



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 11-014

Prompted by:

Date Opened: 09/29/2011

Investigator: Chris Lash

Approver: Frank Borris

Subject: Electric Power Steering Failure

Date Closed: 04/15/2014

Reviewer: Jeff Quandt

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: General Motors LLC

Products: 2004-07 Saturn ION

Population: 334,728

Problem Description: Vehicles may experience a sudden loss of power steering assist at any time while driving resulting in increased steering effort.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	1,172	3,620	4787**
Crashes/Fires:	3	7	10
Injury Incidents:	1	1	2
Number of Injuries:	1	1	2
Fatality Incidents:	0	0	0
Other*:	0	30,560	30,560

***Description of Other:** Warranty claims related to loss of EPS

****** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This Engineering Analysis has been closed. Recall 14V-153.

Summary:

On March 31, 2014, General Motors Company (GM) submitted a Defect Information Report (DIR) to NHTSA describing a safety defect that may result in a sudden loss of power steering assist in approximately 1,340,447 model year (MY) 2004 through 2010 vehicles equipped with electric power steering (EPS), including 334,728 MY 2004 through 2007 Saturn ION vehicles that are the subject of EA11-014. GM has assigned the recall number N140115. The NHTSA recall number is 14V-153. According to the DIR, if power steering assist is lost, a message is displayed on the Driver Information Center and a chime sounds to inform the driver. GM indicated that steering control can be maintained in manual (unassisted) steering mode, but would require greater driver effort at low vehicle speeds, which could increase the risk of a crash.

Sudden loss of power steering assist can occur in the subject vehicles if the system loses electrical power or whenever the system detects a fault that requires it to enter fail-safe operation mode, removing power from the EPS motor. GM's DIR identifies three basic conditions that may result in loss of power steering assist in the recalled vehicles: power steering motor faults, torque sensor assembly faults, and power steering motor controller unit faults. GM will issue four service bulletins providing different repair procedures for recalled vehicles.

Bulletin 14115 will provide repair instructions for replacing the power steering motor in MY 2004-2007 Saturn ION, 2009-2010 Chevrolet HHR (non-turbo), 2010 Chevrolet Cobalt and vehicles repaired in recall 10V-073 that received repairs prior to May 31, 2010.

Bulletin 14116 will provide repair instructions for replacing the torque sensor assembly in MY 2004-2006 Chevrolet Malibu and Malibu Maxx, 2005-2006 Pontiac G6 and 2008-2009 Malibu, Pontiac G6 and Saturn Aura vehicles built from March 1, 2008 through June 27, 2008.

Bulletin 14117 will provide repair instructions for replacing the torque sensor assembly and power steering motor controller unit in MY 2008 Malibu, G6 and Aura vehicles built from February 1, 2008 through February 28, 2008.

Bulletin 14118 will provide repair instructions for replacing the power steering motor controller unit in MY 2008 Malibu, G6 and Aura vehicles built from October 1, 2007 through January 31, 2008.

Analysis of information from all sources identified a total of 4,787 complaints and 30,560 warranty claims related to loss of power steering assist while driving in the MY 2004 through 2007 Saturn ION vehicles, resulting in a complaint rate of 14.3 incidents per thousand vehicles and a warranty claim rate of 9.1 percent. ODI's analysis of alleged steering related crashes identified 12 with evidence indicating the incident was related to a loss of power steering assist.

Two of the crash allegations involved low-speed curb impacts and are excluded from the resume crash count. Three incidents occurred in parking lots, six occurred while turning at street intersections, and one occurred on a highway exit ramp. The crashes in parking lots or intersections all occurred at speeds less than 30 mph. The crash on the highway exit ramp involved impact into a guard rail at approximately 35 mph. Two of the crashes resulted in injuries to the drivers.

This investigation is closed. All ODI complaints associated with this closing resume are listed in the attachment pages.

VOQs associated with this closing resume:

10575980,	10547352,	10523640,	10496404,	10475703,	10462435,	10454222,	10446060,	10436443,
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10576622,	10546547,	10522784,	10493101,	10474290,	10461348,	10453474,	10445778,	10436269,
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10573593,	10537447,	10515304,	10487553,	10469625,	10459107,	10451927,	10442030,	10435086,
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10558428,	10535305,	10513142,	10483350,	10466802,	10457683,	10450208,	10440086,	10434111,
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10548316,	10525730,	10500161,	10476658,	10462680,	10454534,	10446403,	10437739,	10432173,
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VOQs associated with this closing resume:

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VOQs associated with this closing resume:

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VOQs associated with this closing resume:

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