



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

**Investigation:** EA 12-001  
**Prompted by:** PE11-035  
**Date Opened:** 01/23/2012  
**Investigator:** Peter Ong  
**Approver:** Frank Borris  
**Subject:** Inadvertent Air Bag Deployment

**Date Closed:** 02/21/2013  
**Reviewer:** Scott Yon

## MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** Chrysler Group LLC  
**Products:** 2002-2003 Jeep Liberty  
**Population:** 336,768

**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>	28	124	131**
<b>Crashes/Fires:</b>	0	0	0
<b>Injury Incidents:</b>	11	54	58**
<b>Number of Injuries:</b>	14	57	62**
<b>Fatality Incidents:</b>	0	0	0

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

## ACTION / SUMMARY INFORMATION

**Action:** Closed this Engineering Analysis (see Recalls 12V-527, 13V-040 & 13V-029)

### Summary:

The investigation was opened based on reports of frontal air bag inadvertent deployments (ABIDs) on model year (MY) 2002-2003 Jeep Liberty vehicles. Data provided by Chrysler indicate that the air bag squib filter circuitry inside the Occupant Restraint Control (ORC) module can degrade and result in an inadvertent air bag deployment, without a crash or impact, while the vehicle is being operated on the roadway. As of Oct. 04, 2012, ODI is aware of 131 frontal ABIDs on the Jeep Liberty vehicles resulting in 62 injuries consisting of burns, cuts and bruises to the upper body region. There were no reports of loss of vehicle control or vehicle crashes. Some owners noted that the air bag warning light (ABL) and/or chime had activated just seconds prior to the air bag deployment, while others stated that they did not observe any prior ABL illumination.

Chrysler's analysis found there were no reports of ABID on Liberty vehicles build after March 28, 2003, a date which coincides with a filter circuit design change in the ORC module. The Jeep Grand Cherokee and Dodge Viper were identified as having the same basic circuit. ODI is aware of 61 frontal ABIDs with 31 injuries on the Grand Cherokee and none on the Dodge Viper. In its Nov. 07, 2012 letter (12V-527), Chrysler announced plans to recall 744,822 Jeep Vehicles (MY02-03 Liberty through 03/28/03 and MY02-04 Grand Cherokee through 5/23/03). The remedy consists of installing an in-line jumper harness with an integrated squib circuit electrical filter. In addition, in Feb 05, 2013 letter (13V-040), Chrysler added the MY03-04 Dodge Viper (through 6/30/04) with a similar remedy, bringing the total number of recalled vehicles to 748,482.

During the investigation ODI contacted the ORC module supplier (TRW) to determine the usage of this circuitry in other manufacturers' vehicles. As a result, ODI sent peer Information Request (IR) letters to five other manufactures. Toyota's response identified 72 frontal ABIDs resulting in 31 injuries. The rate and failure mode/trend were consistent with the subject defective issue as reported by Chrysler. In a Jan. 30, 2013 letter (13V-029), Toyota announced plans

to recall 897,709 MY2003-2004 Corolla/Matrix and Pontiac Vibe vehicles and will utilize a similar remedy to that of Chrysler consisting of adding an in-line noise filter to its air bag wire harness.

Honda's IR response reported 126 unique ABIDs for both frontal, side impact and/or side curtain air bag deployments across 4 models and 800k vehicles. However upon further review, no more than 25 of the reports appeared to be frontal ABIDs. The remaining involved less aggressive non-frontal ABIDs mainly stemming from side sensors that trigger side and/or side curtain air bags upon undercarriage debris strike or heavy door slams. The Honda rates are lower than those from the recalled Liberty and Toyota models, and with the exception of the MY 2002-2003 Odyssey, the other Honda models' failure mode/trend was also less severe. ODI will continue to monitor the affected Honda models.

There were no reports of ABIDs from the other three peer manufacturers.

It should be noted that since the October 2012 data collection date, ODI has received 4 additional Jeep Liberty and 2 Jeep Grand Cherokee reports for frontal ABIDs with two reports alleging loss of vehicle control and crashes. To date, the ORC modules from the two crash vehicles have not been available for detailed analysis by Chrysler or ODI, so the cause of the ABIDs cannot be confirmed at this time.

Accordingly the investigation is closed.

The ODI reports cited above can be reviewed at [www-odi.nhtsa.dot.gov/complaints](http://www-odi.nhtsa.dot.gov/complaints) under the following identification:  
10055405 10166706 10249231 10283484 10335637 10399551 10407276 10428411 10429306 10429579 10435710  
10442497 10445840 10446269 10446271 10446972 10448277 10452718 10454657 10455345 10457590 10458823  
10463405 10465663 10465861 10467781 10474062 10475197