U S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: PE08-033
Date Opened: 04/28/2008 Date Closed: 08/28/2008
Principal Investigator: Christopher Lash
Subject: Steering Binding

Manufacturer: Hyundai-Kia America Technical Center, Inc.
Products: 2002-2004 Kia Sedona
Population: 154,387

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

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	6	138	144
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	3914	3914

*Description Of Other: Warranty claims for steering intermediate shaft replacement.

Action: This Preliminary Evaluation has been upgraded to an Engineering Analysis (EA08-017).

Engineer: *Christopher Lash* Date: *08/28/2008*
Div. Chief: *Jeffrey L. Quandt* Date: *08/28/2008*
Office Dir.: *Kathleen C. DeMeter* Date: *08/28/2008*

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 relating 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 upgraded this investigation to an Engineering Analysis (EA08-017) covering MY 2002 through 2004 Kia Sedona vehicles sold or currently registered in salt belt states to assess the frequency and trend of the alleged defect and its effect on steering effort.

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