

Part 573 Safety Recall Report

23E-094

Manufacturer Name : R.H. Sheppard Co., Inc.**Submission Date :** DEC 18, 2023**NHTSA Recall No. :** 23E-094**Manufacturer Recall No. :** NR**Manufacturer Information :****Population :****Manufacturer Name :** R.H. Sheppard Co., Inc.**Number of potentially involved :** 274**Address :** 101 Philadelphia Street**Estimated percentage with defect :** 1 %**P.O. Box 877 Hanover PA 17331-0877****Company phone :** 717-637-3751**Equipment Information :****Brand / Trade 1 :** Sheppard**Model :** HD94P**Part No. :** various**Size :** not applicable**Function :** Steering

Descriptive Information : A small number of steering gears may have been assembled without the required number of recirculating balls. The recall population was determined by evaluating the manufacturing data generated on the assembly line for indications of a gap in the process control steps.

Production Dates : MAR 01, 2023 - NOV 29, 2023**Brand / Trade 2 :** Sheppard**Model :** M100P**Part No. :** various**Size :** n/a**Function :** Steering

Descriptive Information : A small number of steering gears may have been assembled without the required number of recirculating balls. The recall population was determined by evaluating the manufacturing data generated on the assembly line for indications of a gap in the process control steps.

Production Dates : MAR 01, 2023 - NOV 29, 2023

Brand / Trade 3 : Sheppard

Model : HD94S

Part No. : various

Size : n/a

Function : Steering

Descriptive Information : A small number of steering gears may have been assembled without the required number of recirculating balls. The recall population was determined by evaluating the manufacturing data generated on the assembly line for indications of a gap in the process control steps.

Production Dates : MAR 01, 2023 - OCT 31, 2023

Brand / Trade 4 : Sheppard

Model : M110P

Part No. : various

Size : n/a

Function : Steering

Descriptive Information : A small number of steering gears may have been assembled without the required number of recirculating balls. The recall population was determined by evaluating the manufacturing data generated on the assembly line for indications of a gap in the process control steps.

Production Dates : MAR 01, 2023 - OCT 31, 2023

Brand / Trade 5 : Sheppard

Model : M83P

Part No. : various

Size : n/a

Function : Steering

Descriptive Information : A small number of steering gears may have been assembled without the required number of recirculating balls. The recall population was determined by evaluating the manufacturing data generated on the assembly line for indications of a gap in the process control steps.

Production Dates : MAR 01, 2023 - MAR 31, 2023

Brand / Trade 6 : Sheppard

Model : MD83

Part No. : various

Size : n/a

Function : Steering

Descriptive Information : A small number of steering gears may have been assembled without the required number of recirculating balls. The recall population was determined by evaluating the manufacturing data generated on the assembly line for indications of a gap in the process control steps.

Production Dates : MAR 01, 2023 - OCT 31, 2023

Brand / Trade 7 : Sheppard

Model : SD110P

Part No. : various

Size : n/a

Function : Steering

Descriptive Information : A small number of steering gears may have been assembled without the required number of recirculating balls. The recall population was determined by evaluating the manufacturing data generated on the assembly line for indications of a gap in the process control steps.

Production Dates : MAR 01, 2023 - OCT 31, 2023

Brand / Trade 8 : Sheppard

Model : XD120P

Part No. : various

Size : n/a

Function : Steering

Descriptive Information : A small number of steering gears may have been assembled without the required number of recirculating balls. The recall population was determined by evaluating the manufacturing data generated on the assembly line for indications of a gap in the process control steps.

Production Dates : MAR 01, 2023 - OCT 31, 2023

Description of Defect :

Description of the Defect : The defect is a steering gear assembled with fewer than the required number of recirculating balls.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : A steering gear with fewer than the required number of recirculating balls may bind when loads are applied. In some cases, the balls may align on the same side of the gear's worm-shaft and concentrated loads may cause the gear's internal part to fracture resulting in the loss of steering. Loss of steering increases the likelihood of a crash.

