U.S. Department of Transportation

National Highway Traffic Safety Administration

OFFICE OF DEFECTS INVESTIGATION

ODI RESUME

Investigation: RQ22002
Prompted By: Recall 16V-907
Date Opened: 07/22/2022 **Date Closed:** 06/16/2025
Investigator: Arnaldo Torres Diaz **Reviewer:** Bruce York
Approver: Tanya Topka
Subject: Stall from Crankshaft\Camshaft Failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Chrysler (FCA US, LLC)
Products: 2016 Jeep Compass, 2016 Dodge Journey, 2016 Jeep Patriot
Population: 289,067

Problem Description: Vehicles similar to those identified in recall 16V-907, but not included in the scope, may experience intermittent operation of the crankshaft or camshaft sensor as described in the recall.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	602	2,502	0	2,221	5,325	0
Crashes/Fires:	0	0	0	0	0	0
Injury Incidents:	0	0	0	0	0	0
Number of Injuries:	0	0	0	0	0	0
Fatality Incidents:	0	0	0	0	0	0
Number of Fatalities:	0	0	0	0	0	0

Description of Other:
Warranty Claims

ACTION/SUMMARY INFORMATION

Action: This Recall Query (RQ) is closed without a manufacturer action.

Summary:

On December 13, 2016, the National Highway Traffic Safety Administration (NHTSA) received recall 16V-907 from Fiat Chrysler Automobiles (FCA) that identified a safety defect involving crankshaft or camshaft sensor failures on certain 2016 Model Year Dodge Journey, Jeep Compass, and Jeep Patriot vehicles. The failure of the crankshaft or camshaft sensor may lead to a loss of motive power (LOMP) in the recalled vehicles. Following the receipt of recall 16V-907, the Office of Defects Investigation (ODI) received 127 vehicle owner's questionnaires (VOQ), in which consumers allege experiencing crankshaft or camshaft failures on similar vehicles not included in the recall. On July 22, 2022, this Recall Query was opened to further assess the scope, frequency, and safety consequences of the alleged defect described in the recall.

During this investigation, ODI sent two information request (IR) letters to FCA. The first letter was sent on August 15, 2022, and the second on July 12, 2024. Responses to these IR letters, that included manufacturer claim data related to the alleged defect, were received on September 26, 2022, and September 6, 2024, respectively.

Analysis of ODI and FCA claim data identified two failure modes relating to intermittent crankshaft and camshaft sensor loss of signal. The first failure mode involves a faulty crankshaft or camshaft electrical connector, as identified in recall 16V-907. The second failure mode involves a faulty crankshaft and/or camshaft position sensor. Both failure modes exhibit intermittent operation of the crankshaft and/or camshaft position sensor that can result in a malfunction indicator lamp (MIL), engine stall while driving, or a no start condition.

For the first failure mode, the claim data indicates that the majority of failures resulted in a LOMP and occurred on vehicles covered by recall 16V-907.

For the second failure mode, the claim data indicates that the majority of failures resulted in a MIL or no start condition and occurred on vehicles manufactured prior to the vehicles covered by recall 16V-907.

VOQ and claim data submitted to NHTSA, involving vehicles built outside the scope of recall 16V-907, commonly do not describe a LOMP. These claims typically describe experiencing symptoms such as a MIL, Diagnostic Trouble Code (DTC) associated with crank/camshaft position sensor, and subsequent visits to a dealership. A substantially smaller percentage of the complaints allege an actual LOMP (<.05% of total).

During production, FCA implemented multiple corrective actions to address the camshaft/camshaft sensor signal issue. The last of which was a software update that occurred in February 2016 and based on the claim data, addressed the crankshaft and/or camshaft position sensor issues that were leading to MIL or no start. For vehicles built prior to the software update, the sensor failures were normally covered under warranty.

FCA's assessment of the alleged defect is that the subject vehicles (not included in recall 16V-907) are not typically experiencing a LOMP when they have trouble with their crankshaft and/or camshaft position sensor and for that reason it does not represent a safety defect. FCA states consumers experience multiple warning signs including MIL illumination, drive quality changes, or no start conditions when a crankshaft and/or camshaft position sensor is failing.

Based on ODI's analysis of the failure modes, the failure mode for vehicles not included in recall 16V-907 is unlikely to result in LOMP. The data indicates that vehicles not included in the recall experience LOMP at much lower rates than the recalled population. In addition, ODI is not aware of any related vehicle crashes or injuries in that time. Given these facts, a safety-related defect trend has not been identified at this time. Accordingly, this investigation is closed without action. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The Agency reserves the right to take additional action if warranted by future circumstances. To review the ODI reports cited in the Closing Resume ODI Report Identification Number document, go to NHTSA.gov.