.8	14.2	kg/vehicle produced
Ferrari	n.a.	**1.8**	1.4	0.9	1.1	kg/hour of production
Magneti Marelli	-30%	**0.2**	0.3	0.3	0.4	kg/hour of production
Teksid (cast iron)	-17%	**3.0**	4.3	5.3	5.8	kg/ton produced
Teksid (aluminum)	-17%	**8.4**	16.0	72.4	32.7	kg/ton produced
Comau	-57%	**0.02**	0.02	0.10	0.10	kg/hour of production
FCA	**up to -75%**					

[16] Refers to NAFTA region plants.

Details by Processes

Recovery of Waste

FCA worldwide (% waste recovered out of waste generated)

	2020 Target	2015	2014	2013	2010
Mass-Market Brand assembly and stamping	97%	**96.7%**	97.4%	98.1%	94.0%
Mass-Market Brand engines and transmissions	96%	**90.8%**	87.0%	88.7%	83.0%
Mass-Market Brand casting	95%	**96.5%**	99.1%	99.7%	98.9%
Mass-Market Brand others[17]	95%	**94.7%**	94.4%	94.6%	93.2%
Maserati	91%	**93.8%**	90.5%	91.5%	84.6%
Ferrari	50%	**36.0%**	45.8%	46.1%	30.8%
Magneti Marelli	90%	**92.6%**	87.6%	83.4%	82.6%
Teksid	45%	**37.7%**	33.4%	24.3%	19.7%
Comau	95%	**96.8%**	92.9%	83.8%	66.0%
FCA	**up to 98%**				

Waste in Landfill

FCA worldwide (% waste sent to landfill out of waste generated)

	2020 Target	2015	2014	2013	2010
Mass-Market Brand assembly and stamping	1%	**1.4%**	1.3%	1.3%	4.4%
Mass-Market Brand engines and transmissions	1.4%	**1.5%**	1.5%	1.4%	3.5%
Mass-Market Brand casting	2%	**0.1%**	0.3%	0.3%	4.0%
Mass-Market Brand others[17]	2%	**3.9%**	4.5%	5.3%	6.9%
Maserati	0%	**0.0%**	0.0%	0.0%	0.0%
Ferrari	0%	**0.0%**	0.0%	0.0%	1.5%
Magneti Marelli	3%	**2.2%**	3.3%	4.7%	10.4%
Teksid	70%	**62.2%**	66.4%	75.4%	80.1%
Comau	0%	**0.3%**	4.7%	6.5%	14.7%
FCA	**up to 0%**				

[17] Refers to NAFTA region plants.

Details by Processes

Biodiversity Conservation

Plants Near, Bordering or Within Protected[18] or High Biodiversity Areas

Company and Plant Location	Activity	Surface (M m²)	IUCN Red List Species/National Conservation List Species Present	Investment (€)	Action Taken	Independent Monitoring	Protected Area Relative to Plant
FCA Italy Verrone (Italy)	Production of transmissions and parts	1.8	44 species listed: 0 Critically endangered 2 Endangered 2 Vulnerable 2 Near Threatened 38 Least Concern	10,000	Biophilia activities conducted for elementary school students from surrounding towns. Weed eradication to protect natural habitat	Y	Within plant complex
Magneti Marelli Venaria (Italy)	Production of lighting and exhaust systems	0.2	1 species listed: 1 Near Threatened	–	Work done together with the Park specialists to complete the mapping of old oaks and conduct improvement activities with the possibility to open new paths that had previously been closed to the public. These trees represent not only an important heritage of the Park, but the optimal habitat for Osmoderma Eremita and other umbrella species	N	Within plant complex (IT1110079 “La Mandria”)
Teksid Funfrap (Portugal)	Production of engine blocks, exhaust manifolds, differentials and carter turbines	0.1	n.a.	–	Meeting with local authorities to disclose results of analysis	N	Adjacent to plant (less than 5 km)
FCA Italy Kragujevac (Serbia)	Assembly and stamping	1.2	73 species listed: 2 Near Threatened 71 Least Concern	12,000	Bio Lake Area = 1,230 m² maximum depth = 1.95 m volume = 1,500 m³ (Aquatic flora is used to oxygenate water and eliminate microorganisms. No chlorine or chemical disinfectants should be used to treat water). Koi introduced to help balance ecosystem (e.g., control certain algae). About 30 indigenous trees planted	Y	Adjacent to plant (within 5 km)
FCA Italy Campo Largo (Brasil)	Production of engines	1.2	88 species listed: 2 Critically Endangered 0 Endangered 0 Vulnerable 2 Near Threatened 84 Least Concern	-		N	Adjacent to plant (less than 5 km)

[18] A protected area (site of regional, national and EU importance, special protection zone, oasis, etc.) is a geographically defined area that is designated, regulated or managed to achieve specific conservation objectives. An area of high biodiversity value is an area that is not subject to legal protection, but is recognized by governmental and non-governmental organizations for its significant biodiversity.

Details by Processes

Transport

CO_2 Emissions in Logistics Processes FCA[19] (thousands of tons of CO_2)	2015	2014	2013	2012
Upstream[20] EMEA	92.6	72.1	65.7	74.6
Downstream[21] EMEA	155.4	93.3	96.1	104.7
Total EMEA	**248.0**	**165.4**	**161.8**	**179.3**
Upstream[20] NAFTA	558.7	568.2	462.5	387.9
Downstream[21] NAFTA	559.5	529.8	419.3	416.1
Total NAFTA	**1,118.2**	**1,098.0**	**881.8**	**804.0**
Upstream[20] LATAM	25.7	-	-	-
Downstream[21] LATAM	51.4	-	-	-
Total LATAM	**77.1**	**-**	**-**	**-**
Total global	**1,443.3**	**1,263.4**	**1,043.6**	**983.3**
Vehicle volume monitored compared with previous year	+21%	+12.5%	+3.5%	-
CO_2/vehicle km	-13.5%	-9.5%	-14%	-
Mopar EMEA	7.7	7.7	8.0	8.4
Magneti Marelli EMEA	28.0	24.3	24.6	22.9

CO_2 Emissions from Business Air Travel FCA worldwide (thousands of tons of CO_2)	2015	2014	2013
CO_2 emitted	49.7	42.1	39.1

Related content

Environmental impact reduction in logistics processes >

[19] *Ferrari excluded.*
[20] *Upstream: material and parts distribution to plants.*
[21] *Downstream: finished vehicle distribution to markets.*

Details by Workforce

Employees in Numbers

Gender Distribution by Geographic Area
FCA worldwide

	2015			2014			2013		
	Workforce by Geographic Area (no.)	% Men	% Women	Workforce by Geographic Area (no.)	% Men	% Women	Workforce by Geographic Area (no.)	% Men	% Women
Europe	91,798	78.2	21.8	88,061	78.3	21.7	89,030	78.4	21.6
North America	90,210	76.2	23.8	85,521	76.2	23.8	81,365	77.6	22.4
Latin America	44,199	89.7	10.3	47,232	90.2	9.8	48,306	90.4	9.6
Asia	8,242	72.5	27.5	7,701	71.5	28.5	6,699	70.2	29.8
Rest of world	172	69.8	30.2	175	70.3	29.7	187	72.7	27.3
Total	**234,621**	**79.0**	**21.0**	**228,690**	**79.7**	**20.3**	**225,587**	**80.4**	**19.6**

Gender Distribution by Category
FCA worldwide

	2015			2014			2013		
	Workforce by Category (no.)	% Men	% Women	Workforce by Category (no.)	% Men	% Women	Workforce by Category (no.)	% Men	% Women
Manager	2,488	86.9	13.1	2,426	86.8	13.2	2,409	86.9	13.1
Professional	34,390	80.9	19.1	33,202	81.4	18.6	31,302	81.7	18.3
Salaried	34,689	71.7	28.3	33,931	71.4	28.6	33,047	71.1	28.9
Hourly	163,054	80.6	19.4	159,131	81.1	18.9	158,829	82.0	18.0
Total	**234,621**	**79.4**	**20.6**	**228,690**	**79.7**	**20.3**	**225,587**	**80.4**	**19.6**

Employees by Geographic Area and Category
FCA worldwide (no.)

	2015					2014					2013				
	Total	Hourly	Salaried	Professional	Manager	Total	Hourly	Salaried	Professional	Manager	Total	Hourly	Salaried	Professional	Manager
Europe	91,798	58,194	15,299	17,122	1,183	88,061	55,690	14,737	16,490	1,144	89,030	57,137	14,857	15,857	1,179
North America	90,210	67,720	9,638	11,733	1,119	85,521	63,541	9,371	11,502	1,107	81,365	60,145	9,014	11,151	1,055
Latin America	44,199	34,574	5,966	3,513	146	47,232	37,258	6,352	3,480	142	48,306	38,826	6,242	3,085	153
Asia	8,242	2,562	3,761	1,880	39	7,701	2,636	3,445	1,588	32	6,699	2,696	2,905	1,078	20
Rest of world	172	4	25	142	1	175	6	26	142	1	187	25	29	131	2
Total	**234,621**	**163,054**	**34,689**	**34,390**	**2,488**	**228,690**	**159,131**	**33,931**	**33,202**	**2,426**	**225,587**	**158,829**	**33,047**	**31,302**	**2,409**

Gender Distribution by Operating Segment
FCA worldwide

	2015			2014			2013		
	Workforce by Operating Segment (no.)	% Men	% Women	Workforce by Operating Segment (no.)	% Men	% Women	Workforce by Operating Segment (no.)	% Men	% Women
Mass-Market Brands	162,492	80.9	19.1	158,539	81.1	18.9	154,074	82.0	18.0
Luxury Brands	4,504	85.9	14.1	4,125	86.3	13.7	3,677	87.5	12.5
Components	59,376	78.4	21.6	57,813	79.2	20.8	59,082	79.9	20.1
Others[1]	8,249	54.0	46.0	8,213	53.6	46.4	8,754	53.3	46.7
Total	**234,621**	**79.4**	**20.6**	**228,690**	**79.7**	**20.3**	**225,587**	**80.4**	**19.6**

[1] *Others includes companies operating in publishing, communications and services, and other companies.*

Details by Workforce

Employees in Numbers

Employees by Country
FCA worldwide (%)

	2015	2014	2013
Italy	**27.4**	26.8	27.7
United States	**26.0**	25.9	24.4
Brazil	**16.7**	18.0	18.5
Mexico	**7.4**	6.5	6.1
Canada	**5.1**	4.9	4.9
Poland	**3.9**	4.0	4.0
China	**2.3**	2.2	2.0
Argentina	**1.8**	2.2	2.4
Serbia	**1.6**	1.7	1.7
Germany	**1.2**	1.2	1.2
France	**0.9**	1.0	1.2
Spain	**0.7**	0.7	0.6
Venezuela	**0.4**	0.4	0.5
Other countries	**4.6**	4.4	4.7
Total (no.)	**234,621**	228,690	225,587

Nationality of Managers
FCA worldwide

	2015	
	Managers (no.)	% of Total Managers
Italian	1,015	40.8
American	965	38.8
Brazilian	116	4.7
Canadian	65	2.6
French	65	2.6
Mexican	63	2.5
German	43	1.7
Polish	21	0.8
Chinese	19	0.8
Others	116	4.7
Total	**2,488**	**100.0**

Managers of Local Nationality by Geographic Area
FCA[2] worldwide (%)

	2015
Europe	**86.2**
North America	**96.2**
Latin America	**100.0**
Asia	**46.2**
Rest of world	**100.0**

Employees by Principal Ethnic Origin
FCA in North America (%)

	2015
Caucasian	**55.3**
Hispanic	**21.3**
African American	**20.0**
American Indian	**0.2**
Other	**3.2**

Employees by Nationality Minority Group
FCA in North America (%)

	2015
Employees belonging to a nationality minority group[3] (no.)	**6,408**
of which men (%)	**79.7**
of which women (%)	**20.3**
Over total workforce (%)	**2.7**

[2] Ferrari and La Stampa managers not included in the calculation.
[3] Minority group reported in the table consists of employees with nationality different from country of work.

