



Title: Dana® Spicer® Steer Knuckle Recall Process

Date: September 7, 2017

Vehicles: *Predator Chassis and Airport Refueler Chassis with a Dana® Spicer® Steer Axle manufactured between April, 2015 and September, 2015.*

Problem: There is a possibility of improper nut torque on the tie rod end assemblies that could cause other damage.

Corrective Action: Follow instruction provided by Dana® Spicer® for inspection and resolution.
SEE INSERTED DANA® SPICER® INFORMATION BULLETIN.

Work Instructions: SEE INSERTED DANA® SPICER® INFORMATION BULLETIN.

Parts List: SEE INSERTED DANA® SPICER® INFORMATION BULLETIN.

Tools: SEE INSERTED DANA® SPICER® INFORMATION BULLETIN.

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ATTENTION: Mr. Chris Morrison



WORK INSTRUCTIONS

Dana® Spicer® Steer Axle

Information Bulletin

ABIB-1701

Bulletin Type: Warranty Information

Topic: Steer Knuckle Recall Process – Recall Number 17E041

Affected Model: All

Description

Dana has identified a group of steer axles manufactured between March 1, 2015 and May 17, 2015 that will require the inspection of the nut torque on tie rod end assemblies. The process below will give you step by step instruction how to file a recall claim, inspect suspect components, order replacement parts and close out the claim.

Standard Repair Times

Inspected tie rod ends for movement and proper torque (both sides) **.5 hours**

Knuckle replacement (per side) – **4 hours**

Tie rod end replacement (per side) – **.5 hours**

Set steer axle toe - **.3 hours**

Recall Claim Process

Important Note: All recall claim processing and parts orders must be directed to Dana's Real Time Warranty group. Please do not try to file claims through your OEM warranty process.

Step # 1 Before you call Real Time Warranty

1. Verify the VIN number of the vehicle is on the recall list.
2. Locate the identification tags on the front of the steer axle. Write down everything on the tag.



3. Locate the recall inspection form on the last page of this document.
4. Before you call Dana RTW to start a claim please fill out a recall inspection form. It is important that the information below and what you found during your inspection of the steer axle is documented and sent to RTW before you call to open a claim.
 - Repair Order Number
 - Dealer Code
 - Complete 17 digit Vehicle Identification Number (VIN) Located on truck door jam, drivers side
 - Axle model (Example: E12021)
 - Axle serial number (Example: MY01778644) Tag located on the carrier assembly
 - In-service date of the vehicle
 - Vehicle mileage
 - Inspection data

WORK INSTRUCTIONS **(Continued)**

Picture Taking

5. If your inspection identifies that components may need to be replaced you will need to take pictures of the damage parts and the position of the cotter pin hole. It's important to remember that RTW will be using the pictures you send to determine if components need to be replaced. If the pictures are out of focus, too light, too dark, too far away or too close-up the process will be delayed until new pictures are submitted. Use the example below as a guide of what your pictures should resemble.



Tie Rod Arm Taper Bore



Tie Rod End Taper Stud



Back of Tie Rod Nut



Nut Rotation



Cotter Pin Hole Position

6. Email the recall inspect form and pictures if required to Spicer.rtw@dana.com. You can visit Dana.com for additional contact information and warranty guidelines.
7. Enter the repair order number in the subject line of your email.

Step # 2 Time to Call Real Time Warranty (877-777-5360, # 3)

1. Real Time Warranty will review the information you sent while you are on the phone and give you direction to the next step.
 - a. If the inspection data shows that there is no looseness between the tie rod end and tie rod arm, RTW will approve the labor for the inspection and close the claim.
 - b. If components need to be replaced RTW will order the parts and approve the labor for the repair.
2. When a repair has been authorized the damaged parts must be returned to Dana for review. Below you will find the shipping instructions and address.
3. For tracking purposes please write this RMA number on the outside of the shipping container and in the shipping address. RMA-1200

Warranty Return Material Shipping Instructions

- For shipments over 150 LBS. - Call Penske Logistic at 855-456-3867
- For shipments under 150 LBS. - Call Dana Logistics at 260-481-3778

Ship To:
Dana Inc. CV Warranty Return Center
6515 Maumee Western
Maumee, OH. 43537
Att: RMA-1200

Important Note: If material is shipped to the warranty center without a copy of the claim, the shipment will be returned "Collect" to the sender.

