



Nissan North America, Inc.

One Nissan Way
Franklin, TN 37067

Mailing Address:
PO Box 685001
Franklin, TN 37068

August 21, 2018

Mr. Jeff Giuseppe
Associate Administrator for Enforcement
National Highway Traffic Safety Administration
Attn: Recall Management Division (NVS-215)
Room W48-302
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Dear Mr. Giuseppe:

We are transmitting the enclosed Defect Information Report in accordance with 49 CFR Part 573. A voluntary recall campaign will be initiated and your office provided with the notices.

Very truly,

A handwritten signature in black ink, appearing to read 'Derek Latta', with a long horizontal stroke extending to the left.

Derek Latta
Manager,
Technical Compliance

Encl.

DEFECT INFORMATION REPORT

1. Manufacturer:

Nissan North America, Inc. Canton Plant
Nissan Mexicana, S.A. de C.V. Aguascalientes Plant
Nissan Mexicana, S.A. de C.V. Civac Plant

2. Vehicles Potentially Involved:

<u>Model Year/Make/Model</u>	<u>Dates of Manufacture</u>
MY 2017 Nissan Sentra	February 14, 2017 through August 15, 2017
MY 2017-2018 Nissan Frontier	March 4, 2017 through October 4, 2017
MY 2017 Nissan NV1500/NV2500 Van/NV3500 Bus	March 22, 2017 through August 21, 2017
MY 2017 Nissan NV3500 Van	March 22, 2017 through August 18, 2017
MY 2017 Nissan NV200	February 15, 2017 through August 31, 2017
MY 2017 Nissan Taxi	February 15, 2017 through March 24, 2017
MY 2017-2018 Nissan Versa Note	February 14, 2017 through August 15, 2017
MY 2017-2018 Nissan Versa Sedan	February 14, 2017 through August 31, 2017
MY 2017 Chevrolet City Express	February 15, 2017 through September 1, 2017

This report applies only to certain vehicles equipped with mechanical (physical) key ignition systems manufactured by the supplier during a defined time period and by specific LOT numbers. Vehicles equipped with mechanical key ignition systems manufactured outside the above production ranges are unaffected, based on supplier production records.

Vehicles equipped with the Intelligent Key system (majority of MY2017-2018 fleet) are likewise unaffected, because the vehicles are not equipped with the component subject of this report.

The supplier of the ignition switch is:

ALPHA TECHNOLOGY CORPORATION
251 Mason Road
Howell, MI 48844-0168
Makoto Taya
(517) 546-9700
Makoto.taya@kk-alpha.com

The name, description and part number(s) of the recalled component(s) are below.

<u>Part Name</u>	<u>Part Description</u>	<u>Part Number(s)</u>
IGN-SW	Ignition Switch	48750-0M010

3. Total Number of Vehicles Potentially Involved:

Approximately 153,047 vehicles are subject to this recall as shown in the table below:

<u>Model Year/Make/Model</u>	<u>Number of Vehicles</u>
MY 2017 Nissan Sentra	39,694
MY 2017-2018 Nissan Frontier	31,598
MY 2017 Nissan NV1500/NV2500 Van/NV3500 Bus	5,936
MY 2017 Nissan NV3500 Van	620
MY 2017 Nissan NV200	10,037
MY 2017 Nissan Taxi	107
MY 2017-2018 Nissan Versa Note	13,529
MY 2017-2018 Nissan Versa Sedan	48,219
MY 2017 Chevrolet City Express	3,307

4. Percentage of Vehicles Estimated to Actually Contain the Defect:

NR%¹

5. Description of the Defect:

On some of the affected vehicles, the mechanical key ignition systems may have been equipped with a ball spring which could be susceptible to long-term excessive wear and possible fatigue breakage after an estimated 6 years of normal use. If the ball spring breaks, the retention force of the ignition switch is reduced. If heavier items (e.g. a heavy key chain) are attached to the ignition key, and the vehicle is driven over rough surfaces, the weight of the items may exceed the retention force of the broken ball spring and pull the ignition switch from the "ON" position to the "ACC" position. If this occurs while the vehicle is in motion, the engine will stop running. The air bag system would continue to be powered through built-in electrical capacity reserve, but this reserve will deplete, unless the vehicle is restarted. This increases the risk of a crash, and injury potential if a crash does occur.

6. Chronology of Principal Events:

In August 2017, the ignition switch supplier informed Nissan that it identified a tooling maintenance issue potentially affecting the subject ball springs. More specifically, the tooling may have created a stress riser on some of the ball springs.

¹ Nissan is unable to provide an estimate of the percentage of vehicles that actually contain the defect. Whether the issue will lead to ball spring breakage, creating an unreasonable risk to safety, depends on each vehicle's operating conditions over time.

Nissan immediately checked available field data and did not identify any field incidents potentially attributable to this condition. Nissan and the supplier began an investigation into the potential consequences of the issue and its effect on vehicle performance.

August 2017 to October 2017 – Nissan requested that the supplier perform bench vibration testing to assess the subject condition and its potential effect on long-term durability of the ignition switch. However, after reviewing the test setup and test results, Nissan concluded that the magnitude of the vibration induced by this bench test was too large and therefore not representative of real world driving. Nissan also reviewed past testing of rough road conditions.

November 2017 to December 2017 – Nissan used the results of the October review to develop a new bench testing protocol.

January 2018 – The supplier conducted additional bench testing that was intended to be more representative of real world vehicle usage.

February 2018 to March 2018 – Nissan and the supplier studied the new bench testing results, but concluded they were still not representative of real world vehicle usage due to excessive vibration during the test, specifically in the lower frequency range.

March 2018 - Nissan determined that bench testing would not yield realistic results and decided that vehicle testing would be required to simulate accurate real-world scenarios.

Throughout this time period, Nissan continued to monitor available field data and again did not identify any incidents potentially attributable to the subject condition.

April 2018 to June 2018 – Nissan developed a vehicle test plan to evaluate the effect of ball spring breakage on the ignition switch. More specifically, Nissan decided on the appropriate models, test conditions, such as road surface type and vehicle speeds, while the supplier prepared special tools to indicate and record data for the vehicle test, and supplied sample parts to use on test vehicles.

July 2018 to August 2018 – Nissan began conducting vehicle testing. Excessive weight was simulated using multiple keys (up to 10), which were attached to the ignition key ring. The testing was conducted using representative models on a variety of rough surfaces and curb impacts to simulate potential worst-case real world usage. Nissan also continued to bench test in parallel to the vehicle testing, using varying weights to determine the effect of reduced weight would have on the results. Nissan also requested that the supplier confirm production history and identify potentially affected LOT numbers and part production range based on known tooling maintenance.

At the conclusion of vehicle testing, Nissan determined that if the ball spring is broken, it could not rule out the potential for inadvertent ignition switch movement from the "ON" position during certain rough driving conditions with heavier items attached to the ignition key ring.

August 14, 2018 – While Nissan continues to be unaware of any field incidents attributable to this issue, out of abundance of caution, Nissan decided to conduct a Safety Recall Campaign in accordance with the defect notification requirements specified in 49 CFR Part 573.

7. Description of Corrective Action:

Owners of all potentially affected vehicles will be notified within sixty (60) days. Dealers will be notified on or before September 5, 2018. Dealers will inspect the LOT number of the ignition switch and if it is affected, replace it with a new one. Information in the Part 577 owner notification concerning reimbursement for the cost of obtaining a pre-notification remedy is not included as these vehicles remain under warranty.

8. Copy of Notices:

Copies of all notices will be provided to NHTSA as they become available.