



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 10-031
Date Opened: 08/23/2010
Investigator: Peter Ong
Approver: Frank Borris
Subject: Crash Related Fuel Tank Fires

Date Closed: 06/14/2012
Reviewer: Scott Yon

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: CHRYSLER GROUP LLC
Products: 1993-2004 Jeep Grand Cherokee
Population: 3,000,000 (Estimated)
Problem Description: Fuel tank system integrity in rear-impacts or crashes.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	9	23	26**
Crashes/Fires:	9	23	26**
Injury Incidents:	4	21	24**
Number of Injuries:	7	41	46**
Fatality Incidents:	3	12	13**
Number of Fatalities:	3	14	15**
Other*:	29	0	29

*Description of Other: FARS (through CY 2010) rear-impact fire crashes resulting in 48 total fatalities.

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: Upgrade Preliminary Evaluation (PE) 10-031 to Engineering Analysis (EA) 12-005

Summary:

NHTSA has conducted extensive analysis of the data regarding fuel tank integrity for the model year (MY) 1993-2004 Jeep Grand Cherokee (JGC). As a result of that work, the agency has decided to upgrade its safety defect investigation to an Engineering Analysis and to expand the scope of vehicles included in the investigation. NHTSA's assessment of the data collected during this investigation indicates that rear-impact-related tank failures and vehicle fires are more prevalent in the JGC than in the non-Jeep peer vehicles. In addition, the agency's analysis of its FARS data for the peer vehicles and three Jeep models shows a higher incidence of rear-impact, fatal fire crashes for the Jeep products.

PE10-031 had focused on the fuel tank system integrity of the JGC vehicles during rear-end collisions and impacts. The fuel tank is located at the rear of the vehicle, between the bumper and axle, and is manufactured from a plastic material (HDPE). Three peer vehicles (across the same MY range as the JGC) were identified for comparative assessment: the Chevrolet Blazer, Ford Explorer, and Toyota 4Runner. ODI has collected and assessed a significant volume of data for the JGC and three peer vehicles under the Defect Petition (DP) 09-005 and PE10-031, much of which was either provided by the petitioner or by the subject and peer manufacturers in response to ODI's information request letters. NHTSA has also utilized its FARS database. Fatal crash data was collected for the JGC and its three peers, along with data for two other Jeep vehicles, the Cherokee and Liberty, which were also manufactured with rear mounted fuel tanks and assessed by ODI as Jeep peer vehicles.

Based on the agency's current analysis, ODI is upgrading its investigation to determine whether the subject vehicles contain a defect that presents an unreasonable risk to safety. The subject vehicles for EA12-005 will be MY 1993-2004 JGC, MY 1993-2001 Cherokee, and MY 2002-2007 Liberty; the estimated production volumes for these vehicles is approximately 5.1 million, although attrition is a factor for the older vehicles. Please note that the counts shown in the above failure report summary are for the JGC only (values shown in the total column are unique). Data for the other Jeep models and possibly other peer models will be collected during the investigation.

The ODI reports cited above can be reviewed online at www-odi.nhtsa.dot.gov/complaints under the following identification (ODI) numbers: 506249, 549376, 734783, 869217, 10009553, 10335943, 10351589, 10351980, 10357528.