

Part 573 Safety Recall Report

21E-104

Manufacturer Name : Crysteel Manufacturing Inc

Submission Date : FEB 08, 2022

NHTSA Recall No. : 21E-104

Manufacturer Recall No. : N/A



Manufacturer Information :

Manufacturer Name : Crysteel Manufacturing Inc

Address : 52182 Ember Road

Lake Crystal MN 56055

Company phone : 519-2933

Population :

Number of potentially involved : 261

Estimated percentage with defect : 100 %

Equipment Information :

Brand / Trade 1 : Cyrsteel Manufacturing

Model : Marathon telescoping dump cylinder

Part No. : Multiple part number

Size : Multiple sizes

Function : Hydraulic

Descriptive Information : Crysteel Mfg received notification from customers of failures of these trunnion-mounted telescopic style hydraulic cylinders. The failure may be due to the change in manufacturing of the final stage rod end wherein the rod end has been nitrocarburized. We then identified the cylinder Part Numbers herein as those which may be susceptible to this failure mode.

This recall only affects inverted trunnion style telescoping hoists produced by Hycy Alabama, LLC finished with Black Armor nitrocarburized finish. Any cylinder with a chrome plated finish is not affected.

261 potential hoists are subject to this recall.

Production Dates : JAN 01, 2020 - OCT 04, 2021

Description of Defect :

Description of the Defect : Failure of the telescopic cylinder final stage rod end through the pin bore cross-section.

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : The cylinder may detach from the hoist cradle leading to the cylinder impacting the back of the cab and possible loss of control of the dump body.

Description of the Cause : The result could be a vehicle tip-over which increases the risk of injury. The hydraulic cylinder, as manufactured, could fail through the area of the lower mount pin.

Identification of Any Warning that can Occur : Cracks may appear in rod prior to failure. However, due to the nature of the failure mode, an impending failure can occur while operating the vehicle without the driver's knowledge.

Involved Components :

Component Name : M5399 SA cylinder

Component Description : M5399 SA Black Armor Trunnion Cylinder

Component Part Number : 2250436

Component Name : M63138 SA cylinder

Component Description : M63138 SA Black Armor Trunnion Cylinder

Component Part Number : 2250440

Component Name : M63153 SA cylinder

Component Description : M63153 SA Black Armor Trunnion Cylinder

Component Part Number : 2250441

Component Name : M5390 DA cylinder

Component Description : M5390 DA Black Armor Trunnion Cylinder

Component Part Number : 2250442

Component Name : M5399 DA cylinder

Component Description : M5399 DA Black Armor Trunnion Cylinder

Component Part Number : 2250443

Component Name : M53117 DA cylinder

Component Description : M53117 DA Black Armor Trunnion Cylinder

Component Part Number : 2250444

Component Name : M63117 DA

Component Description : M63117 DA Black Armor Trunnion Cylinder

Component Part Number : 2250446

Component Name : M63138 DA

Component Description : M63138 DA Black Armor Trunnion Cylinder

Component Part Number : 2250447

Supplier Identification :

Component Manufacturer

Name : Hyco Alabama, LLC

Address : 218 Arad Thompson RD NE
Arab Alabama 35016

Country : United States

Chronology :

We received field reports and warranty claims for the cylinder failures and researched the root cause to determine the mode of failure for a specific set of part numbers of the affected hydraulic dump cylinder.

- ☐ September 17, 2021: Crysteel learned of a single cylinder failure from a customer. As this was just one failure, it was handled as a simple warranty claim.
- ☐ October 4, 2021: Crysteel notified by same customer that 2 other cylinders from the same production period of the same cylinder type had failed.
- ☐ October 5, 2021: Crysteel notified its vendor, Hyco, of the failures and requested an investigation into the cause of failure to determine if this could be systemic to the new nitrocarburized finish implemented in 2020.
- ☐ November 12, 2021: Crysteel received the lab analysis report that indicated the cause may be systemic to the nitrocarburizing process and that the strength of the cylinder rod end at the pin eye bore was reduced

below safe operating limits.

☐ November 24, 2021, Crysteel authored a Field Service Bulletin alerting its customers to this issue and provided instructions on how to identify and inspect suspect cylinders in their truck fleets.

☐ Subsequent to this notice to our customers and on determination that this issue warrants a NHTSA Notice, Crysteel is submitting this notice at this time.

Description of Remedy :

Description of Remedy Program : Crysteel will issue a recall and will reimburse the customer for parts and up to six hours labor for the cylinder replacement.

Crysteel will be managing all quarterly reports.

How Remedy Component Differs from Recalled Component : The replacement cylinder will be designated with a new Part Number to differentiate it from the original cylinder.

Identify How/When Recall Condition was Corrected in Production : Production of the Black Armor finished cylinder rod ends was ended promptly in October, 2021 when it was suspected to be the cause of the failures. New cylinders will be produced with a non-nitrocarburized rod end.

Recall Schedule :

Description of Recall Schedule : Crysteel has commenced immediately in working with its distributor customers to identify end user trucks in the field and to notify them to contact us to have their cylinders replaced. The majority of these trucks are owned by municipalities, so we are working with their maintenance teams to schedule their replacements.

Supply chain limitations for timing of the receipt of replacement hydraulic cylinder tube stock will be the controlling factor for how quickly replacement cylinders can be sent to the field. Crysteel and Hyco are working together to mitigate this situation.

Planned Dealer Notification Date : JAN 17, 2022 - 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