

Part 573 Safety Recall Report

22E-065

Manufacturer Name : Proterra Operating Company, Inc.

Submission Date : MAR 07, 2023

NHTSA Recall No. : 22E-065

Manufacturer Recall No. : NR



Manufacturer Information :

Manufacturer Name : Proterra Operating Company, Inc.

Address : 1815 Rollins Road
Burlingame CA 94010

Company phone : 4380000

Population :

Number of potentially involved : 99

Estimated percentage with defect : 85 %

Equipment Information :

Brand / Trade 1 : Proterra Powered

Model : S1-15

Part No. : 129-6202

Size : NR

Function : HV Battery

Descriptive Information : Certain battery packs manufactured by Proterra between December 1, 2021, and July 15, 2022, have a potentially weakened joint in a foil harness that could cause an intermittent connectivity issue that leads to the battery management system (BMS) terminating power. After parts inspections and discussions with the supplier of the affected parts, Proterra determined that the termination of power would only occur in battery packs with a single-string application. Battery packs outside of the recall population use a multi-string application.

Production Dates : DEC 01, 2021 - JUL 15, 2022

Brand / Trade 2 : Proterra Powered

Model : S1-15

Part No. : 139-6181

Size : NR

Function : HV Battery

Descriptive Information : Certain battery packs manufactured by Proterra between December 1, 2021, and July 15, 2022, have a potentially weakened joint in a foil harness that could cause an intermittent connectivity issue that leads to the battery management system (BMS) terminating power. After parts inspections and discussions with the supplier of the affected parts, Proterra determined that the termination of power would only occur in battery packs with a single-string application. Battery packs outside of the recall population use a multi-string application.

Production Dates : DEC 01, 2021 - JUL 15, 2022

Brand / Trade 3 : Proterra Powered

Model : S1-15

Part No. : 163-3642

Size : NR

Function : HV Battery

Descriptive Information : Certain battery packs manufactured by Proterra between December 1, 2021, and July 15, 2022, have a potentially weakened joint in a foil harness that could cause an intermittent connectivity issue that leads to the battery management system (BMS) terminating power. After parts inspections and discussions with the supplier of the affected parts, Proterra determined that the termination of power would only occur in battery packs with a single-string application. Battery packs outside of the recall population use a multi-string application.

Production Dates : DEC 01, 2021 - JUL 15, 2022

Description of Defect :

Description of the Defect : The joint connecting the voltage sense foil harness and the PCB adapter board lacks sufficient solder, resulting in a potentially weakened joint. A weakened joint may create an intermittent connectivity issue that causes the BMS to detect an erroneous voltage measurement which would lead to the BMS terminating power, in order to isolate the battery pack from the remainder of the high voltage system on the vehicle. As a result, on a single-string battery pack application, the vehicle would experience the loss of propulsion. If the power is so terminated on one of the packs in a multi-string battery pack application, the vehicle would not lose propulsion because the additional battery pack would not be terminated.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : Loss of vehicle propulsion could increase the risk of a crash.

Description of the Cause : An error in a supplier's production process resulted in insufficient solder in the joint connecting the voltage sense foil harness and the PCB adapter board.

Identification of Any Warning that can Occur : NR

Involved Components :

Component Name : Manaflex Foil Harness

Component Description : Manaflex Foil Harness

Component Part Number : 050029

Supplier Identification :

Component Manufacturer

Name : Taicang Manaflex Technology Co., LTD

Address : No. 3 Building
No. 100 Chenmenjing Road Taicang Foreign States

Country : China

Chronology :

In March 2022, Proterra identified a continuity issue based on intermittent signals from the module controls to the battery controls. Our internal investigation identified a lack of signals that suggested an issue with the foil harness during battery production.

In March - May 2022, additional parts were rejected as a result of continuity testing, after which Proterra sent the supplier an identified failed foil harness and requested that the supplier begin 100% sorting based on continuity readings.

In June 2022, Proterra performed further inspections at its own production facilities for this continuity issue.

By early July 2022, upon further engineering analysis, Proterra confirmed the foil harness as the source of the low voltage readings.

On July 25, 2022, Proterra's Safety Committee reviewed the issue and decided to conduct a voluntary safety recall. The Safety Committee determined that the loss of propulsion would only result in a single-string application.

As of July 25, 2022, Proterra is not aware of any warranty claims or any field or service reports. No injuries or accidents have been reported related to this issue.

Description of Remedy :

Description of Remedy Program : Affected battery packs within the recall population will be removed and replaced with non-defective battery packs.

All battery packs within the recall population are covered by Proterra's warranty, and the remedy will be provided at no cost to the customer.

How Remedy Component Differs from Recalled Component : The remedied component will not have the weakened joint in a foil harness that could cause an intermittent connectivity issue.

Identify How/When Recall Condition was Corrected in Production : Voltage sense foil harnesses produced by Manaflex and installed into battery packs by Proterra after July 15, 2022, were produced with sufficient solder at the connection to the PCB adaptor board.

Recall Schedule :

Description of Recall Schedule : Proterra will mail notification letters to affected vehicle manufacturer customers by September 27, 2022.

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : AUG 03, 2022 - SEP 27, 2022

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 : Daimler Truck North America LLC

Address : 552 Hyatt St
Gaffney SC 29341

Country : US

Company Phone : 8642068745

Name : Optimal

Address : 29449 Old US Hwy 33
Elkhart IN 46516

Country : US

Company Phone : 7344147933

* NR - Not Reported