

Part 573 Safety Recall Report

21E-024

Manufacturer Name : Cummins, Inc.

Submission Date : AUG 31, 2021

NHTSA Recall No. : 21E-024

Manufacturer Recall No. : C2450, C2482



Manufacturer Information :

Manufacturer Name : Cummins, Inc.

Address : Box 3005, Mail Code 41303

Columbus IN 47202-3005

Company phone : 812-377-5000

Population :

Number of potentially involved : 333

Estimated percentage with defect : 100 %

Equipment Information :

Brand / Trade 1 : Cummins Inc.

Model : PD7000

Part No. : PD7000

Size : NR

Function : Electric Drive

Descriptive Information : The subject Electric Drivetrain consists of high voltage batteries and other components to control and distribute high voltage to a drive motor and other components. The system may also supply high voltage to the vehicle air conditioner, which is not supplied by Cummins. These systems were sold as original equipment in certain school busses and as original or upfit equipment in certain medium duty trucks. This recall consists of the entire population of PD7000 systems built prior to March 9, 2021.

Production Dates : JUN 01, 2018 - MAR 08, 2021

Description of Defect :

Description of the Defect : The subject Electric Drivetrain systems, as originally designed, did not include continuous isolation measurement capability to detect isolation faults in the system (between high voltage components and vehicle chassis ground) when the high voltage contactors are closed.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : If a high voltage isolation fault is not detected and service personnel do not follow prescribed service procedures, they may be exposed to high voltage, increasing the risk of electrical shock.

Description of the Cause : The design does not provide continuous isolation measurement capability when the contactors are closed.

Identification of Any Warning that can Occur : None.

Involved Components :

Component Name : Box, High Voltage Junction

Component Description : High Voltage Power Distribution Unit

Component Part Number : 300444

Component Name : Module, Energy Distribution

Component Description : Battery Control Unit

Component Part Number : 300477, 300475, 5675937, 5636566, 5636567

Component Name : Software, Control

Component Description : Vehicle Control Unit Software

Component Part Number : 5611880, 5678529

Supplier Identification :

Component Manufacturer

Name : N/A

Address : NR

NR

Country : NR

Chronology :

May 28, 2020 – As Cummins started to develop improved isolation measurement capability, Cummins considered whether improvements should be applied to previously produced product. June – October, 2020 – Cummins analyzed the system design, tested the isolation measurement capability, and implemented product improvements in the system hardware and software to improve the isolation measurement capability. October 2020 – March 9, 2021 – Cummins conducted additional testing of the improved system and updated its functionality in software that was identified in the testing. February 25 – March 23, 2021 – Cummins

completed a Product Safety Hazard Analysis of the issue, assessing the need to install the improved isolation measurement capability in the previously produced product, and escalated the issue to the Cummins Product Safety Defect Board. March 23, 2021 –Cummins decided to conduct a safety campaign to install the updated isolation measurement capability in previously produced product as a safety improvement. To date, there have been no reports of accidents or injuries related to this condition.

Description of Remedy :

Description of Remedy Program : Pursuant to 49 CFR 577.11 (e), Cummins requests that it be exempt from providing notification of a reimbursement plan. Any pre-notification product failure would have been replaced under the manufacturer's limited warranty. Accordingly, no person would be eligible for reimbursement pursuant to 573.13. The improvement consists of installing or updating different combinations of High Voltage Power Distribution Unit hardware, software in the Vehicle Control Unit and software in the Battery. It may be necessary to update various miscellaneous hardware for compatibility with the improved hardware (e.g., wire harness and fuses) to effect the improvement. The improvement combination of hardware and software depends on the build period of a particular unit. These combinations will be delineated in the published campaign instructions. The remedy will be completed in two distinct groups due to different configurations of hardware and software; therefore, Cummins will release unique safety campaigns for the two groups. Group 1 consists of units manufactured between June 1, 2018 and August 12, 2020. Group 2 consists of units manufactured between May 14, 2020 and March 8, 2021.

How Remedy Component Differs from Recalled Component : The improved hardware and software will have unique part numbers.

Identify How/When Recall Condition was Corrected in Production : Production began with the entire system capable of continuous isolation monitoring on March 9, 2021.

Recall Schedule :

Description of Recall Schedule : Cummins expects to notify affected OEMs no later than April 9, 2021. Cummins will conduct the recall and notify owners. Cummins expects to send interim notification letters to owners by May 28, 2021. The remedy is expected to be available and communicated to dealers on or about September 1, 2021. Cummins expects to mail owner letters communicating the availability of the remedy during September 2021. Amendment: Cummins expects to release the remedy (C2450) for Group 2 on or about October 1, 2021 and expects to mail owner letters communicating the availability of the remedy during October 2021.

Cummins expects to release the remedy (C2482) for Group 1 on or about January 15, 2022 and expects to mail owner letters communicating the availability of the remedy by February 15, 2022. Interim owner letters were previously issued to both groups.

Planned Dealer Notification Date : OCT 01, 2021 - JAN 15, 2022

Planned Owner Notification Date : MAY 28, 2021 - MAY 28, 2021

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 : Blue Bird Corporation

Address : 3920 Arkwright Road
Macon GA 31210

Country : US

Company Phone : 4788222148

Name : Spartan Motors

Address : 1541 Reynolds Road
Charlotte MI 48813

Country : US

Company Phone : 51754364003275

Name : Thomas Built Buses, Inc.

Address : 1408 Courtesy Road
High Point NC 27260

Country : US

Company Phone : 3368784825

Name : Daimler Trucks North America

Address : 4747 N. Channel Drive
Portland OR 97217

Country : US

Company Phone : 5037457385

* NR - Not Reported