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U.S. Department
of Transportation

National Highway
Traffic Safety
Administration

1200 New Jersey Avenue, SE
Washington, DC 20590

March 4, 2019

The Honorable Jeanne Shaheen
United States Senator
2 Wall Street, Suite 220
Manchester, NH 03101

NEF-109 rrr
Ref. No. 11160831

Dear Senator Shaheen:

Thank you for your correspondence on behalf of your constituent, [REDACTED] concerning his model year (MY) 2003 Chevrolet Suburban. Your correspondence was forwarded to the National Highway Traffic Safety Administration's (NHTSA) Office of Defects Investigation (ODI). I am pleased to respond.

NHTSA is the Federal agency responsible for improving safety on our Nation's highways. We are authorized to order manufacturers to recall and repair motor vehicles or motor vehicle equipment when our investigations indicate that they contain safety defects in their design, construction, or performance. We also monitor the completion rates adequacy of manufacturers' recall campaigns.

We are aware of [REDACTED] complaint, which he submitted through our www.nhtsa.gov website on December 11, 2018. On January 5, 2011, ODI opened an Engineering Analysis (EA11-001, resume enclosed) to investigate corrosion in salt belt states causing brake lines to rupture with a resulting reduction in brake effectiveness in MY 1999 through MY 2003 General Motor (GM) trucks and sport utility vehicles. Our inquiry found that brake line corrosion in areas where salt is used on winter roads occurs no more frequently in the metal brake lines in these GM vehicles than in similar metal brake lines in vehicles made by other manufacturers. These brake lines are protected by a coating to delay or slow corrosion but it can begin to fail within 7 years of service in the environmental conditions in States that use road salt in winter. Given these facts, in conjunction with past court decisions stating that ordinary wear does not constitute a defect requiring a safety recall, NHTSA terminated its investigation on April 8, 2015.

[REDACTED] vehicle was approximately 15 years old at the time he filed his complaint and would have been exposed to road salt during the period of time it was operated in New Hampshire in the winter months. We appreciate [REDACTED] attention to the risks posed by a partial loss of braking effectiveness. [REDACTED] vehicle has a split brake system, which is in conformance with Federal Motor Vehicle Safety Standard No. 105. This means his vehicle's brake system consists of two subsystems actuated by a single or dual master cylinders, designed so that a single

Page 2


The Honorable Jeanne Shaheen

failure in any subsystem (such as a brake line rupture) does not impair the operation of the other brake subsystem. This design mitigates complete brake failure and allows at least two-wheel braking to stop the vehicle. On April 9, 2015, NHTSA issued a safety advisory on preventing brake pipe failure due to corrosion in older vehicles. The safety advisory and additional resources are available on our website at www.nhtsa.gov/About+NHTSA/Press+Releases/2015/nhtsa-corrosion-advisory-04092015.

We recommend that [REDACTED] continue to work with GM or his dealer for further assistance. The information you provided has been entered into our database. It will be considered with future reports to identify any safety defect trends that may require our attention. For your information, an explanation of NHTSA's investigation and recall process is on our website at https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/mvdefectsandrecalls_808795.pdf.

I hope this information is helpful. If you have any questions, please contact me at 202-366-2368.

Sincerely yours,



Brian Barnard
Director, Governmental Affairs,
Policy and Strategic Planning

Enclosure

cc: The Washington Office



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Administration**

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION
NHTSA
Authentic US Department Information
National Highway Traffic Safety Administration
uses a digital certificate to ensure
the content has remained unchanged

Investigation: EA 11-001
Prompted by:
Date Opened: 01/05/2011
Investigator: Chris Lash
Approver: Otto Matheke
Subject: Brake line corrosion failure

Date Closed: 04/08/2015
Reviewer: Jeff Quandt

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: General Motors LLC
Products: 1999-2003 GM C/K pickup trucks and SUVs in Salt Belt states
Population: 2,038,504

Problem Description: Brake line corrosion may result in rupture during brake application, resulting in reduced brake effectiveness.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	2,514	234	2702**
Crashes/Fires:	79	23	88**
Injury Incidents:	17	3	20
Number of Injuries:	17	3	20
Fatality Incidents:	0	0	0
Other*:	0	238	238

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

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This Engineering Analysis has been closed.

Summary:

On January 11, 2011, ODI opened EA11-001 to investigate allegations of premature brake line corrosion failure in model year (MY) 1999 through 2003 General Motors (GM) full-size pickup trucks and sport utility vehicles sold or registered in the following region of the United States that NHTSA has viewed as salt states for investigations of corrosion related issues: 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 subject vehicles represent the first five MY's of GM's GMT800 platform production, of which approximately 2,038,504 vehicles were sold in salt states (the subject vehicles). The GMT800 platform includes the following vehicles: 1999-2007 Chevrolet Silverado and GMC Sierra 1500, 2500 and 3500 series pick-up trucks; 2000-2006 Chevrolet Suburban, Chevrolet Tahoe and GMC Yukon sport utility vehicles; and 2002-2006 Cadillac Escalade and Chevrolet Avalanche sport-utility vehicles. General Motors produced a total of approximately 10,427,062 GMT800 vehicles for sales in the United States, including almost 5 million that were sold in salt states. Although there are over 60 different brake pipe routing configuration used in GMT800 vehicles, with the exception of the rear crossover pipes in MY 200x-2007 vehicles that changed from rear disc to drum brakes, all of the vehicles use brake pipes from the same supplier with a common double-wall, brazed steel pipe design with a combination of hot dip Zinc-Aluminum corrosion protection coating and Aluminum paint outer layer known in the industry as AlGal (ASTM-B750).

ODI analysis of field data regarding GMT800 vehicles identified a total of 3,645 complaints of brake pipe corrosion failures, including 107 alleging crashes, and 40 injuries. Though only 20% of total GMT800 production, due to age

and region the subject vehicles account for a disproportionate share of the failure experience; with 2,702 of the complaints (75%), 88 of the crashes (82%) and 20 of the injuries (50%) reported in those vehicles. Analysis of the complaints showed strong correlations to vehicle age and region. For vehicles with less than 8 years of service, the complaint rates were minimal for all regions. In the salt states the failure rates begin to climb as the vehicles advance in age, particularly in the Northeast corner of the United States. The complaint rates in the salt states go from less than 0.1 incident per thousand vehicles (IPTV) at 7 years in service to over 1.0 IPTV after the 12th year of service for the subject pickup trucks and utility vehicles. Most of the failures reported to ODI occurred in vehicles with more than 10 years in service. ODI's investigation did not identify any specific defect conditions that were causing or contributing to the brake pipe failures. Nor did the analysis isolate the problem to any subject vehicle sub-populations when analyzed by vehicle type or production range. The investigation found that vehicles experiencing brake pipe corrosion failures were likely to have general patterns of excessive corrosion on the majority of the brake pipe assembly and appear to be occurring due to expected wear out for the brake pipe coating material used in the subject vehicles and the environmental conditions in severe corrosion states.

A safety-related defect has not been identified at this time. Accordingly, this investigation is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The agency will monitor this issue and reserves the right to take further action if warranted by the circumstances. For additional information, see the closing report in the investigation document file.