Details by Workforce

Gender Distribution by Contract and Employment Type

FCA worldwide

2015	Unlimited-term				Fixed-term			
	% Men		% Women		% Men		% Women	
Total	**79.8**		**20.2**		**71.8**		**28.2**	
	Part-time		Full-time		Part-time		Full-time	
	% Men	% Women	% Men	% Women	% Men	% Women	% Men	% Women
Europe	11.8	88.2	79.6	20.4	52.9	47.1	61.4	38.6
North America	5.2	94.8	76.3	23.7	53.6	46.4	95.7	4.3
Latin America	75.0	25.0	89.7	10.3	-	-	82.4	17.6
Asia	-	-	72.3	27.7	66.7	33.3	73.5	26.5
Rest of world	-	-	69.8	30.2	-	-	-	-

Details by Workforce

Gender Distribution by Length of Service
FCA worldwide

	2015			2014			2013		
	Workforce by Length of Service (no.)	% Men	% Women	Workforce by Length of Service (no.)	% Men	% Women	Workforce by Length of Service (no.)	% Men	% Women
Up to 5 years	104,046	75.8	24.2	94,366	76.3	23.7	90,413	77.7	22.3
6 to 10 years	29,478	81.7	18.3	30,305	82.0	18.0	28,797	82.8	17.2
11 to 20 years	48,750	81.6	18.4	55,343	81.3	18.7	59,228	81.4	18.6
21 to 30 years	41,313	84.4	15.6	36,282	85.7	14.3	34,714	85.8	14.2
Over 30 years	11,034	78.6	21.4	12,394	76.0	24.0	12,435	74.8	25.2
Total	**234,621**			**228,690**			**225,587**		

Gender Distribution by Age
FCA worldwide

	2015			2014			2013		
	Workforce by Age (no.)	% Men	% Women	Workforce by Age (no.)	% Men	% Women	Workforce by Age (no.)	% Men	% Women
Up to 30 years	51,673	77.9	22.1	50,503	78.2	21.8	45,024	80.4	19.6
31 to 40 years	61,883	78.6	21.4	59,682	79.2	20.8	61,631	79.6	20.4
41 to 50 years	67,785	80.0	20.0	65,190	80.7	19.3	66,554	81.2	18.8
Over 50 years	53,280	80.9	19.1	53,315	80.7	19.3	52,378	80.5	19.5
Total	**234,621**			**228,690**			**225,587**		

Gender Distribution by Level of Education
FCA worldwide

	2015			2014			2013		
	Workforce by Education (no.)	% Men	% Women	Workforce by Education (no.)	% Men	% Women	Workforce by Education (no.)	% Men	% Women
University degree or equivalent[4]	58,010	75.3	24.7	49,492	75.6	24.4	52,202	76.1	23.9
High school	113,910	80.9	19.1	94,626	81.0	19.0	100,369	82.7	17.3
Elementary/middle school	48,092	79.9	20.1	35,886	87.5	12.5	56,671	81.4	18.6
Not tracked	14,609	82.0	18.0	48,686	75.8	24.2	16,345	76.9	23.1
Total	**234,621**			**228,690**			**225,587**		

[4] Calculation subject to approximation resulting from the comparison of academic qualifications among different countries.

Details by Workforce

Women by Geographic Area
FCA worldwide (%)

	2015	2014	2013
Europe	**21.8**	21.7	21.6
North America	**23.8**	23.7	22.4
Latin America	**10.3**	9.7	9.6
Asia	**27.5**	28.4	29.8
Rest of world	**30.2**	29.7	27.2
Total	**20.6**	**20.2**	**19.2**

Talent Attraction
FCA worldwide

	2015	2014	2013
New graduates recruited (no.)	**2,584**	1,776	1,810
Traineeships (no.)	**3,598**	2,917	2,765
Scholarships[5] (no.)	**2,765**	2,736	2,686
Scholarships (€ million)	**4.2**	3.9	1.9

Employees by Contract and Employment Type
FCA worldwide (no.)

	2015				
		Unlimited-term		Fixed-term	
	Total	Full-time	Part-time	Full-time	Part-time
Europe	**91,798**	87,706	1,085	2,990	17
North America	**90,210**	82,817	77	3,704	3,612
Latin America	**44,199**	43,656	4	539	-
Asia	**8,242**	6,798	-	1,441	3
Rest of world	**172**	172	-	-	-
Total	**234,621**	221,149	1,166	8,674	3,632

Return to Work After Parental Leave
FCA worldwide (%)

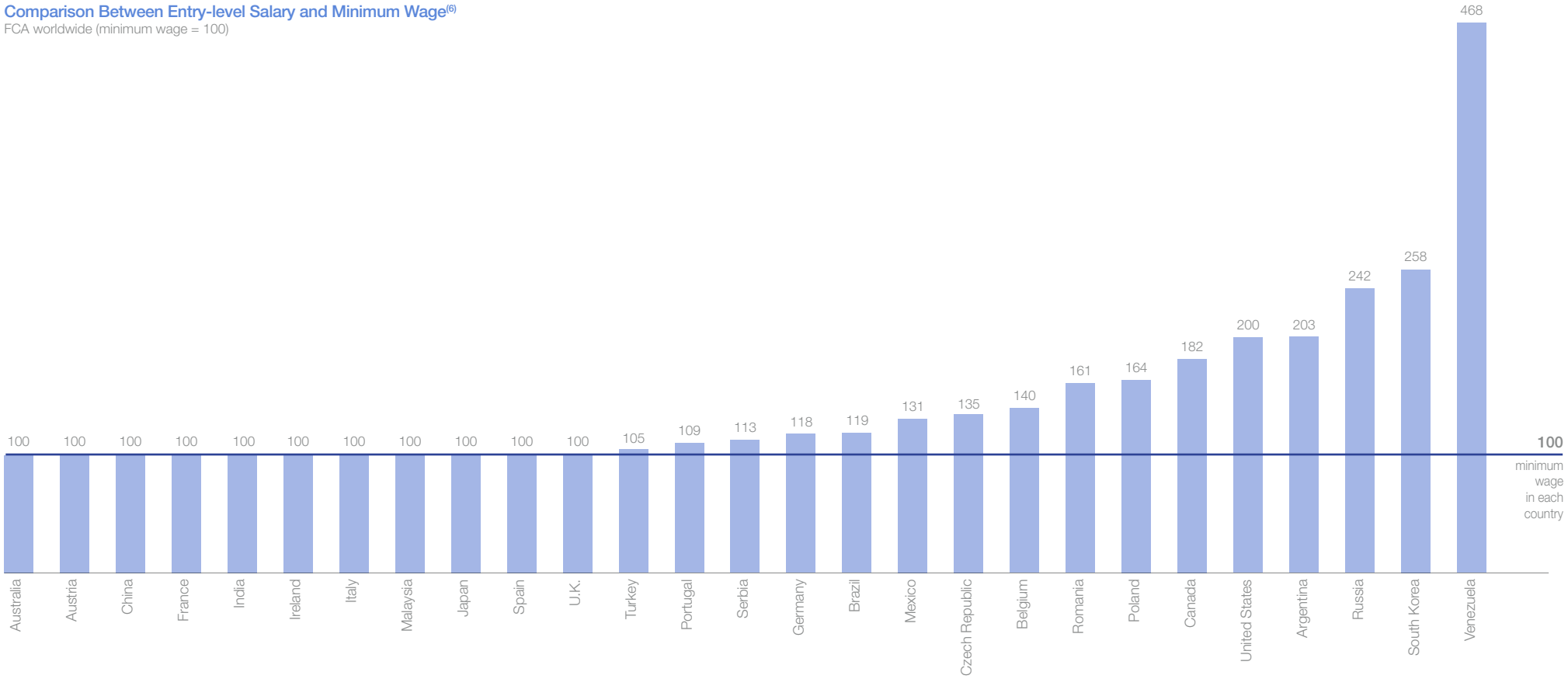
	Men	Women
Employees that took parental leave among the workforce in 2015	2.1	4.6
Employees that took parental leave in 2014 and are still employed	80.0	76.0
Employees that took parental leave in 2013 and are still employed	96.0	73.0

[5] *Includes scholarships granted within the corporate program.*

Details by Workforce

Comparison Between Entry-level Salary and Minimum Wage[6]

FCA worldwide (minimum wage = 100)



[6] *In accordance with the GRI-G4 Guidelines, entry-level salary is defined as the minimum compensation paid to a full-time employee hired at the lowest pay scale/employee grade on the basis of company policy or agreements between the company and trade unions. For each country, results are based on the company with the lowest ratio of entry-level salary to minimum wage, unless the number of employees of the company with the lowest ratio represented less than 10% of that country's total headcount. Figures reported are as of 31 October, 2015.*
The survey of 27 countries covered about 98% of the Group's total workforce. Workplace equality within the Group is also seen in the comparison between minimum entry-level wages by gender. Considering the countries included in the survey sample, minimum wage levels were found to be identical between men and women.

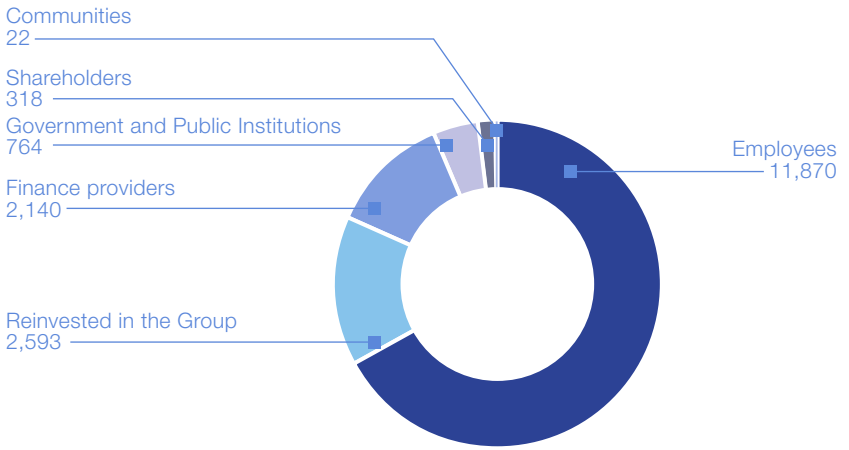
Details by Workforce

Direct Economic Value and Value Added Generated

The value added through the activities of FCA and distributed to its various stakeholders in 2015 totaled €17,707 million (about 16% of revenues).

Direct Economic Value and Value Added Generated FCA worldwide (€ million)	2015
Consolidated 2015 revenues	113,191
Income of financial services companies	(248)
Government grants (current and deferred/capitalized), release of provisions, other income	938
Other income	514
Direct economic value	**114,395**
Cost of materials	(88,027)
Depreciation and amortization	(5,688)
Other expense	(2,973)
Value added	**17,707**

Breakdown of Value Added
FCA worldwide (€ million)



Details by Workforce

Training Expenditures
FCA worldwide

	2015	2014	2013
Spending on training (€ million)	**60.9**	65.6	75.7
% of personnel costs	**0.5**	0.7	0.8

Employees Involved in Training by Gender
FCA worldwide

	Number	Hours	Average Number of Hours[7]
Men	126,601	2,292,518	12.3
Women	32,893	542,773	11.2
Total	**159,494**	**2,835,291**	**12.1**

Employees Involved in Training by Category
FCA worldwide

	% of Employees	Average Number of Hours[7]
Hourly	50.0	8.5
Professional & Salaried	47.3	20.3
Manager	2.7	18.8

Training on Corporate Campaigns[8]
FCA worldwide

	2015	2014	2013
Employees involved (no.)	**115,079**	105,009	53,242
of which managers (%)	2.8	3.7	4.3

Environmental Training
FCA worldwide

	2015	2014	2013
Hours of training	**437,884**	451,638	234,536
Employees involved	**78,447**	107,631	74,123
of which hourly employees	67,673	96,255	65,312

Health and Safety Training
FCA worldwide

	2015	2014	2013
Hours of training	**1,024,672**	1,215,154	1,184,098
Employees involved	**133,782**	170,784	155,227
of which hourly employees	109,328	133,884	116,383

[7] Averages calculated based on total workforce and not exclusively on employees enrolled in training courses.
[8] Training on corporate governance, anti-corruption, human rights, non-discrimination and sustainability.

