

TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL 22TA05

REAR AXLE SHAFTS MAY SEPARATE FROM VEHICLE DURING DRIVING
(INSPECTION)

CERTAIN 2022 MODEL YEAR TUNDRA AND TUNDRA HV

Update

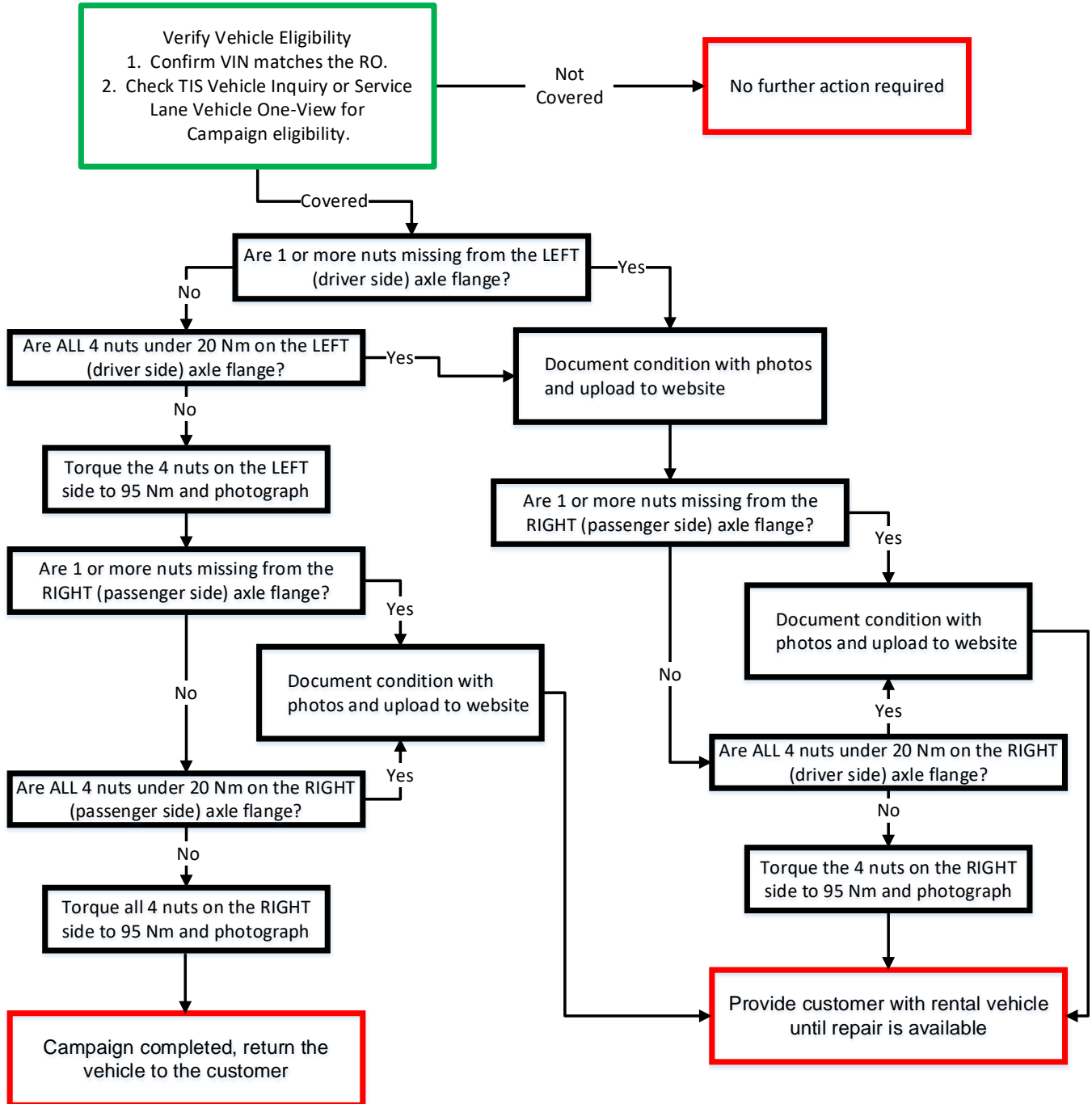
- 7-21-22 – Video overview added to clarify inspection process
- 6-28-22 – TI updated to include inspection website URL

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this recall are required to successfully complete the most current version of the E-Learning course "Safety Recall and Service Campaign Essentials". To ensure that all vehicles have the repair performed correctly; technicians performing this repair are required to currently have completed all of the following courses:

- T351 Toyota Drivetrain Service and Repair

It is the dealership's responsibility to select technicians that have completed the above courses to perform this repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

1. CHECK VEHICLE FOR CAMPAIGN ELIGIBILITY

- a. Compare the VIN on the vehicle to the VIN on the Repair Order to ensure they match.
- b. Check TIS Vehicle Inquiry or Service Lane Vehicle One-View to confirm the VIN is involved in this Campaign, and that it has not already been completed.

