

Part 573 Safety Recall Report

23V-467

Manufacturer Name : Daimler Trucks North America, LLC**Submission Date :** JUL 06, 2023**NHTSA Recall No. :** 23V-467**Manufacturer Recall No. :** FL979**Manufacturer Information :****Population :**

Manufacturer Name : Daimler Trucks North America, LLC

Number of potentially involved : 82

Address : 4747 N. Channel Avenue

Estimated percentage with defect : 100 %

Portland OR 97217-3849

Company phone : 800-745-8000

Vehicle Information :

Vehicle 1 : 2023-2024 Freightliner eCascadia

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : 2-DOOR

Power Train : HYBRID ELECTRIC

Descriptive Information : The recall population includes MY 2023-2024 Freightliner eCascadia electric vehicles built with an e-axle(s) produced within a specific production period. These e-axes may have insufficiently welded planetary gear sets. Vehicles outside the population do not have planetary gear sets produced during the suspect time period.

Production Dates : JAN 19, 2023 - APR 13, 2023

VIN Range 1 : Begin :

NR

End : NR

 Not sequential**Description of Defect :**

Description of the Defect : The affected vehicles may be equipped with one or more e-axes, depending on the configuration of the vehicle. Within each e-axle assembly, a planetary gear set is located between the e-motor and the final drive. Due to a deviation in the supplier's welding process during a specific time frame, certain planetary gear sets may have been insufficiently welded to the base plate and could fracture when exposed to high levels of torque and/or significant road surface vibrations. If a fracture occurs at the weld seam, the connection between the e-motor and the final drive can separate without warning to the driver.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : If the connection between the e-motor and final drive separates, torque cannot be transferred to the drive wheels which can result in an undetectable and sudden loss of motive power and without the ability to restart the vehicle, thereby increasing the risk of a crash.

Description of the Cause : Insufficient welding of planetary gear set to the baseplate.

Identification of Any Warning N/A
that can Occur :

Involved Components :

Component Name 1 : E-axle Assembly Planetary gear set

Component Description : Electric axle

Component Part Number : D746381

Component Name 2 : E-axle assembly Planetary gear set

Component Description : Electric axle

Component Part Number : D746383

Component Name 3 : E-axle Assembly Planetary gear set

Component Description : Electric axle

Component Part Number : D746384

Supplier Identification :

Component Manufacturer

Name : Mercedes-Benz Hedelfingen

Address : Am Ostkai 53

Stuttgart Foreign States 70329

Country : Germany

Chronology :

On February 20, 2023, DTNA conducted routine rough road testing of an e-Cascadia vehicle at its facility which involved driving the vehicle over cement risers and other unpaved and harsh road surfaces. During this testing, the truck experienced a loss of motive power while traveling at low speed. On March 2, 2023, DTNA conducted a tear down of the affected e-axle assembly where a fracture at the weld seam where the planetary gear attaches the baseplate was observed. The parts were sent for additional analysis.

DTNA had opened an investigation to further analyze the issue, but on March 28, 2023, this investigation was

closed on the basis that the failure had occurred during vehicle testing and under extreme road conditions that were not representative of real-world driving. Further, there were no reports of actual failures in the field (including after a review of vehicle telematics data) and it was believed that if a failure were to occur, the driver would have sufficient advanced warning to be able to respond. On May 4, 2023, DTNA opened a separate investigation after a report that the electric motor of an e-axle had decoupled, resulting in vehicle loss of forward movement. In this case, the instrument cluster did not display a telltale and did not generate a diagnostic trouble code for loss of forward movement which suggested the issue was electrical in nature. At the time there was no apparent connection between this topic and the fracture of the weld seam in the internal test vehicle.

On June 7, 2023, DTNA was made aware of the first failure in the field potentially related to a fractured weld seam where the driver described the vehicle as struggling to move forward. Additional similar reports were received between June 7 – 28, 2023, where the drivers noted an inability to move forward and noting a gear pop. When the e-axle with the decoupled motor described above was later analyzed, it was discovered that the weld... (see attachment for further information).

Description of Remedy :

Description of Remedy Program : DTNA is preparing the remedy which is currently under development. Once available, the remedy will be performed free of charge by Daimler Truck North America authorized service facilities. Details of the reimbursement plan will be included in the owner's notification letter. Owners are directed to seek reimbursement for pre-recall notification repairs through authorized dealers.

How Remedy Component Differs from Recalled Component : The remedy component will have planetary gear sets that are sufficiently welded to the baseplate.

Identify How/When Recall Condition was Corrected in Production : The supplier made adjustments to the welding process so that parts produced after March 3, 2023, were sufficiently welded.

Recall Schedule :

Description of Recall Schedule : Customer notification will be made by first class mail using Daimler Trucks North America records to determine the customers affected.

Planned Dealer Notification Date : SEP 03, 2023 - SEP 03, 2023

Planned Owner Notification Date : SEP 03, 2023 - SEP 03, 2023

* NR - Not Reported