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(3 Pages)



November 3, 2009

Mr. Daniel C. Smith  
Associate Administrator for Enforcement  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue, SE  
West Building, Fourth Floor  
Washington, D.C. 20590



Dear Mr. Smith:

Attached is Chrysler Group LLC's ("Chrysler") 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 the windshield wiper system on 2007 model year Dodge Nitro vehicles. The windshield wiper system may experience a condition over time where high usage of the variable pause wiper function ("delay" mode) may eventually affect primary wiper function, rendering the wiper system inoperable or intermittently inoperable.

Chrysler will conduct a safety recall to add external relays and update Totally Integrated Power Module (TIPM) software to control the wiper functions on all affected vehicles.

Sincerely,

A handwritten signature in black ink, appearing to read "D. D. Dillon".

*for* David D. Dillon

Enclosure: Defect Information Report for Chrysler Recall J28

cc: K.C. DeMeter, NHTSA

# DEFECT INFORMATION REPORT FOR CHRYSLER GROUP LLC RECALL J28

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**Submission Date:** November 3, 2009

## Identification of equipment potentially affected:

Make	Model	Model Year	Inclusive Dates of Manufacture	Vehicle Volume
Dodge	Nitro	2007	March 2006 through August 2007	84,680 (estimated)

**Estimated percentage containing defect:** 100%

## Description of defect:

The windshield wiper system may experience a condition over time where high usage of the variable pause wiper function (“delay” mode) may eventually affect primary wiper function.

## The name, address and telephone number of the supplier who manufactured the subject part:

Continental Automotive  
4685 Investment Drive  
Troy, MI 48098-6335  
248-764-6400

## The following chronology of principal events led to the determination of a defect:

- Issue was discovered during long term vehicle durability testing where an intermittent non-function of the wiper system was observed.
- By design, dynamic wiper braking, used primarily during wiper operation in delay mode, uses a short across a Totally Integrated Power Module (TIPM) relay to return wipers to the park position. Investigation revealed that this event results in a small amount of residual current fed back through the TIPM contacts from the wiper motor. This can cause arcing, material transfer and pitting of the relay contacts over time. Repetition of this event may eventually cause sticking, intermittent function, and potential inoperability of the relay.
- The dynamic wiper braking occurs when wipers are cycled off from the low or high speed switch positions, and during every wiper sweep in the delay mode. Thus, the highest speed delay mode (I6) is the worst case condition for TIPM relay pitting.
- The TIPM relay met or exceeded performance standard duty cycle testing, but this cycle did not fully represent high usage in the I6 delay mode.
- Continental Automotive supplies the TIPM.
- Continental developed more robust TIPM software that improves the durability of the wiper function in the delay mode. Supplier testing strictly in the I6 delay mode revealed that the software improved the TIPM relay life by a factor of four. On January 22, 2007, TIPMs with updated software went into production at Chrysler Toledo North Assembly Plant (TNAP).

## **DEFECT INFORMATION REPORT FOR CHRYSLER GROUP LLC RECALL J28**

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- While the January 22, 2007 software update improved durability, additional measures are needed to minimize the possibility that the wiper will become inoperative over the vehicle life cycle.
- TIPM / wiper system hardware is unique to the 2007 MY Dodge Nitro.
- No property damage, crash, injuries or fatalities have been found attributable to this condition.
- This data was presented to the Chrysler Vehicle Regulations Committee on October 27, 2009 who decided to conduct a voluntary safety recall.

### **Statement of measures to be taken to correct defect:**

The owners of all 2007 model year Dodge Nitro vehicles will be contacted by mail. Owners will be requested to take their vehicle to a Chrysler dealer to add external relays and update TIPM software to control the wiper functions. Chrysler expects to initiate national notification to both dealers and owners in November of 2009.

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 original receipt and/or other adequate proof of payment to the company for expense confirmation.