

# Part 573 Safety Recall Report

# 22V-114

**Manufacturer Name :** Proterra, Inc.**Submission Date :** FEB 28, 2022**NHTSA Recall No. :** 22V-114**Manufacturer Recall No. :** SC-20-154**Manufacturer Information :**

Manufacturer Name : Proterra, Inc.

Address : 1815 Rollins Road  
Burlingame CA 94010

Company phone : 4380000

**Population :**

Number of potentially involved : 425

Estimated percentage with defect : 9 %

**Vehicle Information :**

Vehicle 1 : 2017-2022 Proterra 35' Catalyst E2 (2017 - 2019), 40' Catalyst E2 (2017 - 2019), 35' Catalyst RR (2020 - 2021), 40' Catalyst RR (2019 - 2020), 35' ZX5 (2020 - 2022), and 40' ZX5 (2019 - 2022)

Vehicle Type : BUSES, MEDIUM &amp; HEAVY VEHICLES

Body Style : OTHER

Power Train : HYBRID ELECTRIC

Descriptive Information : The recall population was determined via vehicle inspections and discussions with the supplier of the involved component. The recalled vehicles differ from vehicles not included in the recall population because the recalled vehicles may have an insufficiently secured steering gearbox.

Production Dates : AUG 31, 2017 - FEB 18, 2022

VIN Range 1 : Begin :

NR

End : NR

 Not sequential**Description of Defect :**

Description of the Defect : Insufficient plexus adhesive between the torque limiter plate and bus body can cause bolts that secure the steering gearbox to loosen.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : Loss of steering control could result if the steering gear box becomes unsecured

while the vehicle is in operation, increasing the risk of a crash.

Proterra has not received any report of any accidents resulting from this defect. There are no reported crashes or injuries.

Description of the Cause : An insufficient amount of plexus adhesive applied between the torque plate and bus body during production causes a loss of clamp load on the bolts holding the steering gearbox in place.

**Identification of Any Warning that can Occur :** The vehicle may become difficult to steer if the steering gearbox mounting bolts become loose and the steering gear box moves out of position.

## Involved Components :

**Component Name 1 :** Torque Limiter Plate

**Component Description :** The torque limiter plate is used as a mounting point to attach the steering gear box to the bus body.

**Component Part Number :** 018822

## Supplier Identification :

### Component Manufacturer

**Name :** TPI Composites, Inc.

**Address :** 8501 N. Scottsdale Road  
Suite 100 Scottsdale Arizona 82253

**Country :** United States

## Chronology :

In December 2021, Proterra received a customer report of a steering gearbox failure. Proterra investigated and determined the root cause of this failure was the same as the root cause of two 2020 incidents of loose steering gearbox bolts. The 2020 incidents led Proterra to declare a voluntary safety recall (20V-664) in October 2020 on 169 vehicles. The vehicle in the December 2021 report was not one of the 169 vehicles included in the 20V-664 campaign.

In January 2022, Proterra's Quality Compliance Steering Committee met and determined further investigation of this issue was warranted.

On February 21, 2022, the Committee reviewed the investigation findings, including the supplier's production records related to the amount of plexus adhesive applied to the torque limiter plate. The Committee decided to conduct a voluntary safety recall to address this issue.

As of February 21, Proterra knows of no crashes, injuries, or fatalities associated with this issue.

## Description of Remedy :

Description of Remedy Program : Protterra will provide a mechanical fastener that acts as a “locking cap” on the steering gearbox bolts and new steering gearbox bolts capable of receiving the caps as soon as the parts are available. These locking caps and bolts should be installed during the next routine scheduled service for each vehicle.

Updated 6,000-mile preventative maintenance guidelines will include work instructions to determine whether there is a gap between the steering gearbox and the bus body due to inadequate application of plexus adhesive. Any vehicle exhibiting such gap will be remedied by removing the torque plate and installing a new torque plate with sufficient plexus adhesive.

How Remedy Component Differs from Recalled Component : The remedy components are “locking caps” and new bolts capable of accepting the caps. There are no caps on the steering gearbox bolts of any vehicle in the recall population. For the potential additional remedy associated with the 6,000-mile inspection, the remedy component is a new torque limiter plate with sufficient plexus adhesive coverage. The recalled component is a torque limiter plate that lacks sufficient plexus adhesive.

Identify How/When Recall Condition was Corrected in Production : The recall condition was corrected at the supplier’s production facilities on February 18, 2022 via the supplier’s adherence to work instructions requiring 100% plexus adhesive coverage on the torque limiter plate. Additionally, on that date, Protterra started to conduct on-site visual inspections of the supplier’s installation of the torque limiter plate.

## Recall Schedule :

Description of Recall Schedule : Protterra sells the majority of its vehicles directly to transit agencies or other public entities with their own vehicle maintenance departments, so Protterra does not maintain a dealer network. Accordingly, Protterra will include detailed instructions for the recall remedy as a part of the letters sent to all affected owners. Protterra will send these owner letters by or before April 29, 2022. For any customer without a vehicle maintenance department, Protterra will arrange for the recall remedy to be performed by Protterra’s service department or by a third party.

Planned Dealer Notification Date : APR 29, 2022 - APR 29, 2022

Planned Owner Notification Date : APR 29, 2022 - APR 29, 2022

\* NR - Not Reported