GRI: G4-EN31, G4-HR2, G4-LA9, G4-LA10, G4-SO4

Details by Workforce

Employee Turnover

Turnover by Geographic Area	Europe	North America	Latin America	Asia	Rest of World	Total Worldwide
Employees at December 31, 2014	88,061	85,521	47,232	7,701	175	228,690
New Hires	7,885	17,177	6,744	2,161	17	33,984
Departures	(4,133)	(12,503)	(10,205)	(1,635)	(17)	(28,493)
Δ scope of operations and transfers	(2)	15	428	2	(3)	440
Employees at December 31, 2015	**91,798**	**90,210**	**44,199**	**8,242**	**172**	**234,621**

Turnover by Category	Hourly	Salaried	Professional	Manager
Employees at December 31, 2014	159,131	33,931	33,202	2,426
New Hires	24,404	6,903	2,569	108
Departures	(20,337)	(5,041)	(2,890)	(225)
Δ scope of operations, transfers and Category change	(144)	(1,104)	1,509	179
Employees at December 31, 2015	**163,054**	**34,689**	**34,390**	**2,488**

Turnover by Category and Geographic Area	Hourly Europe	Hourly North America	Hourly Latin America	Hourly Asia	Hourly Rest of World
Employees at December 31, 2014	55,690	63,541	37,258	2,636	6
New Hires	4,900	13,324	5,542	638	-
Departures	(2,164)	(8,958)	(8,513)	(700)	(2)
Δ scope of operations, transfers and Category change	(232)	(187)	287	(12)	-
Employees at December 31, 2015	**58,194**	**67,720**	**34,574**	**2,562**	**4**

Turnover by Age Group	Up to 30 Years	31 to 40 Years	41 to 50 Years	Over 50 Years
Employees at December 31, 2014	50,503	59,682	65,190	53,315
New Hires	22,024	7,696	3,088	1,176
Departures	(13,414)	(7,108)	(3,592)	(4,379)
Δ scope of operations and transfers	228	127	84	1
Employees at December 31, 2015	**59,341**	**60,397**	**64,770**	**50,113**

Turnover by Gender	Men	Women
Employees at December 31, 2014	182,365	46,325
New Hires	25,590	8,394
Departures	(22,071)	(6,422)
Δ scope of operations and transfers	400	40
Employees at December 31, 2015	**186,244**	**48,377**

Details by Workforce

Occupational Health and Safety

Injuries by Geographic Area and Gender

FCA worldwide (no.)

	2015			2014			2013		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Europe	241	199	42	263	203	60	323	251	72
North America	161	133	28	153	123	30	161	126	35
Latin America	100	90	10	212	199	13	259	247	12
Asia	12	12	-	11	10	1	5	5	-
Rest of world	-	-	-	-	-	-	-	-	-
Total	**514**	**434**	**80**	**639**	**535**	**104**	**748**	**629**	**119**

Days of Absence[9] by Geographic Area and Gender

FCA worldwide (no.)

	2015			2014			2013		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Europe	7,972	6,372	1,600	9,326	7,006	2,320	10,407	8,174	2,233
North America	7,843	6,374	1,469	7,695	6,371	1,324	8,762	6,176	2,586
Latin America	2,859	2,637	222	3,484	3,279	205	5,378	5,088	290
Asia	193	193	-	463	458	5	72	72	-
Rest of world	-	-	-	-	-	-	-	-	-
Total	**18,867**	**15,576**	**3,291**	**20,968**	**17,114**	**3,854**	**24,619**	**19,510**	**5,109**

Frequency Rate by Geographic Area and Gender

FCA worldwide (accidents per 100,000 hours worked)

	2015			2014			2013		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Europe	0.15	0.16	0.13	0.19	0.18	0.22	0.24	0.24	0.26
North America	0.09	0.09	0.06	0.08	0.09	0.07	0.09	0.09	0.10
Latin America	0.13	0.13	0.12	0.24	0.25	0.15	0.28	0.31	0.10
Asia	0.06	0.08	-	0.05	0.06	0.03	0.07	0.10	-
Rest of world	-	-	-	-	-	-	-	-	-
Total	**0.12**	**0.12**	**0.09**	**0.15**	**0.15**	**0.13**	**0.19**	**0.19**	**0.15**

Severity Rate by Geographic Area and Gender

FCA worldwide (days of absence due to accidents per 1,000 hours worked)

	2015			2014			2013		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Europe	0.05	0.05	0.05	0.07	0.06	0.09	0.08	0.08	0.08
North America	0.04	0.04	0.03	0.04	0.05	0.03	0.05	0.05	0.07
Latin America	0.04	0.04	0.03	0.04	0.04	0.02	0.06	0.06	0.02
Asia	0.01	0.01	-	0.02	0.03	-	0.01	0.01	-
Rest of world	-	-	-	-	-	-	-	-	-
Total	**0.04**	**0.04**	**0.04**	**0.05**	**0.05**	**0.05**	**0.06**	**0.06**	**0.07**

Occupational Illness Cases by Geographic Area and Gender

FCA worldwide (no.)

	2015			2014			2013		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Europe	117	87	30	177	131	46	211	156	55
North America	218	136	82	482	333	149	378	217	161
Latin America	47	47	-	4	3	1	143	140	3
Asia	-	-	-	-	-	-	-	-	-
Rest of world	-	-	-	-	-	-	-	-	-
Total	**382**	**270**	**112**	**663**	**467**	**196**	**732**	**513**	**219**

Occupational Illness Frequency Rate by Geographic Area and Gender

FCA worldwide (days of absence due to accidents per 1,000 hours worked)

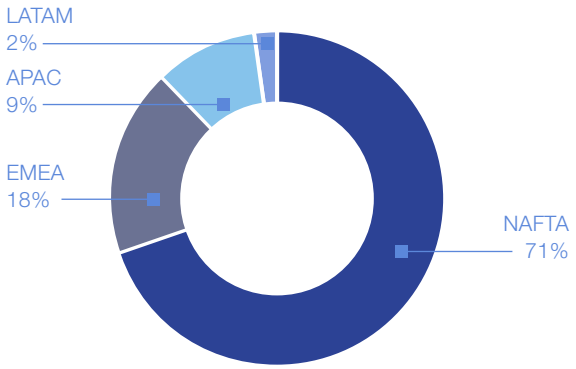
	2015			2014			2013		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Europe	0.07	0.07	0.09	0.13	0.12	0.17	0.16	0.15	0.20
North America	0.12	0.09	0.19	0.26	0.24	0.34	0.22	0.16	0.46
Latin America	0.06	0.07	-	-	-	0.01	0.16	0.18	0.02
Asia	-	-	-	-	-	-	-	-	-
Rest of world	-	-	-	-	-	-	-	-	-
Total	**0.09**	**0.08**	**0.13**	**0.15**	**0.13**	**0.24**	**0.18**	**0.16**	**0.28**

[9] Refers to the number of calendar days of absence (including Saturdays, Sundays and holidays) due to accidents that occurred to employees (hourly, salaried and professional) resulting in absence from work for more than three days, excluding the day the accident occurred. Excluded from the calculation are: days of absence due to accidents that occurred while traveling to and from work, including by private transportation.

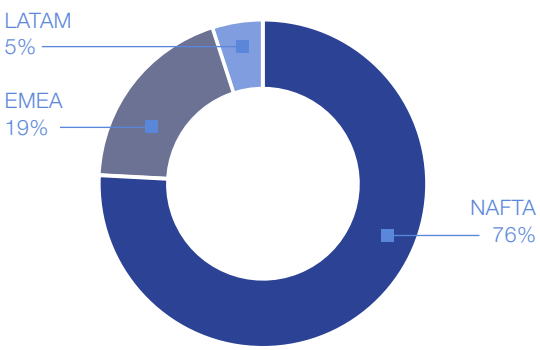
Details by Suppliers

Purchases

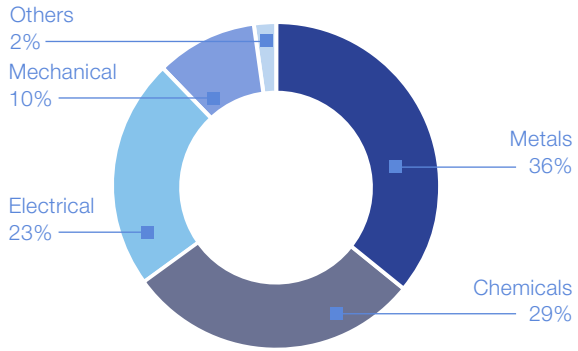
Purchases[1] by Origin
Group Purchasing worldwide



Purchases[1] by Destination
Group Purchasing worldwide



Purchases[1] by Type
Group Purchasing worldwide



[1] *Refers to the monetary value of direct material purchases managed by Group Purchasing.*

Details by Suppliers

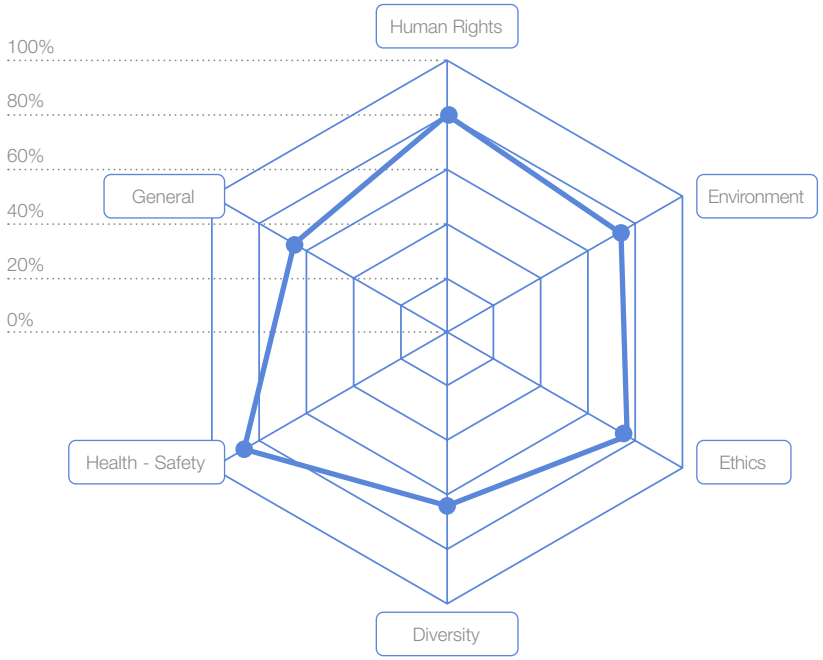
Supplier Sustainability Self-Assessment

Questionnaire Results
Group Purchasing worldwide

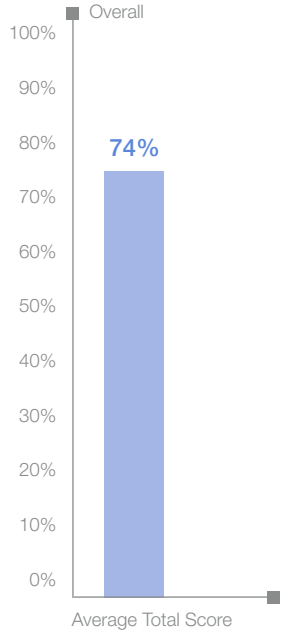
	2015	2014	2013
Suppliers sent self-assessment questionnaires (no.)[2]	**1,497**	1,176	1,088
Suppliers responding to questionnaire (%)	**22**[3]	53	80
Average score	**74/100**	75/100	79/100
Purchases by value covered by questionnaires (%)[4]	**34**	63	43

Dashboard

Average Score by Value



Average Total



[2] Data refers to Top Parent supplier codes (companies' headquarters code). The data related to 2013 have been restated using Top Parent supplier codes.
[3] The NAFTA launch of the online platform in Q4 resulted in many suppliers responding in early 2016, outside the scope of this reporting period.
[4] Value of purchases managed by Group Purchasing.

Details by Suppliers

Supplier Audits

Audit Results
Group Purchasing worldwide

	2015	2014	2013
Sustainability audits (no.)	**60**	65	72
Performed by FCA personnel (Supplier Quality Engineers)	27	30	38
Performed by a third party	33	35	34
Purchases by value covered by audits[5]	**5%**	6%	5%

Corrective Action Plans[6]
Group Purchasing worldwide

Aspects	Number of Suppliers with which Improvements were Agreed Upon	Percentage of Audited Suppliers Identified as Having Significant Actual and Potential Negative Impacts, with which Improvements were Agreed Upon[7]	Number of Action Plans	Main Action Plan Topics
Environment	16	27%	48	Environmental performance Environmental management Environmental reporting Environmental Emergency Planning System
Labor practices	45	75%	155	Anti-corruption practice training Diversity Occupational Health & Safety Safety Emergency Planning System Sustainability monitoring in the supply chain Supplier Compliance & Ethics training
Human rights	23	38%	57	Code of conduct: Lack of formal document Code of conduct: Lack of communication Code of Conduct: Lack of references to human rights Supplier contractual requirement on human rights Code of conduct responsibilities Lack of a formal grievance mechanism
Impact on society	21	35%	55	Anti-corruption practice, lack of: -policy -communication -responsibilities -grievance mechanism Supplier Code of Conduct Community development

[5] Value of direct and indirect material purchases managed by Group Purchasing.
[6] In 2015, 315 joint action plans have been initiated for 47 suppliers.
[7] The percentage is calculated based on the 60 suppliers audited.

