

Chronology of Defect / Noncompliance Determination

- June 2020: REV Group, Inc. OEM Spartan Fire LLC reported pinion crack to Meritor.
- July – September 2020: Meritor completed testing to attempt to replicate the fracture and could not do so. Meritor implemented 100% magnetic particle inspection in 180 series pinions from July 23 – August 7 and found zero defects.
- March 25, 2021: Meritor received a report of a pinion fracture from a different customer. It did not result in unintended braking. At that point Meritor began an investigation into the root cause of the fracture.
- April 1, 2021: Meritor evaluated pinion material and heat treat material. Meritor confirmed that the heat treated material complied with required specifications.
- April 9, 2021: Meritor began running capability studies on the production spline rolling rack.
- April 20, 2021: Meritor implemented 100% ultrasonic testing / crack detection at final inspection.
- June 12, 2021: Meritor completed capability studies on the production spline rolling rack. The studies showed the spline rack to be within Meritor specifications.
- July 2021: Spartan reported pinion failure during delivery to the dealer from the plant. Meritor provided a new gear set under warranty.
- July 29, 2021: Meritor implemented spline protector sleeves during manufacturing process.
- August 16, 2021: Meritor implemented new spline rolling racks and capability studies on new spline rolling racks.
- September 20, 2021: Spartan notified Meritor of pinion crack failure while in service (24 hours in service and under 3,000 miles). The pinion failure resulted in damage to the spring brake air supply line. This is the first report of unintentional spring brake application related to this issue known to Meritor.
- Meritor continued its investigation, including performing onsite ultrasonic tests for the rest of the REV Group fleets.
- November 22, 2021: REV Groups notified Meritor that its OEMs filed 573 defect reports with NHTSA.
- November 30, 2021: Meritor filed a §573 Report that was required under 49 CFR 573.3(f) which states: “In the case of a defect or noncompliance decided to exist in original equipment installed in the vehicles of more than one manufacturer, compliance with § 573.6 is required of the equipment manufacturer as to the equipment item, and of each vehicle manufacturer as to the vehicles in which the equipment has been installed.” Since, more than one manufacturer decided that a safety defect existed in Series 180 pinion shafts as used in their application, Meritor filed the §573 Report. 21E-098. Meritor stated in that Report that it was still “investigating the root cause as well as the impact to other customers, including those customers impacted by products sold in the replacement market”.
- December 2 thru December 13, 2021: Meritor contacted service locations for warranty claims and was able to obtain repair order reports for some claims.
- January 5 thru January 10, 2022: Meritor contacted affected customers to collect details on air brake hose routings.

- January 7, 2022: Meritor initiated meetings with OEMs on purchaser list provided to NHTSA in December 2021.
- January 21, 2022: Meritor filed amended 573 Defect Report (NHTSA Recall No. 21E-098).
- January – February 2022: Meritor engaged in root cause analysis activity.
- February 18, 2022: Meritor stopped all straightening of 180 pinions at Asheville plant.
- March 3, 2022: Meritor validated new design dummy yokes on assembly line.
- March 3, 2022: Meritor implemented eddy current inspection process at Asheville plant as part of an in-process check for spline defects in conjunction with the ultrasonic inspection at final.
- March 22, 2022: Meritor decided that a safety defect existed and to conduct a safety recall.
- March 29, 2022: Meritor filed this 573 Report (22E-027) specific to replacement equipment sold to our aftermarket customers.