



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

ODI RESUME

Investigation: PE 04-031
 Prompted By: IE04-018 (Chris Wiacek)
 Date Opened: 03/30/2004 Date Closed: 07/01/2004
 Principal Investigator: Cheryl Tuosto
 Subject: Loss of Electric Power Steering

Manufacturer: General Motors Corp.
 Products: 2004 Chevrolet Malibu
 Population: 91,000 (Estimated)

Problem Description: The electrical power assist steering allegedly fails without warning, resulting in increased steering effort.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	38	1,559	1,584
Crashes/Fires:	0	2	2
Injury Incidents:	0	1	1
# Injuries:	0	1	1
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	3,732	3,732

*Description of Other: GM Warranty Claims

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

Engineer: Cheryl Tuosto

Date: 07/01/2004

Div. Chief: Jeffrey L. Quandt

Date: 07/01/2004

Office Dir.: Kathleen C. DeMeter

Date: 07/01/2004

Summary: ODI opened PE04-031 based on eight reports of alleged power steering failure in the subject vehicles. The complaints allege that the driver suddenly lost all electric power steering assistance without warning making the vehicle difficult to steer.

The subject vehicle utilizes an Electric Power Steering Assist System (EPS) that provides variable steering assistance based on steering wheel torque, steering wheel position, and vehicle speed. General Motors' documents identified the following two factors that contributed to the alleged defect in the subject vehicles:

- A. Contamination of the torque and position sensor from the separation of grease applied to the steering column assembly.
- B. Electrical noise generated on the power and ground slip ring surfaces of the torque and position sensor. The noise is generated as the sensor contact brushes move along the slip ring surfaces when the steering wheel is rotated.

ODI's analysis showed failure rates that are of concern to ODI and indicated that the alleged defect is continuing to occur in the subject vehicles.

This Preliminary Evaluation has been upgraded to an Engineering Analysis to further investigate this concern, to assess the potential safety-related consequences, and to determine the scope of the affected population.

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