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RECALL MANAGEMENT DIVISION

DAIMLERCHRYSLER

07V-092  
(3 Pages)

DaimlerChrysler Corporation  
Stephan J. Speth  
Director  
Vehicle Compliance & Safety Affairs

March 6, 2007

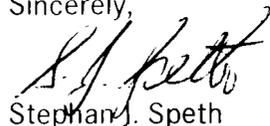
Mr. Daniel Smith  
Associate Administrator of Enforcement, Office of Vehicle Safety  
National Highway Traffic Safety Administration  
400 Seventh Street, S.W.  
Washington, D.C. 20590

Dear Mr. Smith:

Attached is DaimlerChrysler Corporation's (DCC's) 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 some 2004 through 2006 model year Dodge Durango vehicles. Under certain operating conditions, an integrated circuit in the instrument cluster that controls interior lighting may overheat and could potentially cause an instrument panel fire.

DCC will conduct a safety recall to inspect the cluster for damage and replace it if necessary. If the cluster shows no evidence of damage, it will be re-flashed to prevent the potential for this condition. In addition, all vehicles will receive a wiring modification that directs the interior lighting to a portion of the integrated circuit with additional current carrying capacity.

Sincerely,



Stephan J. Speth

Enclosure: Defect Information Report for DaimlerChrysler Corporation Recall G07

cc: K.C. DeMeter, NHTSA  
Division of Occupational Safety & Health  
California Department of Industrial Relations

# DEFECT INFORMATION REPORT FOR DAIMLERCHRYSLER CORPORATION RECALL G07

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**Submission date:** March 6, 2007

## Identifying classification of vehicles potentially affected:

Make	Model	Model Year	Inclusive Dates of Manufacture	Volume
Dodge	Durango	2004-2006	4/03/03 through 6/30/06	328,424 (estimated)

**Estimated percentage containing defect:** 100%

## Description of defect:

Under certain operating conditions, an integrated circuit located in the instrument cluster may overheat and result in an instrument panel fire.

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

Siemens / VDO  
100 Electronics Blvd.  
Huntsville, Alabama 35824  
(256) 464-2236

## The following chronology of principal events occurred between April of 2006 and February of 2007 and led to the determination of a defect:

- In April of 2006, DaimlerChrysler Corporation (DCC) initiated an internal investigation into a small number of reports of 2004 model year Durango (HB) instrument panel (IP) fires that appeared to be originating in the cluster.
- In May of 2006, NHTSA opened recall query RQ06-006 to investigate allegations of IP fires in 2004 model year HB vehicles. NHTSA opened the RQ to attempt to determine if six reports they had received were related to prior DCC recall C43 involving a cracked capacitor (designated as C293) in the cluster circuit board.
- Investigation of these new reports indicated that the fire originated on the left side of the cluster directly behind an integrated circuit (IC) designated as Z107. This IC circuit controls courtesy lighting functions, switching and the fade-to-off feature, in addition to several other functions, and is located on the opposite side of the cluster from the C293 capacitor.
- NHTSA upgraded RQ06-006 to engineering analysis EA06-015 in August of 2006.
- As the investigation continued, a vehicle that had experienced courtesy light malfunctions was returned to DCC for analysis. A number of clusters that indicated heat stress in the area of Z107 were also reviewed by engineering and returned to Siemens / VDO (formerly Huntsville) for analysis.

## DEFECT INFORMATION REPORT FOR DAIMLERCHRYSLER CORPORATION RECALL G07

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- Siemens, after initial inspection of the clusters, removed the Z017 chips and returned them to Freescale (formerly Motorola) in Toulouse, France, for de-capping and further analysis.
- Freescale determined that damage in the IC was due to electrical overload stress (EOS). The damage was evident in both the power portion and logic portion of the Z107 device. Damage on the logic portion prevented the chip from protecting itself from excess current flow and resulting thermal stress.
- In parallel, DCC Engineering tested the returned vehicle for lamp loads, wire resistance, build variations, or optional equipment that may have contributed to higher loads on the courtesy lamp circuit.
- Analysis showed that actual lamp loads as observed in the HB vehicles stressed the capability of the Z107 driver assigned to handle them. The self diagnostics feature of the IC was found to also be improperly implemented in the cluster software strategy at Huntsville / Siemens.
- Further analysis determined that an I\_LIM bit, which limits in-rush current to the IC and is used primarily when the chip controls relays or solenoids, was improperly set.
- While the investigation continued, as a precautionary measure the courtesy lamps were removed from the existing driver for the 2007 model year HB and reassigned to a spare driver with four times the current carrying capability. The I\_LIM bit was set to not limit in-rush current.
- At the time of the EA response in November of 2006, the company was aware of 37 customer complaints that may be related to this issue, including 13 minor property damage claims. There were no reports of death or injury.
- Subsequent to the EA response, DCC has become aware of an additional 29 customer complaints that may be related to this issue.
- This information was presented to the Vehicle Regulations Committee on February 27, 2007, who decided to conduct a safety recall.

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

DCC will inspect the cluster for damage and replace it if necessary. If the cluster shows no evidence of damage, it will be re-flashed to prevent the potential for this condition. In addition, all vehicles will receive a modification that directs the interior lighting to a portion of the integrated circuit with additional current carrying capacity. DCC expects to begin national notification to both dealers and to owners in April of 2007.

DCC has a long-standing 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, DCC, as part of the owner letter, will request that customers send original receipt and/or other adequate proof of payment to the company for confirmation of the expense.