

DAIMLERCHRYSLER

DaimlerChrysler Corporation

Stephan J. Speth

Director

Vehicle Compliance & Safety Affairs

August 3, 2004

Mr. Kenneth N. Weinstein
Associate Administrator, Safety Assurance
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

Dear Mr. Weinstein:

Attached is DaimlerChrysler Corporation'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 2002 – 2004 model year Dodge Caravan, Dodge Grand Caravan, Chrysler Voyager, and Chrysler Town & Country vehicles with 3.3L and 3.8L V-6 engines. The upper power steering cooler hose on some vehicles may split and cause a fluid leak. Power steering fluid leakage in the presence of an ignition source can result in an under hood fire. DaimlerChrysler Corporation will conduct a voluntary safety recall to replace the upper power steering cooler hose on all affected vehicles.

Sincerely,



Stephan J. Speth

Enclosures: Defect Information Report for DaimlerChrysler Corporation Recall D37

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

DEFECT INFORMATION REPORT FOR DAIMLERCHRYSLER RECALL D37

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Submission date: August 3, 2004

Identifying classification of vehicles potentially affected:

Make	Model	Model Year	Inclusive Dates of Manufacture	Vehicle Volume	Other
Dodge	Caravan, Grand Caravan	2002-2004	10/01/2001 - 8/01/2003	881,000 (estimated)	w/ 3.3 and 3.8L V-6 engines only
Chrysler	Voyager, Town & Country				

Estimated percentage containing defect: Unknown**Description of defect:**

The upper power steering cooler hose on some vehicles may split and cause a fluid leak. Power steering fluid leakage in the presence of an ignition source can result in an under hood fire.

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

Dayco Products, L.L.C.
1955 Enterprise Drive
Rochester Hills, MI 48309
(248) 853-8300

The following chronology of principal events occurred from May of 2003 through July of 2004 and led to the determination of a defect:

- In May 2003, DaimlerChrysler Corporation (DCC) approved a Customer Satisfaction Notification to owners of RS/RG vehicles built between mid-October 2001 and mid-July 2002 to replace the formed lower power steering cooler hoses. The investigation that led to the campaign determined that the hose material used during this build period (Dayco 3982) could split during use causing a loss of power steering assist. Splitting

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was attributed to operating pressures, primarily experienced during cold start up, that were in excess of those called for by the applicable performance specification. This excess pressure was induced by a restrictor placed in the return side of the system to reduce steering shudder. Analysis and field data showed no risk of fire from leakage at the lower power steering cooler hoses. This issue was the subject of NHTSA investigation PE03-012.

- It was established that while the formed lower power steering hose material had been switched from Dayco 3982 to a higher strength Dayco 3238 braided material in mid-July 2002, the upper power steering hose continued to be manufactured from the lower strength equivalent Dayco 3089 bulk hose. At the time, there was no field input suggesting any issue with the upper hose.
- In late May 2003, DCC received a fire report from DCC Canada indicating that a minivan built in April 2002 had experienced an under hood fire believed to be attributed to a leak in the upper power steering hose. Review of the data surrounding this incident established that the leak had originated on the high pressure side of the restrictor in the upper power steering hose.
- Testing conducted in June and July 2003 on the return side of the system showed momentary pressure spikes that could exceed 500 psi during vehicle cold starts at -40° F, but the upper hose leakage condition could not be reproduced.
- As a precaution, in August 2003 the upper power steering hose material was changed to Dayco 3649 braided bulk hose, which is equivalent in strength to that used in the formed lower hose.
- The field incident received from DCC Canada was considered indeterminate, and the issue monitored for additional input.
- During the remainder of 2003 and early 2004, DCC Canada became aware of seven additional under hood fires possibly related to the upper power steering hose. Analysis of hoses that were not badly damaged in these fires showed internal cracks propagating to the surface at the point of the leak. Engineering analysis and testing of the subject hoses continued to find no factors that could explain this condition.
- In October 2003, based on continuing but isolated input, the investigation was reactivated to further evaluate the condition.
- A field survey started in December 2003 of approximately 90 vehicles from throughout Canada was commissioned.
- In March through April 2004, DCC analysis of vehicle fire input identified three vehicles in the United States that experienced under hood fires potentially related to the upper power steering hose.
- The survey and subsequent analysis was completed in May 2004.
- Results from the survey revealed that the original bulk hose material (F81-494) used through September 2001 had no signs of internal damage and the Dayco 3089 material used beginning in October 2001 appeared to have significant evidence of internal cracking, similar to that witnessed on hoses returned from some of the fire damaged vehicles.

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- In May and June 2004, new testing parameters were developed in an attempt to replicate the condition identified in the field returned parts. The split condition was replicated in a laboratory environment during impulse testing on the 3089 material samples. Samples of the F61-494 material showed no damage. Samples of the 3649 braided material also showed no signs of damage.
- In late June 2004, Transport Canada opened a formal investigation into the subject. At this time, an additional six potentially related fire reports were identified.
- This data was presented on July 27, 2004 to the Vehicle Regulations Committee who decided to conduct a safety recall to repair the affected vehicles.

Statement of measures to be taken to correct defect:

DaimlerChrysler Corporation will conduct a safety recall to replace the upper power steering cooler hose on all affected vehicles. DaimlerChrysler expects to initiate national notification to dealers and owners in September 2004.

DaimlerChrysler Corporation 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, DaimlerChrysler Corporation, 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.