



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 11-015
Prompted by: PE11-021, Consumer Complaints
Date Opened: 11/10/2011 **Date Closed:** 06/02/2014
Investigator: Lawrence Hershman **Reviewer:** Scott Yon
Approver: Frank Borris
Subject: Transmission Shift Cable Failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: General Motors LLC
Products: MY 2007-Early MY 2008 Saturn Aura w/4 Spd Auto Transmission
Population: 58,835
Problem Description: Transmission shift cable may fail resulting in rollaway/unintended movement of the vehicle.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	69	166	227**
Crashes/Fires:	5	10	13**
Injury Incidents:	1	1	2
Number of Injuries:	1	1	2
Fatality Incidents:	0	0	0
Other*:	0	1,563	1,563

*Description of Other: GM warranty claims that may relate to shift cable failure.

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: Close this investigation, GM is conducting NHTSA Safety Recall 14V-224.

Summary:

On April 29, 2014, GM submitted a Part 573 defect information report initiating Safety Recall 14V-224 to remedy the subject vehicles equipped with four speed automatic transmissions manufactured before October 31, 2007. On May 22, 2014 GM expanded 14V-224 to include MY 2004-2008 Chevrolet Malibu/Malibu Maxx and MY 2005 - 2008 Pontiac G6 (total recall population 1,131,113). GM will install a replacement shift cable assembly to remedy the affected vehicles.

The subject shift cable's protective outer conduit (jacket) deteriorates with time and use. Jacket deterioration could lead to a tear of the conduit material which allows moisture to reach the lay wires, potentially causing them to corrode and weaken. The lay wires provide support to the inner core wire that performs the shift detent actuation of the transmission. Without sufficient lay wire support, the shifter position inside the vehicle and the actual transmission gear selection may not align. A complete loss of shift function can occur when the core wire fractures and fails fully. The failure data supports that the problem affects subject vehicles equipped with four-speed automatic transmissions. Aura vehicles manufactured with other transmission types use a different shift cable assembly, as do four speed equipped Aura's manufactured after October 31, 2007.

Transmission shift cable failure can cause multiple shift function failure modes. One involves an engine no-start condition where the gear shifter is in the park position but the transmission is actually in drive or reverse gear (engine starting is inhibited in this circumstance). A second involves non-powered vehicle movement where the driver turns

the engine off and moves the shifter to park but the transmission fails to engage the park gear; the vehicle may roll away if the driver exits without setting the park brake. A third involves powered vehicle movements, where the driver moves the gearshift but the transmission fails to engage the intended gear, and the engine remains running. For instance the driver can shift to park but the transmission may remain in drive or reverse, resulting in vehicle movement when the driver does not expect it. Another failure involves the driver shifting to reverse but the transmission remains in drive, resulting in the vehicle moving in a direction opposite to that the driver intended. Another failure mode results in complete loss of shifting.

Both NHTSA and GM have received complaints alleging one or more of these failure scenarios, and in some cases consumers report experiencing multiple problems over the course of several drive cycles. In one incident, the vehicle unexpectedly moved forward after the driver placed the gear selector in park resulting in the vehicle striking a fixed object (porch railing). Among the crashes identified above, nine involved property damage and two involved minor injuries when the vehicles rolled and struck the driver as they exited the vehicle.

The recall action initiated by the manufacturer appears to address the safety risks of concern to ODI. Accordingly, the investigation is closed.

The VOQs cited above can be viewed at www-odi.nhtsa.dot.gov/owners/SearchNHTSAID under the following identification numbers:

10274914, 10404010, 10432953, 10446285, 10458417, 10495979, 10547333, 10354195 , 10404496, 10435560, 10447211, 10461922, 10498567, 10547683, 10374834, 10405577, 10435633, 10447303, 10464207, 10513116, 10553840, 10378975, 10409341, 10435653, 10449759, 10464388, 10513875, 10554335, 10382559, 10411913, 10435677, 10452089, 10467958, 10516001, 10565628, 10383044, 10412157, 10435996, 10452662, 10478887, 10522732, 10566451, 10390139, 10413540, 10437521, 10453371, 10479234, 10523434, 10568697, 10398044, 10414817, 10437846, 10453920, 10479587, 10523922, 10574813, 10398417, 10415038, 10439140, 10457385, 10488828, 10526090, 10577933, 10398882, 10418212, 10441998, 10457684, 10489505 10531732.