

**Proposed 573 Submission**

**Based on file RCLRPT-23E058-4938.PDF**

**Actual submission will occur via NHTSA website**

Manufacturer Name: Diamond C Trailers

Submission Date: November 8, 2024

NHTSA Recall No: 24V853

Manufacturer Recall Number:2024-01-RECALL

Manufacturer Information: Population:

Manufacturer Name: Diamond C Trailers Number of potentially involved: 1,432

Address: 4006 FM 3417 Estimated % with defects: 0.35%

Mount Pleasant, TX 75455

Company Phone: 903-572-2834

Equipment Information:

Brand / Trade 1: Diamond C

Model: HDT210 (all trim levels)

Part No.: NR

Size: NR

Function: Trailer Assembly

Descriptive Information: 20,000 GVWR double axle hydraulic dovetail trailer

Production Dates: June 1, 2023 - September 11, 2024

Brand / Trade 2: Diamond C

Model: HDT208 (all trim levels)

Part No.: NR

Size: NR

Function: Trailer Assembly

Descriptive Information: 16,000 GVWR double axle hydraulic dovetail trailer

Production Dates: June 1, 2023 - September 11, 2024

Brand / Trade 3: Diamond C

Model: HDT307 (all trim levels)

Part No.: NR

Size: NR

Function: Trailer Assembly

Descriptive Information: 21,000 GVWR triple axle hydraulic dovetail trailer

Production Dates: June 1, 2023 - September 11, 2024

Brand / Trade 4:

Model:

Part No.:

Size:

Function:

Descriptive Information:

Production Dates:

Description of Defect:

Describe the Safety Risk: Installed axles on certain GVWR rated trailers with an integrated tilt tail may come loose from the manufactured axle hanger assembly. When this condition occurs, the axle may roll up in the axle hanger assembly and may come loose from the trailer. This condition could increase the chance of an accident.

Description of the Defect: Failure of the axle fastener (nut/bolt) at the axle frame assembly.

FMVSS 1: N/A

FMVSS 2: N/A

Description of Cause: Fastener installation procedure lacked sufficient enforcement.

Identification of Any Warning that can Occur: None

Involved Components:

Component Name: Axle assembly nut and bolt

Component Description: Grade 8, steel, 5/8" bolt and matching nut

Component Part Number: 70-02-0401009 (bolt), 70-02-201039 (nut)

Supplier Identification:

Name: None

Address: None

Country: None

Chronology:

June 1, 2023-Diamond C's Engineering Department issues engineering change to modify the length of one component of assembly tubing in the subject trailers.

July 17, 2024 – Diamond C receives first warranty complaint of torsion axle rolling in the mount. Diamond C's investigation determined that fasteners (bolt/nut) came loose causing axle to roll. Diamond C was unable to determine whether the bolt sheared or the nut came loose. There was no indication of hanger failure.

September 3, 2024-Diamond C receives an additional warranty complaint where torsion axle rolled in hanger assembly. This failure was attributable to missing fastener. Diamond C was unable to determine whether the bolt sheared or the nut came loose.

September 27, 2024-Diamond C receives an additional warranty complaint where the torsion axle rolled in frame assembly.

The trailer involved exhibited significant pre-existing damage to the hanger frame and mating parts. This included evidence of multiple failures at the axle mount, suggesting significant overloading of the trailer's GVWR.

October 21, 2024-Diamond C receives warranty claim detailing HDT torsion axle rolling in the frame assembly. Diamond C Engineering Department begins its analysis of the broken sub-assembly. That analysis is ongoing.

October 21, 2024-November 1, 2024-Diamond C continues to analyze September and October 2024 warranty claims involving rolled torsion axle. Through this analysis, Diamond C determined that the failures occurred due to loosening of hardware and not shearing.

November 1, 2024-While Diamond C continues to analyze relevant data to determine a root cause of hanger assembly failures, Diamond C's Product Recall Team made a determination that a defect related to motor vehicle safety existed and decided to conduct a safety recall. As of

November 1, 2024, Diamond C had five warranty claims for axles rolling in the hanger frame assembly, 0 field or service reports, and no property damage claims, injuries or deaths related to this issue.

On November 14, 2024, Diamond C reviewed a customer returned trailer with the axle roll defect. Investigation and analysis confirmed that the fasteners (bolt and nut) were not present on the axle hanger frame assembly. There was no evidence of shearing or cracking on bearing surfaces. All evidence indicates the nut likely came loose. Once the nut disengaged, the bolt was free.

On November 20, 2024, Diamond C determined that a failure of the fastener hardware is the root cause for the axle roll and began assessing potential repair remedies.

November 25, 2024 – December 3, 2024 - Diamond C conducted testing to assess the appropriate repair remedy and ultimately selected a grade 8, 5/8"-11 flange bolt in combination with grade G top-lock distortion thread flange nut combination.

#### Description of Remedy:

Description of Remedy Program: Diamond C has determined the remedy will be to introduce a flanged bolt and distortion locking flange nut to the torsion hanger frame assembly to prevent the nut from disengaging from the bolt. Diamond C will provide a repair kit to all dealers with instructions on how to replace the fastener hardware.

How Remedy Component Differs from Recalled Component: The remedy fastener construction uses a distortion thread flange nut. The nut is designed to distort the bolt threads as the nut is tightened on the bolt. This distortion will prevent unintended disengagement of the nut. Due to both the bolt and nut having a flange, the remedy eliminates the risk of improper washer usage.

Identify How/When Recall Condition was Corrected in Production: Defect was corrected in production on 12/5/2024 by introduction of replacement fasteners.

#### Recall Schedule:

Description of Recall Schedule: Diamond C will notify dealers and owners during the week of December 9, 2024 and anticipates that all notification will be concluded within one week.

Planned Dealer Notification Begin Date: December 9, 2024

Planned Dealer Notification End Date: December 31, 2024

Planned Owner Notification Begin Date: December 12, 2024

Planned Owner Notification End Date: January 31, 2025

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: N/A

Address

Country:

Company Phone:

\*NR – Not Reported