

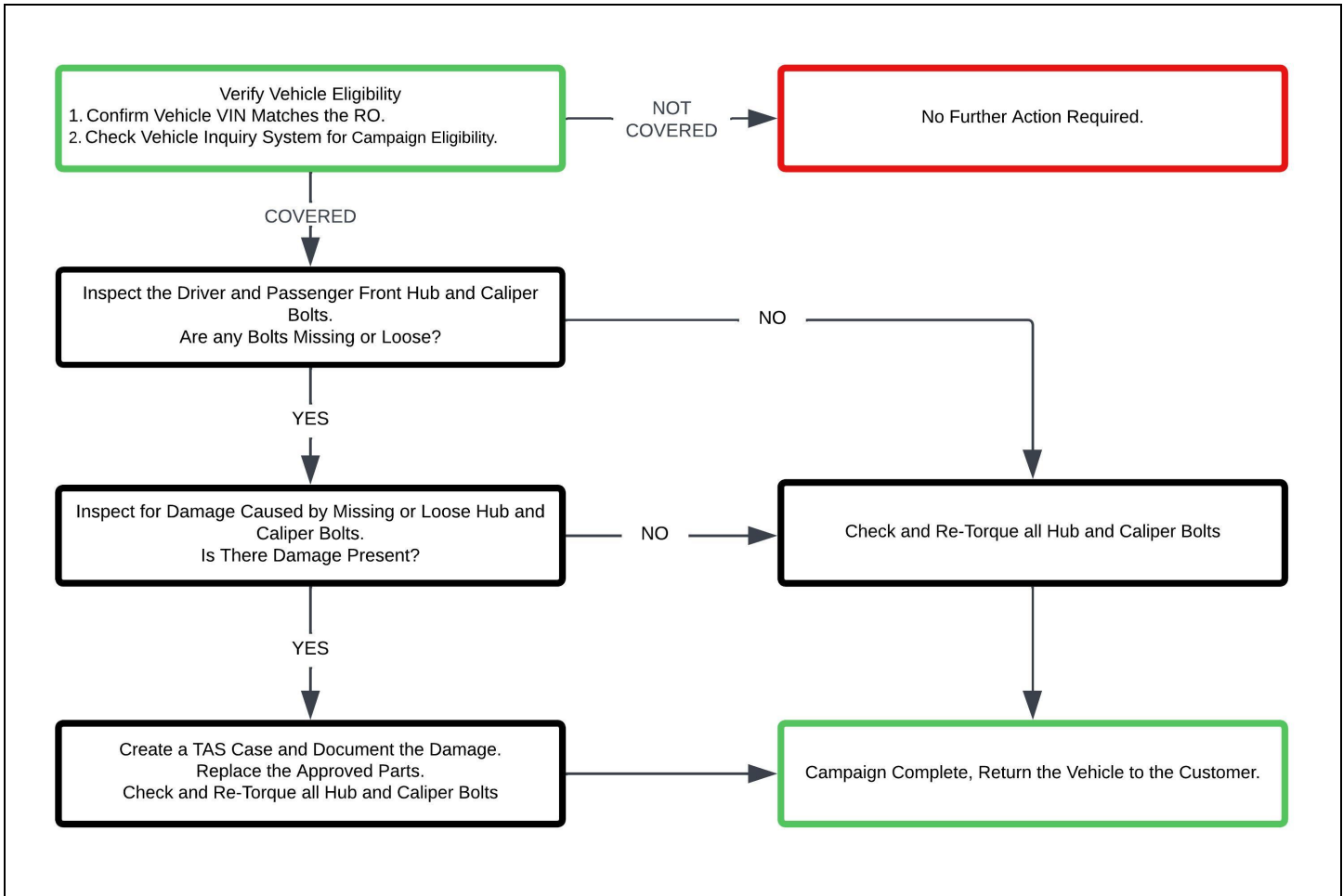
TECHNICAL INSTRUCTIONS
FOR
SAFETY RECALL 24TA14
POTENTIAL LOSS OF BRAKING PERFORMANCE OR WHEEL SEPARATION
CERTAIN 2024 MODEL YEAR RAV4

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this repair are required to 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 recall repair are required to have completed all of the following courses:

- T4535 – Steering, Suspension & Handling

Always check which technicians can perform the repair by logging on to <https://www.uotdealerreports.com>. The dealership is responsible for selecting technicians who have completed the above courses to perform this repair. Carefully review your resources, the technician’s skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure properly trained technicians are available to perform this repair at all times.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

1. CHECK VEHICLE FOR CAMPAIGN ELIGIBILITY

- Compare the vehicle's VIN to the VIN listed on the Repair Order to ensure they match.
- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Campaign and has not already been completed.

