



May 6, 2014

Ms. Nancy Lummen Lewis
Associate Administrator for Enforcement
National Highway Traffic Safety Administration
Recall Management Division (NVS-215)
Room: W48-302
1200 New Jersey Ave. SE
Washington, DC 20590

Dear Ms. Lewis:

The following information is submitted pursuant to the requirements of 49 CFR Part 573.6, Defect and Noncompliance Reports, which contains details of a safety defect in as determined by Chrysler Group LLC.

573.6(c)(1): Manufacturer's Name, Brand Name

Chrysler Group LLC, Fiat

573.6(c)(2)(i): Identification of Affected Vehicles

Make(s)	Model(s)	Model Year(s)	Inclusive Dates of Manufacture
Fiat	500e	2013-2014	September 24, 2012 to April 4, 2014

The determination of the recall population is described in Section 573.6(c)(6).

573.6(c)(2)(iv): Component manufacturer name, address, telephone number, and country of origin:

Robert Bosch Corporation
38000 Hills Tech Drive
Farmington Hills, MI 48331-3417
Country of Origin: Germany
248-876-6629

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573.6(c)(3): Potentially Affected Vehicle Population

4,141 (estimated)

573.6(c)(4): Percentage of Affected Vehicles

Unknown

573.6(c)(5): Description of Defect or Noncompliance

Some Fiat 500 Battery Electric Vehicles (“BEV”) vehicles may be equipped with Power Inverter Module (“PIM”) cooling plates which leak coolant into areas of high voltage circuitry, resulting in service fuse activation and loss of propulsion while driving. Chrysler determined potential leak paths in the cooling plate were formed during the casting and milling phases of the cooling plate production process.

573.6(c)(6): Chronology of Principal Events Leading to Determination of a Safety Defect

- On February 11, 2014, Chrysler opened an investigation based on findings from a warranty inspection where coolant leakage within the PIM was found to have contacted internal circuit boards. The coolant leakage created a conductive path between the high voltage bus and chassis ground setting a Loss of Isolation (“LOI”) Diagnostic Trouble Code (“DTC”) and displaying a service message in the cluster.
- During the investigation, Chrysler became aware of field reports indicating high voltage battery manual service disconnect fuse activations on Fiat 500 BEV vehicles.
- On February 22, 2014, further analysis of two returned PIMs revealed evidence the coolant leak can create a conductive path between the positive and negative terminals of the high voltage bus causing a direct short which may result in a manual service disconnect fuse activation.
- Between December 19, 2013 and March 3, 2014, six high voltage battery manual service disconnect fuse activations occurred in five different vehicles.
- On March 3, 2014, the investigation confirmed all five of these vehicles had the PIM replaced due to an LOI failure.
- Further analysis confirmed each of the 5 replaced PIMs showed evidence of a direct short.
- On March 23, 2014, validation testing of PIMs produced with updated casting and milling processes was completed.
- On April 4, 2014, the suspect period conclusion date was established online at Toluca Assembly Plant with PIMs produced with updated casting and milling processes.
- The suspect period was established as September 24, 2012 to April 4, 2014 at Toluca Assembly Plant.

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- As of April 24, 2014, Chrysler identified approximately 4 CAIRs, 0 VOQs and 5 field reports related to this issue.
- As of April 24, 2014, Chrysler is unaware of any accidents or injuries potentially related to this issue.
- On April 29, 2014, Chrysler determined, through the Vehicle Regulations Committee, to conduct a voluntary safety recall.

573.6(c)(8)(i): Description of Remedy

Chrysler will conduct a voluntary safety recall to replace the PIM on all affected vehicles.

Chrysler has a longstanding policy and practice of reimbursing owners who have incurred the cost of repairing a problem that subsequently becomes the subject of a field action. To ensure consistency, Chrysler, as part of the owner letter, will request that customers send the original receipt and/or other adequate proof of payment to the company for confirmation of the expense.

573.6(c)(8)(ii): Dealer and Owner Communication

Chrysler estimates it will notify dealers and owners in June 2014.

573.6(c)(10): Submission of Recall Communications

Chrysler will provide representative copies of the dealer and owner letters to NHTSA's Recall Management Division when available.

573.6(c)(11): Manufacturer's Campaign Number

Chrysler has assigned recall number P23 to this action.

Sincerely,



Kristin J. Kolodge
Product Investigations and Campaigns Senior Manager

cc: Frank Borris, NHTSA