

Part 573 Safety Recall Report

23E-079

Manufacturer Name : Allison Transmission, Inc.

Submission Date : DEC 08, 2023

NHTSA Recall No. : 23E-079

Manufacturer Recall No. : 2023FA04



Manufacturer Information :

Manufacturer Name : Allison Transmission, Inc.

Address : One Allison Way
Indianapolis IN 46222

Company phone : 317-242-5000

Population :

Number of potentially involved : 8,498

Estimated percentage with defect : 25 %

Equipment Information :

Brand / Trade 1 : Allison Transmission

Model : B3400xFE_R

Part No. : B3400xFE_R

Size : NR

Function : Output Yoke Bol

Descriptive Information : The output yoke bolt connects the driveline yoke to the transmission output shaft.

Allison Transmission, Inc. (ATI) supplied approximately 1,281 transmissions equipped with the subject bolt to OEM customers for use primarily in municipal transit bus duty cycle.

The recall scope was determined based upon a review of production shipping records.

Production Dates : JAN 01, 2019 - OCT 02, 2023

Brand / Trade 2 : Allison Transmission

Model : B400R

Part No. : B400R

Size : NR

Function : Output Yoke Bol

Descriptive Information : The output yoke bolt connects the driveline yoke to the transmission output shaft.

Allison Transmission, Inc. (ATI) supplied approximately 7,217 transmissions equipped with the subject bolt to OEM customers for use primarily in municipal transit bus duty cycle.

The recall scope was determined based upon a review of production shipping records.

Production Dates : JAN 01, 2019 - OCT 02, 2023

Description of Defect :

Description of the Defect : Under certain conditions, the output yoke bolt may loosen and potentially result in separation of the driveline from the transmission output shaft.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : If the driveline separates from the transmission output shaft while driving, the vehicle may experience an unexpected loss of propulsion, which may increase the risk of a crash. Additionally, an immobilized transit bus presents a potential risk of injury to passengers if they are offloaded in an unsuitable environment.

Description of the Cause : ATI has not yet determined the cause of the loosening of the output yoke bolt. Transit bus duty cycles have a very high start/stop shift density. This generates significantly more torsional activity on this bolted joint than other applications. Testing by ATI and its customer is ongoing.

Identification of Any Warning that can Occur : The failure could occur without warning.

Involved Components :

Component Name : Output Yoke Bolt

Component Description : Bolt connecting plate 29535213 and yoke 29540327 to output shaft 29540991

Component Part Number : PN29535219

Supplier Identification :

Component Manufacturer

Name : Allison Transmission

Address : NR

NR

Country : NR

Chronology :

- June 26-27, 2023: ATI learned of potential loose output yoke bolts and separated drivelines in Canada involving Nova Bus vehicles and that Nova Bus conducted a field survey that identified loose output bolts.
- July 10, 2023: ATI began noise, vibration, harshness (NVH) testing on select Nova Buses jointly with Nova Bus.
- July 12, 2023: Nova Bus submitted a defect information report to NHTSA related to the issue. See Recall No. 23V482.
- July 19, 2023: ATI Opened a formal investigation.
- Jul. – Sep. 2023: ATI investigated potential causes of the Nova Bus reports and collected data related to torque specifications for the output yoke bolt. ATI learned of complaints of driveline cases for transit buses manufactured by another vehicle manufacture. ATI investigated the additional claims and conducted a field survey of transit buses to inspect transmissions for loose output yoke bolts.
- Sep. 25, 2023: After confirming reports of loose bolts in buses produced by additional vehicle manufacturers, ATI escalated the issue to its Field Performance Evaluation Review Committee (FPERC).
- Sep. 26, 2023: ATI's FPERC made its recommendation to ATI's Executive Field Action Decision Committee (EFADC).
- Oct. 4, 2023: Based on the information developed during the investigation, ATI – through the EFADC – agreed that the condition constituted a safety-related defect.

ATI is not aware of any accidents or injuries related to this condition.

Description of Remedy :

Description of Remedy Program : ATI is working with OEMs to inspect the output yoke bolts and, if necessary, tighten loose output yoke bolts. Pursuant to 49 CFR 577.11(e), ATI requests that it be exempt from providing notification or a reimbursement plan. Pre-notification product failures would have been addressed under the terms of the ATI's or vehicle manufacturer's warranty or goodwill.

How Remedy Component Differs from Recalled Component : ATI increased the torque specification for the output yoke bolt for all B400R and B3400xFE_R transmissions. The clamp load for the output yoke bolt was increased by approximately 150%, nominal torque is being increased from the previous specification of 77.5 Newton-meters (N?m) to 130 N?m.

Identify How/When Recall Condition was Corrected in Production : On October 3, 2023, ATI implemented a specification change that increased the torque on the output yoke bolt from 77.5 N?m to 130 N?m.

Recall Schedule :

Description of Recall Schedule : The timing of owner notifications will be determined in consultation with the affected OEMs. In cases where ATI will contact owners, ATI is prepared to commence owner notification on the dates noted.

Planned Dealer Notification Date : OCT 20, 2023 - OCT 30, 2023

Planned Owner Notification Date : DEC 08, 2023 - DEC 22, 2023

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 : Gillig

Address : 451 Discovery Dr
Livermore CA 94551

Country : US

Company Phone : 5102645075

Name : New Flyer

Address : 4141 SW 30th Ave
Fort Lauderdale FL 33312

Country : US

Company Phone : 2564537181

Name : Nova Bus

Address : 260 Banker Road
Plattsburg NY 12901

Country : US

Company Phone : 4388431428

Name : ENC - Eldorado National

Address : NR
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Country : NR

Company Phone : NR

* NR - Not Reported