

**NISSAN GROUP
OF NORTH AMERICA**



Nissan North America, Inc.

One Nissan Way
Franklin, TN 37067

Mailing Address:
PO Box 685001
Franklin, TN 37068

November 22, 2019

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 amendment and supplement to the Defect Information Report filed on November 8, 2019 in accordance with 49 CFR Part 573. This report updates sections 2, 3, 5, 6 and 7, respectively.

Very truly,

A handwritten signature in black ink, appearing to read "Derek Latta".

Derek Latta
Manager,
Technical Compliance

Encl.

AMENDED DEFECT INFORMATION REPORT

1. Vehicle Manufacturer:

Nissan North America, Inc., Canton Plant
Nissan North America, Inc., Smyrna Plant

Anti-Lock Brake System (ABS) actuator part numbers:

<u>Model Year/Make Model</u>	<u>Part Description</u>	<u>Part Number</u>
MY2016-2018 Nissan Maxima	ABS ACTUATOR ASSY	47660-4RB1C
MY2015-2018 Nissan Murano	ABS ACTUATOR ASSY - AWD	47660-9UD6D
MY2015-2018 Nissan Murano	ABS ACTUATOR ASSY - FWD	47660-9UD6C
MY2017-2019 Nissan Pathfinder	ABS ACTUATOR ASSY	47660-9PP1B
MY2017-2019 Nissan Pathfinder	ABS ACTUATOR ASSY	47660-9PP1D
MY2017-2019 INFINITI QX60	ABS ACTUATOR ASSY	47660-9PP1B
MY2017-2019 INFINITI QX60	ABS ACTUATOR ASSY	47660-9PP1D
Brake Fluid	Brake Fluid (DOT 3 Type 12oz)	999MP-A4100P

2. Units Potentially Involved:

Production period of affected vehicles involved:

<u>Model Year/Make Model</u>	<u>Dates of Manufacture</u>
MY2016-2018 Nissan Maxima	February 10, 2015 (SOP) through May 22, 2018 (02/10/15 to 01/05/17 were subject to 18V-601)
MY2015-2018 Nissan Murano	August 22, 2014 (SOP) through May 31, 2018 (08/22/14 to 02/24/2017 were subject to 18V-601)
MY2017-2019 Nissan Pathfinder	April 20, 2016 (SOP) through May 23, 2018
MY2017-2019 INFINITI QX60	May 18, 2016 (SOP) through May 23, 2018

The ABS actuators are unique to the makes and models manufactured during the above dates, as well as the MY2015-2016 Murano Hybrid vehicles produced during August 22, 2014 to July 19, 2016 that are subject to Recall 16V-636.

3. Total Number of Units Potentially Involved:

Approximately 391,479 vehicles are subject to this recall, as shown in the table below. This includes vehicles previously subject to Recall 16V-636 that were repaired and vehicles subject to Recall 18V-601 that have not yet been remedied, or were inspected and determined to not need a repair at that time.

<u>Model Year/Make Model</u>	<u>Number of Vehicles</u>
MY2016-2018 Nissan Maxima	82,256
MY2015-2018 Nissan Murano	115,353
MY2017-2019 Nissan Pathfinder	125,119
MY2017-2019 INFINITI QX60	68,751

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

1%¹

5. Description of the Defect:

Due to manufacturing variation, the subject vehicles (equipped with ADVICS ABS actuators) may contain an oil seal with inadequate sealing performance. More specifically, die temperature and tension force variation coupled with high temperature vehicle environment can adversely affect oil seal hardness. These conditions coupled with insufficient lubrication could cause the oil seal to wear prematurely and eventually lead to leakage of brake fluid. If this occurs, the ABS warning lamp will continuously illuminate on the instrument panel to warn the driver. However, if the warning is ignored and the vehicle continues to be operated in this condition, the brake fluid leak may potentially create an electrical short in the actuator circuit, which in rare instances, may lead to a fire.

6. Chronology of Principal Events:

August 24, 2016 – Following determination that a manufacturing issue with die temperature variation resulted in oil seal hardness out of specification, Nissan initiated Recall 16V-636 to replace ADVICS ABS actuators equipped with affected oil seals.

August 30, 2018 – Following reports of brake fluid leaks and thermal incidents in vehicles equipped with ABS actuators not subject to Recall 16V-636, Nissan determined that oil seals manufactured at a certain higher recommended die temperature than those previously recalled were also experiencing premature wear. Nissan initiated Recall 18V-601 to replace ABS actuators equipped with affected oil seals.

October 2018 – Nissan received a warranty claim returned actuator with evidence of thermal damage for a vehicle manufactured after the production ranges subject to Recall Number 18V-601. Nissan began to investigate whether the subject actuator was outside the previously identified affected actuator production and the cause of the condition.

November 2018 to April 2019 – Nissan initiated a parts collection activity and continued field monitoring while actively working with ADVICS to investigate performance differences between the recalled actuators and post countermeasure parts. Durability testing was conducted on the returned incident part, warranty returns and new production level parts.

May 2019 – August 2019 - Analysis of test results confirmed decreased oil seal hardness and lack of lubrication on the returned parts. Nissan continued the investigation of oil seal performance of actuators in production to attempt to identify the cause of the decreased oil seal hardness.

¹ Nissan anticipates the estimated percentage of vehicles involved with defect is very low. Only three (3) warranty returned parts exhibited the subject condition out of the affected population of vehicles. 1% is used here because submission within NHTSA's safety portal will not allow a non-numeric value.

Concurrent with this activity, Nissan became aware of additional incidents involving thermal damage of varying extent, and it conducted inspections and testing of these additional returned parts. Nissan's testing could not consistently recreate the returned part conditions on production parts, which suggested a need to improve understanding of manufacturing variation.

September 2019 to November 2019 – Analysis of supplier production records indicated greater variation in tension force than had been previously understood. Further investigation was initiated to evaluate the extent of impact to oil seal performance. Nissan identified combined factors affecting seal performance: die temperature variation, tension force variation, high temperature vehicle environment, and insufficient lubrication.

In total, Nissan has received seven (7) reports of field incidents involving various degrees of thermal damage for vehicles outside of Recall Number 18V-601 that are potentially attributable to the subject condition. Nissan is not aware of any injuries or fatalities. Nissan has not received any claims of ABS Light on for brake fluid leaks or thermal damage for vehicles equipped with the more recent design of ABS actuators using a normally-closed-valve design.

November 4, 2019 – Based on the foregoing, Nissan determined that a safety related defect exists and decided to expand its safety recall campaign to remedy the vehicles outlined above.

7. Description of Corrective Action:

Owners of the subject vehicles will receive an interim notification beginning on December 14, 2019. Dealers will be notified on November 13, 2019. The interim notification will instruct owners to park their vehicle outside away from structures and other vehicles and contact Nissan on INFINITI Roadside Assistance to have their vehicle towed to the dealer as soon as possible if their ABS warning light is illuminated for 10 seconds or longer. If the ABS warning light is illuminated, the dealer will replace the ABS actuator with a new design part at no cost to the owner.

When additional remedy parts are available in summer 2020 owners will receive a second notification advising them to bring their vehicles into the dealer for repair. The dealer will replace the ABS actuator with a new design, at no cost to the owner.

Nissan will include a statement in the Part 577 owner notification concerning reimbursement for the cost of obtaining a pre-notification remedy for the subject vehicles that are no longer under warranty. Your office will be provided with a copy of the Part 577 owner notification for approval.

8. Copy of Notices:

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