



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

**Investigation:** RQ 14-001  
**Date Opened:** 05/29/2014  
**Investigator:** Evan Frings  
**Approver:** Otto Matheke  
**Subject:** Jeep inadvertent air bag deployment

**Date Closed:** 11/13/2015  
**Reviewer:** Scott Yon

## MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** Chrysler (FCA US LLC)  
**Products:** MY 2002-2003 Jeep Liberty and 2002-2004 Jeep Grand Cherokee  
**Population:** 744,822

**Problem Description:** The driver and/or passenger frontal air bags can inadvertently deploy (without a crash) while the vehicle is in operation (both at startup and while driving on road).

## FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
<b>Complaints:</b>	9	12	21
<b>Crashes/Fires:</b>	0	0	0
<b>Injury Incidents:</b>	2	4	6
<b>Number of Injuries:</b>	2	4	6
<b>Fatality Incidents:</b>	0	0	0

## ACTION / SUMMARY INFORMATION

**Action:** Close this investigation, see NHTSA recalls 15V-046 and 15V-673.

### Summary:

The Office of Defects Investigation (ODI) opened an investigation based on consumer allegations of inadvertent air bag deployments (IABD) occurring after the recall remedy for NHTSA recall 12V-527 had been installed on recalled model year (MY ) 2002-2003 Jeep Liberty and MY 2002-2004 Jeep Grand Cherokee vehicles manufactured by Fiat Chrysler Automobiles (FCA). The recall was in response to the Office of Defects Investigation (ODI) investigation EA12-001 during which data provided by FCA indicate that the air bag circuitry inside the Occupant Restraint Control (ORC) module can degrade. ORC degradation can result in an inadvertent air bag deployment, without a crash or impact, while the vehicle is being operated. An IABD may involve frontal, side and belt pretensioner devices, and may result in injuries consisting of burns, cuts and bruises to the upper body region, and or the potential for a loss of control and or crash.

The remedy FCA developed for 12V-527 consisted of installing an in-line jumper harness with an integrated electrical filter for the circuits that connect to the air bag modules (squib circuits). This filter is intended to eliminate transient electrical spikes to the ORC which FCA asserted are responsible for the IABDs. ODI has identified a total of 9 NHTSA complaints across all affected vehicles indicating an IABD event occurring after the vehicle had previously been remedied under 12V-527. In addition, FCA reported 12 additional complaints of post-remedy IABD events. The IABD events took place both while driving and while the vehicle was stationary. Six customers incurred injuries consistent with air bag deployments however no crashes were reported.

As a response to this investigation, FCA has issued 2 new recalls involving the IABD. On January 27, 2015 FCA notified ODI that it would conduct a safety recall (15V-046) to remedy potential IABD events occurring in 753,176 MY02-03 Jeep Liberty vehicles built through 03/28/03 and MY 2002-2004 Jeep Grand Cherokee vehicles built through 5/23/03. Note that this recall, which was scoped based on field IABD events does not include all MY 2003 Liberty or MY 2004 Grand Cherokee manufactured with the same level ORC module. According to FCA, the ORC degradation

and subsequent electrical overstress condition that causes the air bags to deploy inadvertently is not fully remedied with the filter installed during the 12V-527 campaign. To remedy IABDs under 15V-046, FCA will install a new design ORC module using a next generation electrical architecture. The next generation architecture has been used in other non-subject vehicles for many years without evidence of IABD events occurring.

In addition to this recall, on October 15, 2015 FCA advised NHTSA that it would conduct safety recall 15V-673 to remedy potential IABD events in the remaining 284,089 MY 2003 Jeep Liberty and MY 2004 Jeep Grand Cherokee vehicles manufactured with the earlier generation ORC module that were not previously recalled. FCA initially did not recall these populations due to the lack of known IABD events. However, FCA is now aware of 7 IABD events occurring in this population. After consultation with ODI regarding the long term durability and noise toughness of the earlier ORC architecture, FCA decided to recall this population also.

The recall actions initiated by the manufacturer address the safety risks identified by the investigation. Accordingly, the investigation is closed.

The ODI reports cited above can be reviewed at <http://www-odi.nhtsa.dot.gov/owners/SearchSafetyIssues> under the following identification (ODI) numbers: 10622092, 10629705, 10619008, 10618842, 10626762, 10640431, 10631954, 10644684, 10650402.