Important Note: If material is returned to Dana and there is no failure found or the wrong material was sent, the shipment will be returned "Collect" back to the sender.

WORK INSTRUCTIONS **(Continued)**

Steer Axle Inspection Procedure – Recall 17E041

1. Block the forward and rear of at least one of the drive axle tires so the vehicle cannot move during this procedure.
2. With a flexible, magnetic base dial indicator, mount the base of the indicator on the tie rod arm so that the indicator tip can be centered on the threads of the stud just above the nut.



Dial Indicator Mounting Position



Dial Indicator Tip Must be Placed on The Stud

3. With someone in the cab of the truck turning the steering wheel (engine off) just enough to cause movement in the wheels, document how much movement is found on each side of the steer axle. Record results on the supplied form.
4. The next step is to remove the cotter pins and check for proper nut torque. Put a paint mark across one side of the nut and top of the stud. With a torque wrench and a 1 ¼" socket, torque the nut in a clockwise (tighten) direction until the nut just starts to rotate or you reach 130 ft. lbs. **Important: Do not exceed 170 ft. lbs.** Record your findings on the recall form.



Paint Mark to Identify Nut Rotation



Check Nut Torque – Do Not Exceed 170 ft. lbs.

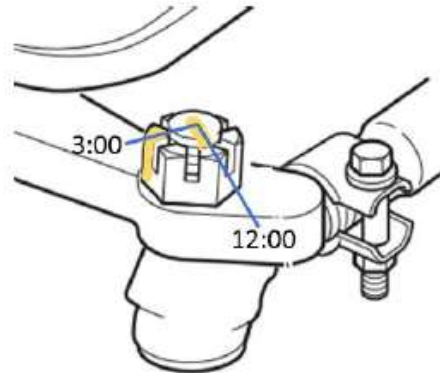
5. If there is no rotation of the nut at 130 ft. lbs. install a new cotter pin and return the truck to service.

WORK INSTRUCTIONS (Continued)

6. If you found rotation of the nut before you reached 130 ft. lbs., we can now torque the nut to 130 ft. lbs. Using the paint mark, record the amount of movement to the nut. Example: Use the paint mark as the 12:00 position, if the nut rotates ¼ turn to reach 130 ft. lbs., document the nut rotated as the 3:00 position.



Retorque to 130 ft. lbs



Record Rotation on Nut

7. With the nut torque to 130 ft. lbs. advance the nut so that the cotter pin hole is aligned with a slot in the nut, reinstall the dial indicator and check for tie rod stud movement once again. Record results on the form supplied.
Note: Never back the nut off to align the cotter pin hole to the nut slot. Torque may reach 170 ft. lbs. to obtain proper alignment.
8. **Important:** Any tie rod stud with movement after proper nut torque and alignment will require the replacement of that knuckle and tie rod.
9. **Important:** One last check. After the nut has been aligned with a slot in the nut, the cotter pin hole **CAN NOT** be above the top of the nut as shown below. Any cotter pin hole that is above the top of the nut surface will require the replacement of the knuckle and tie rod end.



Good Cotter Pin Hole Position



Cotter Pin Hole at Maximum Height

WORK INSTRUCTIONS
(Continued)

Recall 17E041 Inspection Form

Date: _____
 Repair Order Number: _____
 Dealer Code: _____
 Complete 17 Digit Vehicle Identification Number: _____
 Axle model: _____
 Axle serial number: _____
 In-service date of the vehicle: _____
 Vehicle mileage: _____

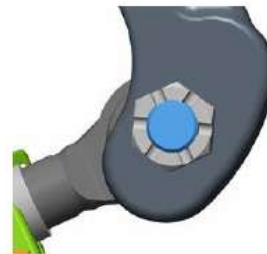
1. Document the amount of total movement on the dial indicator. (Example: .002")

Left Hand Tie Rod Movement Reading	Amount of Movement
Right Hand Tie Rod Movement Reading	Amount of Movement

2. Using the images below mark the amount of rotation on the nut after the nuts where torqued to 130 ft. lbs.



Left Side



Right Side

3. Document the amount of movement between the tie rod end and the tie rod arm after you retorqued the nut to 130 ft. lbs. If there is no movement answer "NONE"

Left Hand Movement After Retorque	Amount of Movement
Right Hand Movement After Retorque	Amount of Movement