Description of the Cause : An error of the steering gear recirculating ball insertion process occurred during assembly. A gap in the rework process allowed for potentially less than the required number of balls to be installed into the gear without detection.

Identification of Any Warning that can Occur : Preceding the internal fracture, the steering may be perceived as strained by the driver. No audible or visual warning is available.

Involved Components :

Component Name : not applicable

Component Description : NR

Component Part Number : NR

Supplier Identification :

Component Manufacturer

Name : n/a

Address : NR

NR

Country : NR

Chronology :

Nov 2022: Improved ball drop stations released to production with visual inspection remaining in place.

March 2023: visual inspection eliminated after 6 months of overlap with permanent process controls.

Nov 27 2023: a gear built on Nov 19, 2023 failed the final test stand was disassembled for analysis. During the tear-down, it was found that the gear did not have the required number of balls installed. The gear had not left the manufacturing plant.

Nov 27 2023: Containment was put in place: Re-implementation of visual inspection.

Nov 28 2023: Sheppard initiates a quality investigation to collect facts. Quality alert is created with segregating gears in-house for analysis. Tear-down and manual inspection performed. No other gears are found to be defective.

Nov 29 2023: A safety risk assessment team is created to evaluate if other gears may have been assembled and been shipped to customers containing the defect.

Dec 4 2023: The Sheppard product safety committee (PSC) is updated on initial investigation of manufacturing records, warranty returns, customer returns. No cases with the reported defect had been reported from the field.

Dec 11, 2023: The Sheppard product safety committee is updated. Manufacturing data indicates that a gap in the rework process logic existed. The gap may have allowed some gears that had been reworked to pass without certainty of containing the correct number of recirculating balls. The PSC out of abundance of caution determined that 274 specific gears should be recalled.

Description of Remedy :

Description of Remedy Program : The specific gears with identified serial numbers will be recalled and replaced with remedy gears. Sheppard will work with the vehicle manufactures to provide gears at no cost the the OEM.

How Remedy Component Differs from Recalled Component : The remedy gears are assembled after the additional steps were added to confirm that any rework certainly contains the corrected number of recirculating ball gears.

Identify How/When Recall Condition was Corrected in Production : The gap in the manufacturing control logic was corrected for the reworked gears. Additional inspection steps are added to confirm that any rework certainly contained the corrected number of recirculating balls.

Recall Schedule :

Description of Recall Schedule : All of the recalled gears where shipped to OEM vehicle manufactures. We expect that the vehicle manufacturers will administer and report on recall progress. No Dealer or Owner notification is expected because no gears were supplied directly to owners or dealers. Communication with the vehicle manufacturers will begin Dec 18, 2023 and is expected to be complete by Jan 17, 2023

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 : Paccar
Address : 10620 NE 38th Place
Kirkland WA
Country : US
Company Phone : 425 828 5201

Name : Navistar
Address : 2701 Navistar Dr
Lisle IL 60532
Country : US
Company Phone : 3313321590

Name : AM General
Address : 105 N. Niles
South Bend IN 46617
Country : US
Company Phone : NR

Name : Volvo Trucks North America
Address : 7900 National Service Rd
Greensboro NC 27409-9416
Country : US
Company Phone : 7175735972

Name : Daimler Truck North America
Address : 4555 N. Channel Ave
Portland OR 97217
Country : US
Company Phone : 5037455508

Name : oshkosh
Address : 2307 oregon st
oshkosh WI 54903
Country : US
Company Phone : NR

Name : Autocar LLC
Address : 551 South Washington St
Hagerstown IN 47346
Country : US
Company Phone : 8882183611

Name : New Flyer of America
Address : 711 Kermaghan Ave
Winnipeg Matitoba 00 R2C 2T4
Country : CA
Company Phone : NR

Name : Meritor
Address : 2135 West Maple Rd
Troy MI 48084
Country : US
Company Phone : 9204245307

Name : Battle Motors
Address : 1951 Reiser Ave
New Philadelphia OH 44663
Country : US
Company Phone : 888 328 5443

* NR - Not Reported