GRI: G4-EN33, G4-HR4, G4-HR5, G4-HR6, G4-HR11, G4-LA15, G4-SO10

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Definitions, Methodology and Scope

The FCA N.V. Sustainability Report, now in its 12th edition, is a voluntary document issued by the Group according to GRI-G4 guidelines [1] to provide stakeholders a comprehensive picture of FCA activities, results and commitments in the economic, environmental and social spheres.

This appendix provides a methodology guide.

Unless otherwise specified or required by the context in which they are used:

- the terms "FCA" and "Group" refer to all companies consolidated within Fiat Chrysler Automobiles N.V. for accounting purposes (see subsidiaries consolidated in the FCA N.V. Annual Report)
- the term "Company" refers to the entire Group
- the term "company" is used with reference to a selection among the following entities: FCA Italy (formerly known as Fiat Group Automobiles or FGA), FCA US (formerly known as Chrysler Group or CG), Ferrari, Maserati, Comau, Magneti Marelli, Teksid, Fiat Services and other companies
- the term "FCA US" refers to all companies consolidated within FCA US LLC (formerly known as "Chrysler Group") for accounting purposes (see subsidiaries consolidated in the FCA N.V. Annual Report)
- the term "FCA Italy" (formerly known as "Fiat Group Automobiles") refers to all companies consolidated within FCA Italy S.p.A. for accounting purposes (see subsidiaries consolidated in the FCA N.V. Annual Report)
- the term "operating segment" refers to the segments according to which the Group business is organized. They include: Mass-Market Brands (previously reported as Mass-Market and Premium Brands or FGA, FGA Engines and Transmission and Chrysler Group); Luxury Brands (Ferrari and Maserati); Components (Magneti Marelli, Teksid, Comau); Others (firms operating in publishing, communications and services, and other companies)
- the term "operating region" refers to the distinct areas in which the operations of Mass-Market Brands are carried out, with the boundaries set according to the organizational changes effective September 1, 2011. The operating regions are: EMEA (Europe, Russia, Middle East and Africa), NAFTA (U.S., Canada and Mexico), LATAM (South and Central America) and APAC (Asia and Pacific countries).

Unless otherwise indicated or required by the context, the information and data contained in this Sustainability Report relates to financial year 2015 (January 1, 2015 to December 31, 2015) and to all FCA companies worldwide falling within the scope of consolidation at December 31, 2015.

[1] *The Global Reporting Initiative (GRI) is a multi-stakeholder process for the development and disclosure of Sustainability Reporting Guidelines. The GRI-G4 guidelines were issued in May 2013. These guidelines offer an international reference for the disclosure of governance approach and of the environmental, social and economic performances and impacts of the organizations.*

In order to ensure that information is comparable and meaningful over time, some data was presented on a pro forma basis. In particular:

- with respect to year 2015 and 2014, data refers to all companies consolidated within FCA N.V. for accounting purposes, for the full year (see subsidiaries consolidated in the Annual Report)
- with respect to year 2012 and 2013, data refers to all companies consolidated within FCA N.V. (formerly Fiat S.p.A.) for accounting purposes, for the full year (see subsidiaries consolidated in the Annual Report)
- with respect to year 2011, although FCA US (formerly Chrysler Group) was consolidated in FCA (formerly Fiat S.p.A.) for accounting purposes as of June 2011, data includes FCA US information for the full year
- with respect to year 2010, data was restated to include FCA US (formerly Chrysler Group) and to exclude companies demerged into CNH Industrial N.V. (formerly Fiat Industrial S.p.A.).

The exclusion of any geographical area, Group company, or specific site from the scope of reporting is attributable to the inability to obtain data of satisfactory quality, or to its immateriality in relation to the Group as a whole, as may be the case for newly-acquired entities or production activities that are not yet fully operational. In some cases, entities that are not consolidated in the financial statements were included in the scope of reporting because of their significant environmental and social impacts.

In particular:

- data on occupational health and safety reported in the “Occupational Health and Safety” section relates to 143 of the 166 plants [2] included in the FCA N.V. Annual Report (covering approximately 94% of plant workers), [3] to office facilities (in total covering approximately 100% of Group employees), and to four plants of companies that are not fully consolidated, including one joint venture in Turkey and three in the APAC region (two in China and one in India)
- the Group’s environmental and energy performance reported in the “Plants” section refers to 143 of the 166 plants [2] included in the FCA N.V. Annual Report (covering approximately 100% of the Group’s industrial revenues), [4] and to four plants of companies that are not fully consolidated, including one joint venture in Turkey and three in the APAC region (two in China and one in India)
- performance indicators per unit of production reported in the “Plants” section have been restated to make data comparable year-over-year.

Data was collected and reported with the aid of existing management control and information systems, where available, in order to ensure reliability of information flows and the correct monitoring of sustainability performance. A dedicated reporting process was established for certain indicators, using electronic databases or files populated directly by the individuals or entities responsible for each aspect worldwide.

Unless otherwise indicated, all data presented in the Report refers to the International System of Units and may be subject to rounding. In some cases, rounding of a very low number may result in a report of zero.

[2] Data was not considered material, and was thus not reported, for two plants dedicated to publishing and communication activities and 21 plants in start-up or closing phase.
[3] Plant workers are defined as all employees located at a particular site, including workers assigned to manufacturing and other associated units (quality control, logistics, etc.), and to research and development.
[4] Revenues attributable to activity of plants directly controlled by the Group.

Quality of Information

The quality of the information contained in the Sustainability Report is supported by compliance with the following principles:

- materiality: inclusion of all information deemed to be of interest to internal and external stakeholders due to its economic, environmental or social impact
- completeness: inclusion of all material topics and indicators
- balance: coverage of both positive and negative aspects of the Group's performance
- comparability: ability to compare between time periods and with similar organizations
- accuracy: provision of adequate levels of detail
- reliability: reporting process subject to audit by an independent organization
- timeliness: Sustainability Report presented together with the FCA N.V. Annual Report at the Annual General Meeting of FCA N.V.
- clarity: the language used addresses all stakeholders.

Preparation of the Sustainability Report is part of an annual reporting process subject to audit, analysis and approval by a number of individuals and entities. FCA continues to use its best efforts to ensure the accuracy of the sustainability information contained in this Report. From time to time, however, figures may be updated.

The document is:

- prepared by the FCA Sustainability Team that coordinates and engages Group operating segments and regions and relevant functions
- approved by the Group Executive Council, the highest decision making body headed by the CEO of FCA N.V., consisting of Chief Operating Officers of regions and companies of the Group and various function heads and by subject matter experts
- examined by the Governance and Sustainability Committee, a subcommittee of the Board of Directors of FCA N.V.
- subject to assurance by an external independent audit firm, Deloitte & Touche S.p.A., in accordance with the criteria established in the International Standard on Assurance Engagement 3000 - Assurance Engagements other than Audits or Reviews of Historical Financial Information (ISAE 3000), issued by the International Auditing and Assurance Standards Board for limited assurance engagements. The statement of assurance describing the activities carried out and the expression of opinion is provided at this link.
- presented together with the Annual Report at the Annual General Meeting of FCA N.V. to provide a complete, current overview of the Group's financial, environmental and social performance
- available for download at no cost from the Sustainability section of the Group's public website (www.fcagroup.com).

The 2014 Sustainability Report was made available at FCA N.V.'s Annual General Meeting on 16 April 2015.

About this Report

Reporting period
Financial year 2015 (January 1, 2015 to December 31, 2015)

Reporting cycle
Annual

Date of publication
April, 2016

Document formats
PDF and interactive versions

Report scope and boundary
- The information and data relate to FCA companies worldwide falling within the scope of consolidation at December 31, 2015
- Financial figures reflect those reported in the 2015 FCA N.V. Annual Report

Report content
The selection of topics for this Report is based on the results of our Corporate priorities, the dialogue with stakeholders, the Global Reporting Initiative G4 requirements and other sustainability ratings and rankings. This Report includes material aspects as well as topics which are not material, but which may be of interest to selected stakeholders. Additional environmental, social and governance indicators are reported in the Facts & Figures section.

Global Reporting Initiative (GRI)
The Report is GRI-G4 in accordance – Comprehensive option.
See page 255 for full set of indicators.

Assurance
- The Report has been submitted to assurance by an external independent audit firm, Deloitte & Touche S.p.A., in accordance with the criteria established in the International Standard on Assurance Engagement 3000 - Assurance Engagements other than Audits or Reviews of Historical Financial Information (ISAE 3000), issued by the International Auditing and Assurance Standards Board for limited assurance engagements.
- Deloitte & Touche S.p.A. is officially authorized to conduct ISAE 3000 assurance audits. The statement of assurance describing the activities carried out and the expression of opinion is provided at this link.

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Forward-Looking Statements

This report contains forward-looking statements. These statements may include terms such as “may,” “will,” “expect,” “could,” “should,” “intend,” “estimate,” “anticipate,” “believe,” “remain,” “on track,” “design,” “target,” “objective,” “goal,” “forecast,” “projection,” “outlook,” “prospects,” “plan,” “intend,” or similar terms. Forward-looking statements are not guarantees of future performance. Rather, they are based on the Group’s current expectations and projections about future events and, by their nature, are subject to inherent risks and uncertainties. They relate to events and depend on circumstances that may or may not occur or exist in the future and, as such, undue reliance should not be placed on them. Actual results may differ materially from those expressed in such statements as a result of a variety of factors, including: the Group’s ability to reach certain minimum vehicle sales volumes; developments in global financial markets and general economic and other conditions; changes in demand for automotive products, which is highly cyclical; the Group’s ability to enrich the product portfolio and offer innovative products; the high level of competition in the automotive industry; the Group’s ability to expand certain of the Group’s brands internationally; changes in the Group’s credit ratings; the Group’s ability to realize anticipated benefits from any acquisitions, joint venture arrangements and other strategic alliances; potential shortfalls in the Group’s defined benefit pension plans; the ability of the Group’s dealers and retail customers to obtain adequate access to financing; the Group’s ability to access funding to execute the Group’s business plan and improve the Group’s business, financial condition and results of operations; various types of claims, lawsuits and other contingent obligations against the Group; disruptions arising from political, social and economic instability; material operating expenditures and other effects from and in relation to compliance with environmental, health and safety regulation; developments in labor and industrial relations and developments in applicable labor laws; increases in costs, disruptions of supply or shortages of raw materials; exchange rate fluctuations, interest rate changes, credit risk and other market risks; political and civil unrest; earthquakes or other disasters and other risks and uncertainties.

Any forward-looking statements contained in this document speak only as of the date of this report and the Group undertakes no obligation to update or revise publicly forward-looking statements. Further information concerning the Group and its businesses, including factors that could materially affect the Group’s financial results, are included in the Group’s reports and filings with the U.S. Securities and Exchange Commission, the AFM and CONSOB.

Independent Auditor's Report

This Sustainability Report has been submitted to assurance by an external independent audit firm, Deloitte & Touche S.p.A. The scope, methodology, limitations and conclusions of the assurance engagement are provided in the following Independent Auditors' Report.

Deloitte.

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INDEPENDENT AUDITORS' REPORT ON THE SUSTAINABILITY REPORT

To Fiat Chrysler Automobiles N.V.

We have performed a limited assurance engagement on the Sustainability Report of Fiat Chrysler Automobiles ("FCA" or the "Group") as of December 31, 2015.

Sustainability organization's responsibility on the preparation of the Sustainability Report

Group Sustainability organization is responsible for the preparation of the Sustainability Report in accordance with the *"G4 Sustainability Reporting Guidelines"* issued in 2013 by GRI – *Global Reporting Initiative*, as stated in the paragraphs "About this Report" and "Definitions, Methodology and Scope" of the Sustainability Report. The Sustainability organization is supported by several entities within the organization including the Group Executive Council and the Board Governance and Sustainability Committee that is also responsible for, among other things, assisting and advising the Board of Directors with monitoring and evaluating reports on the Group's sustainable development policies and practices, management standards, strategy, performance and governance globally, and reviewing, assessing and making recommendations as to strategic guidelines for sustainability related issues, and reviewing the annual Sustainability Report.

The Group Sustainability organization also support the definition of FCA's objectives regarding the sustainability performance and the reporting of the achieved results, for the identification of the stakeholders and the significant aspects to report.

