



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

ODI RESUME

Investigation: PE08-041
Date Opened: 07/09/2008 Date Closed: 10/28/08
Principal Investigator: Andrea Noel
Subject: Steering Intermediate Shaft Binding

Manufacturer: Toyota Motor North America, Inc.
Products: 2004 Toyota Sienna
Population: 216,015

Problem Description: Steering Intermediate Shaft binds due to corrosion.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	15	162	175
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	6,533	6,533

*Description of Other:

Action: This Preliminary Evaluation has been upgraded to an Engineering Analysis (EA08-024).

Engineer: Andrea Noel *A.N.*
Div. Chief: Jeffrey L. Quandt
Office Dir.: Kathleen C. DeMeter

Date: 10/28/2008
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Summary: The Office of Defects Investigation (ODI) opened a Preliminary Evaluation, PE08-041, to investigate allegations of steering binding or increased steering effort caused by corrosion of steering intermediate universal joints in Model Year (MY) 2004 Toyota Sienna vehicles.

Toyota's response to ODI's request for information in PE08-041 indicated that Toyota has been investigating reports of increased steering effort in my 2004 through 2006 Sienna vehicles since 2005. Toyota determined that a combination of thermal damage and subsequent water intrusion could lead to corrosion of the lowermost universal joint installed on the steering intermediate shaft of the subject vehicles. Toyota has made production changes since September 2006 to address these concerns and has issued two Technical Service Bulletins to its dealerships to provide instructions on diagnosing and repairing complaints related to corrosion of the intermediate shaft. Toyota has not determined that a safety defect exists in the steering system of the Toyota Sienna vehicles and provided test data showing that the effect on steering effort is minimal, even for parts with relatively severe corrosion.

A.N.
10/30/08

ODI analyzed complaint and warranty data relating to the following symptoms: (1) steering intermediate shaft binding or locking; (2) corrosion of the steering intermediate shaft universal joint; (3) complaints of increased effort to turn the steering wheel from neutral or return to neutral after turning (e.g., hard steering or steering binding); or (4) noise while steering. These analyses revealed that the subject vehicles have experienced a total complaint rate of 81.0 per 100,000 vehicles and a total warranty claim rate of 3.0 percent. ODI's analysis found that approximately two-thirds of complaints were for noise only. Similar analysis of the warranty data showed that 91 percent were related to noise concerns.

ODI has upgraded this investigation to an Engineering Analysis (EA08-024) to conduct testing to assess the effect of the alleged defect on steering effort in the subject vehicles.

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