NOTICE: 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 AND EQUIPMENT

• Flashlight	• 3/8" Torque Wrench	• 3/8" Ratcheting Wrench
• 3/8" 3" Extension	• 3/8" 17mm Socket	• Gloves

B. PARTS

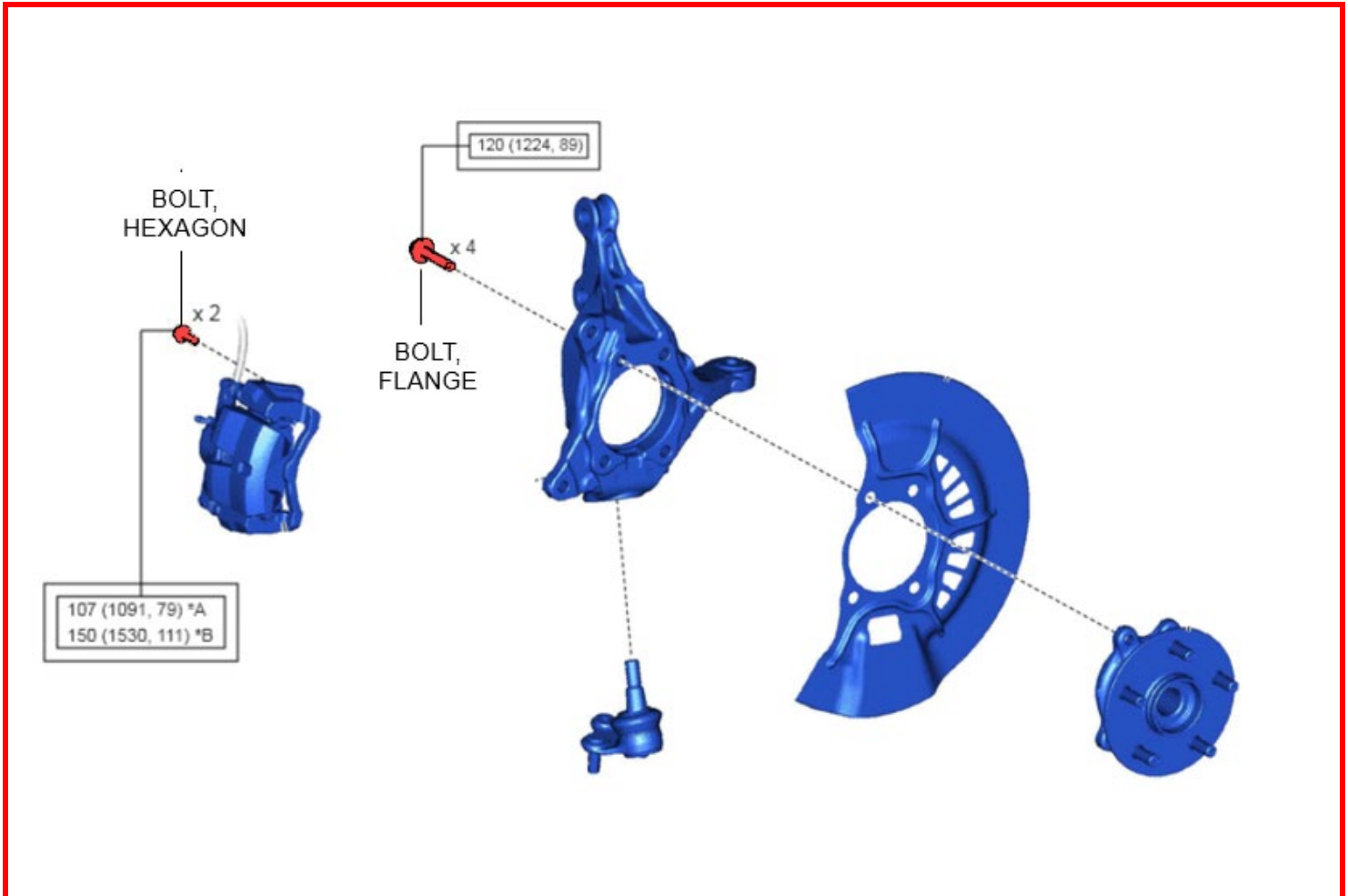
Part Number	Part Description	Quantity
Use EPC	BOLT, FLANGE	As Needed
Use EPC	BOLT, HEXAGON (FOR FRONT DISC BRAKE CALIPER)	As Needed

