



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

**Investigation:** PE 19-009  
**Date Opened:** 08/06/2019  
**Investigator:** Cheryl Rose  
**Approver:** Stephen Ridella  
**Subject:** Occupant Detection System (ODS) Failure

**Date Closed:** 01/22/2020  
**Reviewer:** Jeff Quandt

## MANUFACTURER & PRODUCT INFORMATION

**Manufacturer:** Subaru of America, Inc.  
**Products:** 2014-2018 Subaru Forester vehicles  
**Population:** 924,737

**Problem Description:** The Occupant Detection System (ODS) 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  |
|----------------------------|-----|--------------|--------|
| <b>Complaints:</b>         | 115 | 1,844        | 1937** |
| <b>Crashes/Fires:</b>      | 0   | 0            | 0      |
| <b>Injury Incidents:</b>   | 0   | 0            | 0      |
| <b>Fatality Incidents:</b> | 0   | 0            | 0      |
| <b>Other*:</b>             | 0   | 13,439       | 13,439 |

\*Description of Other: Warranty Claims by unique VIN

\*\* Total eliminates duplicates received by ODI and manufacturer.

## ACTION / SUMMARY INFORMATION

**Action:** Close this Preliminary Evaluation. Recall 19V-701.

### Summary:

The Office of Defects Investigation (ODI) opened PE19-009 to investigate 51 complaints and additional Early Warning Report (EWR) data related to allegations of front passenger seat Occupant Detection System (ODS) malfunctions in model year (MY) 2016 through 2018 Subaru Forester vehicles. These vehicles use a capacitive type ODS, which is intended to classify the occupant of the passenger seat as either full-sized, small stature, a child seat or other object. The complaints reported the ODS failed to operate properly, the SRS (Supplemental Restraint System) warning light illuminated, and/or the ODS incorrectly suppressed (turned off) the front passenger air bag when the seat was occupied by a full-sized passenger. In a frontal crash that is sufficient to warrant deployment, a suppressed air bag may increase the risk of injury to the occupant of the seat.

On August 14, 2019 ODI sent an Information Request (IR) to Subaru requesting information on the subject vehicles and MY 2014-2015 Subaru Forester vehicles.

On October 3, 2019, Subaru submitted a Defect Information Report (DIR) to NHTSA describing a safety defect in the passenger-side front airbag Occupant Detection System (ODS) harness of 366,282 MY 2015-2018 Subaru Forester vehicles equipped with seat heaters. The DIR stated that over time, due to a decrease in contact pressure between the terminals in the ODS sensor mat harness, a temporarily unstable electrical connection may be possible. If the connection is temporarily unstable, the ODS may not properly determine the status of the right front seat occupant. If the ODS is unable to correctly determine the status of the front occupant, the airbag warning light may illuminate, and the front passenger airbag may deactivate even though the seat is occupied, increasing the risk of injury to the front passenger in the event of a crash.

Using vehicle production data and field occurrence frequency, Subaru determined the potentially affected vehicle production range to be between January 20, 2015 and August 1, 2017. In addition, Subaru indicated that over 99 percent of the related MY 2015-2018 field reports with vehicles in the production range involved vehicles with seat heaters.

NHTSA's analysis of complaint and warranty claim data showed 1,440 of the complaints and 11,672 of the claims involve vehicles with seat heaters that were built within the production range covered by Subaru's recall. In addition, NHTSA's analysis showed a complaint rate of 393.1 per hundred thousand vehicles for the recalled population and 89.0 for MY 2014 through 2018 vehicles that are not included in the recall. Analysis of warranty claim data found a claim rate of 3.2 percent for the recalled population and 0.3 percent for MY 2014 through 2018 vehicles that are not included in the recall.

Subaru will instruct owners with Subaru Forester vehicles produced in the affected vehicle production range, to bring their vehicles to a dealer to have the sensor mat harness, inspected and replaced with a new part, including the seat cushion assembly, if necessary.

Based on ODI's analysis, the actions taken by Subaru mitigate any unreasonable risk to safety posed by ODS sensor mat failures in the subject vehicles. For subject and peer vehicles outside the recall population and those equipped without seat heaters, ODI's analysis indicates that there is currently no safety-related defect trend. Given these circumstances, further use of the agency resources in this matter does not appear to be warranted. Accordingly, this investigation is closed.