

Part 573 Safety Recall Report

23V-453

Manufacturer Name : Daimler Trucks North America, LLC**Submission Date :** AUG 10, 2023**NHTSA Recall No. :** 23V-453**Manufacturer Recall No. :** FL978**Manufacturer Information :**

Manufacturer Name : Daimler Trucks North America, LLC

Address : 4747 N. Channel Avenue

Portland OR 97217-3849

Company phone : 800-745-8000

Population :

Number of potentially involved : 332

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2023-2024 Freightliner eCascadia

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : HYBRID ELECTRIC

Descriptive Information : The recall population includes all MY 2023-2024 Freightliner eCascadia electric vehicles. These vehicles were built with an interface between the e-powertrain to the service brakes where the software parameters allow the service brakes to incorrectly estimate the vehicle's mass. Vehicles outside of the recall population do not have an e-powertrain and have the correct software parameters to accurately estimate the vehicle's mass.

Production Dates : FEB 23, 2022 - JUN 22, 2023

VIN Range 1 : Begin :

NR

End : NR

 Not sequential**Description of Noncompliance :**

Description of the Noncompliance : Due to incorrect software parameterization, the interface between the e-powertrain and the service brake system may allow the service brake system to underestimate the vehicle's mass during the mass learning process. If the vehicle's mass is not accurately estimated, this could cause the vehicle's Electronic Stability Control (ESC) system to intervene later than required and/or with insufficient braking force. As such, these vehicles fail to comply with the requirements of Federal Motor Vehicle Safety Standard (FMVSS) number 136, "Electronic stability control systems for heavy vehicles."

FMVSS 1 : 136 - Electronic Stability Control Systems on Heavy Vehicles

FMVSS 2 : NR

Description of the Safety Risk : If the ESC system does not perform in accordance with the FMVSS 136 requirements, it may affect the vehicle's ability to maintain control during certain types of braking events where ESC

Description of the Cause : is needed and could lead to an increased risk of a crash. The interface between the e-powertrain and the service brakes was defined based on DTNA diesel applications and was not changed to adapt it to an electric powertrain.

Identification of Any Warning that can Occur : N/A

Involved Components :

Component Name 1 : Mass Estimator Parameter

Component Description : Vehicle Mass Estimator

Component Part Number : N/A

Supplier Identification :

Component Manufacturer

Name : Daimler Truck North America

Address : 4555 N Channel Ave.
Portland Oregon 97217

Country : United States

Chronology :

On June 12, 2023, during routine on-road vehicle testing, DTNA observed that the test vehicle was braking too lightly when using adaptive cruise control. On June 14, 2023, DTNA opened an investigation into this issue. The investigation focused on reviewing the vehicle's mass learning function, which includes among other things an estimation of the vehicle's mass, and its impact on braking performance in relation to safety systems. DTNA found that due to incorrect software parameterization, the interface between the e-powertrain and the service brakes was not allowing the service brakes to accurately calculate the vehicle's mass, instead causing it to underestimate the vehicle's mass. DTNA further considered the possible impacts of the parameterization issue, including whether it could affect the ESC system's performance. On June 21st, although DTNA had not reached certainty that the electronic stability control system would function improperly, DTNA's analysis suggested that a vehicle with the incorrect parameterization could brake too late or under brake during the FMVSS 136 J-turn test maneuver. Therefore, out of an abundance of caution, DTNA decided to issue a voluntary non-compliance recall. DTNA has received 0 warranty claims and field reports potentially related to this issue and is not aware of any accidents or injuries potentially related to this issue. On July 12, 2023, DTNA amended its Defect Information Report to correct the production start year due to a typographical error. On August 10, 2023, DTNA amended its Defect Information Report to reflect the final remedy for the recall.

Description of Remedy :

Description of Remedy Program : A Daimler Truck North America authorized service facility will update the ABS controller software parameters. The remedy will take approximately one hour and will be performed free of charge. 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 : Remedy software will include correct parameterization for the mass learning function.

Identify How/When Recall Condition was Corrected in Production : DTNA will introduce software with updated parameterization for the mass learning function on future production e-powertrain vehicles.

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 : AUG 26, 2023 - AUG 26, 2023

Planned Owner Notification Date : AUG 26, 2023 - AUG 26, 2023

* NR - Not Reported