

Part 573 Safety Recall Report

22E-027

Manufacturer Name : Meritor, Inc.

Submission Date : APR 25, 2022

NHTSA Recall No. : 22E-027

Manufacturer Recall No. : NR



Manufacturer Information :

Manufacturer Name : Meritor, Inc.

Address : 2135 West Maple Road

Troy MI 48084

Company phone : 248-435-1725

Population :

Number of potentially involved : 536

Estimated percentage with defect : 1 %

Equipment Information :

Brand / Trade 1 : Meritor

Model : Drive Pinion 180 Series

Part No. : 180 Drive Pinion

Size : NR

Function : Transmit Torque

Descriptive Information : Some 180 Series Drive Pinions with low mileage (below 33,954 miles in linehaul vehicles and below 8,496 miles in non-linehaul vehicles) may fracture in the spline. The production date range of the suspect pinions is June 30, 2020 through March 3, 2022. The recalled population does not differ from products built prior to June 30, 2020. However, Meritor believes that products built prior to that date would have already failed if they had the defect. Products manufactured after March 3, 2022 have had both a manufacturing and an inspection process change. On February 18, 2022, Meritor changed its production process to eliminate the straightening of pinion shafts. Shafts that do not meet the specifications for straightness are not straightened or used. On March 3, 2022, Meritor validated new design dummy yokes on the assembly line and began 100% testing of the pinions with both an eddy current in-process inspection and an ultrasonic inspection at final. This 573 Safety Defect Report is specific to product shipped to Meritor's aftermarket customers only.

Production Dates : JUN 30, 2020 - MAR 03, 2022

Description of Defect :

Description of the Defect : 180 Series Drive Pinion fractured in the spline

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : In pinions containing the defect, the fracture of the pinion shaft is expected to

Description of the Safety Risk : occur predominantly during a vehicle start-up at low speed (<10 mph) when the maximum slip aligns with the maximum torque. The fracture location of the pinion shaft occurs just over one inch from the thread end of the drive pinion splines. In vehicles with susceptible air brake hose routings, a fractured pinion may allow for axial separation of the fractured portion of the pinion shaft and yoke which can allow them to hit the brake drop hose, causing the hose to rupture. If this occurred, it would unintentionally apply the parking brakes without the brake lights coming on, possibly resulting in a crash.

Description of the Cause : Meritor's working theory is that the fracture in the drive pinion spline is initiated during manufacturing in the straightening or bearing preload yoking process. Meritor is currently not using the straightening process and Meritor is currently conducting eddy current in-process inspection after the bearing preload yoking process in addition to ultrasonic inspection at final for containment as Meritor's investigation continues.

Identification of Any Warning that can Occur : If the pinion fractures, the driver may hear an audible noise and feel the vehicle slowing down due to loss of propulsion from the drive axle.

Involved Components :

Component Name : 180 Series Axle Carriers and Gear Sets

Component Description : Pinion

Component Part Number : 5-66167_02

Supplier Identification :

Component Manufacturer

Name : NR

Address : NR

NR

Country : NR

Chronology :

See attached word document titled "Chronology"

Description of Remedy :

Description of Remedy Program : Meritor will work with the customer and an appropriate repair facility to determine if the vehicle is affected. If repair is needed, the Differential Carrier Assembly will be replaced. Gear Sets that were sold separately and that have not yet been installed into a Differential Carrier Assembly will be replaced with a new Gear Set. The replacement will be done at no charge to the customer. Although Meritor believes all the customers that have experienced the problem have been covered by our warranty, Meritor will state in the §577 letter that if the customer has experienced the condition and it was not covered under warranty, Meritor will reimburse the customer for parts and labor connected with the replacement of the 180 Series pinion assembly.

How Remedy Component Differs from Recalled Component : The remedied component will meet Meritor's straightness specifications without having been subject to the straightening process, which is no longer used. The remedied component will pass both eddy current and ultrasonic inspection.

Identify How/When Recall Condition was Corrected in Production : On April 20, 2021, Meritor implemented ultrasonic testing at final inspection. Meritor eliminated the straightening process on February 18, 2022. On March 3, 2022, Meritor validated new design dummy yokes on the assembly line and began 100% testing of the pinions with both an eddy current in-process inspection and an ultrasonic inspection at final.

Recall Schedule :

Description of Recall Schedule : Owners notifications will be sent to aftermarket customers affected by the suspect population.

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : MAY 02, 2022 - MAY 13, 2022

Purchaser Information :

The following manufacturers purchased this defective/noncompliant equipment for possible use or installation in new motor vehicles or new items of motor vehicle equipment:

Name : NR

Address : NR

NR

Country : NR

Company Phone : NR

* NR - Not Reported