IV. WORK PROCEDURE TABLE OF CONTENTS

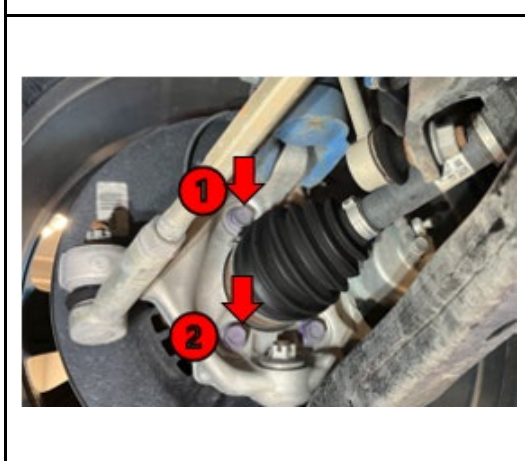
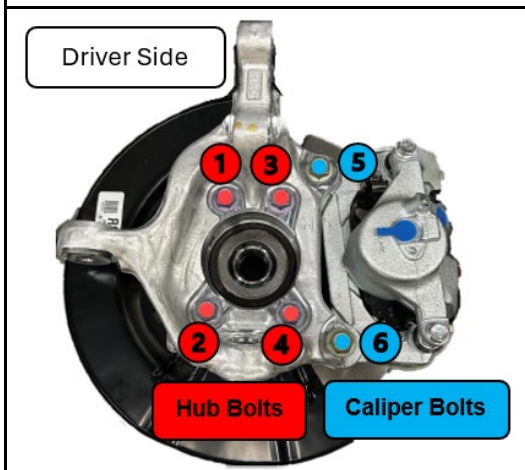
INSPECT DRIVER AND PASSENGER FRONT HUB AND CALIPER BOLTS	SECTION VI.
TORQUE THE FRONT HUB AND CALIPER BOLTS TO SPECIFICATION	SECTION VII.
APPENDIX	SECTION VIII.

V. BACKGROUND

Certain bolts may not have been properly tightened during manufacturing and can loosen over time, potentially causing the front brake calipers or front wheels to detach. If this occurs, there can be an increase in stopping distance or a loss of vehicle control, increasing the risk of crash.



VI. INSPECT THE FRONT HUB AND CALIPER BOLTS FOR LOOSENESS AND/OR DAMAGE



1. INSPECT THE DRIVER FRONT HUB AND CALIPER BOLTS

a. Raise the vehicle on lift and allow the front wheels to be at shoulder height or above.

b. Review the driver side hub and caliper bolt locations.

c. Turn the driver front wheel full mast to the right (towards passenger side).

d. Inspect the driver side (1) and (2) hub bolts for missing or not fully seated (loose).

e. If any loose bolts found, remove bolt and inspect for damage.

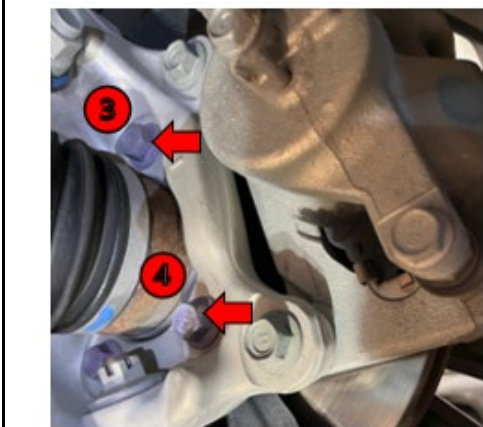


- Check any bolt that is loose for damaged threads.
- Document any missing bolts.

