U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

NHTSA

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Investigation:	PE 18-014		
Date Opened:	12/01/2018	**Date Closed:**	09/10/2020
Investigator:	Frederick Lamance	**Reviewer:**	Jeff Quandt
Approver:	Stephen Ridella		
Subject:	Loss of Brake Power Assist		

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: LAND ROVER

Products: 2012 - 2014 MY Range Rover Evoque

Population: 30,426

Problem Description: The brake vacuum pump may fail while driving, resulting in a loss of power assisted braking.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	7	26	33
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	0	204	204

***Description of Other:** Warranty claims related to the alleged defect.

ACTION / SUMMARY INFORMATION

Action: PE18-014 has been upgraded to an Engineering Analysis (EA20-001).

Summary:

On December 1, 2018, the Office of Defects Investigation (ODI) opened Preliminary Evaluation PE18-014 to investigate allegations of brake vacuum pump failure in model year (MY) 2012 through 2014 Range Rover Evoque vehicles. During PE18-014, ODI identified 33 complaints and field reports related to the alleged defect in the subject vehicles. Seven of the complaints were received by ODI and 26 were reported as consumer complaints or field reports in the Jaguar Land Rover (JLR) response to ODI's Information Request letter for PE18-014. All the complaints and field reports identified by ODI involved MY 2012-2013 Range Rover Evoque vehicles. ODI's analysis of warranty data supplied by JLR identified 198 claims related to the alleged defect in MY 2012-2013 vehicles, resulting in a claim rate of 0.84 percent. ODI identified just 6 claims in the MY 2014 Range Rover Evoque vehicles, resulting in a claim rate of0.09 percent.

The subject vehicles are equipped with 2.0 liter Gasoline Turbocharged Direct Injection (GTDI) engines that utilize a mechanically driven single vane rotary vacuum pump supplied by Magna International (Magna). The 2.0L GTDI engines and subject Magna vacuum pumps were used by JLR in the following applications: MY 2012-2017 Land Rover Range Rover Evoque (L538), MY 2013-2015 Land Rover LR2 (L359), MY 2015-2017 Land Rover Discovery Sport (L550), MY 2013-2015 Jaguar XF (X250), and MY 2017 Jaguar XE (X760). Field return analyses of failed vacuum pumps from these products has determined that the failures were caused by blockage of the orifice supplying lubricating oil to the pump. Magna and JLR have attributed the blockage to oil "sludge" resulting from failure to perform oil changes at the specified maintenance intervals.

This Preliminary Evaluation has been upgraded to an Engineering Analysis (EA20-001) covering MY 2012-2013 Range Rover Evoque vehicles (subject vehicles). Other JLR products equipped with 2.0L GTDI engines and subject Magna vacuum pumps will be included in the EA as peer vehicles. The EA will further assess the causes of pump

failures in the subject and peer vehicles, the frequency and trends of pump failures in each population, the reasons for differences in experience between subject and peer vehicle applications, and the effects of pump failure on brake system performance in the subject vehicles.

The ODI reports (VOQs) cited above can be viewed at NHTSA.gov under the following reference numbers: 10986358, 11025409, 11083348, 11131896, 11149724, 11231234, 11343256.