



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

ODI RESUME

Investigation: EA 06-014
 Prompted By: RQ06-005 (Andrea Noel)
 Date Opened: 08/02/2006
 Principal Investigator: Andrea Noel
 Subject: Ball Joint Failure

Manufacturer: Toyota Motor North America, INC.
 Products: 2004-2005 Toyota Tundra
 Population: 220,826

Problem Description: The front suspension lower ball joint separates while driving resulting in a loss of vehicle control.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	6	40	42
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	77	77

*Description Of Other: Toyota warranty claims pertaining to lower ball joint separation.

Action: An engineering Analysis has been opened.

Engineer: Andrea Noel

A.A.N.

Date: 08/07/2006

Div. Chief: Jeffrey L. Quandt

Date: 08/07/2006

Office Dir.: Kathleen C. DeMeter

Date: 08/07/2006

Summary: On May 16, 2005, Toyota submitted a defect information report to NHTSA's Office of Defects Investigation (ODI) regarding a defect condition that could result in lower ball joint separation in certain model year (MY) 2001 through 2004 Toyota Tundra, Sequoia, Tacoma and 4runner vehicles (Recall 05V-225, ODI investigation EA04-024). Toyota's Recall included approximately 775,000 vehicles built during a period in which the assembly process could have produced scratches on the ball surface, which could result in accelerated wear of the joints. The lower ball joints were replaced in the recalled vehicles. ODI opened RQ06-005 based on four consumer reports of alleged ball joint failure in Tundra vehicles that were not included in Recall 05V-225. The complaints alleged incidents of front suspension lower ball joint separation while driving, resulting in suspension collapse and loss of vehicle control.

During RQ06-005 ODI identified 112 (50.7 per 100,000 vehicles) unique lower ball joint separation incidents. These incidents include consumer complaints, field reports and warranty claims for the MY 2004-2005 Tundra vehicles. All of the reported incidents were outside the scope of Recall 05V-225, and there is some duplication between complaints and warranty. Also, further examination showed that the average failure mileage was 53,234 miles and that of the 112 incidents, 65 (66.3 per 100,000 vehicles) were on four-wheel drive vehicles, which make up approximately 44% of the MY 2004-2005 population (220,826 vehicles). The remaining 56% are two-wheel drive vehicles which experienced a total of 47 (38.2 per 100,000 vehicles) ball joint separations. This investigation has been upgraded to an Engineering Analysis.

EA 8/10/06