NOTE: If any loose bolts are discovered and the threads are ok, temporarily reinstall bolt.



f. Turn the driver front wheel full mast to the left (towards divers side).

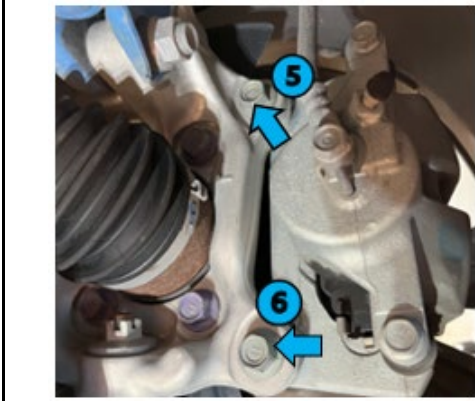


g. Inspect the driver side hub bolts (3) and (4) for missing or not fully seated (loose).
h. If any loose bolts found, remove and inspect for damage.



- Check any bolt that is loose for damaged threads.
- Document any missing bolts.

NOTE: If any loose bolts are discovered and threads are ok, temporarily reinstall bolt.



i. Inspect the driver side caliper bolts (5) and (6) for missing or not fully seated (loose).
j. If any loose bolts found, remove and inspect for damage.

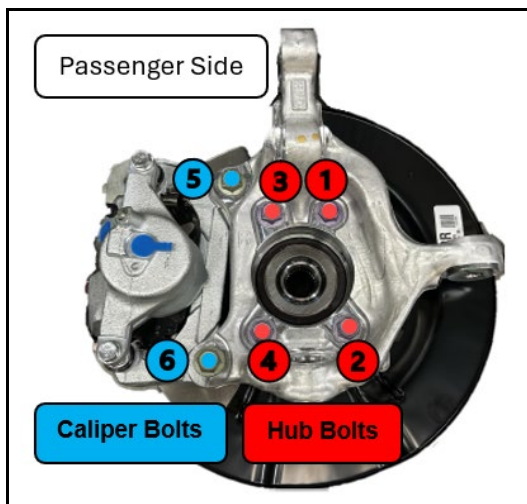
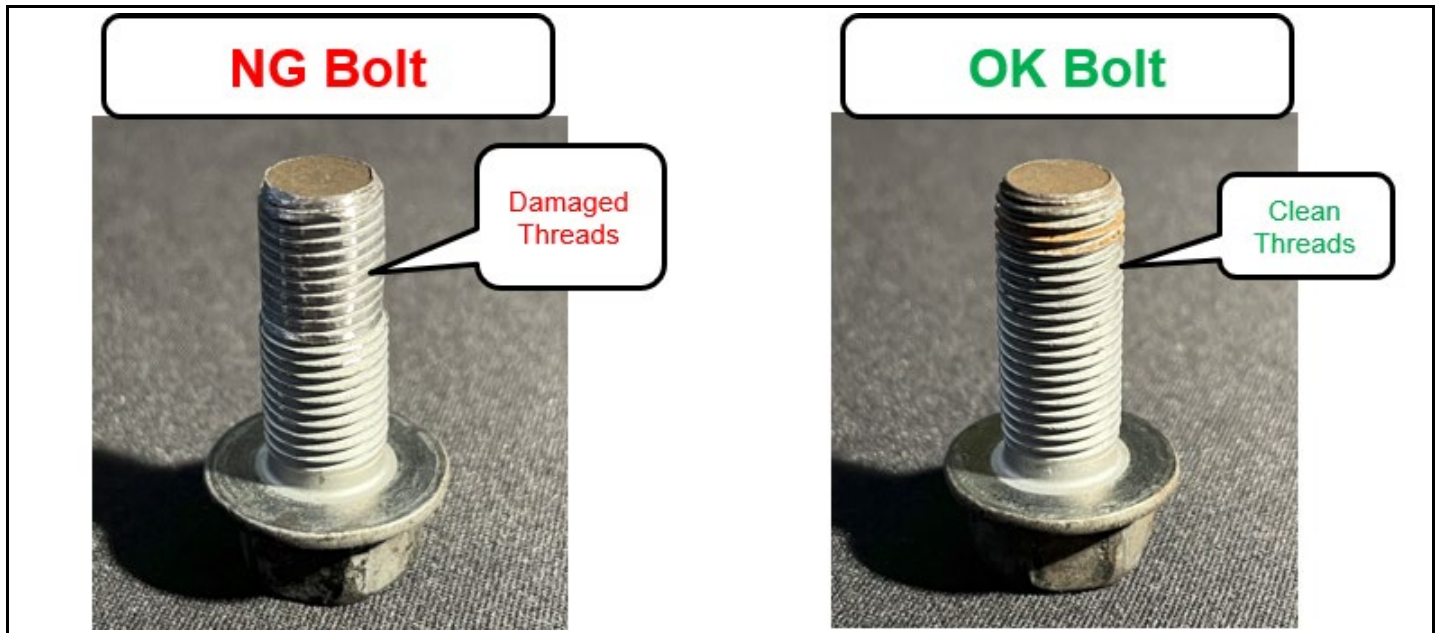


