

Amended Defect Information Report

(Section 573.6)

FL-958

Date of Submission: November 9, 2022 (November 1, 2022)

Manufacturer: Daimler Truck North America LLC
P.O. BOX 3849
Portland, Oregon 97208

Type of Report: **Safety Defect** **Non-Compliance**

Vehicle Information

Model Yr. Start: 2017 **Model Yr. End:** 2023

Make: Freightliner, Western Star

Model: Cascadia, 49X, 47X, 57X, Business Class M2, 114SD

Production Dates: **Begin:** 03/08/2016 **End:** 06/18/22

Type: Truck/Tractor

Descriptive Information:

Only certain vehicles equipped with painted front axle modulator valves and Adaptive Cruise Control (ACC) technology are included in this recall.

Number potentially involved: 219,390 **Estimated percentage of involve with defect:**
0.1%

Defect Description

Describe the defect:

On certain vehicles, chemical corrosion could affect the functionality of the brake modulator valve, which during an Adaptive Cruise Control (ACC) braking event may result in full system pressure applied to one front wheel end causing brake pull from differential in brake force. Regular service brakes are unaffected.

If a noncompliance, provide the applicable FMVSS: N/A

Describe the safety risk:

A full system pressure applied to one front wheel end could lead to a brake pull resulting in a sudden change in vehicle direction due to uneven braking on the front axle increasing the risk of a motor vehicle crash.

Identify any warning, which can precede or occur: Driver's may get an ABS light prior to complete valve contamination.

If applicable, identify the manufacture of the defective or noncompliant component: Braking System

Involved Components

Component Name: Single ABS Modulator Valve

Component Description: Quick Release Pneumatic Valve

Component Part Number: WAB472 196 037 0, WAB472 196 025 0

Supplier Identification:

ZF Group

12001 Tech Center Drive

Livonia, MI, 48150 USA

Scott Paxton

Director, Regulatory Legal Counsel

Mobile: 612/227-9864

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Component Manufacturer: ZF Group

Chronology of Noncompliance Determination

Provide the chronology of events leading up to the defect decision or test data for the noncompliance decision.

In 2020, DTNA recalled unpainted brake modulator valves due to possible corrosion and implemented a remedy of painted valves. On September 14, 2022, DTNA received two reports of vehicle pull during an Adaptive Cruise Control (ACC) event from a single isolated customer with the painted valves. The first report mentioned about two cases of unintended brake pull to the left side, while the second mentioned one case of unintended brake pull to the right side. The dealer was able to isolate the failure to the painted steer single modulator valve after repairing the vehicle. The reports all center around vehicles from one limited geographic area. In or around that time, DTNA promptly opened an investigation to determine the scope of the

issue. Additionally, DTNA promptly analyzed the failed parts and found debris associated with corrosion. Around the same time, DTNA conducted a warranty seek and was unable to find claims alleging brake pull events caused by subject valve corrosion. However, as part of its due diligence, DTNA worked with customers in various locations starting in early October 2022 to randomly select parts to inspect. 36 valves were returned from various parts of the east salt belt region in Canada and the United States and shipped to the supplier for further evaluation. Corrosion testing results on 5 trucks (2 different customers) found through late October 2022 revealed varying degrees of corrosion build up on the valves installed on trucks operating in the aggressive salt belt region of South East Canada (Quebec). Around the same time, DTNA received corrosion testing results on valves installed on trucks based in the US's aggressive salt belt region (Maine and New York), and there was some level of corrosion found. On or about late October and early November, DTNA decided to recall in Canada where corrosion was first observed and then in the US where less severe corrosion was later found.

As DTNA moved quickly to determine a recall, some facts remain unknown. DTNA is continuing to investigate the impact of other external braking events, such as Electronic Stability Control (ESC) and Anti-lock Braking System (ABS).

DTNA amended the recall population on November 3, 2022, out of an abundance of caution, to include other vehicle models built with the subject steer modulator valves, despite having a different valve mounting style and no knowledge of any field failures. DTNA discovered during the assessment that mounting is an important variable for debris intrusion, but there are other variables that may also play an important role in corrosion.

The DIR was updated on November 9, 2022 by DTNA to include the most accurate affected population based on the best-known registration domicile location and the best-known supplier identification information.

Identify the Remedy

Describe the defect/noncompliance remedy program, including the manufacture's plan for reimbursement.

Affected vehicles will receive two front anodized modulator valves (one each for the left and right). Repairs will be released in phases based on locations of the vehicle and repairs will be performed by Daimler Trucks North America authorized service facilities. Customer notification will be done by first class mail using Daimler Trucks North America records to determine the customers affected. Daimler Truck North America shall be offering a refund for owner-paid repairs covered by this recall if the repair was performed prior to the date indicated in the reimbursement plan, which will be posted with owner's notification letter. Owners are directed to seek reimbursement through authorized deal.

Identify the Recall Schedule

Describe the recall schedule for notifications:

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

Planned Dealer Notification Begin Date: 12/30/2022

Planned Dealer Notification End Date: 12/30/2022

Planned Owner Notification Begin Date: 12/30/2022

Planned Owner Notification End Date: 12/30/2022

Manufacture's identification code for this recall (if applicable): FL-958

DTNA Representative;



Sam Geser
Product Defect Investigation Engineering Manager