



U.S. Department  
of Transportation  
**National Highway  
Traffic Safety  
Administration**

## ODI RESUME

Investigation: EA08-008  
Prompted By: PE07-062  
Date Opened: 04/15/2008 Date Closed: 04/16/2009  
Principal Investigator: Stephen McHenry  
Subject: Upper ball joint separation

Manufacturer: Chrysler, LLC.  
Products: 2002 and 2003 Jeep Liberty 4x4 and 4x2  
Population: 397,579

Problem Description: Front suspension upper ball joint may separate while driving.

### FAILURE REPORT SUMMARY

|                     | ODI | Manufacturer | Total |
|---------------------|-----|--------------|-------|
| Complaints:         | 43  | 79           | 106   |
| Crashes/Fires:      | 0   | 1            | 1     |
| Injury Incidents:   | 0   | 1            | 1     |
| # Injuries:         | 0   | 1            | 1     |
| Fatality Incidents: | 0   | 0            | 0     |
| # Fatalities:       | 0   | 0            | 0     |
| Other*:             | 0   | 0            | 0     |

\*Description of Other:

Action: This Engineering Analysis has been closed. Recall 09V-119

Engineer: Stephen McHenry *SMH*  
Div. Chief: Jeffrey Quandt  
Office Dir.: Kathleen C. DeMeter

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Summary: On April 7, 2009, Chrysler LLC. submitted to ODI a Defect Information report indicating that it would recall approximately 42,469 model year 2002 through 2003 Jeep Liberty vehicles to remedy a defect that can result in upper ball joint separation while driving (09V-119). The affected vehicles were built from May 2002 through September 2002 and originally sold or currently registered in Connecticut, Delaware, District of Columbia, Kentucky, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia and Wisconsin. According to Chrysler, the front suspension upper control arm ball joint may experience a loss of lubrication which can lead to corrosion, accelerated wear, and possible separation while driving. Chrysler's recall procedure instructs dealers to replace the front upper control arm assemblies on all affected vehicles.

Although the specific cause for the defect in the recalled production range has not been determined, ODI's analysis of upper ball joint separations by vehicle build date shows a clearly defined and significant "spike" in the rate of separation during the five month production range covered by 09V-119, which accounts for only 11 percent of subject vehicle production but approximately 70 percent of separation incidents. Seventy-four (74) of the upper ball joint separation incidents identified by ODI occurred in vehicles produced in the recall months, resulting in a separation rate of 174 per 100,000 vehicles. The separation rate in the remaining subject vehicle population is significantly lower, at 9 incidents per 100,000 vehicles. At this time, the data do not show a defect trend in the subject vehicles built outside the recall range after approximately 6-8 years in service.

This engineering analysis is closed.