

Part 573 Safety Recall Report

24V-546

Manufacturer Name : Motiv Power Systems**Submission Date :** JUL 22, 2024**NHTSA Recall No. :** 24V-546**Manufacturer Recall No. :** none**Manufacturer Information :**

Manufacturer Name : Motiv Power Systems

Address : 330 Hatch Drive

Foster City CA 94404

Company phone : 650-425-3032

Population :

Number of potentially involved : 227

Estimated percentage with defect : NR

Vehicle Information :

Vehicle 1 : 2021-2024 Motiv Gen 5 EPIC E-450, EPIC 4 BEV

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : ALL

Power Train : NR

Descriptive Information : 100% of vehicles in date range are included.

Production Dates : JAN 01, 2021 - MAR 01, 2024

VIN Range 1 : Begin : NR End : NR

 Not sequential

Vehicle 2 : 2019-2023 Motiv Gen 5 EPIC F-59 BEV

Vehicle Type :

Body Style : VAN

Power Train : NR

Descriptive Information : All Step Van.

Production Dates : JAN 01, 2019 - DEC 31, 2020

VIN Range 1 : Begin : NR End : NR

 Not sequential

Vehicle 3 : 2019-2020 Motiv Gen 5 EPIC F-53 BEV

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : OTHER

Power Train : NR

Descriptive Information : All Trolley Bus.

Production Dates : JAN 01, 2019 - DEC 31, 2023

VIN Range 1 : Begin : NR End : NR

 Not sequential

Description of Defect :

Description of the Defect : Motiv Power Systems, Inc. has determined that on certain vehicles converted to a Motiv Gen 5 EPIC (E-450, F-59, F-53 models) powertrain, the vehicle control software could misclassify a loss of isolation between the chassis and high voltage system during operation. This in turn could result in a loss of vehicle propulsion and power-assistance for steering and braking.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : Loss of propulsion while the vehicle is in motion could increase the risk of a crash.

Description of the Cause : Vehicle control software coding error.

Identification of Any Warning that can Occur : None. The operator would not receive a warning in advance of such an occurrence.

Involved Components :

Component Name 1 : Vehicle Control Software

Component Description : NR

Component Part Number : Software Rev 2.7.3.b

Supplier Identification :**Component Manufacturer**

Name : NR

Address : NR

NR

Country : NR

Chronology :

6/14/2024: Motiv received a customer report of a loss of propulsion on a Ford E-450 Motiv Gen 5 EPIC4 vehicle. The customer reported a loss of propulsion while driving. Motiv immediately grounded the vehicle and began an investigation of the incident.

6/14 – 6/21/2024: Motiv field technicians conducted an inspection of the affected vehicle. That inspection determined the vehicle had experienced a temporary loss of isolation between the High Voltage (HV) system and vehicle chassis.

6/21 – 7/15/2024: Motiv conducted additional analysis and testing to determine the root cause of the reported loss of propulsion. The investigation determined that software in the vehicle's powertrain controller was responsible for immediately shutting down the HV batteries in response to the loss of isolation fault. This was a deviation from the software design, which provides that the response to an isolation fault should be to shut down the High Voltage system only at the end of the drive cycle (when the vehicle is shifted into Park)

7/16/2024 – Further review determined that the shutdown of the High Voltage system while the vehicle was in motion was caused by a software misclassification of the loss of isolation as a more severe fault. This misclassification led to the shutdown of the High Voltage system. As a result of this determination, Motiv concluded that a potential safety risk could not be ruled out and decided to conduct a recall. Motiv is currently aware of 1 field report (including warranty claims, field reports, and service reports) received in the US potentially related to this defect. Motiv is not aware of any reported crashes, injuries, or property damage in connection with the defect.

Description of Remedy :

Description of Remedy Program : A software patch will be developed, tested, and released over-the-air to all potentially affected vehicles free of charge to the customer. That patch will correct the software error so that upon detection of a loss of isolation, the vehicle will continue normal operation until the vehicle shifts into Park gear. At that point the HV batteries will be shut down until the loss of isolation fault is resolved and the fault is cleared.

How Remedy Component Differs from Recalled Component : The remedy software will allow vehicle to continue operating until the vehicle is shifted into Park gear, at which point the HV batteries will shut down until the isolation fault is resolved.

Identify How/When Recall Condition was Corrected in Production : A production stop ship is in effect until software remedy is available.

Recall Schedule :

Description of Recall Schedule : NR

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : AUG 30, 2024 - NR

* NR - Not Reported