Note: TMNA warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were previously completed, even by another dealer.

III. PREPARATION

A. TOOLS & EQUIPMENT

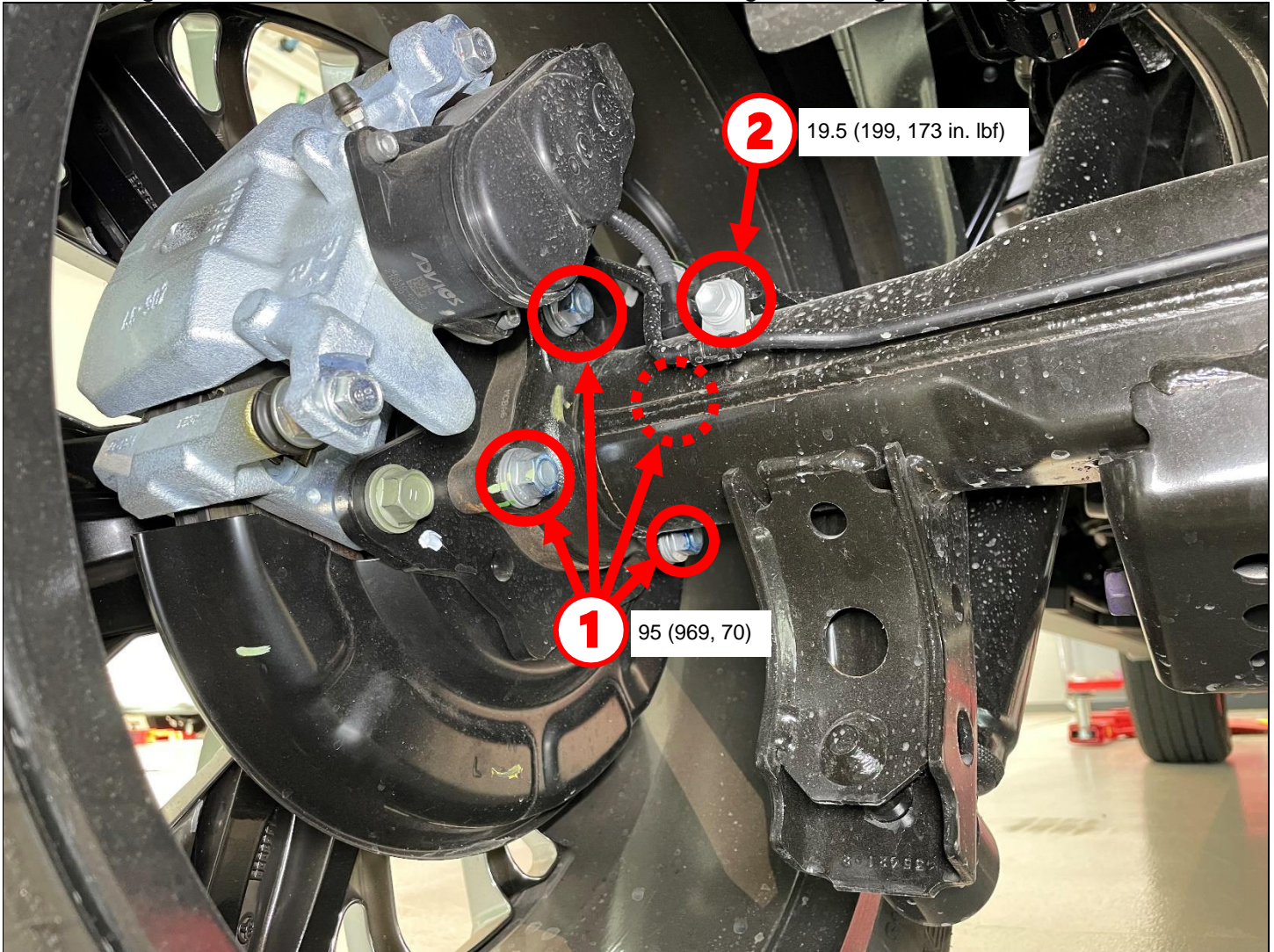
• Standard Hand Tools	• Torque Wrench	• Smart Phone or Camera	• Fine tip paint marker
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IV. WORK PROCEDURE TABLE OF CONTENTS

COMPONENTS.....	V
LEFT REAR AXLE HOUSING FLANGE NUT INSPECTION	VI
RIGHT REAR AXLE HOUSING FLANGE NUT INSPECTION	VII
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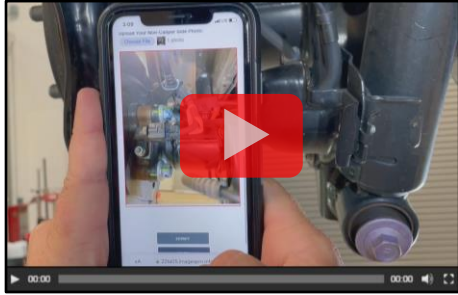
V. COMPONENTS

The image below is for the left (driver) side. Reference this image for the right (passenger) side as well.



