



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 18-004
Prompted by:
Date Opened: 07/02/2018 **Date Closed:** 10/17/2019
Investigator: Frederick Lamance **Reviewer:** Jeff Quandt
Approver: Stephen Ridella
Subject: Door latch failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: LAND ROVER
Products: 2013-2016 Range Rover and Range Rover Sport
Population: 131,305
Problem Description: Consumers report incidents of doors opening while driving or failing to latch.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	11	152	161**
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	0	1,531	1,531

*Description of Other: Warranty claims related to doors opening while driving or failing to latch.

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This Engineering Analysis has been closed. Recalls 19V-390 and 19V-392.

Summary:

On May 24, 2019, Jaguar Land Rover North America, LLC (JLR) submitted two Part 573 letters to NHTSA describing door latch defects that could result in doors opening while driving in certain model year (MY) 2013-2016 Range Rover and Range Rover Sport vehicles equipped with JLR's Unilatch Keyless Vehicle (KV) entry system.

Recall 19V-392 (JLR Recall N335) describes a KV lever binding defect in approximately 65,385 MY 2013-2016 Range Rover and MY 2014-2016 Range Rover Sport vehicles built between May 9, 2012 and March 5, 2015. Moisture intrusion may result in KV motor bearing corrosion, which may prevent the KV lever from returning to the home position and prevent the latch pawl from properly engaging the latch claw. Vehicles recalled under 19V-392 will be checked for a pre-existing error state and mechanically disabled if an error is detected. If no error is detected, the vehicles will receive a software update that will disable the KV entry function on the vehicle.

Recall 19V-390 (JLR Recall N336) describes a defect in the KV latching system of left-side doors in approximately 28,671 MY 2016 Range Rover and Range Rover Sport vehicles built between October 1, 2015 and May 27, 2016. A spring in the KV latching system may jam between the outside transmission lever and chamfer bush, preventing the latch assembly from returning to its correct position and fully latching the door. Vehicles recalled under 19V-390 will have the left-side latch assemblies replaced with assemblies that meet the engineering specification.

ODI's analysis of consumer complaints and field reports identified a total of 161 latch failures in the subject vehicles, including 57 involving doors opening with the vehicle in motion. The analysis found that 157 of the latch complaints and 56 of the door opening in motion incidents involve vehicles and latch assemblies covered under Recalls 19V-390 and 19V-392. Engineering Analysis EA18-004 is closed based upon JLR's recall actions. For more information about the recall defect conditions and related field data, see the attached report.

On June 11, 2015, Jaguar-Land Rover (JLR) submitted a Defect Information Report (DIR) to NHTSA describing a defect condition in the electronically controlled door latch systems of approximately 65,372 model year (MY) 2013-2016 Range Rover and MY 2014-2016 Range Rover Sport that could result in incidents of door opening while driving (NHTSA Recall No. 15V-385, JLR Recall P068). The recalled vehicles were equipped with JLR's Unilatch Keyless Vehicle (KV) entry system and the defect condition affected both front and rear door latches, which are all controlled by the Keyless Vehicle Module (KVM). ODI opened Recall Query RQ17-005 on August 4, 2017 to investigate four complaints alleging incidents of doors opening while driving in vehicles that had received the remedy for Recall 15V-385. The investigation was upgraded to Engineering Analysis EA18-004 on July 3, 2018. On May 24, 2019, JLR submitted Defect Information Reports describing two door latch conditions that could result in doors opening while driving in certain model year (MY) 2013 through 2016 Range Rover and Range Rover Sport vehicles equipped with JLR's Unilatch Keyless Vehicle (KV) entry system.

Recall 19V-392 (JLR Recall N335) describes a KV lever binding defect in approximately 65,385 MY 2013-2016 Range Rover and MY 2014-2016 Range Rover Sport vehicles built between May 9, 2012 and March 5, 2015. Moisture intrusion may result in KV motor bearing corrosion, which may prevent the KV lever from returning to the home position and prevent the latch pawl from properly engaging the latch claw. Vehicle produced after March 5, 2015 were equipped with latch assemblies produced after the supplier, Brose Schließsysteme GmbH & Co. KG, implemented a design countermeasure to eliminate the moisture intrusion entry path. Vehicles recalled under 19V-392 will be checked for a pre-existing error state (e.g., KV lever failing to return to the home position) and mechanically disabled if an error is detected. If no error is detected, the vehicles will receive a software update that will disable the KV entry function on the vehicle.

