U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: PE 03-050
Prompted By: IE03-046
Date Opened: 10/30/2003 Date Closed: 02/03/2004
Principal Investigator: Chris Lash
Subject: Fuel Rail Leakage

Manufacturer: General Motors Corp.
Products: 1995-1997 Aurora, Seville, Deville, Eldorado
Population: 483,274

Problem Description: fuel rail cracks and leaks gasoline into the engine compartment.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	123	127	250
Crashes/Fires:	15	40	55
Injury Incidents:	0	4	4
# Injuries:	0	4	4
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	26,433	26,433

*Description of Other: total part sales from 9/00 to 10/03 (38 months) was 26,433 or 5.5% of MY95-97 subject vehicles sold.

Action: this Preliminary Evaluation has been upgraded to an Engineering Analysis.

Engineer: *Christopher Lash* Date: *02/03/2004*
Div. Chief: *Jeffrey L. Quandt* Date: *02/03/2004*
Office Dir.: *Kathleen C. DeMeter* Date: *02/03/2004*

Summary: The fuel rail assemblies used in the subject vehicles were manufactured by DANA. The fuel rail jumper tubes were made of monolayer Nylon 12 (PA12). In model year (MY) 1998, the jumper tube material was changed from PA12 to M-bond (a multi-layer PTFE/PA12). In addition, all service parts produced since the end of production 1997 use the M-bond jumper tubes. Material analysis performed by DANA on failed fuel rails showed that the mono-layer Nylon 12 jumper tubes are susceptible to environmental stress cracking (ESC). GM believes the ESC is a result of heat, time, alcohol blended fuel, fuel pressure cycling, and designed in stress.

Eight of the GM complaints are duplicative of ODI complaints. ODI has received 77 of it's 123 complaints in the past 12 months. Fuel rail part sales over the last three years range from 3.0 percent of production for the my 1997 Cadillac vehicles to 13.1 percent for the my 1995 Auroras.
At least one of the fire incidents occurred while the vehicle was parked within a garage attached to the consumers home. The fire resulted in damage to the dwelling as well as the total loss of the vehicle.

This investigation has been upgraded to an Engineering Analysis.

VLT 3-18-04