	PART NAME	QUANTITY (PER SIDE)	QUANTITY (TOTAL)	TORQUE SPECIFICATION
1	Nut, Flange (Axle)	4	8	95 Nm (969 kgf cm, 70 ft. lbf)
2	Bolt, W/Washer (Brake Line)	1	2	19.5 Nm (199 kgf cm, 173 in. lbf)

VI. LEFT REAR AXLE HOUSING FLANGE NUT INSPECTION



1. WATCH INSPECTION VIDEO OVERVIEW

- a. Click the link to the left to watch a video overview of the inspection and photo upload process.

[Remedy Inspection Website](https://22ta05.imagespm.info/)

<https://22ta05.imagespm.info/>



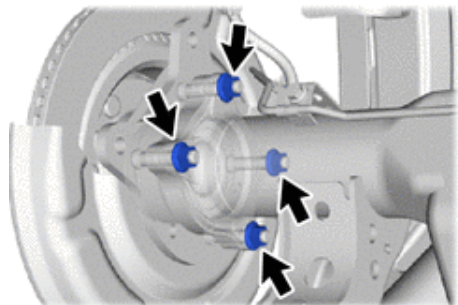
2. LOG INTO REMEDY INSPECTION WEBSITE

- a. Navigate to the URL shown the left on a computer, or for a more seamless photo upload process, scan the QR code with your smartphone.
- b. Log in to the website.

Username: 5-digit Dealer Code
Default Password: xxxxx

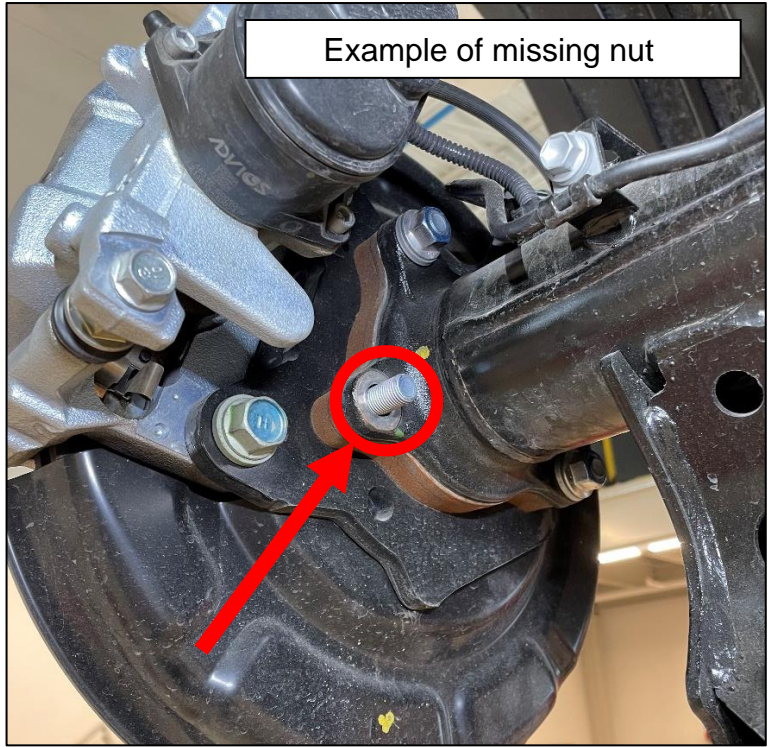
NOTE: Each dealer only has a single account, please ensure that the reset password is communicated to all technicians and dealer associates that will be utilizing this website.

- c. Enter all requested information along with VIN.
- d. Follow along on the website as you go through the procedure and upload images as requested.



3. CHECK FOR MISSING AXLE SHAFT FLANGE NUTS

- a. Release the parking brake.
- b. Lift the vehicle.
- c. Remove the left (driver) rear tire.
- d. Check to see if all 4 nuts are present on the axle housing flange. If one or more nuts are missing, this side has failed inspection.



Is there **at least one** nut missing on the LEFT (Driver) Side?