Recall 19V-390 (JLR Recall N336) describes a defect in the KV latching system of left-side doors in approximately 28,671 MY 2016 Range Rover and Range Rover Sport vehicles built between October 1, 2015 and May 27, 2016. A spring in the KV latching system may jam between the outside transmission lever and chamfer bush, preventing the latch assembly from returning to its correct position and fully latching the door. Based upon component analysis conducted with the supplier, JLR's engineering investigation determined from component analysis conducted that left-side door latch outside transmission lever and bush chamfer components were not manufactured to the designed dimensional specifications. Further analysis conducted by the supplier showed that the out-of-specification parts were supplied to JLR during the period covered by the recall. Vehicles recalled under 19V-390 will have the left-side latch assemblies replaced with assemblies that meet the engineering specification.

ODI analyzed consumer complaints, field reports and warranty claims by vehicle build range, door position and failure mode. Tables 1 and 2 provide a breakdown of the field data associated with the 19V-392 and 19V-390 vehicles and for MY 2015-2016 vehicles investigated in EA18-004 that are not included in JLR's recalls. The highest incident rates were observed in the vehicles recalled under 19V-392. The recalled vehicles account for 72 percent of subject vehicle sales and 97 percent of the Unlatched-In-Motion and Failure-To-Latch complaints analyzed by ODI. Failures in vehicles that are not included in the two JLR recalls appear to be associated with random and isolated latch fault conditions. ODI will continue to monitor those populations for signs of developing defect trends.

Engineering Analysis EA18-004 is closed based upon JLR's recall actions. For more information about the recall defect conditions and related field data, see the attached report.

The NHTSA consumer complaints counted in the closing resume for EA18-004 can be reviewed at www.odn.htsa.dot.gov/owners/SearchNHTSAID under ODI identification numbers: 11202865, 11172840, 11170874, 11139609, 11113525, 11098484, 10983285, 10908506, 10883256, 10819201, 10654268.

Build Range	Door Position	Recall No.	Volume	Unlatched in Motion		Failure to Latch		Total	
				No.	R/100k	No.	R/100k	No.	R/100k
05/09/2012 – 03/05/2015	All	19V-392	65,385	55	84.1	97	148.4	152	232.5
03/06/2015 – 09/30/2015	All	N/A	20,831	1	4.8	3	14.4	4	19.2
10/01/2015 – 05/27/2016	Left Side	13V-390	28,671	1	3.5	4	14.0	5	17.4
	Right Side	N/A	28,671	0	0	0	0	0	0
05/28/2016 – 10/26/2016	All	N/A	15,950	0	0	0	0	0	0
Recalled Vehicle Total			94,056	56	59.5	101	107.4	157	166.9
Unrecalled Vehicle Total			37,249	1	2.7	3	8.1	4	10.7

Table 1. Complaints and Field Reports.

Build Range	Door Position	Recall No.	Volume	Unlatched in Motion		Failure to Latch		Total	
				No.	IPTV	No.	IPTV	No.	IPTV
05/09/2012 – 03/05/2015	All	19V-392	65,385	92	1.41	1288	19.7	1380	21.1
03/06/2015 – 09/30/2015	All	N/A	20,831	3	0.14	37	1.8	40	1.9
10/01/2015 – 05/27/2016	Left Side	13V-390	28,671	9	0.31	79	2.8	88	3.1
	Right Side	N/A	28,671	1	0.03	13	0.5	14	0.5
05/28/2016 – 06/30/2016	All	N/A	15,950	1	0.06	8	0.5	9	0.6
Recalled Vehicle Total			94,056	102	1.08	1380	14.7	1482	15.8
Unrecalled Vehicle Total			37,249	4	0.11	45	1.2	49	1.3

Table 2. Warranty Claims.