

Part 573 Safety Recall Report

22V-908

Manufacturer Name : McLaren Automotive Incorporated**Submission Date :** DEC 08, 2022**NHTSA Recall No. :** 22V-908**Manufacturer Recall No. :** NR**Manufacturer Information :**

Manufacturer Name : McLaren Automotive Incorporated

Address : 1405 S. Beltline Road, Suite 100

Coppell TX 75019

Company phone : 646-429-8916

Population :

Number of potentially involved : 164

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2023-2023 McLaren Artura

Vehicle Type : LOW VOLUME VEHICLES

Body Style : 2-DOOR

Power Train : GAS

Descriptive Information : The fuel pipes on the recalled vehicles were equipped with cold formed nuts, while the vehicles that were not included in the recall have fuel pipes that were equipped with fully machined nuts. McLaren was able to identify the vehicles with cold formed nuts by reviewing its production records.

Production Dates : OCT 08, 2021 - NOV 14, 2022

VIN Range 1 : Begin : SBM16AEA3PW000177 End : SBM16AEA1PW000372 Not sequential**Description of Defect :**

Description of the Defect : The cold formed nuts of the high-pressure fuel pipes can potentially loosen from the male threaded outlet connection of the gasoline direct injection fuel pump when subjected to vehicle loads, in particular during dynamic driving manoeuvres commonly associated with track running.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : If the nut becomes loose, the seal between the end flare of the fuel pipe and the sealing cone of the pump outlet may be disrupted, leading to the release of fuel. The end flare of the fuel pipe is situated close to engine components which have a high operating temperature. If fuel is released in proximity to these components, it could result in thermal activity.

Description of the Cause : McLaren has determined the cause to be the type of nut that was used to secure the fuel pipe to the gasoline direct injection fuel pump. The nut on the affected vehicles is a cold formed nut with rolled threads. McLaren has concluded that this nut may have a lower residual torque than is necessary to assure the

Identification of Any Warning
that can Occur : NR

connection. McLaren considers this to be due to a low coefficient of friction as a result of the process used to manufacture a cold formed nut compared to the process used to manufacture a fully machined nut.

Involved Components :

Component Name 1 : Left hand and right hand high-pressure fuel pipes

Component Description : Fuel pipes equipped with 15mm length, cold formed nuts with rolled threads)

Component Part Number : 16FB270CP.05 (left hand) and 16FB626CP.03 (right hand)

Supplier Identification :

Component Manufacturer

Name : NR

Address : NR

NR

Country : NR

Chronology :

The specification for the fuel injection system on the vehicle originally called for a fully machined nut to be used. However, during March 2021, the nut supplier notified McLaren of an imminent stock shortage of fully machined nuts and proposed a switch to cold formed nuts, which were already used widely by their other customers. The cold formed nuts had been successfully validated by the nut supplier and in durability testing performed by McLaren.

In June 2022, a vehicle with approximately 1000km of road use was driven on a race circuit, and a fuel leak occurred. Upon inspection, it was found that the cold formed nut of the left-hand high-pressure fuel pipe had loosened at the pump outlet connection.

McLaren immediately commenced an investigation. This investigation concluded that the cold formed nut had been attached with insufficient torque. To address this issue, McLaren developed and validated a bespoke tightening procedure for the cold formed nuts.

McLaren reworked all the vehicles which had cold formed nuts using the bespoke tightening procedure. Note, at this point, the vehicle was not yet been launched for sale to the general public so no vehicles produced with the original tightening procedure were ever released to the public.

In September 2022, McLaren began using fuel pipes with fully machined nuts on its production line. McLaren chose to take this action because the fully machined nuts were back in stock and did not require the bespoke tightening procedure that was required for the cold formed nuts.

At the beginning of November 2022, a different vehicle with approximately 2800km of road use was driven on a race circuit by a McLaren professional driver, and a fuel leak occurred. Upon inspection, it was found that the cold formed nut of the left-hand high-pressure fuel pipe had loosened at the pump outlet connection.

CHRONOLOGY IS CONTINUED IN THE "MANUFACTURER COMMENTS TO NHTSA STAFF" FIELD BELOW

Description of Remedy :

Description of Remedy Program : McLaren will replace the high-pressure fuel pipes, which are equipped with 15mm cold formed nuts with rolled threads, with new high-pressure fuel pipes equipped with 16.5mm fully machined nuts with cut threads.

This remedy will be carried out at no charge to the customer.

Since all of the covered vehicles are covered by warranty, there is no need for a reimbursement program.

How Remedy Component Differs from Recalled Component : The fully machined nuts with cut threads have a higher coefficient of friction than the cold formed nuts with rolled threads.

Identify How/When Recall Condition was Corrected in Production : On 17 September 2022, McLaren began using fuel pipes equipped with fully machined nuts.

Recall Schedule :

Description of Recall Schedule : NR

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : NR - NR

* NR - Not Reported