Upload photo to website as prompted then proceed to section VII. RIGHT REAR AXLE HOUSING FLANGE NUT INSPECTION

Proceed to step 4



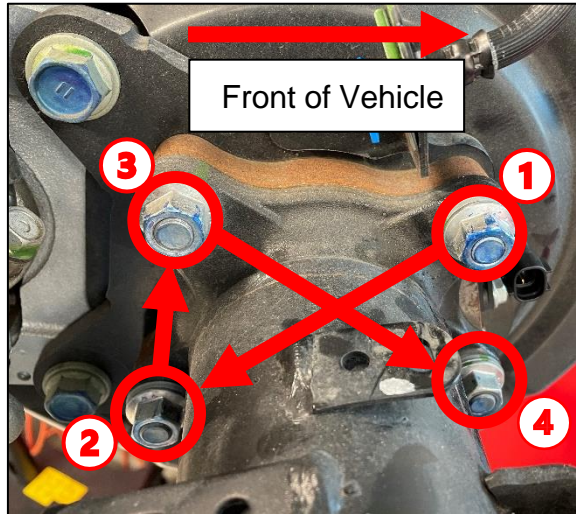
4. MATCHMARK NUTS ON LEFT SIDE

- a. Using a fine tip paint marker, matchmark all 4 nuts, washers, and the axle housing flange.
- b. Mark "D" for "Driver" close to the axle shaft flange so it will be visible while taking photos of the nuts/studs.



5. TEMPORARILY REMOVE BRAKE LINE HARDWARE TO ALLOW ACCESS TO UPPER LEFT NUT

- a. Remove the outermost bolt that secures the hard brake line to the axle housing.



NOTE: Some parts removed for visibility

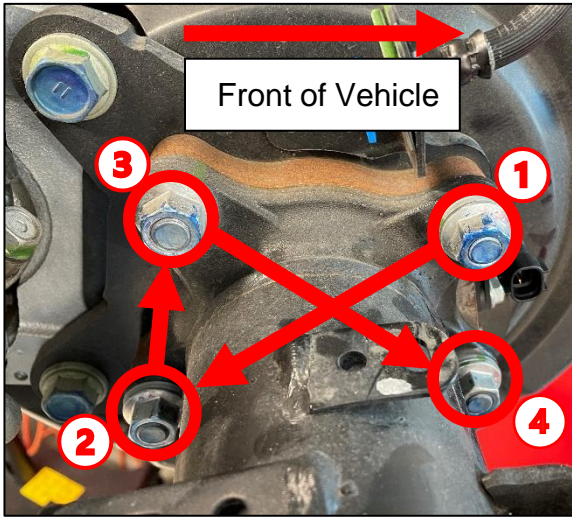
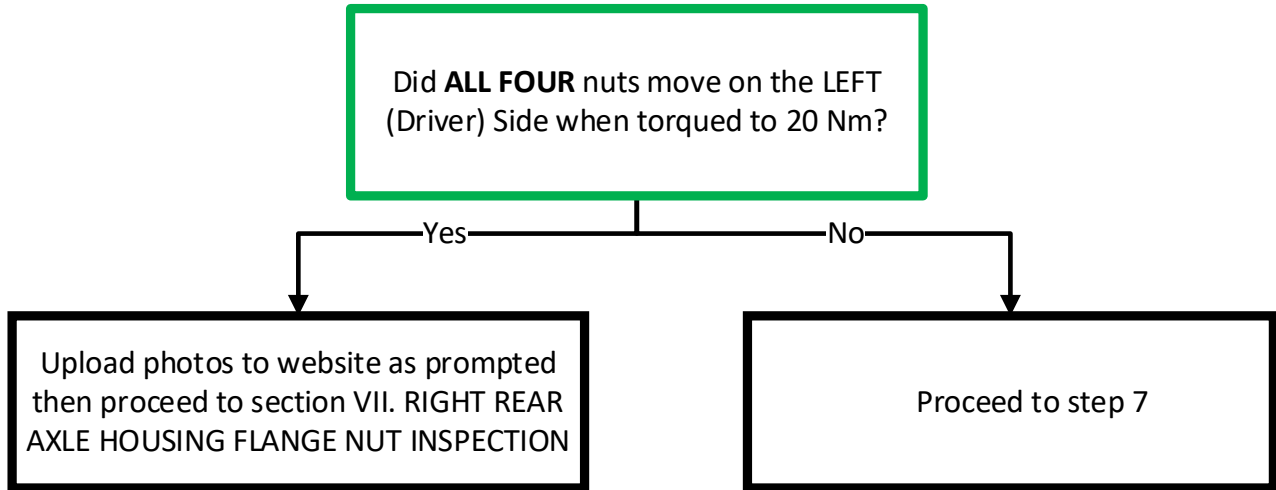
6. TORQUE STEP 1: CHECK TO SEE IF ALL FOUR (4) NUTS ON LEFT SIDE MOVE AT 20 Nm

- a. Set torque wrench to 20 Nm (204 kgf cm, 177 in. lbf)
- b. Tighten each nut to 20 Nm (204 kgf cm, 177 in. lbf) following the tightening sequence shown in the image to the left.



- Only move the brake line enough to create clearance for a torque wrench. Excessive movement could result in permanent damage to the brake line or losing of the joint.
- Be careful not to scratch or cause other damage to the brake line.
- Do NOT use extensions with the torque wrench.