Auditors' responsibility

Our responsibility is to issue this report based on the procedures performed. We conducted our work in accordance with the criteria established in the *"International Standard on Assurance Engagement 3000 – Assurance Engagements other than Audits or Reviews of Historical Financial Information"* (*"ISAE 3000"*), issued by the International Auditing and Assurance Standards Board for limited assurance engagements. The standard requires the compliance with ethical principles, including independence requirements, and that we plan and perform the engagement to obtain limited assurance whether the Sustainability Report is free from material misstatement. These procedures included inquiries, primary with company personnel responsible for the preparation of the Sustainability Report, analysis of documents and other evidence gathering procedures as appropriate.

The procedures performed on the Sustainability Report consisted in verifying its compliance with the principles for defining report content and quality set out in the *"G4 Sustainability Reporting Guidelines"*, and are summarized as follows:

- comparing the economic and financial data included in the Sustainability Report with those reported in the Group Consolidated Financial Statements as of December 31, 2015, on which another auditor issued the auditors' report, dated February 29th, 2016;
- analysing, through interviews, the governance system and the management process of the matters related to sustainability management and its relationship with the strategy and operations of the Group;
- analysing the process relating to the definition of material aspects disclosed in the Sustainability Report, with reference to the methods used for the identification and prioritization of material aspects for stakeholders and to the internal validation of the process results;

- analysing how the processes underlying the generation, collection and management of quantitative data of the Sustainability Report operate. In particular, we have performed:
  - interviews and discussions with the management of FCA Sepin S.c.p.A. and the personnel of the Group among the four operating regions to gather information about the accounting and reporting systems used in preparing the Sustainability Report, as well as on the internal control procedures supporting the gathering, aggregation, processing and transmittal of data and information to the department responsible for the preparation of the Sustainability Report;
  - analysis, on a sample basis, of the documentation supporting the preparation of the Sustainability Report, in order to gather the evidence of processes in place, their adequacy, and that the internal control system correctly manages data and information in connection with the objectives described in the Sustainability Report;
- analysing the compliance and the internal consistency of the qualitative information disclosed in the Sustainability Report in relation to the guidelines identified in the paragraph "Sustainability organization's responsibility on the preparation of the Sustainability Report" of this report;
- analysing the stakeholders engagement process, in terms of methods applied, through the analysis of the minutes of the meetings or any other available documentation about the main topics arisen in the discussion with them;
- obtaining the representation letter signed by the legal representative of FCA Sepin S.c.p.A., on the compliance of the Sustainability Report with the guidelines identified in the paragraph "Sustainability organization's responsibility on the preparation of the Sustainability Report", as well as the reliability and completeness of the data and information disclosed.

Data and information subject to our limited assurance are reported, as required by the *"G4 Sustainability Reporting Guidelines"*, in the "GRI G4 Content Index" of the Sustainability Report.

The procedures performed in a limited assurance engagement are less than those performed in a reasonable assurance engagement in accordance with ISAE 3000, and, therefore, do not enable us to obtain assurance that we would become aware of all significant matters and events that might be identified in a reasonable assurance engagement.

Conclusion

Based on the work performed, nothing has come to our attention that causes us to believe that the Sustainability Report of FCA as of December 31, 2015 is not prepared, in all material respects, in accordance with the *"G4 Sustainability Reporting Guidelines"* issued in 2013 by GRI – *Global Reporting Initiative*, as stated in the paragraphs "About this Report" and "Definitions, Methodology and Scope" of the Sustainability Report.

Milan, April 11, 2016

DELOITTE&TOUCHE S.P.A.

Franco Amelio
Partner

GRI G4 Content Index

This Report is prepared according to the GRI-G4 - Comprehensive option.

GRI Materiality Disclosures FCA N.V.

Mar 2016 Service

The following table lists content within the document that relates to specific GRI-G4 indicators. Each indicator references the appropriate pages/links in the 2015 Sustainability Report or the 2015 Group Annual Report.

Page numbers also work as a direct link to the related content in this Report or other source.

Key

AR = Annual Report at December 31, 2015
SR = Sustainability Report at December 31, 2015

Fully disclosed
Not disclosed

General standard disclosures

DMA and Indicators		Publications	Page	Omission and reason
Strategy and analysis				
G4-1	Statement from the Chairman and the CEO	SR	4-5, 31	
G4-2	Key impacts, risks, and opportunities	AR SR	14-27 9, 31, 34, 64-65, 67, 144-145	
Organizational profile				
G4-3	Name of the organization	SR	9	
G4-4	Primary brands, products, and/or services		37-49	
G4-5	Location of the organization's headquarters	SR	252	
G4-6	Countries where the organization operates	AR SR	259-277 9, 249-251	
G4-7	Nature of ownership and legal form	AR	84-85	
G4-8	Markets served	SR	9	
G4-9	Scale of the reporting organization	SR	9, 19-22, 24-30, 79-80, 235-236, 238-239, 243	
G4-10	Workforce characteristic	SR	79-80, 87, 235, 237-239, 243	
G4-11	Employees covered by collective bargaining agreements	SR	128	
G4-12	Organization's supply chain	AR SR	116-117 114-115, 245	
G4-13	Changes in organization's size, structure, ownership or its supply chain	AR SR	116-117 87, 114-115, 243	
G4-14	Precautionary approach to risk management	SR	64-65, 67, 171-172	

DMA and Indicators		Publications	Page	Omission and reason
G4-15	Externally developed charters, principles or initiatives to which the organization subscribes	AR SR	98 58, 61	
G4-16	Membership in associations or organizations	SR	53-54	
Identified material aspects and boundaries				
G4-17	Entities included in the organization reports	AR SR	143-146, 259-277 249-251	
G4-18	Reporting principles for defining report content	SR	77	
G4-19	Material aspects identified in defining report content	SR	77	
G4-20	Material aspects within the organization	SR	77	
G4-21	Material aspects outside the organization	SR	77	
G4-22	Restatements of information provided in earlier reports	SR	249-251	
G4-23	Significant changes from previous reporting periods in scope and aspect boundaries	SR	249-251	
Stakeholder engagement				
G4-24	Stakeholder groups engaged by the organization	SR	73-76	
G4-25	Identification and selection of stakeholders to engage	SR	73-76	
G4-26	Organization's approach to stakeholder engagement	SR	73-76	
G4-27	Key topics collected through stakeholder engagement	SR	73-77	
Report profile				
G4-28	Reporting period	SR	252	
G4-29	Date of the last report	SR	249-251	
G4-30	Reporting cycle	SR	249-252	
G4-31	Contact point for questions regarding the report	SR	252	
G4-32	GRI Content Index	SR	255-264	
G4-33	External assurance	SR	249-251, 254	

DMA and Indicators		Publications	Page	Omission and reason
Governance				
G4-34	Governance structure	AR SR	85-107 32, 53, 55, 57	
G4-35	Delegating authority for economic, environmental and social topics	SR	32, 52	
G4-36	Positions with responsibility for economic, environmental and social topics	AR SR	91 32-34, 52, 55	
G4-37	Consultation between stakeholders and the highest governance bodies on economic, environmental and social topics	AR SR	91, 94-96 32-34, 52, 57	
G4-38	Composition of highest governance bodies and its committees	AR SR	85-107 55-57	
G4-39	Executive powers of the Chairman	AR SR	85 55	
G4-40	Qualification and expertise of highest governance bodies	AR SR	85-89 55-57	
G4-41	Processes to avoid conflicts of interest	AR	92	
G4-42	Highest governance bodies and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts	AR SR	85, 108 32, 52, 57	
G4-43	Measures taken to develop and enhance the highest governance bodies' collective knowledge of economic, environmental and social topics	AR SR	85 32, 55-57	
G4-44	Evaluation of the Board of Directors' performance	AR SR	91 55-57	
G4-45	Highest governance bodies' role in the identification and management of economic, environmental and social impacts, risks, and opportunities	AR SR	101-105 57, 65, 67	
G4-46	Highest governance bodies' role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics.	AR SR	101-105 32, 65, 67	
G4-47	Frequency of the highest governance bodies' review of economic, environmental and social impacts, risks, and opportunities	AR SR	101-105 65, 67	
G4-48	Highest committee or position that formally reviews and approves the organization's sustainability report	AR SR	91 32, 57	
G4-49	Communicating critical concerns to the highest governance bodies	AR SR	101-105 32, 65	
G4-50	Critical concerns that were communicated to the highest governance bodies and the mechanism(s) used to address and resolve them	AR SR	101-105 65	
G4-51	Remuneration policies for highest governance bodies and senior executives	AR	118-131	
G4-52	Determining remuneration	AR	118-131	
G4-53	How stakeholders' views are sought and taken into account regarding remuneration	AR	94-96, 118-131	
G4-54	Ratio of the annual compensations within the organization			The full set of data is not reportable; in some countries of presence this information is subject to confidential treatment
G4-55	Ratio of percentage increase in annual compensation within the organization			The full set of data is not reportable; in some countries of presence this information is subject to confidential treatment

Ethics and integrity

G4-56	Organization's values, principles, standards and norms of behavior	SR	53, 58	
G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity	SR	58-61	
G4-58	Internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity	SR	59-61, 65	

Specific standard disclosures

Economic

DMA and Indicators		Publications	Page	Omission and reason
Material aspect: economic performance				
G4-DMA	Generic Disclosures on Management Approach	SR	65-70, 144-145	
G4-EC1	Direct economic value generated and distributed	SR	144-145, 241	
G4-EC2	Financial implications, risks and opportunities for the organization's activities due to climate change	AR SR	102, 104-105 9, 31, 33, 65-70	
G4-EC3	Coverage of the organization's defined benefit plan obligations	SR	86	
G4-EC4	Financial assistance received from government	SR	212	
Material aspect: market presence				
G4-DMA	Generic Disclosures on Management Approach	SR	85, 240	
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage	SR	240	
G4-EC6	Proportion of senior management hired from the local community	SR	236	
Material aspect: indirect economic impacts				
G4-DMA	Generic Disclosures on Management Approach	AR SR	102, 104-105 65, 67, 110, 114-117, 119, 122-124, 144-149,	
G4-EC7	Development and impact of infrastructure investments and services supported	AR SR	102, 104-105 20, 26, 65, 67, 144-149	
G4-EC8	Significant indirect economic impacts	SR	11-18, 20, 23, 26, 29, 65, 67, 70, 108, 110-112, 114-117, 119, 122-124, 144-149, 245	
Material aspect: procurement practices				
G4-DMA	Generic Disclosures on Management Approach	SR	114-115	
G4-EC9	Proportion of spending on local suppliers	SR	114-115, 245	

Environmental

DMA and Indicators		Publications	Page	Omission and reason
Material aspect: materials				
G4-DMA	Generic Disclosures on Management Approach	SR	178-179	
G4-EN1	Materials used	SR	24, 177-179, 212	
G4-EN2	Recycled input materials	SR	24, 177-179, 212	
Material aspect: energy				
G4-DMA	Generic Disclosures on Management Approach	SR	113, 197	
G4-EN3	Energy consumption within the organization	SR	24, 197, 213-215	
G4-EN4	Energy consumption outside of the organization	SR	184	
G4-EN5	Energy intensity	SR	24, 197, 216	
G4-EN6	Reduction of energy consumption	SR	89, 113, 197	
G4-EN7	Reductions in energy requirements of products and services	SR	151-167, 171-172	
Material aspect: water				
G4-DMA	Generic Disclosures on Management Approach	SR	199	
G4-EN8	Water withdrawal	SR	24, 199-200, 221-222	
G4-EN9	Water sources significantly affected by withdrawal	SR	223	
G4-EN10	Water recycled and reused	SR	30, 199-200, 222	
Material aspect: biodiversity				
G4-DMA	Generic Disclosures on Management Approach	SR	193-195	
G4-EN11	Operational sites in, or adjacent to, protected areas and areas of high biodiversity value	SR	233	
G4-EN12	Description of significant impacts on biodiversity	SR	233	
G4-EN13	Habitats protected or restored	SR	233	
G4-EN14	List of species with habitats in areas affected by operations, by level of extinction risk	SR	233	
Material aspect: emissions				
G4-DMA	Generic Disclosures on Management Approach	SR	198	
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	SR	198, 217-218	
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	SR	198, 217-218	
G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	SR	184, 205, 234	
G4-EN18	Greenhouse gas (GHG) emissions intensity	SR	198, 205, 218, 234	
G4-EN19	Reduction of greenhouse gas (GHG) emissions	SR	30, 89, 193-195, 197-198, 206-209	
G4-EN20	Emissions of ozone-depleting substances (ODS)	SR	219	
G4-EN21	NO_x, SO_x, and other significant air emissions	SR	220	