- Check any bolt that is loose for damaged threads.
- Document any missing bolts.

NOTE: If any loose bolts are discovered and threads are ok, temporarily reinstall bolt.

k. Are any of the bolts for the driver side missing or exhibiting signs of damage to the threads?

- **OK:** Proceed to the passenger side inspection [Step 2](#).
- **NG:** Document the damage, then proceed to [Step 2](#).

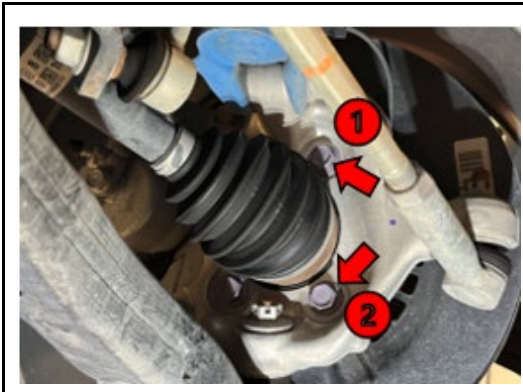


2. **INSPECT THE PASSENGER SIDE HUB BOLTS FOR LOOSENESS AND/OR DAMAGE**

a. Review the passenger side hub and caliper bolt locations.



b. Turn the passenger front wheel full mast to the left (towards drivers side).



- c. Inspect the passenger side (1) and (2) hub bolts for missing or not fully seated (loose).
- d. If any loose bolts found, remove and inspect for damage.

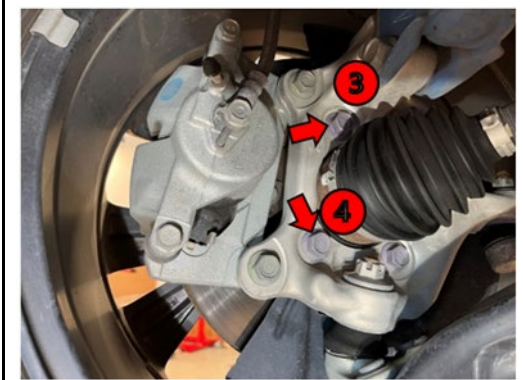


- Check any bolt that is loose for damaged threads.
- Document any missing bolts.

NOTE: If any loose bolts are discovered and the threads are ok, temporarily reinstall bolt.



- e. Turn the passenger front wheel full mast to the right (towards passenger side).

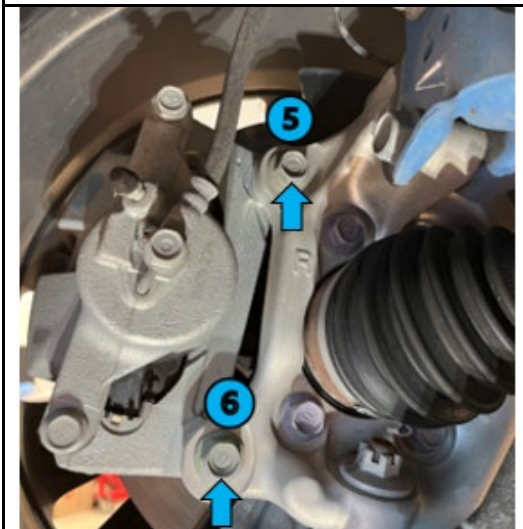


- f. Inspect the passenger side hub bolts (3) and (4) for missing or not fully seated (loose).
- g. If any loose bolts found, remove and inspect for damage.