- c. Check the matchmarks to see if the nuts moved. If **ALL FOUR (4)** moved, this side has failed inspection.



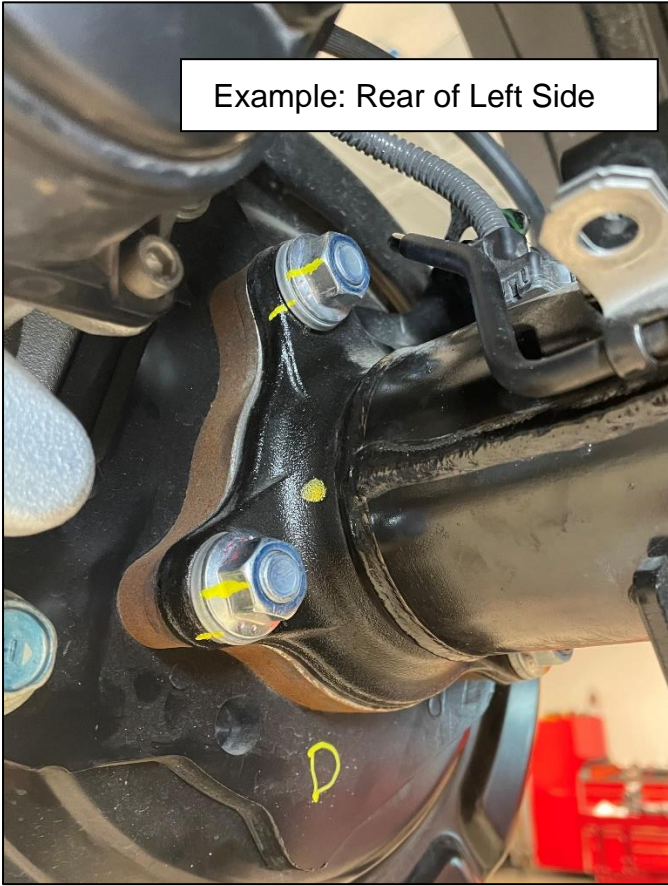
NOTE: Some parts removed for visibility

7. TORQUE STEP 2: INCREASE TORQUE TO 95 Nm
- Set torque wrench to 95 Nm (969 kgf cm, 70 ft. lbf)
 - Tighten each nut to 95 Nm (969 kgf cm, 70 ft. lbf) following the tightening sequence shown to the left.



- Only move the brake line enough to create clearance for a torque wrench. Excessive movement could result in permanent damage to the brake line or losing of the joint.
- Be careful not to scratch or cause other damage to the brake line.
- Torque nuts to 95 Nm (969 kgf cm, 70 ft. lbf). DO NOT use torque specification listed in Repair Manual.
- When torquing the nut apply torque in a smooth slow rotation. DO NOT quickly apply torque.
- Do NOT use extensions with the torque wrench.

- c. Photograph the matchmark positions post-torque and upload 2 photos to website (front and rear of axle; 2 nuts per photo).

