



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

ODI RESUME

Investigation: EA08-017
 Prompted by: PE08-033
 Date Opened: 08/28/2008
 Principal Investigator: Chris Lash
 Subject: Steering Binding

Manufacturer: Hyundai-Kia America Technical Center, Inc.
 Products: 2002-2004 Kia Sedona in salt belt states
 Population: 62,634


Problem Description: Driver may experience hard steering, binding or noise while steering due to binding of the lower steering column universal joint.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	6	111	117
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	3418	3418

*Description Of Other: Warranty claims

Action: An Engineering Analysis has been opened.

Engineer: Christopher Lash 
 Div. Chief: Jeffrey L. Quandt
 Office Dir.: Kathleen C. DeMeter

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Summary: On April 28, 2008, the Office of Defects Investigation (ODI) opened Preliminary Evaluation PE08-033 to investigate complaints alleging steering binding in Model Year 2002 through 2004 Kia Sedona Minivans. Kia's response to ODI's request for information in PE08-033 indicated that concerns with binding of the steering intermediate shaft were first identified and investigated in August 2002, in vehicles sold in Indonesia. This investigation resulted in the addition of a stiffening rib to the bearing cap seal. In June 2003, Kia again investigated owner complaints of steering noise and higher than normal steering resistance and in October and November of 2003 design changes to the shaft universal joint bearings were made to improve lubricant retention and eliminate water intrusion that could lead to early bearing failure. According to Kia, the alleged defect results in a progressive change in steering effort that should be apparent to the driver through noise and gradual changes in steering stiffness long before the condition could become dangerous.

ODI's analyses of complaint and warranty data related to the alleged defect show that the condition is occurring at significantly higher rates in salt-belt states (note: for purposes of this investigation the "salt belt" includes Connecticut, Delaware, the District of Columbia, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia and Wisconsin). The warranty rate for

replacement of the steering intermediate shaft is 5.5% for vehicles sold in the salt belt and 0.5% for the rest of the United States. The complaint rate for the alleged defect is 186.8 per 100,000 vehicles in the salt belt and 29.4 per 100,000 vehicles for the rest of the United States. There is one allegation of a crash related to the alleged defect. A subject vehicle struck two parked cars while attempting to make a left turn, allegedly resulting in minor injuries to the driver.

ODI has opened an Engineering Analysis of the alleged defect in MY 2002 through 2004 Kia Sedona vehicles sold or currently registered in salt belt states to assess the frequency and trend of the condition and its effect on steering effort.

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