- Check any bolt that is loose for damaged threads.
- Document any missing bolts.

NOTE: If any loose bolts are discovered and threads are ok, temporarily reinstall bolt.



- h. Inspect the passenger side caliper bolts (5) and (6) for missing or not fully seated (loose).
- i. If any loose bolts found, remove and inspect for damage.

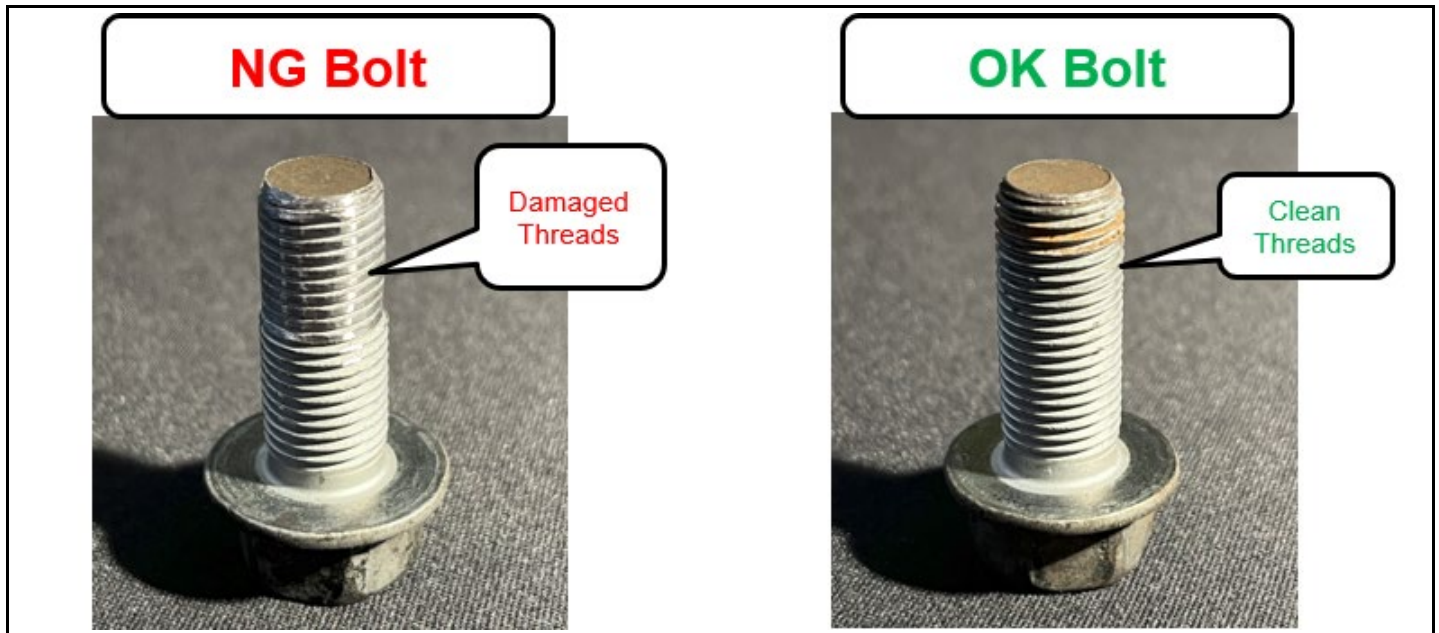


- Check any bolt that is loose for damaged threads.
- Document any missing bolts.

NOTE: If any loose bolts are discovered and threads are ok, temporarily reinstall bolt.

j. Are any of the bolts for the passenger side missing or exhibiting signs of damage to the threads?

- **OK:** Proceed to [Step 3](#).
- **NG:** Document the damage, then proceed to [Step 3](#).



