

FCA US LLC Chronology
P60/14V634 Alternator Expansion
Submitted on November 21, 2017

- In August 2014, Chrysler opened an investigation into concerns of alternator-related engine stall while driving, increased steering effort, Antilock Brake System/Electronic Stability Control deactivation or fire /smoke in 2011-2012 MY Dodge Charger vehicles.
- Chrysler's investigation analyzed alternators from vehicles exhibiting these conditions, and found indications of thermal fatigue of the alternators' silicone diodes.
- Based on warranty data analysis, 160 Amp alternator part returns and a common control system design, Chrysler expanded the investigation scope to include WD, WK, LC, and the LX platforms, equipped with Electric Hydraulic Power Steering ("EHPS"), but limited to the 3.6L equipped with a 160 Amp Alternator.
- The root cause was determined to be thermal fatigue in the silicon diode within the alternator rectifier bridge, due to a combination of high operating temperatures and cyclical system load conditions, induced by the EHPS.
- This condition can lead to failure of the 20 Amp Silicon Rubber potted Diode(s) in the 160 Amp alternator.
- Failure mode of the 160 Amp alternators can range from no output, reduced output, or a fully shorted to ground condition.
- These modes can have corresponding variability in time to failure and warning to the driver.
- During certain low battery voltage conditions associated with the 160 Amp alternator silicon diode thermal fatigue failures, a rapid sequential thermal failure of the silicon diodes may cause engine stalling without the advanced warning provided by prolonged illumination of the "Charging System Indication Lamp" or by the EVIC, the electronic vehicle information center.
- Depending on the failure mode and timing, system voltage may drop to critical levels, disabling systems such as the, "Antilock Brake System/Electronic Stability Control", "Engine Control Module/Central Body Controller", or a total vehicle electrical system shut down (in the event of a short to ground failure mode).
- On September 5, 2017, the National Highway Traffic Safety Administration ("NHTSA") contacted FCA US LLC ("FCA US") requesting review of a Vehicle Owner Questionnaire ("VOQ") alleging similar symptoms to the P60 (NHTSA 14V-634) recall for a vehicle outside of the original recall scope.
- On September 5, 2017, the FCA US Vehicle Safety and Regulatory Compliance organization opened an investigation into the P60 (NHTSA 14V-634) clean point.
- Between September 5, 2017, and September 24, 2017, FCA US completed a Repair Order ("RO"), Customer Assistance Inquiry Record ("CAIR"), Field Report and VOQ search for instances of fire and/or stall on vehicle models included within the P60 (NHTSA 14V-634) recall that were built within two months of the P60 (NHTSA 14V-634) end of the suspect period.
- Between October 16, 2017, and October 23, 2017, FCA US reviewed additional ROs, CAIRs, Field Reports and VOQs for instances of fire and/or stall on vehicle models included within the P60 (NHTSA 14V-634) recall that were built after end of the suspect period for the P60 (NHTSA14V-634) through the entire 2014 MY.
- Between September 25, 2017, and November 9, 2017, FCA US requested the return of alternators from vehicles with 2014 MY built dates after the end of the suspect period for the P60 (NHTSA 14V-634) campaign to verify the date that the P60 (NHTSA 14V-634) remedy alternator parts went into production at the vehicle assembly plant.
- As of November 15, 2017, FCA US identified approximately 111 Warranty/Repair Orders, 29 CAIRs, 4 VOQs and 2 field reports related to this issue; in vehicles of the same make, model, and model year

with the suspect alternator in the scope of P60 (NHTSA14V-634), but that were not included in the scope of the P60 (NHTSA 14V-634 recall population).

- As of November 15, 2017, FCA US is not aware of any accidents or injuries potentially related to this expansion, the original P60 (NHTSA14V-634) had one accident reported.
- On November 15, 2017, FCA US expanded the scope of FCA US recall P60 (NHTSA 14V-634).