



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

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

Investigation: PE23019

Prompted By: VOQ Review

Date Opened: 11/13/2023

Date 07/23/2024

Closed:

Investigator: Joseph Teitelman

Reviewer: Peter Kivett

Approver: Tanya Topka

Subject: Loss of Motive Power

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Kia America, Inc.

Products: 2016-2017 Kia Sorento with 3.3 L Engines

Population: 127,740

Problem Description: Loss of motive power due to head gasket / head bolt failure

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	26	53	0	1,738	77*	0
Crashes/Fires:	0	0	0	0	0	0
Injury Incidents:	1	0	0	0	1	0
Number of Injuries:	1	0	0	0	1	0
Fatality Incidents:	0	0	0	0	0	0
Number of Fatalities:	0	0	0	0	0	0

Description of Other:

Manufacturer Warranty Claims

*Total eliminates duplicates received by the manufacturer

ACTION/SUMMARY INFORMATION

Action: Close this Preliminary Evaluation (PE)

Summary:

On November 13, 2023, the Office of Defects Investigation (ODI) opened a Preliminary Evaluation (PE23-019) to investigate allegations of loss of motive power relating to head gasket and/or head bolt failure in Model Year (MY) 2016-2017 Kia Sorento vehicles equipped with the 3.3 L Lambda II engine. When the investigation was opened, ODI had received 13 Vehicle Owner Questionnaires (VOQs) related to reports of loss of motive power. In an information request letter dated November 30, 2023, ODI requested technical information and failure data relating to the alleged defect in the subject MY 2016-2017 Kia Sorento as well as several peer vehicle populations which share the 3.3 L engine.

In its February 26, 2024, response to ODI's information request, Kia provided 2022 customer complaints (including techline and field reports) and 1738 warranty claims representing 2411 unique vehicles within the subject vehicle population. Of the customer complaints provided by Kia, they identified only 53 unique allegations of a loss of motive power resulting from the alleged defect. Kia determined that the remaining reports were minor vehicle drivability or engine performance issues. ODI reviewed the information provided by Kia, along with additional VOQs submitted to NHTSA following the opening of the investigation. When eliminating duplicative reports across the data sources, the total number of allegations of loss of motive power relating to the alleged defect in the subject vehicles is 77, representing an incident report rate of 59 per 100,000 vehicles. The MY 2016 Kia Sorento exhibited both the highest overall complaint rate and loss of motive power report rate across all subject and peer vehicle populations, representing an incident report rate of 102 per 100,000 vehicles. Across all data sources, there are no allegations of crashes or fires relating to the alleged defect. The one injury incident reflected in the failure summary table above is related to a consumer who was reportedly burned (minor burn requiring medical attention) while attempting to remove the coolant reservoir cap following a loss of motive power event.

In their response to ODI, Kia described that if the threads of a head bolt hole in the subject engine becomes damaged, the clamping force between the cylinder head and engine block can decrease in the area of the affected head bolt. Kia's assessment of the alleged defect is that when the failure occurs, drivers are provided with numerous warning signs prior to a potential loss of motive power event. According to Kia, potential warning signs associated with this failure include coolant leak/consumption or noticeable coolant odor, engine oil leak/consumption, engine temperature gauge rising to "H" (hot), check engine light illuminating, engine cooling fan remaining on following the engine being shut off, HVAC system not functioning properly, unusual engine noise, difficulty starting the vehicle, and smoke/condensation emitting from the engine compartment or exhaust. Through both its review of the information provided by Kia and outreach to consumers, ODI confirmed that there is reasonable detectability present in the vast majority of occurrences of the alleged defect.

To mitigate the alleged defect, Kia increased the engagement depth of the head bolt threads for all subject engines, beginning in May 2017. ODI's analysis of the failure data demonstrates that this corrective action correlates with a much lower incident report rate for engines produced following the change (8 per 100,000 vehicles for the MY 2018-2020 Kia Sorento). In December 2023, Kia launched extended warranty campaign WTY035 covering failures associated with the alleged defect in the subject vehicle population through 15 years or 180,000 miles, whichever comes first. Through its investigation, ODI identified the following peer vehicle populations, which were produced prior to the corrective action and exhibit failure rates comparable to the subject vehicles: MY 2014-2015 Kia Sorento, MY 2015-2016 Kia Sedona, and MY 2014-2017 Kia Cadenza equipped with the 3.3 L engine. Through discussions with ODI during the investigation, Kia decided to launch extended warranty campaign WTY039 in May 2024, which covers these peer vehicle populations through 15 years or 180,000 miles, whichever comes first.

Based on analysis of the failure data indicating a low incident report rate of loss of motive power for the alleged defect, and in consideration of the warning signs which frequently occur from head gasket and/or head bolt failure in the subject engines, ODI is closing this Preliminary Evaluation. The agency reserves the right to take additional action if warranted by future circumstances. To review the reports cited in the Closing Resume ODI Report Identification Number document, go to [NHTSA.gov](https://www.nhtsa.gov).