

# NISSAN

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**NISSAN NORTH AMERICA, INC.**

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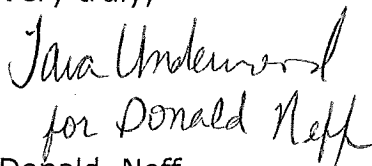
October 14, 2015

Mr. Frank S. Borris II  
Acting Associate Administrator for Enforcement  
National Highway Traffic Safety Administration  
Attn: Recall Management Division (NVS-210)  
Room W48-302  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

Dear Mr. Borris:

We are transmitting a further update to the July 29 Part 573 report and the September 17 Part 573 update for (Recall 15V-468) to supplement the information on the vehicles affected. More specifically, Nissan is providing the production range and the number of potentially affected Altima 3.5 vehicles. Nissan is also amending the affected population of MY16 Maxima vehicles.

Very truly,



Donald Neff  
Manager,  
Technical Compliance

Encl.

## **DEFECT INFORMATION REPORT**

1. Manufacturer:

Nissan North America, Inc.

2. Vehicles Potentially Involved:

Model Year 2016 Nissan Maxima vehicles manufactured from February 10, 2015 (start of production) to August 18, 2015 at the Smyrna, TN plant.

Please note that Nissan previously recalled MY16 Maxima vehicles manufactured from start of production through June 2, 2015. For reasons described in Section 6, this update adds MY16 Maxima vehicles manufactured between June 3 and August 18 to the recall population.

Model Year 2013-2016 Nissan Altima 3.5 (equipped with a V6 engine) vehicles manufactured from March 30, 2012 (start of production) to August 18, 2015 at both the Smyrna, TN and Canton, MS plants.

The fuel tank supplier is:

Plastic Omnium-Anderson  
Auto Inergy Division  
5100 Old Pearman Dairy Road  
Anderson, SC 29265

Jim Hogg  
Plant Director, Anderson SC  
Auto Inergy Division  
Mobile: (864)-245-4707

3. Total Number of Vehicles Potentially Involved:

Approximately 18,648 Model Year 2016 Maxima vehicles  
Approximately 28,198 Model Year 2013-2016 Altima 3.5 vehicles

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

Unknown

## 5. Description of the Defect:

Nissan has determined that certain Model Year 2016 Maxima and certain Model Year 2013-2016 Altima 3.5 (equipped with a V6 engine) vehicles might contain fuel tanks with an out-of-specification dimension at the opening for the fuel sending unit. As a result, if this condition is present, the H-seal between the sending unit and fuel tank can possibly displace during a severe frontal crash. This can increase the potential risk of a fuel leak in the event of a crash, increasing the risk of injury to vehicle occupants.

## 6. Chronology of Principal Events:

July 10, 2015 – NHTSA performed an NCAP test on a MY 2016 Nissan Maxima. After the crash test was conducted, NHTSA observed a fuel leak after the vehicle was statically rotated 90 degrees. NHTSA informed Nissan of the results of the test and Nissan immediately began an investigation into the issue.

July 14, 2015 – While Nissan had not determined that other Maxima vehicles were similarly affected, out of an abundance of caution, Nissan initiated a dealer quality hold on Model Year 2016 Maxima vehicles to prevent outflow pending the results of the investigation.

July 16, 2015 – Nissan visited MGA to inspect the post-test NCAP vehicle. This included a visual inspection of the vehicle and fuel system, as well as pressure test of the fuel system. As a result of the pressure test and visual inspection, Nissan found that a fuel leak occurred at the seal between the fuel tank and fuel sending unit. Specifically, Nissan found an H-seal was displaced from its initial position, resulting in a loss of seal between the fuel tank and sending unit.

July 17, 2015 - Nissan began analyzing several fuel tanks to determine the potential cause of the H-seal displacement and fuel leak. Nissan hypothesized that the H-seal displacement may have been a result of an assembly or parts quality issue. As a result of this initial hypothesis, Nissan initiated an audit of the supplier manufacturing process as well as an inspection of additional fuel tanks.

July 20, 2015 – The initial supplier audit and parts inspection showed some deviation in the fuel tank “wall” height at the point of the fuel tank connection to the fuel sending unit. Nissan hypothesized that the reduced “wall” height could make it difficult for the operator to correctly position the H-seal during assembly, which may create a condition that could cause the H-seal to move out of position when loaded during a crash event; resulting in loss of seal. Nissan decided to conduct a series of vehicle crash tests

and sled tests to confirm the effect of the wall height and mis-positioned H-seal on vehicle performance.

Nissan engineers remained on site at the tank supplier, investigating the supplier assembly processes and tank production records from July 20 until July 27. Separately, Nissan visited the H-seal component supplier on July 23 and also the E-ring supplier on July 27, as part of the investigation.

July 21, 2015 – Nissan conducted a crash test with correct “wall” height fuel tanks and found no leaks. The H-seal was in the correct position after the test.

July 23, 2015 – Nissan conducted a teleconference with NHTSA to brief the agency on the status of the investigation and additional activities that were under way.

