June 6, 2013

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:
Attached is Chrysler Group LLC's ("Chrysler") updated Defect Information Report, complying with the requirements of 49 CFR Part 573, Defect and Noncompliance Reports, which contains details of a potential safety related defect in vehicles. The update includes information relating to clarification of incidents and customer claims identified during this investigation. The change is in Section 573.6(c)(6).

Chrysler Group will conduct a voluntary safety recall to reflash the final drive controller on all affected vehicles with updated control software.

Sincerely,


Kristin J. Kolodge

Enclosure: Defect Information Report for Chrysler Group LLC. Recall N23
cc: Frank Borris, NHTSA

## DEFECT INFORMATION REPORT FOR CHRYSLER GROUP LLC

 Page 1Submission Date: May 7, 2013; Revised June 6, 2013

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

Chrysler Group LLC, Jeep
573.6(c)(2): Identification of Affected Vehicles

| Make(s) | Model(s) | Model <br> Year(s) | Inclusive Dates of <br> Manufacture |
| :---: | :---: | :---: | :---: |
| Jeep | Grand | 2005 to | February 11, 2004 to |
|  | Cherokee | 2010 | March 9, 2010 |
| Jeep | Commander | 2006 to | January 31, 2005 to |
|  |  | 2010 | March 10, 2010 |

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

Tier 1:
Magna Powertrain
1870 Technology Dr, Troy, MI USA
(248) 680-4900

Subcomponent supplier:
Preh de Mexico S.A. de C.V.GmbH
Crio 814
Guadalupe, Nuevo Leon, Mexico
528151025700
573.6(c)(3): Potentially Affected Vehicle Population

295,345 (estimated)
573.6(c)(4): Percentage of Affected Vehicles

Unknown

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

Some vehicles may experience a transfer case actuator encoder electrical failure that results in unintentional transfer case shifting into or through the neutral position, which may result in vehicle rollaway and may result in a crash.

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

- On January 18, 2012, Chrysler opened an investigation as result of a customer complaining of his 2007 MY Grand Cherokee shifting to neutral and rolling upon a remote start.
- The 245 transfer case is an automatic 4WD system that shifts into and out of 4WD modes and ranges automatically or based on customer inputs. The shifting is accomplished with an electric actuator (composed of a motor, gearing, and electric position encoder) and is commanded by the final drive control module.
- On January 30, 2012 engineering requested additional actuators be collected through the warranty system. Engineering engaged the transfer case supplier to analyze the actuators returned under warranty.
- The warranty analysis was completed on October 11, 2012 and found cracks in the actuator circuit board traces that resulted in a biased (offset) position signal which could be incorrectly interpreted by the final drive controller.
- During the initial vehicle startup sequence, the controller can automatically command a transfer case shift, without input from the driver (attempting to correct its position based on a biased signal).
- On September 25, 2012 Chrysler obtained the software source code from the controller supplier and began to review the code for possible changes.
- On December 3, 2012, Chrysler completed software modifications to prevent unintended shifting due to a biased encoder signal. On March 19, 2013 Chrysler completed validation of the new software.
- During its investigation, Chrysler identified 34 CAIRs, 1 field report, and 1 VOQ reported between April 3, 2006 and May 25, 2012 potentially related the transfer case actuator.
- Chrysler Group LLC is aware of 26 accidents and 2 injuries between July 26, 2006 and January 31, 2012 that could be related to this issue.
- On April 30, 2013, Chrysler Group LLC decided to conduct a voluntary safety recall to reflash the final drive controller on all affected vehicles.


## 573.6(c)(7): Information Used in Determination of a Noncompliance

N/A

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

Chrysler will conduct a voluntary safety recall to reflash the final drive controller with new software that can recognize a biased signal and set a fault.

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)(10): Dealer and Owner Communications

Chrysler plans to begin notification of dealers and owners in June, 2013.
Chrysler will provide the dealer and owner letters when available.

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

Chrysler has assigned recall number N 23 to this action.