DMA and Indicators		Publications	Page	Omission and reason
Material aspect: effluents and waste				
G4-DMA	Generic Disclosures on Management Approach	SR	199, 201	
G4-EN22	Water discharge	SR	30, 199-200, 221, 224-228	
G4-EN23	Waste disposal	SR	30, 201-202, 229-232	
G4-EN24	Significant spills	SR	193-195	
G4-EN25	Hazardous waste	SR	201-202	
G4-EN26	Biodiversity and habitats affected by the organization's discharges	SR	223	
Material aspect: products and services				
G4-DMA	Generic Disclosures on Management Approach	SR	151-155	
G4-EN27	Mitigation of environmental impacts of products and services	SR	105, 151-166, 167-176, 181-182	
G4-EN28	Products sold and their packaging materials that are reclaimed	SR	183	
Material aspect: compliance				
G4-DMA	Generic Disclosures on Management Approach	SR	63, 193-195	
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	SR	63	
Material aspect: transport				
G4-DMA	Generic Disclosures on Management Approach	SR	203-204	
G4-EN30	Environmental impacts of transport	SR	205, 207, 210, 234	
Material aspect: overall				
G4-DMA	Generic Disclosures on Management Approach	SR	193-195	
G4-EN31	Environmental protection expenditures and investments	SR	193-195, 242	
Material aspect: supplier environmental assessment				
G4-DMA	Generic Disclosures on Management Approach	SR	120-121, 125	
G4-EN32	Suppliers screened using environmental criteria	SR	23, 31, 120-121, 125, 206, 246	
G4-EN33	Actual and potential negative environmental impacts in the supply chain and actions taken	SR	23, 31, 120-121, 125, 247	
Material aspect: environmental grievance mechanisms				
G4-DMA	Generic Disclosures on Management Approach	SR	59-60	
G4-EN34	Grievances about environmental impacts filed, addressed, and resolved	SR	59-60, 122-123	

Social

Labor practices and decent work

DMA and Indicators		Publications	Page	Omission and reason
Material aspect: employment				
G4-DMA	Generic Disclosures on Management Approach	SR	79-80, 86, 88	
G4-LA1	Number and rates of new employee hires and employee turnover	SR	28, 79-80, 87-88, 243	
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	SR	86	
G4-LA3	Return to work and retention rates after parental leave	SR	88, 239	
Material aspect: labor/management relations				
G4-DMA	Generic Disclosures on Management Approach	SR	143	
G4-LA4	Minimum notice periods regarding operational changes	SR	143	
Material aspect: occupational health and safety				
G4-DMA	Generic Disclosures on Management Approach	SR	92-96	
G4-LA5	Workforce represented in health and safety committees	SR	96	
G4-LA6	Injuries, occupational diseases, lost days, absenteeism and total number of work-related fatalities	SR	94-95, 244	
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	SR	94-96, 244	
G4-LA8	Health and safety topics covered in formal agreements with trade unions	SR	93, 128	
Material aspect: training and education				
G4-DMA	Generic Disclosures on Management Approach	SR	78, 81-84	
G4-LA9	Training per employee	SR	22, 28, 83, 242	
G4-LA10	Programs for skills management and lifelong learning of employees	SR	22, 78, 81, 83, 242	
G4-LA11	Employees receiving regular performance and career development reviews	SR	22, 81-82	
Material aspect: diversity and equal opportunity				
G4-DMA	Generic Disclosures on Management Approach	SR	55, 90-91	
G4-LA12	Composition of governance bodies and breakdown of employees per indicators of diversity	SR	55, 79-80, 90-91, 235-239	
Material aspect: equal remuneration for women and men				
G4-DMA	Generic Disclosures on Management Approach	SR	85	
G4-LA13	Ratio of basic salary and remuneration of women to men	SR		The full set of data is not reportable; in some countries of presence this information is subject to confidential treatment
Material aspect: supplier assessment for labor practices				
G4-DMA	Generic Disclosures on Management Approach	SR	120-121,127	
G4-LA14	Suppliers screened using labor practices criteria	SR	23, 120-121, 127, 246	
G4-LA15	Actual and potential negative impacts for labor practices in the supply chain and actions taken	SR	120-121, 127, 247	
Material aspect: labor practices grievance mechanisms				
G4-DMA	Generic Disclosures on Management Approach	SR	59-60, 122-123	
G4-LA16	Grievances about labor practices filed, addressed, and resolved	SR	122-123	

Human rights

DMA and Indicators		Publications	Page	Omission and reason
Material aspect: investment				
G4-DMA	Generic Disclosures on Management Approach	SR	58, 62, 118	
G4-HR1	Investment agreements and contracts that include human rights clauses or that underwent human rights screening	SR	58, 62, 118	
G4-HR2	Employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations	SR	58, 62, 242	
Material aspect: non-discrimination				
G4-DMA	Generic Disclosures on Management Approach	SR	59-60, 62	
G4-HR3	Incidents of discrimination and corrective actions taken	SR	59-60, 62	
Material aspect: freedom of association and collective bargaining				
G4-DMA	Generic Disclosures on Management Approach	SR	120-121, 127-128, 134-135, 142	
G4-HR4	Risks to the right to exercise freedom of association and collective bargaining	SR	62, 120-121, 127-142, 247	
Material aspect: child labor				
G4-DMA	Generic Disclosures on Management Approach	SR	62, 120-121, 127	
G4-HR5	Operations identified as having significant risk for incidents of child labor	SR	62, 120-121, 127, 247	
Material aspect: forced or compulsory labor				
G4-DMA	Generic Disclosures on Management Approach	SR	62, 120-121, 127	
G4-HR6	Operations identified as having significant risk for incidents of forced or compulsory labor	SR	62, 120-121, 127, 247	
Material aspect: security practices				
G4-DMA	Generic Disclosures on Management Approach	SR	62	
G4-HR7	Security personnel trained on human rights policies	SR	62	
Material aspect: indigenous rights				
G4-DMA	Generic Disclosures on Management Approach	SR	144-146	
G4-HR8	Violations of the rights of indigenous peoples	SR	144-146	
Material aspect: assessment				
G4-DMA	Generic Disclosures on Management Approach	SR	59-60, 62	
G4-HR9	Operations subject to human rights reviews or impact assessments	SR	59-60, 62	
Material aspect: supplier human rights assessment				
G4-DMA	Generic Disclosures on Management Approach	SR	120-121, 127	
G4-HR10	Suppliers screened using human rights criteria	SR	23, 120-121, 127, 246	
G4-HR11	Actual and potential negative human rights impacts in the supply chain and actions taken	SR	120-121, 127, 247	
Material aspect: human rights grievance mechanisms				
G4-DMA	Generic Disclosures on Management Approach	SR	59-60, 122-123	
G4-HR12	Grievances about human rights impacts filed, addressed, and resolved	SR	59-60, 122-123	

Society

DMA and Indicators		Publications	Page	Omission and reason
Material aspect: local communities				
G4-DMA	Generic Disclosures on Management Approach	SR	87, 144-149	
G4-SO1	Operations with implemented local community engagement, impact assessments, and development programs	SR	73-76, 80, 144-149, 233	
G4-SO2	Operations with significant actual and potential negative impacts on local communities	SR	11-18, 87, 144-149	
Material aspect: anti-corruption				
G4-DMA	Generic Disclosures on Management Approach	SR	59-60	
G4-SO3	Operations assessed for risks related to corruption	SR	59-60	
G4-SO4	Communication and training on anti-corruption policies and procedures	SR	58-60, 242	
G4-SO5	Confirmed incidents of corruption and actions taken	SR	59-60, 63	
Material aspect: public policy				
G4-DMA	Generic Disclosures on Management Approach	SR	53	
G4-SO6	Value of political contributions	SR	53	
Material aspect: anti-competitive behavior				
G4-DMA	Generic Disclosures on Management Approach	SR	59-61	
G4-SO7	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	SR	63	
Material aspect: compliance				
G4-DMA	Generic Disclosures on Management Approach	SR	63	
G4-SO8	Fines and sanctions for non-compliance with laws and regulations	SR	63	
Material aspect: supplier assessment for impacts on society				
G4-DMA	Generic Disclosures on Management Approach	SR	120-121	
G4-SO9	Suppliers screened using criteria for impacts on society	SR	23, 120-121, 246	
G4-SO10	Actual and potential negative impacts on society in the supply chain and actions taken	SR	120-121, 247	
Material aspect: grievance mechanisms for impacts on society				
G4-DMA	Generic Disclosures on Management Approach	SR	59-60	
G4-SO11	Grievances about impacts on society filed, addressed, and resolved	SR	59-60, 122-123	

Product responsibility

DMA and Indicators		Publications	Page	Omission and reason
Material aspect: customer health and safety				
G4-DMA	Generic Disclosures on Management Approach	SR	180, 185-187, 191-192,	
G4-PR1	Product and service categories for which health and safety impacts are assessed for improvement	SR	177-180, 185-190	
G4-PR2	Incidents of non-compliance with regulations concerning the health and safety impacts of products and services during their life cycle	SR	63, 187, 191-192	
Material aspect: product and service labeling				
G4-DMA	Generic Disclosures on Management Approach	SR	97-104, 106, 126, 177-184	
G4-PR3	Product and service information	SR	126, 177-180, 183-184, 212	
G4-PR4	Incidents of non-compliance with regulations concerning product and service information and labeling	SR	63	
G4-PR5	Results of surveys measuring customer satisfaction	SR	99, 101-104	
Material aspect: marketing communications				
G4-DMA	Generic Disclosures on Management Approach	SR	106	
G4-PR6	Sale of banned or disputed products	SR	106	
G4-PR7	Incidents of non-compliance with regulations concerning marketing communications	SR	63	
Material aspect: customer privacy				
G4-DMA	Generic Disclosures on Management Approach	SR	106	
G4-PR8	Substantiated complaints regarding breaches of customer privacy and losses of customer data	SR	106	
Material aspect: compliance				
G4-DMA	Generic Disclosures on Management Approach	SR	63	
G4-PR9	Fines for non-compliance with laws and regulations concerning the provision and use of products and services	SR	63	

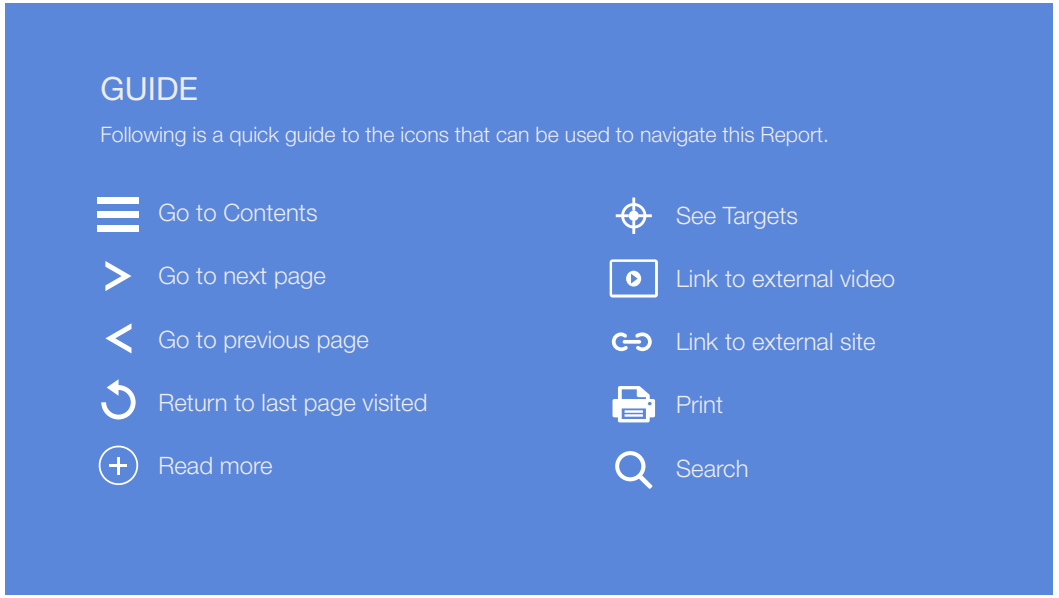
GUIDE
Following is a quick guide to the icons that can be used to navigate this Report.
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EXHIBIT 16

The Detroit News

FIAT CHRYSLER

Quality chief leaves FCA amid recalls, poor reliability

Michael Wayland The Detroit News

Published 11:17 a.m. ET Oct. 28, 2014 | **Updated 7:49 a.m. ET Oct. 29, 2014**

Fiat Chrysler Automobiles NV's chief quality officer is leaving the company amid worsening reliability ratings and a potential recall investigation into millions of cars and trucks.

