



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 16-002
Prompted by:
Date Opened: 02/03/2016
Investigator: Stephen Mchenry
Approver: Otto Matheke
Subject: Vehicle rollaway, engine on
Reviewer: Jeff Quandt

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Chrysler (FCA US LLC)
Products: 2014-15 Grand Cherokee; 2012-14 Charger & 300 w/3.6L engine
Population: 856,284 (Estimated)
Problem Description: Drivers may exit the vehicle when the engine is running and the transmission is not in Park, resulting in unattended vehicle rollaway. Rollaway incidents may result in serious injuries to the driver or passengers as they exit the vehicle or to other pedestrians in the path of the rolling vehicle.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	69	267	314**
Crashes/Fires:	39	95	121**
Injury Incidents:	15	22	30**
Number of Injuries:	15	22	30**
Fatality Incidents:	0	0	0
Other*:	0	325	325

*Description of Other: Complaints reporting difficulty shifting to Park.

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: An Engineering Analysis has been opened.

Summary:

The Office of Defects Investigation (ODI) opened Preliminary Evaluation PE15-030 on August 20, 2015, to investigate 14 complaints alleging incidents of rollaway after intended shifts to Park in Model Year (MY) 2014 and 2015 Jeep Grand Cherokees vehicles. The MY 2014-2015 Grand Cherokee vehicles are equipped with Monostable electronic ("E-shift") gearshift assemblies supplied by ZF Group (ZF). The E-shift system operates electronically and the gear requested by the driver is transmitted from the shifter via the CAN Bus to the Transmission Control Module which makes the requested shift. The Monostable gearshift does not move into a detent but springs back to a centered/neutral position after the driver selects a gear and releases the shifter. A button on the shift knob must be depressed to shift out of Park, shift out of Neutral, and to shift from Drive to Reverse or Park.

The gear selected is shown on a display in the dash and illuminated letters on the shifter. If the driver's door is opened when the gearshift is not in Park, a chime sounds and a message is displayed on the EVIC to warn the driver. In addition, the engine Start/Stop push-button control logic does not permit normal engine shut-off when the transmission is not in Park. This logic may provide feedback to drivers who attempt to turn the engine off when the transmission is not in Park. However, this function does not protect drivers who intentionally leave the engine running or drivers who do not recognize that the engine continues to run after an attempted shut-off.

NHTSA testing during PE15-030 indicates that operation of the Monostable shifter is not intuitive and provides poor

tactile and visual feedback to the driver, increasing the potential for unintended gear selection.

ODI's analysis of the PE15-030 complaint and field report data identified 306 incidents of vehicle rollaway following intended shifts to Park in the 2014-2015 Grand Cherokee. These resulted in 117 alleged crashes. Twenty-eight of the crashes reportedly caused injuries, including 3 with a fractured pelvis and 4 others requiring some degree of hospitalization (a ruptured bladder, fractured kneecap, broken ribs, damaged to right leg). Other injuries include reports of a broken nose, facial lacerations requiring stitches, sprained knees, severe bruising, and trauma to legs.

MY 2012-2014 Chrysler 300 and Dodge Charger vehicles (L-cars) equipped with 3.6L engines use the same ZF Monostable shifter. ODI has received 8 complaints, including 4 crashes and 2 injuries on the subject L-cars. FCA changed the shifter design in the L-cars in MY 2015 and in the Grand Cherokee vehicles in MY 2016.

An Engineering Analysis has been opened to assess the scope, frequency, and safety-related consequences of the alleged defect. The Vehicle Owner Questionnaires (VOQs) associated with the opening of this Engineering Analysis are:

Jeep Grand Cherokee: 10823099, 10822939, 10822442, 10820488, 10817252, 10810551, 10810051, 10809691, 10809024, 10807839, 10807416, 10794318, 10787947, 10787576, 10785790, 10783597, 10778854, 10775391, 10767488, 10766494, 10763333, 10763284, 10763082, 10762457, 10761498, 10760980, 10760729, 10760702, 10760081, 10759979, 10759669, 10759622, 10759568, 10759548, 10759533, 10759287, 10759278, 10759198, 10759186, 10759157, 10759131, 10759102, 10759082, 10759066, 10759047, 10759046, 10733158, 10730952, 10716526, 10711893, 10683556, 10679497, 10676998, 10668651, 10662619, 10662308, 10631167, 10605865, 10583366, 10567538, 10555901, and 10537653.

Dodge Charger and Chrysler 300: 10790299, 10714355, 10693300, 10672445, 10670681, 10595813, 10594667, 10566108, and 10508134.