

Amended Defect Information Report

(Section 573.6)

FL- 851

Date of Submission: *December 23, 2021*

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

Type of Report: Safety Defect Non-Compliance

Vehicle Information

Model Yr. Start: 2020 **Model Yr. End:** 2021

Make: Freightliner

Model: New Cascadia

Production Dates: **Begin:** 01/16/2019 **End:** 03/27/2020

Descriptive Information:

On the affected vehicles, during certain Advanced Brake Assist (ABA) events that have progressed to require a full emergency brake application to avoid a collision, the hazard warning lights may activate automatically in the moments immediately before the vehicle comes to a complete stop, and flashes at a rate of 140 flashes per min.

Number potentially involved: 24,282 **Estimated percentage of involve with defect:** 100%

Defect / Non-compliance Description

For this Defect/Non-compliance:

Describe the defect or non-compliance:

On the affected vehicles, during certain Advanced Brake Assist (ABA) events that have progressed to require a full emergency brake application to avoid a collision, the hazard warning lights may activate automatically in the moments immediately before the vehicle comes to a complete stop and flashes at a rate of 140 flashes per min. FMVSS 108, requires the hazard warning signal lights to be driver controlled and flashing rate to be between 60-120 flashes per min and that the activation of the hazard warning operating unit be "driver controlled."

If a non-compliance, provide the applicable FMVSS:

FMVSS 108

Describe the safety risk:

DTNA intends to petition the agency pursuant to 49 CFR 556 for exemption from the notice and remedy provisions of the Safety Act on the grounds that the automatic activation portion of this non-compliance is inconsequential as it relates to motor vehicle safety.

The automatic activation of the hazard lamps communicates to other motorists the potential for an impending and possibly severe crash. ABA events that progress to a full emergency braking stage are rare and only occurs after multiple warnings to the driver, which the driver has ignored or to which the driver is unable to respond. These include optical acoustic warning, haptic warning (partial braking) during which time a driver can disengage ABA before the hazard warning signal is automatically activated and begins to flash at 140 flashes per min. The automatic activation of the hazard lamps occurs within the moments (seconds or fractions of a second) before the vehicle (a Class 8 truck with a GVWR of above 50,000 lbs.) employs a significant de-rating event with a force of approximately 1G. The duration of the hazard lamp activation under these conditions lasts a matter of seconds, if the ABA system is able to avert the crash. DTNA has already submitted to NHTSA an inconsequentiality petition regarding the flash rate.

Identify any warning, which can precede or occur:

ABA events which progress to a full emergency braking stage occurs only after multiple warnings to the driver including auditory and visual warnings, haptic braking which involves partial braking along with auditory and visual warnings.

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

N/A

Involved Components

Component Name: Detroit Assurance 5.0

Component Description: Advanced Drivers Assistance System (ADAS)

Component Part Number: N/A

Chronology of Defect / Non-compliance Determination

Provide the chronology of events leading up to the defect decision or test data for the non-compliance decision.

February 2020, DTNA began an investigation to review all its features related to ABA events as part of a study to develop systems for new trucks. During this study, it was identified that

certain features may need further review to ensure the current product met the provisions of FMVSS 108. March 2020 through April 2020, Product validation conducted tests on certain vehicles to identify any potential non-compliance, and an extensive engineering investigation was undertaken to understand all the features of ABA and how they interact together. During this study, it was identified that in certain situations the hazard warning signals flash at a rate of 140 flashes per min. An in-depth review of NHTSA regulations and interpretations related to this issue indicated a potential non-compliance with the flash rate provisions. May 6, 2020, DTNA determined that a non-compliance existed as to the flash rate for the hazard warning lamps and decided to file a Part 573 non-compliance information report and petition for exemption from the notice and remedy provisions of the Safety Act for this issue. DTNA believes that this non-compliance is inconsequential as it relates to motor vehicle safety, as the occurrence will be extremely rare, for a very short duration and does not contribute to confusion or distraction for other motorists. DTNA also recognized that the hazards automatically flash in severe brake events but deemed this not a non-compliance, nor an issue that needed NHTSA approval, based upon the permission granted to GM in essentially similar situations.

June 4, 2020, DTNA filed a petition for exemption from notification and remedy provisions of motor vehicle safety act for non-compliance with FMVSS no. 108, lamps, reflective devices and associated equipment. Between early June 2020 to Late July 2020, DTNA communicated with NHTSA, at the agency's request, regarding DTNA's non-compliance information report and inconsequentiality petition. DTNA made several verbal updates, presentations and provided evidence and data to support the inconsequentiality petition pertaining to hazard warning signals flashing at 140 flashes per min during certain ABA events that involves full braking. July 13, 2020, upon NHTSA's request, DTNA amended the inconsequentiality petition to include FMVSS S14.9.3.9.3 – flasher performance requirements as an additional non-compliance basis.

Between late August 2021 to late September 2021, DTNA again reviewed the inconsequentiality petition with NHTSA at the agency's request. At that time, NHTSA advised DTNA to consider automatic activation of the hazard lamps as an additional aspect of the non-compliance analysis. October 4, 2021, DTNA met with NHTSA and presented the company's basis for why it did not believe that automatic activation of the hazard warning lamps during the course of a severe automatic emergency braking event rose to the level of a non-compliance. DTNA presented, among other things, the severe and limited time frame for the automatic activation of the hazard lamps, the progressive phases of automatic braking required to trigger the hazard lamps and analysis of similar circumstances where the agency had concluded that automatic activation of the hazard lamps was appropriate to communicate a vehicular emergency. DTNA furnished the agency with additional information that it requested in the following weeks. On December 20, 2021, DTNA received a verbal report from NHTSA, which described that the

agency views automatic activation of hazard warning signals during an emergency braking event in the DTNA vehicles as a non-compliance. December 22, 2021, based on this feedback from NHTSA, DTNA determined that a non-compliance existed and decided to amend Part 573 non-compliance information report and petition for exemption from the notice and remedy provisions of the Safety Act for this issue. DTNA believes that this non-compliance is inconsequential as it relates to motor vehicle safety, and will supply an inconsequentiality petition for the agency's consideration.

Identify the Remedy

Describe the defect/non-compliance remedy program, including the manufacture's plan for reimbursement.

DTNA intends to petition the agency pursuant to 49 CFR 556 for exemption from the notice and remedy provisions of the safety act on the grounds this non-compliance is nonconsequential as it relates to motor vehicle safety.

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: N/A

Planned Dealer Notification End Date: N/A

Planned Owner Notification Begin Date: N/A

Planned Owner Notification End Date: N/A

Manufacture's identification code for this recall (if applicable): FL-851

DTNA Representative;



Tiffani Torgeson

Manager

Compliance and Regulatory Affairs