The automaker on Tuesday announced that senior vice president of quality Doug Betts has "left the company to pursue other interests." Betts, an industry veteran and Chrysler quality chief since 2009, has been replaced by two people: Mark Chernoby, who will head quality for FCA, and Matthew Liddane, who will lead quality in North America for Chrysler Group.

The executive shakeup came a day after all but one of Chrysler's U.S. brands ranked at the very bottom of Consumer Reports' annual reliability study and the National Highway Traffic Safety Administration agreed to review a request to open a formal investigation into 4.9 million 2007-14 Chrysler vehicles. Those vehicles are tied to electronic failures linked to stalling, air bag non-deployments, unintended acceleration and fires.

A company spokesman said "no comment" when asked if Betts' departure was related to the potential recall investigation and poor reliability rankings.

Chrysler historically has performed poorly in Consumer Reports' reliability ratings, but this year could have been the straw that broke the camel's back. The Auburn Hills unit of FCA performed the worst of any automaker in the annual rankings, with Dodge, Ram, Jeep and Fiat at the bottom of this year's list of 28 brands. The company's namesake Chrysler brand ranked 22nd, down four places from a year ago.

Some of Chrysler's brands — especially Jeep and Ram Truck — have been flying out of dealerships. Michelle Krebs, AutoTrader.com senior analyst, said Chrysler's low reliability ratings could derail that success: "They are doing really well in sales, but if consumers have a bad experience in terms of reliability, will they have repeat customers?"

Betts, a member of FCA's Group Executive Council, leaves the automaker two months after Chrysler said it was reorganizing vehicle safety efforts into a new office of Vehicle Safety and Regulatory Compliance led by Senior Vice President Scott Kunselman. Previously, Chrysler housed auto safety in its global engineering group.

Chrysler's top safety engineer previously reported to Chernoby, who was then senior vice president of engineering. Chernoby will continue responsibilities as chief operating officer for product development and remain a member of the FCA Group Executive Council, an influential decision-making group led by CEO Sergio Marchionne.

Liddane has held a series of engineering positions with increasing responsibility. He most recently was Chrysler vice president of systems and components.

Automakers under fire

In May, Marchionne revealed he had hired an outside team to review its safety practices as the U.S. auto industry braced for soaring costs from the rising number of recalled vehicles. Marchionne said he asked consultants "to look at the Chrysler process itself, to find out whether we can improve it — we're going to benchmark it against other (automakers)."

Chrysler's reorganization was the second this year for a Detroit automaker. Faced with massive recalls and federal investigations, General Motors Co. CEO Mary Barra in March named Jeff Boyer to the new position of vice president of global vehicle safety. Two months later, GM announced a restructuring of its global vehicle engineering unit, including hiring 35 product safety investigators as part of a response to safety issues.

Automakers have recalled a record 53 million-plus vehicles in the U.S. this year, topping the prior record of 30.8 million in 2004.

Management consultant Ken Dalto said the auto industry is under a microscope because of quality issues, and someone always has to be held accountable.

"There's no way they can go through a combination of ratings and recalls without someone being responsible," he said, adding having two executives replace Betts is a good start. "That's the culture of the auto industry."

Dalto of Bingham Farms-based Kenneth Dalto & Associates said Chrysler is going to have to "dig deep, internally." He said automaker must not just shift management, but follow GM's lead and attempt to create a cultural shift.

Since becoming CEO in January, Barra has been laboring to change the 106-year-old automaker's culture that has been criticized for decades as insular, slow to take responsibility for problems, hesitant to deliver bad news to superiors and reluctant to fire poorly performing executives.

GM this year has recalled more than 26.5 million vehicles in the U.S., including 2.6 million older cars for ignition switch defects linked to 30 deaths. Chrysler recalled nearly 4.7 million vehicles domestically through mid-October, including many older-model cars and trucks.

3rd-quarter results today

Jake Fisher, director of automotive testing at Consumer Reports, said Chrysler is combating problems with its UConnect infotainment system and powertrain technologies. He said the sharing of engines, transmissions and other technologies between Chrysler and Fiat has not eased reliability concerns in recent years.

All of Chrysler's brands declined in rankings in the Consumer Reports survey compared to a year ago. And the Fiat 500L was named the least reliable among 265 models included in the survey. Chrysler's year-over-year sales have increased 54 consecutive months, including seven months of double-digit growth this year.

Chrysler, in a statement Monday on its reliability rankings, said it values customer feedback and uses it to improve its vehicles: "Many of the issues identified in the survey coincided with new product and technology introductions and have already been addressed with vehicles currently in production," the company said.

The executive changes on Tuesday were announced a day before the automaker is scheduled to release its third-quarter financial results, the company's first earnings since Italian automaker Fiat SpA and Chrysler officially merged into FCA.

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EXHIBIT 17

SAFETY LEADERSHIP

Sandy Says: Are You a Safety Advocate?

A press release announcing the appointment of a "safety advocate" at Fiat Chrysler Automobiles caught my eye. What, I thought, does a formal "safety advocate" do?

Sandy Smith

FEB 04, 2016

On Jan. 15, Fiat Chrysler Automobiles (FCA US) announced that Kristen Kreibich was named to the newly established position of safety advocate for the company. Kreibich brings more than 20 years of manufacturing, regulatory and safety experience to her new position, and is tasked with enriching the safety culture at FCA US.

"Everyone is a safety advocate at FCA US, because safety considerations are baked in to every component of every product we make," says Mike Dahl, head of vehicle safety and regulatory compliance (VSRC). "But Kristen's appointment is the embodiment of this mindset. She is our new safety ambassador."

The position of safety advocate is a new one for VSRC, an organization that was restructured in 2014 to streamline critical decision-making. In slightly more than one year, the number of vehicle-safety personnel in the organization has more than doubled. Just as significant, Dahl reports directly to CEO Sergio Marchionne.

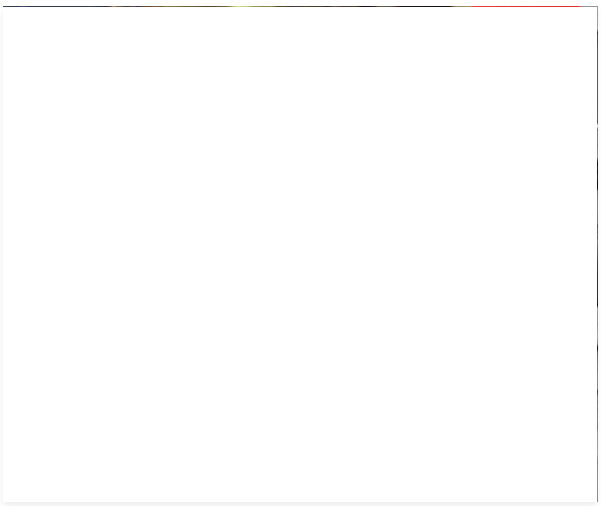
In her new position, Kreibich will be responsible for promoting greater awareness of vehicle and occupant safety – both internally with FCA US employees – and externally with regulators, industry observers and trade associations. In addition to highlighting the company's safety engineering achievements, she will share her insights about proposed legislation and the evolution of the safety landscape.

"Because of my background, I am passionate about vehicle safety," said Kreibich, who

Although Kreibich's focus will be on vehicle and occupant safety, it made me contemplate the idea of formal "safety advocates" for worker safety and health efforts.

Given that FCA US created a position of "safety advocate" for vehicles and customers, I wanted to know more about employee safety at the company. What I discovered is that FCA provides measurements of employee safety as part of its sustainability efforts and includes workplace safety and health in the "Our Culture" section of its annual sustainability report, two things that "safety excellence" companies are doing.

As discussed in EHS News this month, a new report by the Center for Safety and Health Sustainability claims that integrated reports on performance tell a business' stakeholders of its ability to create value in a sustainable way and feature data on a range of non-financial matters. This means that "human capital" issues such as the mental and physical health of the workforce and employee engagement are considered material to a company's performance, just like balance sheets and statements of cash flow.



When Dahl talked about safety being "baked in" to every component of every product FCA makes, he meant it.

"In every country and area of activity, FCA gives paramount importance to achieving the

• The continuous reduction in accidents, in terms of both severity and frequency.

• An alignment of all FCA plants and facilities, new and existing, to the highest international standards (OHSAS18001).

• The promotion of a culture of health and well-being for all employees.

"FCA considers a safe and healthy working environment a basic right for all employees," FCA notes in the sustainability report. "Operating according to the highest international standards requires an integrated approach to the management of health and safety in our plants and offices. The commitment in this area not only covers employees, but also suppliers, service providers and local communities."

During 2014, employees submitted more than 2 million suggestions, of which 260,000 were ideas on how to improve health and safety conditions. The year-over-year increase of 74.5 percent in the total number of employee suggestions "demonstrates the significant level of participation and commitment to health and safety throughout the organization," says FCA, adding: "This level of involvement has helped to develop a culture of proactiveness and prevention."

As the sustainability report notes, at FCA, "health is not simply considered as a lack of illness

Sandy Says: The Eyes Have It

JAN 12, 2017

Eye, Face & Head

Sandy Says: Road Rage – Don't Be THAT Driver!

APR 28, 2016

Safety

Sandy Says: Burn Baby Burn

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Sandy Says: When Smart Employees Make Stupid Choices

FEB 29, 2016

Safety

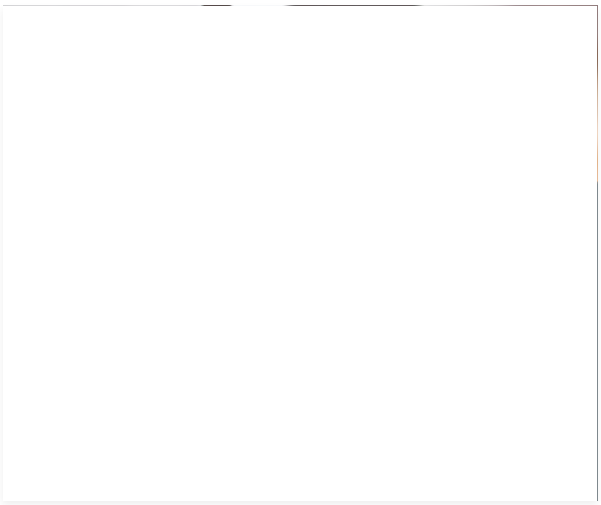
SAFETY TECHNOLOGY

Three Keys to Data and Analytics Effectiveness

Research from APQC suggests these practices and techniques can help promote a data-driven culture.

Holly Lyke-Ho-Gland

JAN 10, 2020



Overall, organizations are satisfied with their data and analytics programs. Just under half of manufacturing organizations believe that their analytics programs are either effective or very effective at creating insights to solve organizational challenges, according to a recent APQC survey. However, there is still plenty of room for programs to grow. Which leads to the question, what factors drive the perception of effectiveness by the end-users of the analytics team's efforts and what levers do teams need to pull to improve the effectiveness of their programs?

To better understand which levers analytics teams need to focus on, we conducted a correlation analysis on data from our Trends in Data and Analytics survey.

So, what was statistically significant?

1. Resources

2. Selection Criteria

3. Engagement Drivers

Resources are Foundational

Similar to findings found in previous research on developing a data-driven culture, a key factor of success is access to the necessary data and analytics resources (including formal teams, the right skills, and access to high-quality data.)

Best-practice organizations typically use a centralized governance team combined with

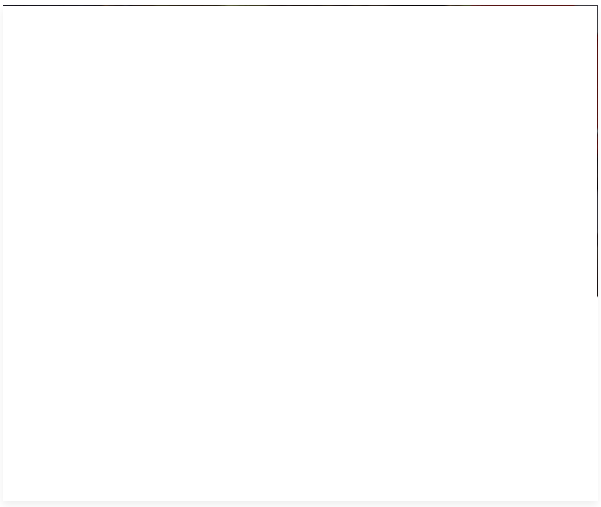
1. **Visibility.** People know where to go to get their analysis done and build a rapport and trust with their analytics teams.