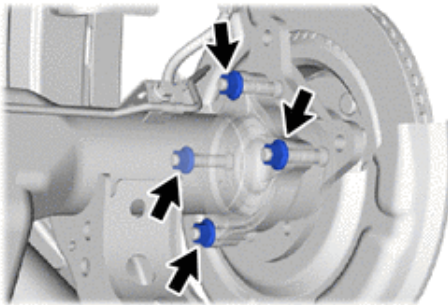


Example: Rear of Left Side

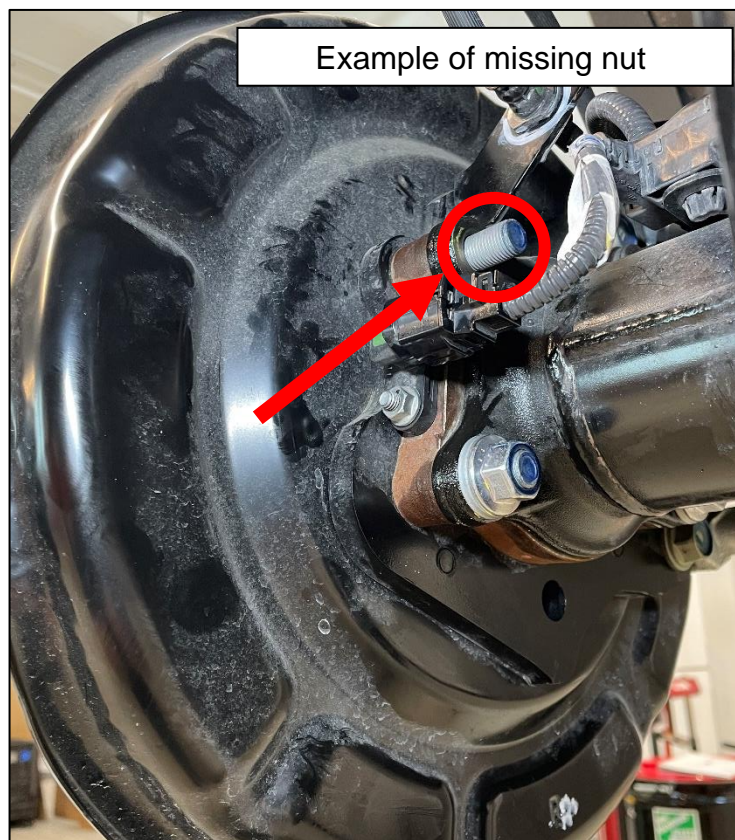


Example: Front of Left Side

VII. RIGHT REAR AXLE HOUSING FLANGE NUT INSPECTION



1. CHECK FOR MISSING AXLE SHAFT FLANGE NUTS
 - a. Remove the right (passenger) rear tire.
 - b. Check to see if all 4 nuts are present on the axle housing flange. If one or more nuts are missing, this side has failed inspection.



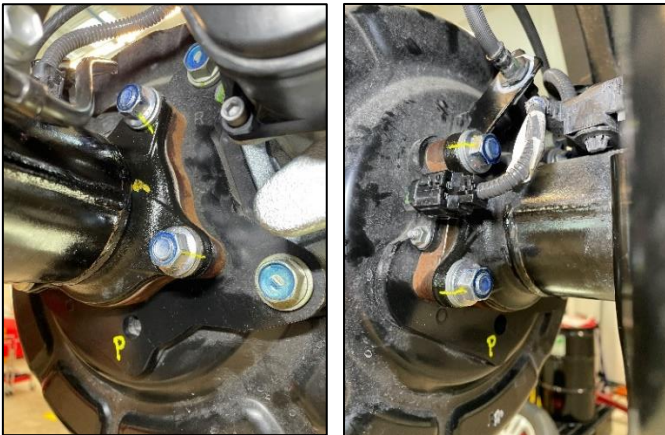
Is there **at least one** nut missing on the
RIGHT (Passenger) Side?

Yes

No

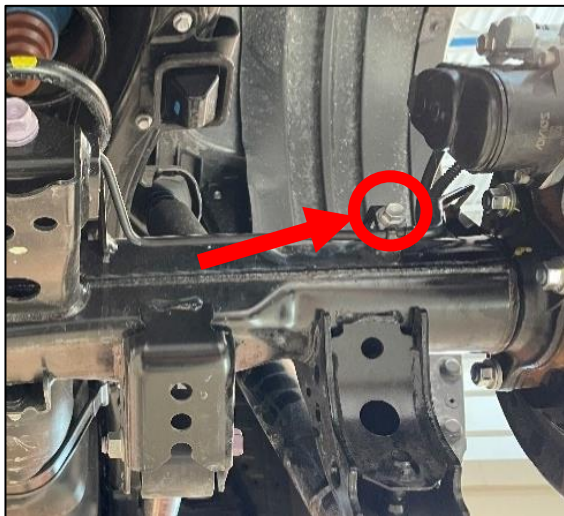
Upload photo to website as prompted
then proceed to section VIII. **INSTALL
BRAKE HARDWARE AND REAR WHEELS**

Proceed to step 2



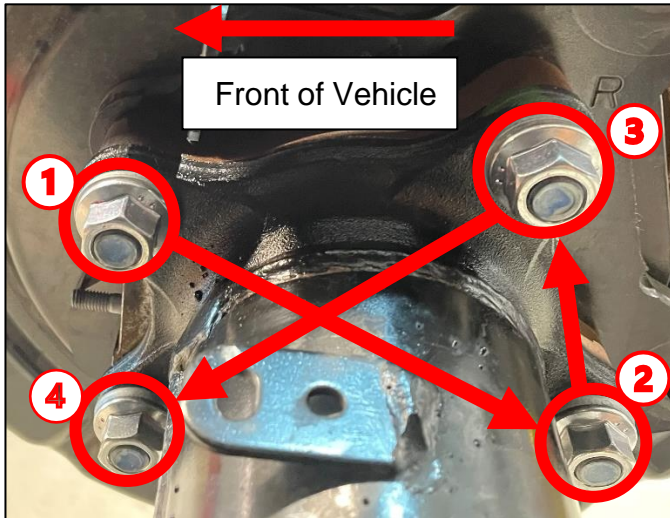
2. MATCHMARK NUTS ON RIGHT SIDE

- a. Using a fine tip paint marker, matchmark all 4 nuts, washers, and the axle housing flange.
- b. Mark "P" for "Passenger" close to the axle shaft flange so it will be visible while taking photos of the nuts/studs.



3. TEMPORARILY REMOVE BRAKE LINE HARDWARE TO ALLOW ACCESS TO UPPER RIGHT NUT

- a. Remove the outermost bolt that secures the hard brake line to the axle housing.



