



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

ODI RESUME

Investigation: PE 03-057

Prompted By: IE03-043/Ridgely

Date Opened: 12/08/2003

Principal Investigator: Greg Magno

Subject: Parking Brake Failure

Date Closed: 04/09/2004

Manufacturer: General Motors Corp.

Products: 1999-2003 GM Silverado/Sierra W/Manual Trans.

Population: 70,226

Problem Description: Parking brake friction linings wear out prematurely, rendering the parking brake ineffective.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	10	45	55
Crashes/Fires:	2	15	17
Injury Incidents:	1	2	3
# Injuries:	1	2	3
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	2,854	2,854

*Description of Other: Warranty claims for parking brake replacement or adjustment

Action: The Preliminary Evaluation has been upgraded to an Engineering Analysis

Engineer: Gregory E. Magno *CEM 4/9/04*

Date: 04/09/2004

Div. Chief: Jeffrey L. Quandt

Date: 04/09/2004

Office Dir.: Kathleen C. DeMeter

Date: 04/09/2004

Summary: ODI opened PE03-057 to assess parking brake ineffectiveness in the subject vehicles. These vehicles are equipped with four wheel disc brakes that incorporate a single-shoe drum-in-hat parking brake independent of the service brakes. Complaint and warranty data indicate that the parking brake linings tend to wear out early in the life of the vehicle (at an average of 24 months in service), reducing the parking brake system's torque below that needed to immobilize the vehicle. GM has attributed this accelerated wear to foreign material intrusion and a failure of the brake shoe to properly self-center within its brake drum.

Effective with the start of MY 2003 production, a newer reduced force hold-down clip was introduced to facilitate brake shoe disengagement from the drum surface. This part is also available at the service level for the MY 1999-2002 vehicles. GM has indicated that the parking brake is intended to operate in conjunction with the transmission to immobilize parked vehicles, and that in many cases, accelerated parking brake lining wear is caused by rough use, vehicle modifications, and driving with the parking brake engaged.

ODI has upgraded the preliminary evaluation to an engineering analysis to gather further information concerning parking brake usage factors and the circumstances surrounding the seventeen reported vehicle crashes.

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*Reviewed
4/12/04
CEM*