July 27, 2015 through July 28, 2015 – Nissan conducted a series of sled tests, trying to replicate the results of the July 10 NCAP test. However, the results were unable to be duplicated. Separately, Nissan conducted a vehicle crash test with a tank that contained a wall height consistent with the NHTSA Maxima NCAP test vehicle and an incorrect H-seal position. Nissan partially replicated the results of the July 10 NCAP test, as a small amount of fuel leaked during the crash test sequence; though no fuel leaked after the vehicle was statically rotated.

July 28, 2015 – Nissan determined that the subject MY16 Maxima vehicles contained a safety-related defect and that a safety recall campaign would be conducted.

July 29, 2015 – Nissan conducted a vehicle crash test with a tank that contained a wall height consistent with the NHTSA Maxima NCAP test vehicle and a correct H-seal position. The vehicle exhibited a fuel leak during the FMVSS 301 static rollover, which was consistent with the NHTSA Maxima NCAP test result.

July 29, 2015 – Nissan submitted a Part 573 Defect Information Report and issued a “stop sale” notice to dealers.

July 30, 2015 – Nissan conducted a detailed inspection on the July 10 NCAP test vehicle and fuel tank. The fuel tank was removed and measured at the crash test facility and returned to Nissan for further analysis.

August 4, 2015 – Nissan created a field fix concept (retainer ring that locks onto the fuel tank and keeps the H-seal in the groove area during impact).

August 13, 2015 – Nissan conducted a vehicle crash test to determine the “wall” height threshold for fuel leakage. This vehicle test achieved FMVSS

301 criteria; there was no fuel leak during or after the static vehicle rollover.

August 13, 2015 – Nissan conducted an Altima V6 engine vehicle crash test with a post-June 2, 2015 fuel tank and a correct H-seal position. This vehicle test achieved FMVSS 301 criteria; there was no fuel leak during or after the static vehicle rollover.

August 14, 2015 – Nissan conducted a second vehicle crash test to determine the “wall” height threshold for fuel leakage. This vehicle test achieved FMVSS 301 criteria; there was no fuel leak during or after the static vehicle rollover.

August 17, 2015 – Nissan completed the design of the retainer ring field fix.

August 21, 2015 – Nissan conducted an Altima I4 engine vehicle crash test with a post June 2, 2015 fuel tank and a correct H-seal position. This vehicle test achieved FMVSS 301 criteria; there was no fuel leak during or after the static vehicle rollover.

August 26, 2015 - Nissan sourced the retainer ring and kicked off tooling.

August 31, 2015 – Nissan conducted an Altima I4 engine vehicle crash test with a tank that contained a wall height consistent with the NHTSA Maxima NCAP test vehicle and a correct H-seal position. This vehicle test achieved FMVSS 301 criteria; there was no fuel leak during or after the static vehicle rollover.

September 1, 2015 – The supplier completed the retainer ring tooling and created validation parts.

September 3, 2015 - Nissan conducted an Altima V6 engine vehicle crash test with a tank that contained wall height consistent with the NHTSA Maxima NCAP test vehicle and a correct H-seal position. This vehicle test did not achieve FMVSS 301 criteria; there was fuel leak during the static vehicle rollover.

September 4, 2015 - Nissan conducted a Maxima vehicle crash test to confirm the retainer ring field repair effectiveness. The vehicle was tested with a tank that contained “wall” height consistent with the NHTSA Maxima NCAP test vehicle, a correct H-seal position and Retainer Ring. This vehicle test achieved FMVSS 301 criteria; there was no fuel leak during or after the static vehicle rollover.

Additionally, Nissan studied prior internal crash tests involving Nissan Altima vehicles, none of which exhibited the leak observed during the subject Model Year 2016 Maxima test. Nissan also measured a large

sample of fuel tanks from different production periods, and studied changes at the supplier facility. Concurrently with this investigation, Nissan also worked to refine the remedy described in Section 7.

September 10, 2015 – Nissan decided that certain Altima 3.5 vehicles should be added to the recall, but indicated to NHTSA that it did not yet determine the affected vehicle range.

Subsequent to September 10, 2015, Nissan worked to identify the population of the potentially affected Altima 3.5 vehicles by studying supplier production data. Additionally, Nissan collected and analyzed fuel tank measurements for tanks built after June 2, 2015.

Upon review of available data, Nissan concluded that Nissan Altima 3.5 vehicles manufactured since March 30, 2012 (start of production) will be recalled.

Upon further investigation and testing of supplier quality improvements implemented for vehicles manufactured on or after June 2, 2015, and out of abundance of caution; Nissan decided that both Altima and MY16 Maxima vehicles manufactured through August 18, 2015 will be recalled. Accordingly, Nissan decided to add MY16 Maxima vehicles manufactured between June 3 and August 18 to the existing recall population.

7. Description of Corrective Action:

Nissan will begin remediating the subject vehicles by installing a retainer ring in the sending unit/tank interface to help the H-seal to seat properly between the fuel tank and the fuel sending unit. This will prevent potential H-seal movement in a crash.

All affected vehicles have received or will receive Owner Notifications within 60 days of the applicable Part 573 notification dates.

8. Copy of Notices:

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