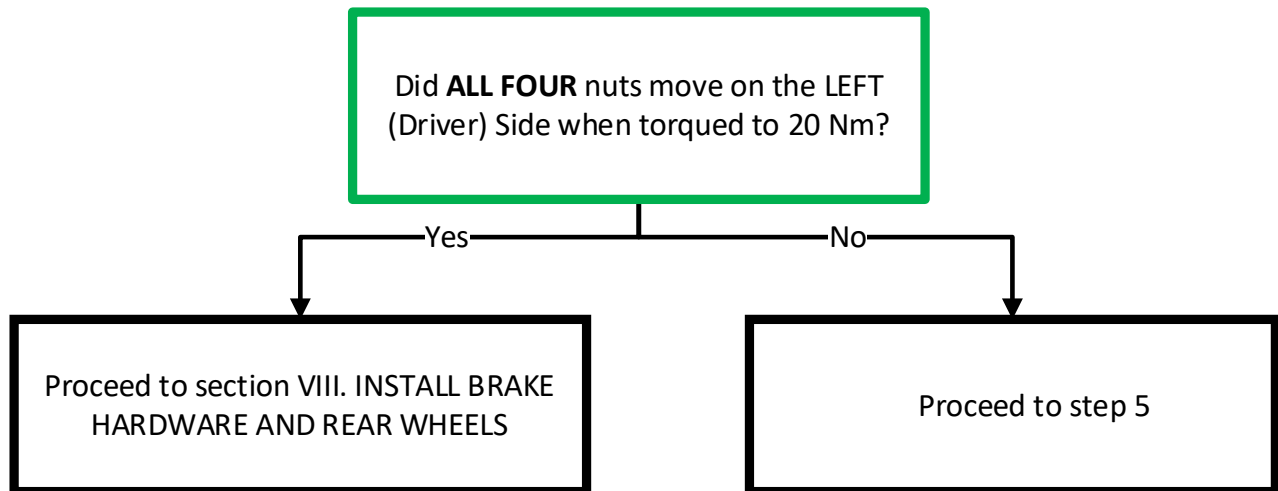
NOTE: Some parts removed for visibility

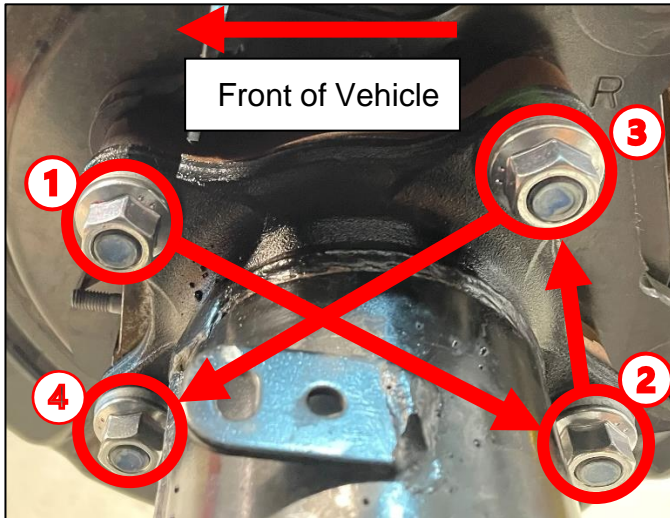
4. TORQUE STEP 1: CHECK TO SEE IF ALL FOUR (4) NUTS ON RIGHT SIDE MOVE AT 20 Nm
- Set torque wrench to 20 Nm (204 kgf cm, 177 in. lbf).
 - Tighten each nut to 20 Nm (204 kgf cm, 177 in. lbf) following the tightening sequence shown in the image to the left.

Critical

- Only move the brake line enough to create clearance for a torque wrench. Excessive movement could result in permanent damage to the brake line.
- Be careful not to scratch or cause other damage to the brake line.
- Do NOT use extensions with the torque wrench.

- Check the matchmarks to see if the nuts moved. If **ALL FOUR (4)** moved, this side has failed inspection.





NOTE: Some parts removed for visibility

5. TORQUE STEP 2: INCREASE TORQUE TO 95 Nm
 - a. Set the torque wrench to 95 Nm (969 kgf cm, 70 ft. lbf)
 - b. Tighten each nut to 95 Nm (969 kgf cm, 70 ft. lbf) following the tightening sequence shown to the left.



- Only move the brake line enough to create clearance for a torque wrench. Excessive movement could result in permanent damage to the brake line.
- Be careful not to scratch or cause other damage to the brake line.
- Torque nuts to 95 Nm (969 kgf cm, 70 ft. lbf). DO NOT use torque specification listed in Repair Manual.
- When torquing the nut apply torque in a smooth slow rotation. DO NOT quickly apply torque.
- Do NOT use extensions with the torque wrench.

