



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 15-001
Date Opened: 01/12/2015
Investigator: Michael Lee
Approver: Michael Brown
Subject: Improper Frontal Air Bag Deployment

Date Closed: 10/29/2016
Reviewer: Michael Lee

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Nissan North America, Inc.
Products: 2013 Nissan Rogue
Population: 195,218

Problem Description: Complaints allege delayed and/or partial deployment of the driver's frontal air bags in crashes. Some allege the air bags deployed significantly late (at least several seconds or longer after a vehicle crash) and also did not inflate properly.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	3	3	5**
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Number of Injuries:	1	0	1
Fatality Incidents:	0	0	0

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This Preliminary Evaluation has been closed.

Summary:

The Office of Defects Investigation (ODI) reviewed its complaint data and Nissan's design, test and field data on the model year 2013 Nissan Rogue vehicles (subject vehicles) and other model year Rogue vehicles. ODI also reviewed its complaint data and Nissan's field data on several other Nissan and Infiniti models that use the same driver air bag inflator design used in the subject vehicles. In addition, NHTSA conducted testing and analysis of a sample of driver air bag inflator units taken out of the subject vehicles and reviewed a NHTSA crash database and crash test results on the Rogue vehicles.

A safety-related defect trend has not been identified at this time and further use of agency resources does not appear to be warranted. Accordingly, this investigation is closed. The closing of this investigation does not constitute a finding by NHTSA that no safety-related defect exists. The agency will monitor the issue and reserves the right to take future action if warranted by the circumstances. See attached report for additional information.

The ODI complaints cited above can be viewed at www.safercar.gov under the following ODI identification numbers: 10566667, 10644946 and 10862615.

PE15-001 Additional Information

The Office of Defects Investigation (ODI) opened this Preliminary Evaluation based on two unusual but similar complaints alleging improper air bag deployment on model year (MY) 2013 Nissan Rogue vehicles (subject vehicles). Both complaints alleged the driver's frontal air bag deployed in a subject vehicle as a result of a crash but the air bag deployed many seconds (possibly up to a minute or so) after the crash and also did not fully inflate or inflated slowly. They also alleged the air bag failures occurred after the vehicle came to a stop (after the entire sequence of the crash).

In its response to ODI's initial information request, Nissan reported the frontal driver air bag (DAB) inflator design used in the subject vehicles (MY 2013 Rogue) was also used in MY 2008-2012 Nissan Rogue and MY 2014-2015 Rogue Select (carryover Rogue model) vehicles. No relevant design or manufacturing changes in these vehicles were identified by Nissan. Nissan also reported that several other Nissan and Infiniti models use the same DAB inflator design as the subject vehicles. ODI then conducted a peer review of Nissan's complaint data and other field data concerning any allegation of delayed and/or partial DAB deployment on the subject vehicles and the above-mentioned peer vehicles. The peer review revealed no identifiable safety defect trend in any of the vehicles: Nine potentially related reports on the Rogue vehicles (3 on subject MY 2013 and 6 on MY 2008-12 and 2014-15) and three reports on the peer vehicles. Some of the complaints alleged delayed DAB deployment without specifying a time duration or sequence, or without indicating a significantly delayed deployment (e.g., the air bag deployed at least several seconds after the crash or it deployed after the vehicle came to a stop). Examples of the reported incidents include the air bag deployed "after I hit the car in front blowing me back into the seat" and "after I hit the steering wheel." Other complaints alleged the air bag did not fully inflate but did not report a delayed deployment. The peer review also revealed none of the complaints alleged serious injuries as a result of the alleged air bag failures in the subject and peer vehicles.

Nissan stated that it does not believe a safety-related defect exists in the subject vehicles and believes the air bag systems performed properly in the vehicles associated with the reported incidents of improper DAB deployment. Nissan based these claims on the general air bag deployment characteristics (i.e., air bag system is designed to deploy within specified [very fast] parameters) and visual vehicle inspections and/or EDR data review of several of the complaint vehicles. In addition, Nissan reported there have been no changes in the design or manufacture of the air bag control module or electronic control unit (ECU) that could be related to the alleged defect in any of the Rogue and Rogue Select vehicles. The lack of a design or manufacturing change in the ECUs indicates an issue with the deployment algorithm or logic (one that that could delay an air bag deployment) does not exist in the subject MY 2013 Rogue vehicles.

NHTSA's Vehicle Research and Test Center (VRTC) conducted testing and analysis of 20 originally-equipped DAB inflator modules from the subject MY 2013 Rogue vehicles (note: Nissan dealers removed the inflator modules later used for testing). The test work included CT

scanning of the air bag propellant and enhancer materials contained in each inflator followed by deploying the air bag inflator modules. VRTC observed no abnormalities related to the alleged defect in the CT scans or deployment tests. In addition, VRTC could not replicate the alleged air bag failures by intentionally introducing inflator squib issues and other fault variables. Based on VRTC's evaluation performed, VRTC and ODI found no root cause for the alleged defect in the subject vehicles. In addition, ODI reviewed NHTSA's NASS crash database for frontal air bag deployed crashes involving the Rogue vehicles, and NCAP's and IIHS's data on frontal crash tests conducted on the Rogue vehicles, and found no issues that appear to be related to the alleged defect.