Part 573 Safety Recall Report

15V-115

Manufacturer Name : Chrysler (FCA US LLC)
Submission Date : FEB 24,2015
NHTSA Recall No. : 15V-115
Manufacturer Recall No. : R09

Manufacturer Information :

Manufacturer Name : Chrysler (FCA US LLC)
Address : 800 Chrysler Drive
CIMS 482-00-91 Auburn Hills MI 48326-2757
Company phone : 1-800-853-1403

Population :

Number of potentially involved : 338,216
Estimated percentage with defect : 0

Vehicle Information :

Vehicle : 2012-2013 Jeep Grand Cherokee
Vehicle Type : LIGHT VEHICLES
Body Style : SUV
Power Train : GAS
Descriptive Information : 3.6L, 5.7L, 6.4L Engines
Production Dates : SEP 17, 2010 - AUG 19, 2013

VIN (Vehicle Identification Number) Range

Begin : NR End : NR ☐ Not sequential VINs

Vehicle : 2012-2013 Dodge Durango
Vehicle Type : LIGHT VEHICLES
Body Style : SUV
Power Train : GAS
Descriptive Information : 3.6L and 5.7L Engines
Production Dates : JAN 18, 2011 - AUG 19, 2013

VIN (Vehicle Identification Number) Range

Begin : NR End : NR ☐ Not sequential VINs

Description of Defect :

Description of the Defect : Some 2012-2013 MY WK and WD (3.6L, 5.7L, 6.4L) vehicles (“Subject Vehicles”) may experience a failure in the Fuel Pump relay within the Totally Integrated Power Module – 7 (“TIPM-7”) which can result in a no start or stall condition.
Description of the Safety Risk : Loss of motive power
Description of the Cause : •Root cause has been identified as deformation of contact spring due to heat caused

by the combination of contact power, and ambient temperature around the fuel pump relay.

Identification of Any Warning that can Occur : A stall event may be preceded by engine starting issues.

Supplier Identification :

Component Manufacturer

Name : Continental Automotive Systems, Inc.

Address : One Continental Drive
Auburn Hills MICHIGAN 48326

Country : United States

Chronology :

• On Oct 1, 2013, an investigation was initiated after the safety office was notified that TIPM-7 parts were on national backorder due to high WK/WD demand.
• In Oct of 2013, a preliminary review of field narratives & vehicles indicated a fuel pump circuit in the TIPM-7 was not energizing the fuel pump.
• On Nov 6, 2013, in order to alleviate the TIPM backorder, an existing MOPAR kit, offering a standalone external replacement relay, was made available for vehicles exhibiting TIPM fuel pump relay symptoms.
• In Nov 2013, 11 relays were analyzed and demonstrated both spring deformation and contact erosion.
• During Dec 2013 – Feb 2014, cycle testing was conducted to analyze the effect of inductance and current at the fuel pump relay, but was unable to recreate TIPM-7 fuel pump relay failures.
• In Mar 2014, vehicle level analysis identified the presence of a startup pulse, which momentarily turns the fuel pump relay off in some vehicles, increasing relay cycles.
• In Mar – Apr 2014, steady state load tests were conducted to analyze the effect of continuous high temperature and high current at the fuel pump relay, but were unable to recreate TIPM-7 fuel pump relay failures.
• In May – Aug 2014, multiple fuel pump relay versions were put under test replicating the worst case WK/WD vehicle operating conditions with a more severe duty cycle. Testing was able to successfully recreate TIPM-7 fuel pump relay failures in an accelerated time frame, as well as confirm the reliability of the external relay solution.
• In Aug 2014, Chrysler's VRC authorized a voluntary safety recall for 2011 MY WK and WD 3.6L and 5.7L engines.
• In Sept 2014 – Jan 2015, additional testing and field data analysis indicated that additional WK/WD vehicles may be susceptible to the same type of fuel pump relay malfunction.
On Feb 17, 2015 the FCA US VRC authorized a voluntary safety recall for the 2012-2013 MY WK and WD 3.6L and 5.7L engines.

Description of Remedy :

Description of Remedy Program : Conduct a Voluntary Safety Recall on all affected vehicles to install a new, more robust fuel pump relay, which will be installed external to the TIPM-7.

How Remedy Component Differs from Recalled Component : Remedy is a new part to the vehicle and is installed externally to the TIPM.

Identify How/When Recall Condition was Corrected in Production : The electrical architecture in 2014 MY WK and WD vehicles was redesigned to

	include a new body controller and fuel pump relay.

Recall Schedule :

Description of Recall Schedule : NR

Planned Dealer Notification Date : APR 17, 2015 - APR 17, 2015

Planned Owner Notification Date : APR 24, 2015 - APR 24, 2015

* NR - Not Reported