- c. Photograph the matchmark positions post-torque and upload 2 photos to website (front and rear of axle; 2 nuts per photo).



VIII. INSTALL BRAKE HARDWARE AND REAR WHEELS

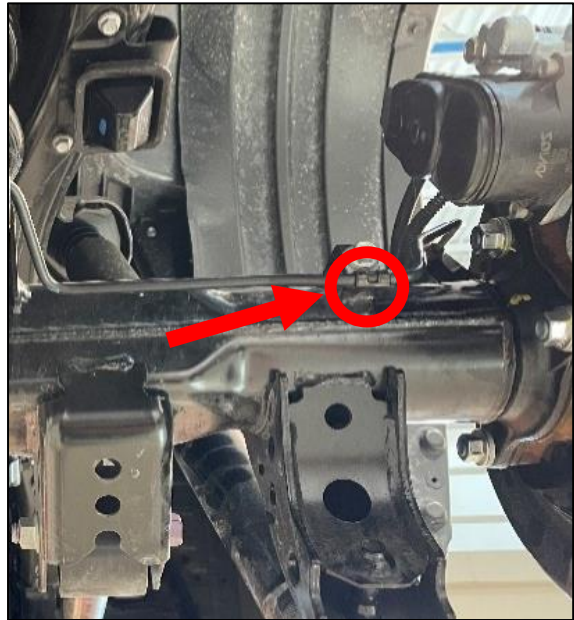
1. REINSTALL BRAKE HARDWARE

- a. Reinstall the bolts that secure the hard brake line to the axle housing.

Torque Specification: 19.5 Nm (199 kgf cm, 173 in. lbf)



Left (Driver) Side



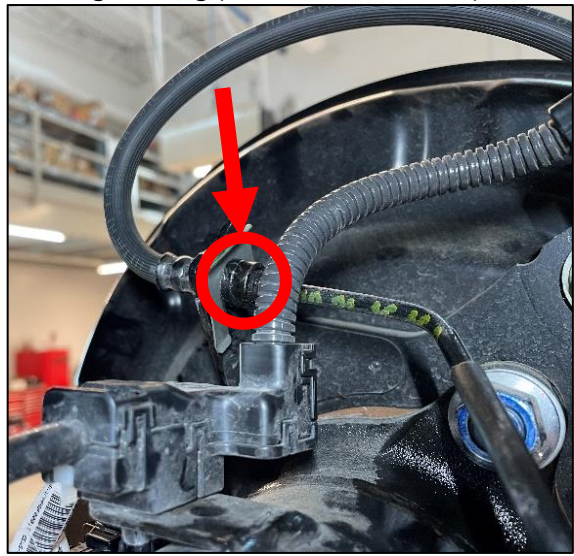
Right (Passenger) Side

2. CHECK FOR BRAKE FLUID LEAKS

- a. Inspect both brake line joints for leaks where the hard brake tube connects to the flexible hose. If leaks are found, refer to Repair Manual for tightening procedure and torque.



Left (Driver) Side



Right (Passenger) Side

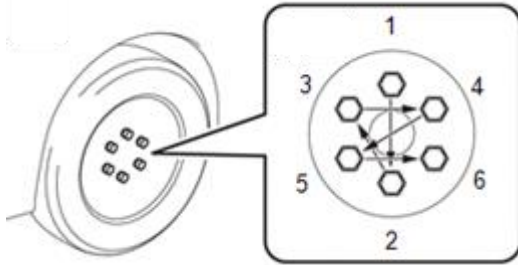
3. REINSTALL REAR WHEELS

a. Reinstall Rear Wheels and torque according to the sequence and specification below.

Torque Specification:

- Steel Wheel: 209 Nm (2131 kgf-cm, 154 ft.·lbf)
- Aluminum Wheel: 131 Nm (1336 kgf-cm, 97 ft.·lbf)

Torque Pattern:



Were any nuts missing, or were all 4 nuts on 1 or both sides torqued less than 20 Nm?

Yes

No

Provide customer with rental vehicle until remedy repair is available. If customer refuses rental, contact your region representative.

Proceed to VERIFY REPAIR QUALITY

◀ VERIFY REPAIR QUALITY ▶

- Confirm all axle flange nuts were installed and torqued properly.
- Confirm brake line bolts were installed and torqued properly.
- Confirm wheels were installed and torqued properly.
- Confirm that there are no fluids leaking from the rear axle area.
- Confirm that the brake lines have not been deformed, scratched, or damaged in any way.

If you have any questions regarding this instruction, please contact your regional representative.

APPENDIX

A. PARTS DISPOSAL

In accordance with Federal law, please make sure all recalled parts (original parts) removed from the vehicle are disposed of in a manner in which they will not be reused, *unless requested for parts recovery return.*

B. CAMPAIGN DESIGNATION DECORDER

