



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: RQ 10-004
Prompted by:
Date Opened: 12/15/2010
Investigator: Chris Lash
Approver: Frank Borris
Subject: Electric Power Steering Failure

Date Closed: 10/05/2011
Reviewer: Steve Mchenry

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: GENERAL MOTORS LLC
Products: 2004-07 Saturn Ion
Population: 382,474

Problem Description: A buildup of oil and debris on the armature of the electric power steering (EPS) assist motor may cause the motor to suddenly shutdown, resulting in an increase in steering effort and and EPS warning light.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	846	3,489	4151**
Crashes/Fires:	1	15	16
Injury Incidents:	0	2	2
Number of Injuries:	0	2	2
Fatality Incidents:	0	0	0
Other*:	0	17,385	17,385

*Description of Other: GM warranty claims for loss of steering assist

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

ACTION / SUMMARY INFORMATION

Action: RQ10-004 has been upgraded to an Engineering Analysis (EA11-014).

Summary:

ODI has received 846 complaints and GM identified 3,489 reports alleging sudden loss of steering power assist in model year (MY) 2004 through 2007 Saturn Ion vehicles manufactured and sold by General Motors Corporation (GM). Sixteen of these complaints alleged that the EPS warning lamp had illuminated before or during the loss of steering assist and the increased steering effort contributed to a crash. Two of the GM crash claims indicated that the driver was injured in the crash.

In a previous Preliminary Evaluation PE10-005, ODI investigated the sudden loss of power steering assist in MY 2005 through 2010 Chevrolet Cobalt vehicles. In May 2011, in response to an ODI information request letter for RQ10-004, GM provided ODI with complaint, warranty and EPS system information related to EPS loss of assist for the Saturn ION and Peer vehicles Pontiac G6 and Chevrolet Malibu. In that response, GM indicated that the EPS system used in the subject vehicles was the same as that used in the MY2005 to 2010 Chevrolet Cobalt and Pontiac G5. In March 2010, GM recalled approximately 1.05 million Chevrolet Cobalt and Pontiac G5 vehicles (NHTSA recall no. 10V-073) to correct a defect with the EPS assist motor. The defect identified was described as a buildup of brush debris mixed with oily material on the EPS electric motor armature which causes the motor to stop functioning; the same problem identified in the current subject vehicles. ODI has duplicated this failure in both a Chevrolet Cobalt and Saturn Ion previously tested at the Vehicle Research and Test Center (VRTC).

In the defect notification letter for the previously recalled Cobalt and G5 vehicles, GM stated that the vehicles may

experience a sudden loss of assist that could occur at any time while driving and that if power steering was lost the vehicle would revert to manual steering mode and would require increased steering effort from the driver. ODI believes that, depending on driving circumstances this increase in steering effort could result in some loss of control and a crash.

This investigation has been upgraded to an engineering analysis (EA11-014) to further assess the frequency, scope and safety consequences of a sudden loss of steering assist in the subject vehicles.