U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

Investigation: PE 16-013
Date Opened: 09/28/2016 **Date Closed:** 03/20/2017
Investigator: Pedro Bonilla **Reviewer:** Scott Yon
Approver: Stephen Ridella
Subject: Inadvertent Curtain and Seat Air Bag

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Nissan North America, Inc.
Products: 2012 Nissan Versa
Population: 54,751

Problem Description: The side curtain and seat mounted (thorax) air bags can inadvertently deploy when the vehicle door is shut.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	3	33	33**
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This investigation is closed, see NHTSA Recall No. 17V-144

Summary:

The Office of Defects Investigations opened this Preliminary Evaluation to investigate complaints alleging an inadvertent deployment of side air bags on model year 2012 Nissan Versa vehicles. The three complaints indicate the driver or passenger curtain and seat mounted air bags deployed when the front door on the same (affected) side was shut.

According to Nissan, the defect identified involved the dissimilarity of the metals used in the side air bag sensor electrical connectors, gold versus tin materials. This combination may lead to fretting and oxidation on the connector pins of the Satellite Sensor and the harness which connects it to the Airbag Control Unit (ACU). Fretting and oxidation increases the likelihood of a momentary loss of connectivity, and thus communication from the sensor to the ACU.

When communication is lost between the side impact sensor and the ACU, the system is designed to enter a “backup state” mode of operation. The backup state allows the curtain and seat-mounted side air bags to deploy should the communication be accidentally lost during the course of a crash event. In this mode, the “safing path” is used in the ACU algorithm for a deployment decision. By design, the safing path has a lower threshold for deployment compared to the normal state which requires both safing and trigger path thresholds to be met. Consequently, if this momentary communication loss occurs when the door is closed forcefully, it may cause the curtain and seat-mounted side air bag, as well as the seat belt pretensioner to deploy inadvertently.

On March, 6, 2017, Nissan North America, Inc, submitted a Defect Information Report to NHTSA establishing that it will address this issue. See recall action 17V-144 for further details; remedy details and timing are to be determined. Accordingly, the investigation is closed.

The ODI reports cited above can be reviewed at SaferCar.gov under the following ID numbers:

10743601, 10732337, 10779675