



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 15-031
Date Opened: 09/01/2015
Investigator: Sharon Yukevich
Approver: Otto Matheke
Subject: Occupant Classification System
Date Closed: 02/11/2016
Reviewer: Scott Yon

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Kia Motors America
Products: 2007-2009 Kia Spectra
Population: 186,132

Problem Description: The occupant classification system for the front passenger side air bag may malfunction causing the passenger side air bag to not operate as intended.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	48	115	163
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	0	1,860	1,860

*Description of Other: Warranty claims related to Occupant Classification System malfunction

ACTION / SUMMARY INFORMATION

Action: Close this Preliminary Evaluation (PE)

Summary:

The subject vehicle population is MY 2007-2009 Kia Spectra vehicles. Consumers report that the SRS (air bag) warning light is illuminated in their vehicle. The focus of the investigation was the failure of the front seat passenger Occupant Classification System (OCS) sensor mat. This sensor mat is embedded in the front passenger seat cushion and is intended to detect child seats and small statured occupants who could be harmed by deployment of the passenger frontal air bag.

The OCS may develop a failure due to an open circuit in the sensor mat caused by the mat cracking during use. An open circuit in the OCS sensor mat is detected as a fault in the system by the air bag diagnostic. A trouble code will then be stored in the air bag control unit and the air bag warning light will be illuminated. If this fault is detected, the OCS will not suppress the front passenger air bag and in a crash of sufficient severity the front passenger air bag will deploy regardless of the nature or size of the child seat or occupant in the front passenger seat.

The report counts shown above include only those reports that specifically address the issue covered by this investigation, failure of the OCS sensor mat. Reports alleging only that the "air bag light is on" with no cause stated, or where no cause was otherwise identified, were excluded as the air bag light could be illuminated for system faults other than an OCS malfunction.

Kia's assessment was that the cracking was caused by owner abuse. The subject vehicles have been in service for an average of approximately eight (8) years. An analysis of Kia's warranty data for the subject vehicles, including a comparison with other agency and manufacturer data pertaining to similar OCS failure investigations, indicates that the subject vehicles experience a comparatively low complaint rate for this issue given the number of years the vehicles have been in service.

Kia has implemented an extended warranty program for the OCS sensor mat providing for free replacement for 15 years regardless of vehicle mileage and will send owners of the subject vehicles letters notifying them of the potential hazards posed by OCS failure as well as the terms of the extended warranty. Consumers whose air bag warning light is illuminated will have the opportunity to have their vehicle diagnosed and, if a fault is indicated, have the OCS sensor mat repaired at no charge.

In view of the comparatively low complaint rate and Kia's implementation of an extended warranty with owner notification, ODI has tentatively concluded that the actions taken by Kia mitigate any unreasonable risk to safety posed by OCS sensor mat failures in the subject vehicles. Accordingly, the investigation is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist, and the agency reserves the right to take additional action if warranted by new circumstances.

Details on Kia's extended warranty program, including a copy of both Kia's letter to the consumer and Kia's letter to their dealers, for the subject vehicle population will be available in the public file for this investigation.

The ODI reports cited above can be viewed at <http://www-odi.nhtsa.dot.gov/owners/SearchNHTSAID> under the following identification (ODI) numbers:

10789130, 10787308, 10785138, 10777856, 10765359, 10745773, 10746133, 10745528, 10721336, 10715846, 10712140, 10712046, 10706009, 10705387, 10681321, 10677080, 10673071, 10654873, 10654522, 10652472, 10651525, 10643205, 10639671, 10638251, 10627289, 10621507, 10620724, 10615883, 10609000, 10607838, 10606252, 10577842, 10568029, 10564527, 10561224, 10558018, 10548300, 10546251, 10515126, 10514578, 10507314, 10505671, 10504605, 10502779, 10500601, 10491709, 10459289, 10421138.