

# Part 573 Safety Recall Report

## 23V-207

**Manufacturer Name :** Lightning eMotors Inc.**Submission Date :** APR 21, 2023**NHTSA Recall No. :** 23V-207**Manufacturer Recall No. :** 2023-001**Manufacturer Information :****Population :**

Manufacturer Name : Lightning eMotors Inc.

Number of potentially involved : 148

Address : 815 14th Street SW  
Suite A100 Loveland CO 80537

Estimated percentage with defect : 100 %

Company phone : (970)744-7241

**Vehicle Information :**

Vehicle 1 : 2020-2020 Lightning eMotors FT3-43

Vehicle Type : BUSES, MEDIUM &amp; HEAVY VEHICLES

Body Style : ALL

Power Train : HYBRID ELECTRIC

Descriptive Information : All Lightning eMotors vehicles equipped with eMatrix Battery Packs are affected. Vehicles not affected by this recall are equipped with Proterra or Romeo Battery Packs. This recall affects 9 vehicles.

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

VIN Range 1 : Begin : NR End : NR

☐ Not sequential

Vehicle 2 : 2019-2021 Lightning eMotors FE4-129

Vehicle Type : BUSES, MEDIUM &amp; HEAVY VEHICLES

Body Style : ALL

Power Train : HYBRID ELECTRIC

Descriptive Information : All Lightning eMotors vehicles equipped with eMatrix Battery Packs are affected. Vehicles not affected by this recall are equipped with Proterra or Romeo Battery Packs. This recall affects 40 vehicles.

Production Dates : JAN 01, 2019 - FEB 01, 2022

VIN Range 1 : Begin : NR End : NR

☐ Not sequential

Vehicle 3 : 2020-2020 Lightning eMotors FE4-86

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : ALL

Power Train : HYBRID ELECTRIC

Descriptive Information : All Lightning eMotors vehicles equipped with eMatrix Battery Packs are affected. Vehicles not affected by this recall are equipped with Proterra or Romeo Battery Packs. This recall affects 6 vehicles

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

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Vehicle 4 : 2019-2022 Lightning eMotors FT3-86

Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES

Body Style : ALL

Power Train : HYBRID ELECTRIC

Descriptive Information : All Lightning eMotors vehicles equipped with eMatrix Battery Packs are affected. Vehicles not affected by this recall are equipped with Proterra or Romeo Battery Packs. This recall affects 93 vehicles.

Production Dates : JAN 01, 2019 - FEB 01, 2022

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

## Description of Defect :

Description of the Defect : Defective structural welds and internal radiator leaks have been found in the battery packs of this population of vehicles. Structural failure or internal coolant leaks of an eMatrix battery may result in isolation faults and cell imbalances.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : Defective structural welds and internal radiator leaks could result in failure of traction drive increasing the potential for collisions, and thermal runaway of Traction Batteries which could result in vehicle fires.

Description of the Cause : Structural failure or internal coolant leaks of an eMatrix battery may result in isolation faults and cell imbalances.

Identification of Any Warning that can Occur : None

## Involved Components :

Component Name 1 : Traction Battery, eMatrix

Component Description : TRACTION BATTERY; Ematrix; 43.2KWh; 352V; M35E

Component Part Number : 811-09

Component Name 2 : Traction Battery, eMatrix

Component Description : TRACTION BATTERY; Ematrix; 43.2KWh; 352V; M36

Component Part Number : 811-010

Component Name 3 : Traction Battery, eMatrix

Component Description : TRACTION BATTERY; Ematrix; LG MH1 cells; MH-1

Component Part Number : 811-011

Component Name 4 : Traction Battery, eMatrix

Component Description : TRACTION BATTERY; Ematrix; 42.6KWh; 375V; M48

Component Part Number : 811-012

### Supplier Identification :

#### Component Manufacturer

Name : eMatrix

Address : 21520 Bridge St  
Southfield Michigan 48033

Country : United States

### Chronology :

11/14/2021 – A thermal event occurred in a FT3-86 model equipped with an eMatrix battery

11/15/2021 – An investigation into the cause of the thermal event was initiated with the battery supplier (eMatrix)

4/27/2022 – The battery supplier and experts had their first opportunity to inspect the FT3-86, and the vehicle's batteries were removed

6/17/2022 – The FT3-86 vehicle was released from the insurance company to Lightning for testing and analysis

6/2022 – Lightning commenced inspections of welds on suspect eMatrix batteries to assist in identifying

potential root cause(s) of the thermal event

9/20/2022 – A thermal event was reported on an FE4-129, and a second root cause investigation was initiated

9/26/2022 – Lightning commenced daily monitoring of telematics data for indicators of potential eMatrix battery defects

10/4/2022 – Lightning disassembled two eMatrix battery packs and found coolant leaking from an internal radiator

12/2022 – The insurer of the FT3-86 vehicle released its report opining that a failed support structure of the battery caused the thermal event

1/6/2023 – Lightning engaged a weld expert who opined that the welding of the support structure of all eMatrix battery models was inadequate for the intended purpose

1/20/2023 – Lightning prepared a root cause analysis report with the radiator and/or the inadequate welds and substructure as likely cause(s) of the thermal events

2/10/2023 – Lightning's engineering report was presented to the battery supplier for review and discussion (eMatrix did not undertake or assist in the investigation or analysis)

3/17/2023 – Lightning held a follow-up meeting with the supplier to discuss the findings

3/21/2023 – Lightning's Recall Committee decided to conduct a recall

To date, there have been no accidents or injuries related to this condition.

## Description of Remedy :

Description of Remedy Program : Remedy Program is under development at this time.

How Remedy Component Differs from Recalled Component : Remedy Program is under development at this time.

Identify How/When Recall Condition was Corrected in Production : eMatrix Battery Packs were removed from production by design in early MY2022.

## Recall Schedule :

Description of Recall Schedule : Recall notification schedule is under development at this time.

Planned Dealer Notification Date : APR 28, 2023 - APR 28, 2023

Planned Owner Notification Date : JUN 02, 2023 - JUN 02, 2023

\* NR - Not Reported