2. **Quality.** Analytics team members have the bandwidth to dedicate their skills to deliver the best solutions to their end-users.

Selection Criteria Provide Context

To effectively manage the influx of analytics requests, best-practice organizations use a portfolio management approach, including selection criteria to help prioritize, identify redundancies, and schedule the analytics workload. Organizations that use selection criteria are significantly more likely to find their data and analytics programs more effective.

We also found there were six criteria that directly impacted the perceptions of analytics ability to support problem-solving (figure 2).



The six criteria provide context around projects feasibility, resource needs, timing, and potential value of the project.

new data will need to be collected.

2. **Frequency of occurrence**—this helps understand the nature of the project and if it is a recurring project. Which also helps the team balance its ongoing resources and project timing.

3. **Interdependencies**—this helps understand the complexity of the project and look for potential overlaps or synergies to projects in other departments or regions.

4. **Timelines**—helps manage resource planning and turnaround time.

5. **Non-financial benefits**—look at the impact the project will have on less tangible benefits such as customer or employee satisfaction and turnover.

6. **Volatility**—this criterion captures the relative shelf-life of the analysis and how long that it is relevant.

Many of these criteria provide a positive impact on effectiveness because they help the data and analytics team appropriately scope the project by understanding the complexity and feasibility of the projects, as well as provide insights for project planning and resource allocations. This helps the team deliver their projects more effectively and clearly set expectations on the project outcomes.

Engagement Practices Drive Positive Perceptions

When asked about drivers of success, the top four drivers of effectiveness were the usual suspects: defined value, formal analytics team, success stories, and data visualization capabilities. Though these drivers are foundational to success, they aren't enough to ensure program success.

and stakeholders effectively.

a. **Access to analytics training**—provides foundational information that helps them feel more in control and provides ground rules for project expectations.

b. **Self-service options**—also provides a sense of control and emphasizes that data and analytics are there for the end user's convenience. Self-serve options also cater to individuals already analytics savvy and prefer to conduct the analysis on their own.

c. **Consultative services**—this type of service improves effectiveness because it's a collaborative—typically iterative effort—that ensures decision-makers get the answers they need to the right questions.

2. **Engagement Practices**—refers to the tactics that the organization uses to build trust and set behaviors towards a specific goal.

a. Formal change management plans— ensure that the organization focuses on adoption and deliberately engages employees to change how they make decisions.

b. One-on-one engagements—provide an opportunity for the analytics team to speak directly with leaders and employees about the change.

3. **Demonstrable ROI**—ensures that teams are highlighting the tangible and meaningful value of analytics.

In many cases, these drivers are included in the best-practices of an organization's formal change management plan to drive deeper engagement, which has a positive effect on the perceived effectiveness of the analytics team.

Conclusion

The study supports the idea that for your analytics program to be truly effective, organizations

However, establishing a data-driven culture is an ongoing struggle and implementing an enterprise-level cultural change and making it stick is never an easy task. However, if organizations adopt some of the practices and techniques—in resources, selection criteria, and engagement practices—they can shift the perceptions of their efforts and reinforce that data-thinking culture.

Holly Lyke-Ho-Gland is process and performance principal research lead with APQC, a member-based nonprofit and one of the leading proponents of benchmarking and best practice business research.

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Setting Up Data and Analytics Teams to Drive Value
DEC 20, 2019

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EXHIBIT 18

An Entire Life in Just Four Months

An entire life in just four months

FCA puts all pre-production models through an accelerated ageing process which replicates a vehicle's entire lifecycle over a four-month period. The objective is to ensure vehicle quality and safety.

Video - Extreme testing in Balocco

All in the interest of quality and safety

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Photogallery - How FCA tests new models

Extreme terrain, saltwater fords, and mud-and-salt baths represent just a few of the harsh conditions that all new FCA models are subjected to during For Life endurance testing. Every year, hundreds of prototypes and pre-production and production models travel thousands of kilometers on roads and test tracks in extreme climates: ranging from the arctic to the desert.
To ensure that FCA vehicles deliver maximum safety and quality to customers over their entire life, every mechanical and electronic component, body part and trim element is rigorously tested.
The designers work with a team of researchers during the testing phase to ensure vehicles meet the highest standards in terms of safety, ecological profile, driving performance and quality.
Before any future model can be considered fit for FCA customers, it first has to pass the tortuous tracks of Balocco.

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EXHIBIT 19

2020 JEEP® WRANGLER SAFETY & SECURITY

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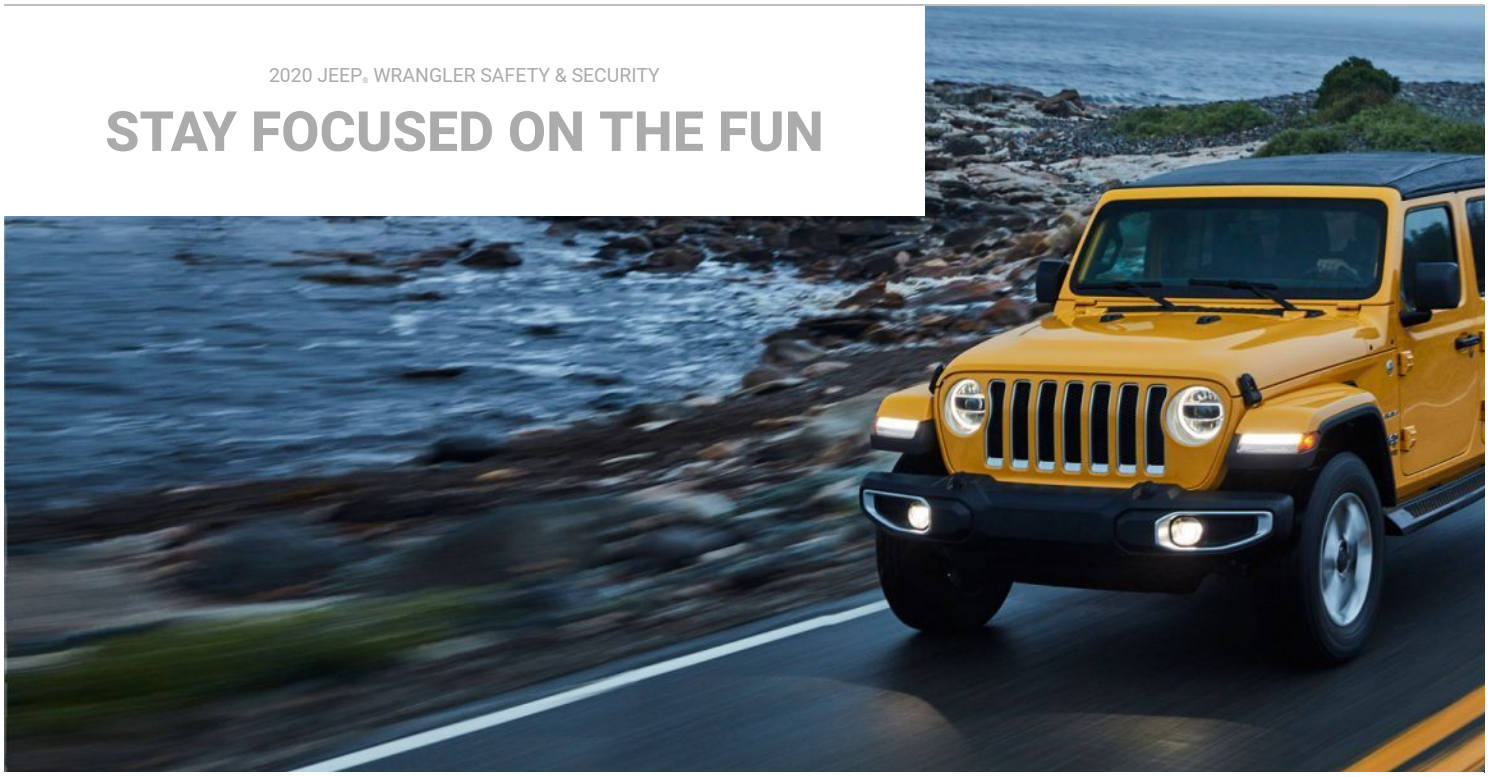

The 2020 Jeep® Wrangler has over 75 standard and available safety and security features for every twist and turn you take.

SAFE AND SECURE

The 2020 Jeep® Wrangler offers active safety and security features that continually monitor driving conditions and alert you to act when needed.

BLIND SPOT MONITORING	FORWARD COLLISION WARNING	ADAPTIVE CRUISE CONTROL	AUTOMATIC HIGH-BEAM HEADLAMPS

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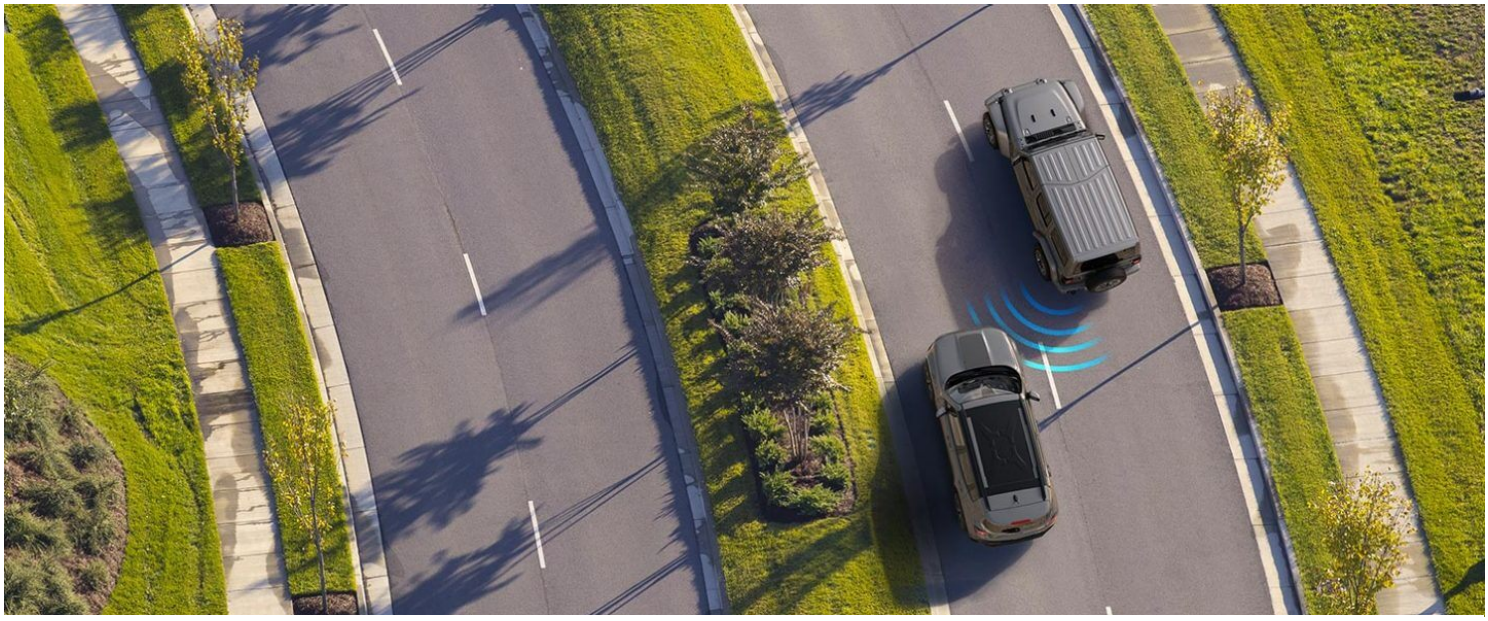
Available Blind Spot Monitoring [2] and Rear Cross Path Detection [3] rely on radar-based sensors to detect other vehicles in your blind spot zones or crossing behind you.



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Wrangler can be equipped with some of the most advanced parking technologies available. Cameras [3], radar and more work together to boost your confidence in almost any parking situation.

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A HEADS UP WHEN BACKING UP

The available ParkSense® Rear Park Assist System [6] uses sensors to alert you if you're too close to an obstacle while backing up at low speeds when an object is detected.

CONNECTIONS YOU CAN COUNT ON

AT YOUR BECK AND CALL

Bluetooth® connectivity allows you to make and receive wireless calls, stream music and talk—all hands-free from the moment you get in and start your Wrangler.

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