



March 4, 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 vehicles 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	500L	2014	April 5, 2013 to January 22, 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:

Ficosa International, S.A.
P.I. Can Mitjans s/n
E08232 Viladecavalls (Barcelona), Spain
Tel: +34 93 700 82 00

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

18,092 (estimated)

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

100% (estimated)

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

Some Fiat 500L vehicles may experience a loss of communication from the Gear Shift Module (GSM) to the transmission which may result in an inability to get the vehicle out of park and/or the transmission does not receive, or is slow to receive, the intended gear selection in certain temperature conditions. The root cause is wide build tolerances within the Supervisor Microcontroller (SMC) internal to the Gear Shift Module, allowing temperature to affect the data transfer rates. When the data transfer rate of the SMC becomes desynchronized with the Main Microcontroller (MMC), the GSM resets and signals to the transmission may be delayed.

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

- On October 23, 2013, Chrysler Vehicle Integration opened an investigation into reports of PRNDL lights flickering and shift delays. Regulatory Affairs was notified on December 2, 2013.
- On January 15, 2014, data from the Gear Shift Module (GSM) supplier showed inconsistent data transfer rates between two in-system microcontrollers with various GSM software levels.
- On January 27, 2014, Chrysler program team began recording vehicle Controller Area Network (CAN) log data from vehicles exhibiting the conditions after they were cold soaked in the environmental chamber.
- The root cause is determined to be wide tolerances of the internal oscillator within the Supervisor Microcontroller (SMC) internal to the GSM, allowing temperature to affect the internal oscillator rate of the SMC.
- When the oscillator rate of the SMC changes, it may become desynchronized with the Main Microcontroller (MMC), causing the GSM to reset and signals to the transmission may be delayed.
- As a result, shift requests made by the driver during this period may lead to vehicles moving in an unintended or unexpected direction.
- The scope of affected vehicles was determined to be all 2014 MY Fiat 500L vehicles produced with GSM software versions 120, 124, and 125.
- The suspect period was established as April 5, 2013 to January 22, 2014 at Fiat Automobile Serbia (Kragujevac – Z) Assembly Plant.
- As of February 20, 2014, Chrysler identified approximately 16 CAIRs, 2 VOQs and 89 field reports related to this issue.
- As of February 20, 2014, Chrysler is unaware of any accidents or injuries potentially related to this issue.
- On February 25, 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 GSM or reflash vehicles with updated GSM software as necessary 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 April 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 P06 to this action.

Sincerely,



Kristin J. Kolodge
Product Investigations and Campaigns Senior Manager

cc: Frank Borris, NHTSA