Manufacturer Name : Terran Axle LLC Submission Date : SEP 10, 2021 NHTSA Recall No.: 21E-067 Manufacturer Recall No.: NR

### **Manufacturer Information :**

Manufacturer Name : Terran Axle LLC

Address: 1 Westbrook Corporate Center Suite 300 Westchester IL 60154 Company phone: 312 7767

## **Population :**

Number of potentially involved : 5,796 Estimated percentage with defect : 6 %

## **Equipment Information :**

Brand / Trade 1:	Terran Axle
Model :	Trailer Axles
Part No. :	020401 (spindle nut)
Size :	NR
Function :	NR
Descriptive Information :	<ul> <li>Basis for Determination of Recall Population: We began manufacturing on February 5, 2021 and continued to June 21, 2021. We are recalling for inspection and any necessary repair all axles that were manufactured and shipped.</li> <li>Recalled products differ (from those not included in recall) because there is a possibility that the spindle nuts in the trailer axles were insufficiently torqued.</li> </ul>
	The number of affected products is 5796 trailer axles each containing 2 spindle nuts. Estimated percentage of axles with insufficiently torqued spindle nuts is 5.6%.
Production Dates :	FEB 05, 2021 - JUN 21, 2021

## **Description of Defect :**

Description of the Defect :	In the assembly of certain axles in our factory, a certain number of spindle nuts were not torqued to prescribed standards resulting in insufficiently torqued (loose) spindle nuts.
FMVSS 1 :	NR
FMVSS 2 :	NR
Description of the Safety Risk :	Insufficiently torqued spindle nuts may lead to higher than normal axle vibration possibly resulting in overheated bearings and bearing failure as well as potential smoking of the axle from friction and improper tire wear and



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	wheel performance. Axle, tire or wheel failure may affect vehicle stability or control, increasing the risk of a crash.
Description of the Cause :	Improper torquing of spindle nut to prescribed levels.
Identification of Any Warning that can Occur :	

#### **Involved Components :**

Component Name :Spindle NutComponent Description :Spindle Nut retains the hub assembly to the spindle.Component Part Number :N/A

#### **Supplier Identification :**

#### **Component Manufacturer**

Name : NR Address : NR NR Country : NR

#### **Chronology** :

Terran Axle received two customer complaints (on July 13 and 14, 2021, respectively) related to reported wheel vibration in one instance and friction causing smoke to emanate from an axle in another instance on trailers utilizing our axles. Beginning at 7pm on July 14, 2021, we initiated a manual quality control review of the available axles in our manufacturing facility. The objective was to identify any manufacturing or assembly issues with the axles, any safety risks and necessary repairs, replacements or adjustments. We enlisted the expertise of our internal axle specialists and visually and manually inspected 125 axles (CPK>1.33) to identify any axles that did not meet specifications. From these manual inspections and the analysis performed by internal axle specialists, we estimated that approximately 5.6% of the affected axles may have had insufficiently torqued spindle nuts. With this information, we identified for inspection and possible repair the axles distributed in the United States of which a portion may not have sufficiently torqued spindle nuts.

After assessment of this data and with the advice of internal axle specialists, we determined on July 17, 2021 to initiate a notice of repair to our trailer manufacturer customers, their dealers, and purchasers of trailers incorporating these axles. We verbally and by email, in certain instances, notified the trailer manufacturers that received these axles of the requirement to inspect all axles to determine immediately if the spindle nuts were properly torqued. Further, we prepared written instructions for the necessary spindle nut torqueing along with

The information contained in this report was submitted pursuant to 49 CFR §573

a step-by-step instructional video. On July 21, 2021, Terran management made a formal determination that remedial field action was necessary.

#### **Description of Remedy :**

	Description of Remedy Program :	Terran Axle will notify all trailer manufacture customers, their dealers, and purchasers of trailers incorporating the axles subject to the inspection to determine whether spindle nuts are properly torqued. We mandate manual inspection of each spindle nut assembly (2 per axle) to ensure proper torqueing and, in the event that a spindle nut requires torqueing to meet prescribed standards, we provide detailed instructions and, for axles that have been in operation on a moving trailer and experience vibration, we will require the technician to confirm that the bearings have not been impacted and the axle is properly greased. In the event that bearings have been affected, we make provision for replacement of these bearings.
		The remedy involves torqueing the spindle nut to the prescribed standards which facilitates proper operability of the axle and consequent wheel and tire function.
]		Inspected each trailer axle and, if a spindle nut was insufficiently torqued, the spindle nut was torqued to the prescribed standards.

#### **Recall Schedule :**

Planned Dealer Notification Date : JUL 23, 2021 - JUL 27, 2021	We identified all of the potentially affected axles (5796 units) and have the serial numbers for all axles that require inspection. Beginning on July 16, 2021, we notified trailer manufacturing customers and their dealers that purchased these axles that these axles may have a spindle nut torque issue and require immediate inspection. On July 19, 2021, we sent written and video instructions to manufacturers and dealers on how to properly torque the spindle to prescribed standards. We have also called dealers to ensure compliance with the inspection and spindle nut adjustment procedures. We are coordinating with the trailer manufacturers and dealers on identifying end user purchasers of trailers with the axles in order to directly provide instructions for the prompt inspection of the axles and, if necessary, adjustment to the spindle nuts. Terran will keep records of all inspections and repairs as well as trailer manufacturer customer, dealer and end user contacts. Terran is in the process of preparing formal recall notification letters to distributors/ dealers and to trailer purchasers/end users and will submit drafts to NHTSA for review.
Planned Owner Notification Date : JUL 26, 2021 - AUG 27, 2021	

#### **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 :Inland Empire TrailersAddress :17748 Taylor AvenueBloomington CA 92316Country :USCompany Phone :9099995033

\* NR - Not Reported

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