3. CONFIRM MISSING AND/OR DAMAGED BOLTS

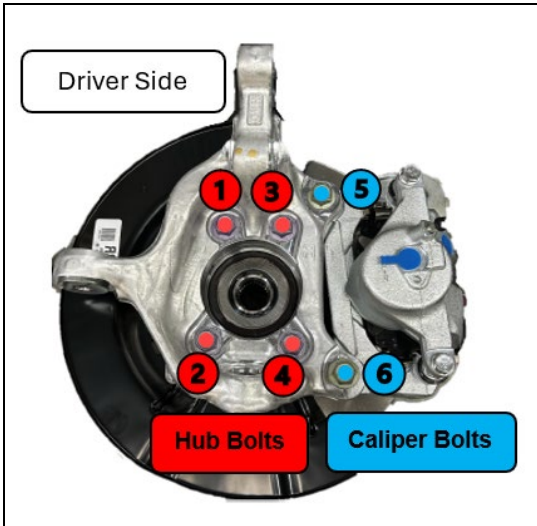
a. If any missing and/or damaged bolts were documented, was there any damage to the wheel, brakes, or surrounding components?

- **OK:** Proceed to [Section VII](#).
- **NG:** If damage is found, document all damaged items with photographs and create a TAS case. Consult with TAS agent and FTS if necessary and determine appropriate replacement parts for the vehicle based on the damage present.

VII. TORQUE THE FRONT HUB AND CALIPER BOLTS TO SPECIFICATION



- Check that there is no foreign matter or rust on the bolt-hole threads and the contact surfaces of the knuckle assembly. Clean the contact surfaces and hub/caliper bolts if necessary. If the bolts are installed with foreign matter or rust between the contact surfaces, the foreign matter or rust may work loose. This may result in a reduction of the fastening force (axial force), leading to looseness or loss of one or more hub/caliper bolts.
- When installing the hub/caliper bolts, check that they rotate smoothly by hand. If they do not rotate smoothly, check that there is no foreign matter or rust and clean if necessary.

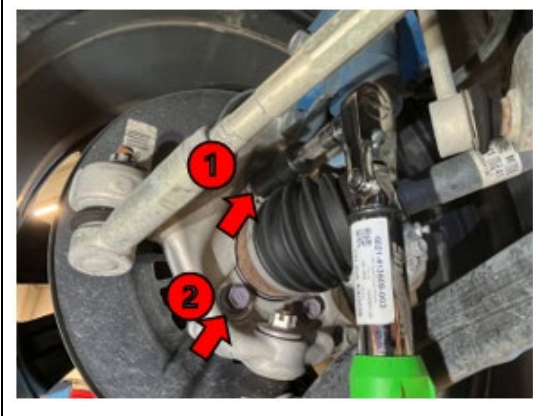


1. TORQUE THE DRIVER SIDE HUB AND CALIPER BOLTS

- a. Review the driver side hub and caliper bolt locations.



- b. Turn the driver front wheel full mast to the right (towards passenger side).



- c. Loosen then torque the driver side hub bolts (1) and (2) to specification.

Torque:
120 N·m {89 ft·lbf}

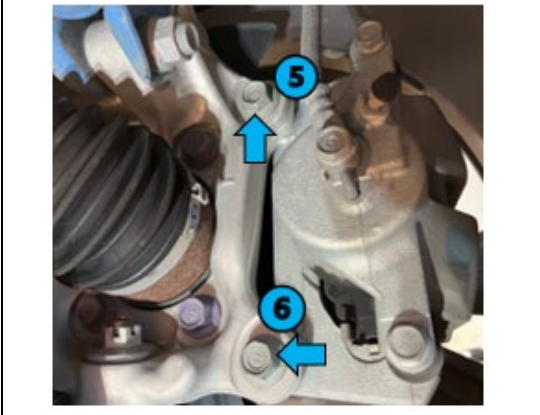


d. Turn the driver front wheel full mast to the left (towards driver side).



e. Loosen then torque the driver side hub bolts (3) and (4) to specification.

