



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

**Investigation:** PE 14-022  
**Date Opened:** 07/22/2014  
**Investigator:** Paul Simmons  
**Approver:** Frank Borris  
**Subject:** Alternator failure

**Date Closed:** 11/06/2014  
**Reviewer:** Jeff Quandt

## MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** Chrysler Group LLC  
**Products:** 2011-2012 Dodge Charger  
**Population:** 129,787

**Problem Description:** Owners allege incidents of engine stall while driving due to alternator failure.

## FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
<b>Complaints:</b>	61	85	146
<b>Crashes/Fires:</b>	0	0	0
<b>Injury Incidents:</b>	0	0	0
<b>Fatality Incidents:</b>	0	0	0

## ACTION / SUMMARY INFORMATION

**Action:** This preliminary evaluation has been closed. See Recall 14V-634.

### Summary:

On July 22, 2014, the Office of Defects Investigation (ODI) opened PE14-022 to investigate 14 complaints (VOQs) alleging incidents of alternator failure resulting in engine stall while driving in model year (MY) 2011 through 2012 Dodge Charger vehicles. The MY 2011 through 2012 Dodge Charger vehicles were sold with three different engine options: 1) 3.6L V6 (VIN8 = G), 88,766 vehicles; 2) 5.7L V8 (VIN8 = T), 38,615 vehicles; and 3) 6.4L V8 (VIN8 = J), 2,406 MY 2012 vehicles. The 14 VOQs identified in the PE14-022 opening resume involve 13 vehicles with 3.6L V6 engines and 1 vehicle with unknown engine (no VIN provided).

In an October 7, 2014 letter to NHTSA, Chrysler described a safety defect condition that could result in rapid alternator failure having limited or no detection in approximately 434,581 MY 2011 through 2014 Chrysler 300, Dodge Charger, Dodge Challenger, Dodge Durango and Jeep Grand Cherokee vehicles equipped with 3.6L engines and 160 amp alternators (NHTSA Recall No. 14V-634, Chrysler P60). The subject alternators are used in vehicles equipped with 3.6L V6 engines and without towing packages. According to Chrysler, the silicone diodes in the alternator rectifier bridge may experience thermal fatigue due to cyclic loading from the Electric Hydraulic Power Steering (EHPS) system, eventually resulting in no output, reduced output, or a fully shorted to ground condition. These failure modes vary in their time to failure and warning to the driver. Depending on the failure mode and timing, system voltage may drop to critically low levels, disabling systems such as the Anti-lock 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).

Analysis of complaints to ODI and Chrysler identified a total of 146 incidents of alternator failure resulting in engine stall while driving in MY 2011 through 2012 Dodge Charger vehicles, including 142 involving vehicles equipped with the 3.6L V6 engines (1.6 IPTV) that were included in 14V-464 and 4 involving vehicles with 5.7L V8 engines (0.1 IPTV), which are equipped with different alternators. Analysis of all alternator failure complaints found that approximately 48 percent of VOQs and 21 percent of Chrysler complaints involved allegations of engine stall. Many (98) complaints reported fire and/or smoke, but analysis of these determined that they involved thermal damage to the alternator diode and did not identify any incidents involving damage beyond the alternator assembly. One VOQ

identified in the opening resume for PE14-022 alleged a crash, but further evaluation determined that this involved a minor rear-end impact with slight bumper damage. This investigation is closed based on Chrysler's decision to conduct a safety recall.

The VOQs associated with this investigation are:

10641479,10641366,10641349,10642017,10640770,10640687,10640553,10639692,10638810,  
10638356,10638175,10638143,10637460,10633806,10633304,10632943,10632006,10631704,  
10631613,10631420,10631088,10630991,10630854,10630844,10630108,10629623,10629603,  
10628228,10628150,10627941,10627342,10626452,10626254,10625962,10622385,10622340,  
10621603,10620961,10619481,10618950,10618948,10618539,10618476,10618334,10618081,  
10618107,10616834,10616461,10616456,10615754,10615719,10606580,10605090,10604958,  
10597295,10592085,10588675,10587141,10562463,10559730,10511407