

Part 573 Safety Recall Report

21E-030

Manufacturer Name : TSE Brakes**Submission Date :** APR 16, 2021**NHTSA Recall No. :** 21E-030**Manufacturer Recall No. :** NR**Manufacturer Information :**

Manufacturer Name : TSE Brakes

Address : 2310 Industrial Drive SW

Cullman AL 35055

Company phone : 256-736-6275

Population :

Number of potentially involved : 3,506

Estimated percentage with defect : 8 %

Equipment Information :

Brand / Trade 1 : TSE Brakes

Model : Omni Tandem Brake Chamber

Part No. : 2024TLD2-1946

Size : NR

Function : Parking and Ser

Descriptive Information : The potentially impacted brake chambers were from a specific and limited batch that incorporated an out of specification main spring which was manufactured by a supplier. The recall population was determined by the actuator part number that has exhibited this failure in the field

Production Dates : JAN 06, 2020 - MAY 11, 2020

Description of Defect :

Description of the Defect : Vendor supplied main springs used to apply the parking brake force are not to specification and may cause premature wear of the parking side diaphragm.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : The pressure plate shifting could cause premature wear of the parking side diaphragm. The premature wear of the parking side diaphragm may cause a leak within the parking brake system which would result in application of the parking brake during operation.

Description of the Cause : The shift of the pressure plate was caused by out of specification side load of the spring. This excessive side load was caused by an issue in the setup of the heat treat of the springs at the supplier.

Identification of Any Warning that can Occur : A warning alarm in the truck would alert the driver to the lack of air pressure before the brakes were applied.

Involved Components :

Component Name : NR

Component Description : NR

Component Part Number : NR

Supplier Identification :**Component Manufacturer**

Name : Matthew Warren

Address : 500 East Ottawa St

Logansport Indiana 46947

Country : United States

Chronology :

- 12/15/20 – Notification by fleet customer of spring brake chamber leaks
- 12/22/20 – Initial 6 chambers analyzed for failure mode. Failure mode determined to be by spring geometry.
- 12/23/20 – Test plan initiated to determine and duplicate the field issue in the lab and have vendor identify the root cause.
- 1/4/21 – Inspection procedure provided to fleet customer to gather more information
- 1/4/21 – Present – work with customers to determine failure rate and whether failures have occurred beyond a single fleet.
- 1/18/21 – Leaking chamber from the field shipped to customer to evaluate if the driver would receive a warning before the brakes were applied due to the leak.
- 1/22/21 – Calculations performed to determine if this failure would cause a truck to be inoperable in a lane of traffic.
- 2/15/21 – Beginning of production by spring supplier to verify root cause and determine possible number of effected springs
- 2/18/21 – Testing started with new chambers produced with springs from failed chambers
- 2/26/21 – Spring Supplier identified root cause and potential effected population
- 3/25/21 – Testing completed with new chambers produced with springs from failed chambers. Plate shifting was present, but no leaks were caused.
- 4/2/21 – Field inspection data received showing an 8% of chambers inspected failed the inspection criteria.
- 4/8/21 – Notification from customer that the truck low air warning light and buzzer would alert the driver to an issue before the brakes are applied.
- 4/14/21 – TSE Brakes following consultation with customers determined that a recall was warranted.

Description of Remedy :

Description of Remedy Program : Brake actuator part number, TSE Brakes invoice numbers and date codes with suspect chambers will be provided to customers. A recall notice will be sent detailing the chamber inspection and replacement procedure. A standard allocation with labor hours will be provided to charge TSE Brakes.

How Remedy Component Differs from Recalled Component : The chambers built with the defective springs have specific date codes.

Identify How/When Recall Condition was Corrected in Production : This defect was isolated to one batch provided by the supplier. The defect was caused by a setup issue in the manufacturing process and will not be present in all batched.

Recall Schedule :

Description of Recall Schedule : Communication to affected customers is intended by 5/31/21.

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : NR - NR

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 : NR

Address : NR

NR

Country : NR

Company Phone : NR

* NR - Not Reported