



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 11-001
Prompted by:
Date Opened: 01/05/2011
Investigator: Chris Lash **Reviewer:** Jeff Quandt
Approver: Richard Boyd
Subject: Brake line corrosion failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: GENERAL MOTORS CORP.
Products: 1999-2003 GM C/K pickup trucks and SUVs in Salt Belt states
Population: 1,770,000 (Estimated)
Problem Description: Brake line corrosion allegedly can result in rupture during brake application, resulting in sudden reduction of brake effectiveness.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	519	277	761**
Crashes/Fires:	13	15	26**
Injury Incidents:	2	1	3
Number of Injuries:	2	1	3
Fatality Incidents:	0	0	0
Other*:	0	538	538

*Description of Other: Warranty claims related to brake line leakage.

** Count indicates duplicate reports received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: An Engineering Analysis has been opened.

Summary:

The Office of Defects Investigation (ODI) received Defect Petition DP10-003 on March 2, 2010, requesting the investigation of model year (MY) 2003 Chevrolet Silverado 2500HD 4WD pickup trucks for corrosion failures of the vehicle brake lines. DP10-003 was granted and on March 30, 2010, Preliminary Evaluation PE10-010 was opened on more than six million model year 1999 through 2003 light trucks and sport utility vehicles manufactured and sold by General Motors Corporation (GM). On July 2, 2010, ODI received GM's response to an information request, which included GM's assessment of the frequency and safety consequences of the alleged defect. GM stated that: (1) the brake system of the subject vehicles is split front/rear and should a brake pipe suddenly fail for any reason, the affected vehicle would be capable of stopping with the pressure supplied by the remaining circuit; (2) the subject vehicles were designed to meet the hydraulic circuit partial failure requirements of Federal Motor Vehicle Safety Standards 105 and 135, Light Vehicle Brake Systems; and (3) should a brake fluid leak occur for any reason, the brake system malfunction indicator lamp (MIL) would illuminate and warn the driver before the brake fluid level was low enough to cause a loss of line pressure.

Of the 890 total complaints for brake pipe corrosion identified, 761 were located in Salt Belt states (Connecticut, Delaware, District of Columbia, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia and Wisconsin). The complaint rate per 100,000 vehicles sold is significantly higher in the Salt Belt, 43.0, compared with 3.0 for the remaining states. In approximately 25 percent of the complaints, the brake pipe failure has allegedly occurred suddenly, with no warning to the driver (i.e., no brake warning light), and resulted in extended stopping distances. In 26 of these incidents, the increase in stopping distance that resulted was alleged as a factor in a crash

and in 10 others the vehicle was intentionally steered off the road or into another lane of travel in order to avoid a crash.

An Engineering Analysis has been opened for subject vehicles sold or currently registered in Salt Belt states to further assess the scope, frequency and safety risks associated with sudden failures of corroded brake pipes that can result in decreased brake effectiveness. ODI will continue to gather information on subject vehicles outside the Salt Belt as well.