Part 573 Safety Recall Report 18V-750

Manufacturer Name : Proterra
Submission Date : OCT 23, 2018
NHTSA Recall No. : 18V-750
Manufacturer Recall No. : NR

Manufacturer Information :

Manufacturer Name : Proterra
Address : 1815 Rollins Road
Burlingame CA 94010
Company phone : 4380000

Population :

Number of potentially involved : 66
Estimated percentage with defect : NR

Vehicle Information :

Vehicle 1 : 2016-2017 Proterra Catalyst 40
Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES
Body Style :
Power Train : NR
Descriptive Information : Recall population was determined based on the affected axle serial number list provided by ZF to Proterra.
Per ZF: It has been identified that ZF axles that incorporate axial and radial air disc brake calipers manufactured by Knorr-Bremse in a specific production period may experience issues in the field.
Production Dates : JUN 01, 2016 - AUG 01, 2017
VIN Range 1 : Begin : NR End : NR ☐ Not sequential

Description of Defect :

Description of the Defect :	PER ZF It has been identified that ZF axles that incorporate axial and radial air disc brake calipers manufactured by Knorr-Bremse in a specific production period may experience issues in the field. Improper surface roughness of a guide pin in radial brake calipers supplied by Knorr-Bremse may cause increased friction, creating noise and, if undetected, potentially leading to uneven brake pad wear, tapered wear of the brake pads, breaking of the brake carriage guide pin support bolt, and brake pad contact with the surface of the wheel. ZF reported a potential safety risk associated with this issue for radial brakes in North America to NHTSA on April 26, 2018. ZF and Knorr-Bremse continue to investigate and assess whether other potential safety risks are associated with this issue. Any potential safety risk in specific vehicle types or applications should also be evaluated by the vehicle manufacturer. ZF supplied axles with the potentially affected brake calipers to several bus manufacturers.
FMVSS 1 :	NR
FMVSS 2 :	NR
Description of the Safety Risk :	PER ZF System reactions: If issue is undetected, it could lead further to the following symptoms on a radial brake: • Tangential taper wear of the brake pads If further undetected, this failure mode can progress to: 1. Significant tangential tapered wear, which could potentially lead to a reduced service brake torque on an affected wheel end of the center or drive axle. Our assessment is that unaffected wheels would keep their braking force due to the redundancy of the brake system. 2. Significant tangential tapered wear, which could potentially lead to a breaking of the fix guide pin support bolt and, as a consequence, the brake caliper or pad may contact the inner surface of the wheel rim. 3. Significant tapered wear, which could potentially lead to a reduction of the parking brake functionality of affected wheels, most specifically for 2 axle buses (<= 40'). Items N°2 and N°3 mentioned above are considered in the safety risk analysis by ZF and Knorr-Bremse and are further discussed in this presentation
Description of the Cause :	Increased surface roughness of fix pin after change of supplier by Knorr-Bremse • Reduced sliding at caliper fix pin plain bearing slip-stick or seized plain bearing

Identification of Any Warning that can Occur :	Excessive noise during braking precedes any decreased brake function

Supplier Identification :

Component Manufacturer

Name :	ZF
Address :	777 Hickory Hill Drive Vernon Hills ILLINOIS 60061
Country :	United States

Chronology :

NR

Description of Remedy :

Description of Remedy Program :	Replace the calipers on affected axles with new calipers provided by Bendix/ ZF. Proterra will ship the parts from our facility in Greenville, SC where parts were received from Bendix. Proterra's customers will file a warranty claim with Proterra for the completion time, and Proterra will file a warranty claim with ZF to recoup the costs of labor. Proterra has identified 1 customer in Chicago who will not be able to perform the work at their site, so the work will be completed at a ZF site.
How Remedy Component Differs from Recalled Component :	NR
Identify How/When Recall Condition was Corrected in Production :	NR

Recall Schedule :

Description of Recall Schedule :	NR
Planned Dealer Notification Date :	NR - NR
Planned Owner Notification Date :	OCT 23, 2018 - NOV 02, 2018

* NR - Not Reported