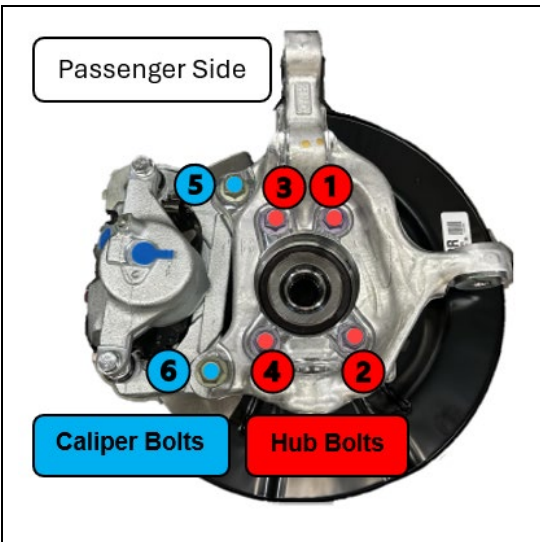
Torque:
120 N·m {89 ft·lbf}



f. Loosen then torque the driver side caliper bolts (5) and (6) to specification.

Torque:
for Steel Steering Knuckle :
107 N·m {79 ft·lbf}

for Aluminum Steering Knuckle :
150 N·m {111 ft·lbf}

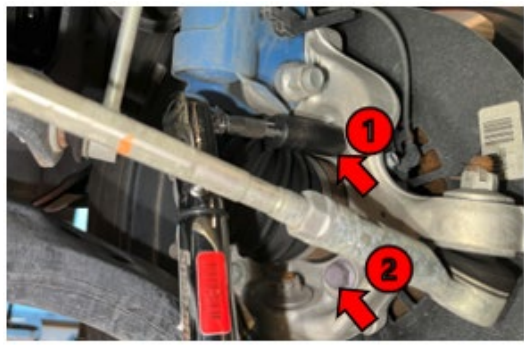


2. TORQUE THE PASSENGER SIDE HUB AND CALIPER BOLTS

a. Review the passenger side hub and caliper bolt locations.



- b. Turn the passenger front wheel full mast to the left (towards driver side).

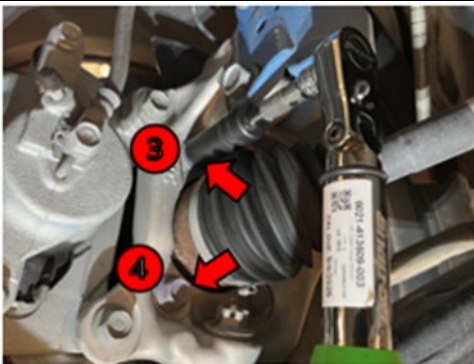


- c. Loosen then torque the passenger side hub bolts (1) and (2) to specification.

Torque:
120 N·m {89 ft·lbf}

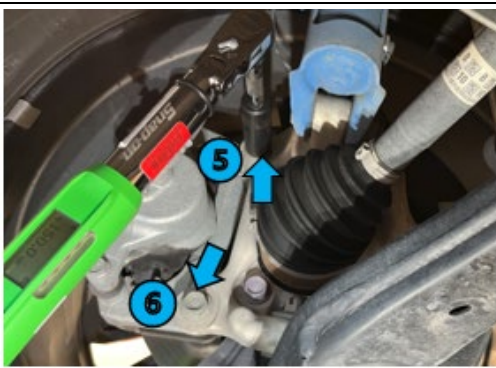


- d. Turn the driver front wheel full mast to the right (towards passenger side).



- e. Loosen then torque the passenger side hub bolts (3) and (4) to specification.

Torque:
120 N·m {89 ft·lbf}



- f. Loosen then torque the passenger side caliper bolts (5) and (6) to specification.

Torque:
for Steel Steering Knuckle :
107 N·m {79 ft·lbf}

for Aluminum Steering Knuckle :
150 N·m {111 ft·lbf}

◀ VERIFY REPAIR QUALITY ▶

- Confirm all hub bolts are torqued to **120 N·m {89 ft·lbf}**.
- Confirm all caliper bolts are torqued to **107 N·m {79 ft·lbf}** (For Steel Steering Knuckle).
- Confirm all caliper bolts are torqued to **150 N·m {111 ft·lbf}** (For Aluminum Steering Knuckle).
- Have a second technician inspect that all hub bolts and caliper bolts on both front steering knuckles have been properly torqued to specification.

VIII. APPENDIX

A. PARTS DISPOSAL

In accordance with Federal law, please ensure all recalled (original) parts removed from the vehicle are disposed of in a manner that will not allow reuse unless requested for parts recovery return.

B. CAMPAIGN DESIGNATION DECODER

