

RECEIVED
NVS-215

DAIMLERCHRYSLER

2004 JUN -3 A 11:48

OFFICE OF
DEFECTS INVESTIGATION

DaimlerChrysler Corporation

Stephan J. Speth

Director

Vehicle Compliance & Safety Affairs

June 2, 2004

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

04V-268
(4 pages)

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 2001-2005 model year PT Cruiser vehicles. It has been determined that on vehicles equipped with naturally aspirated 2.4 L engines and automatic transaxles that variation in the high pressure power steering hose routing may allow for contact between the transaxle differential cover and the hose, potentially resulting in damage to the hose. Subsequent 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 inspect and relocate, or replace as necessary, the power steering hose assembly on all affected vehicles, and confirm torque of the hose fastener at the steering gear end.

Sincerely,


For Stephan J. Speth

Enclosures: Defect Information Report for DaimlerChrysler Corporation Recall # D18

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

DEFECT INFORMATION REPORT FOR DAIMLERCHRYSLER RECALL # D18

Page 1

Submission date: June 2, 2004

Identifying classification of vehicles potentially affected:

Make	Model	Model Year	Inclusive Dates of Manufacture	Volume	Other
Chrysler	PT Cruiser	2001-2005	1/17/2000-4/26/2004	438,391 (est)	with 2.4L non turbo engine & automatic transaxle

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

Routing variation in the high pressure power steering hose may allow contact with the automatic transaxle differential cover, potentially damaging the hose. 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
1955 Enterprise Drive
Rochester Hills, MI 48309
248-853-8300

The following chronology of principal events occurred between mid March 2004 and May 2004 and led to the determination of a defect:

- On March 15th, 2004 PE 04-028 was opened based on seven (7) complaints alleging engine compartment fires on 2002 model year PT Cruiser vehicles.
- Between late March, 2004 and late April, 2004 an in depth review of applicable customer complaint data for 2001 – 2003 model year PT Cruiser vehicles was performed. Analysis of detail provided with the customer complaint data suggested that the origin of fire in nine (9) vehicles may be related to abrasion of the high pressure power steering hose resulting in fluid contacting the hot surface of the catalytic converter. An additional fourteen (14) vehicle reports potentially related to

DEFECT INFORMATION REPORT FOR DAIMLERCHRYSLER RECALL # D18

Page 2

the condition suggested fire origin at the right rear of the engine compartment. Also analyzed were 44 vehicle reports indicating fire origin in the engine compartment, although a specific location could not be determined. An additional thirteen (13) vehicle reports of alleged fire were reviewed, but determination of the origin was not possible due to extensive vehicle damage or lack of information.

- Analysis of detail provided with the customer complaint data showed approximately 120 reports of vehicles with power steering fluid leaks and a review of warranty data revealed 1,328 claims for leaking high pressure power steering hoses.
- In late April, 2004 a vehicle survey was conducted to further assess potential causes of high pressure power steering hose leaks. Fifty (50) vehicles with 2.4L naturally aspirated gasoline engines and automatic transaxles from 2001 – 2003 model years were reviewed. Variation in routing of the power steering hose was observed, and in some instances the hose was found to be in contact with the transaxle differential cover. A total of ten (10) of the survey vehicles exhibited a witness mark on the hose cover at the differential cover, while three (3) had a cut in the hose.
- It was established that PT Cruiser vehicles equipped with manual transmissions have substantial clearance of the high pressure power steering hose due to a smaller transaxle design, and that any variance in routing of the hose would have no adverse effects. Similarly, PT Cruiser vehicles equipped with turbo engines have a unique high pressure power steering hose with different routing that is not susceptible to contact that could damage the hose.
- A subject vehicle from the survey that exhibited minimal clearance between the power steering hose and the transaxle differential cover was evaluated for relevant movement of the hose during vehicle operation. During this evaluation it was observed that engine roll during throttle application would decrease the distance between the edge of the differential cover and power steering hose and allow slight contact.
- It was established that due to hose routing variance, the vehicle could be assembled with insufficient hose length at the rear of the engine (steering gear end). During engine roll, this taut condition can cause the power steering hose to slide within the protective grommets and rotate, decreasing the distance between the hose and the transaxle differential cover plate. Rotation of the power steering hose during engine roll was also observed to occur in a counterclockwise direction at the steering gear attachment fastener, potentially resulting in a reduction of clamp load.
- Between late March, 2004 and late April, 2004 DaimlerChrysler Corporation field engineers conducted a survey of 75 PT Cruiser vehicles from various model years and found fifteen (15) power steering hoses in contact with the automatic transaxle differential cover and ten (10) hoses with varying degrees of damage due to contact, consistent with the internal survey.
- In late April, 2004 an evaluation was conducted at the Toluca Assembly Plant on ten (10) PT Cruiser vehicles to shift the power steering hose approximately 1.25 inches within the two mounting brackets in an attempt to eliminate the taut condition.

DEFECT INFORMATION REPORT FOR DAIMLERCHRYSLER RECALL # D18

Page 3

Analyses and test track evaluation determined the subsequent increase in available hose length at the rear of the engine eliminated the taut condition and was sufficient to eliminate the potential for contact. It was also determined that this routing eliminated rotation of the high pressure power steering hose at the steering gear fastener during engine roll. This change was implemented into production vehicles at the Toluca Assembly Plant on April 23rd, 2004.

- On May 7th, 2004 DaimlerChrysler Corporation submitted its response to NHTSA's information request associated with PE04-028.
- This data was presented to the Vehicle Regulations Committee on May 25th, 2004 who decided to conduct a safety recall to inspect and relocate, or replace as necessary, the power steering hose on all affected vehicles, and confirm torque of the hose fastener at the steering gear end.

Statement of measures to be taken to correct defect:

DaimlerChrysler Corporation will inspect and relocate, or replace as necessary, the power steering hose on all affected vehicles, and confirm torque of the hose fastener at the steering gear end. DaimlerChrysler expects to initiate national notification to both dealers and owners when a sufficient quantity of parts becomes available. DaimlerChrysler's scheduling information for implementing this recall is not available at this time.

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.