

TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL 26TA19

Certain 2026 Model Year Grand Highlander and Grand Highlander HV

Front Steering Knuckle

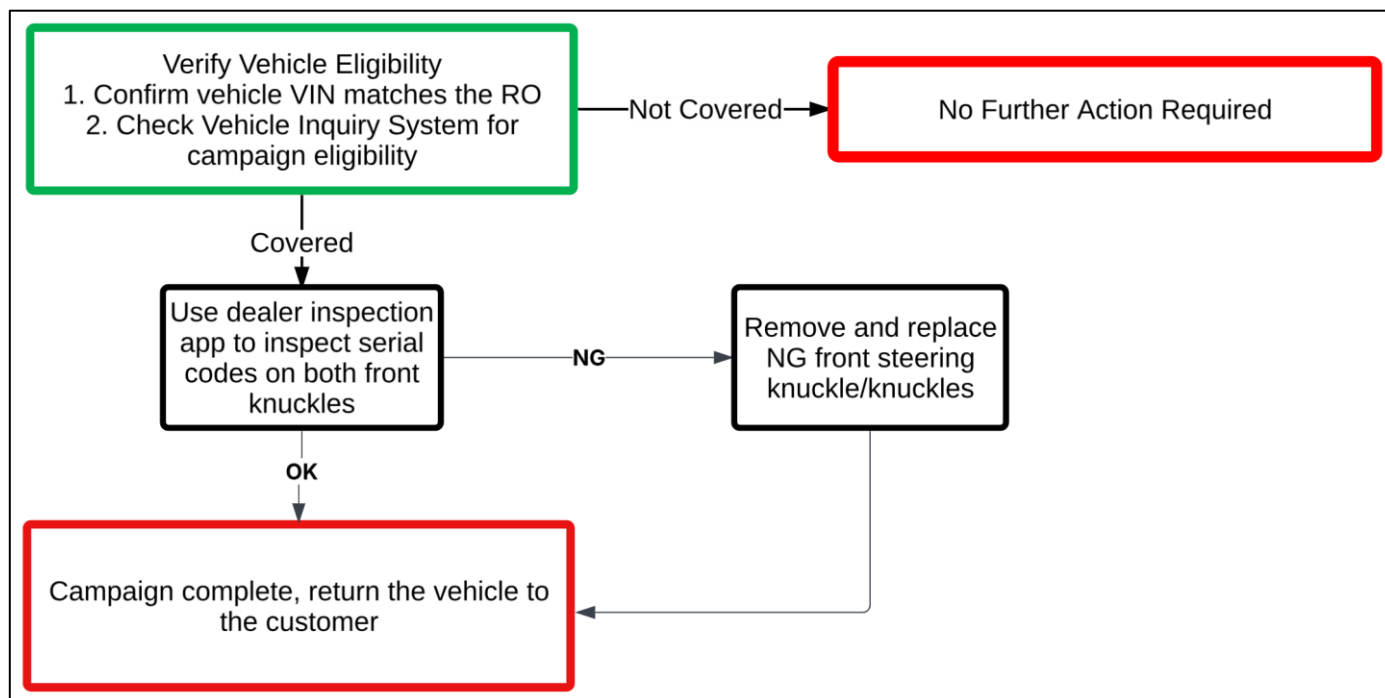
The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this repair are required to successfully complete the most current version of the E-Learning course “Safety Recall and Service Campaign Essentials”. To ensure that all vehicles have the repair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

- **T4535 – Steering and Suspension**

It is the dealership’s responsibility to select technicians with the above course completed 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

The flow chart is for reference only. **DO NOT** use it in place of the full technical instructions. Follow **ALL** steps as outlined in the full technical instructions to confirm the campaign is completed correctly.



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 recall, and that it 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. Parts

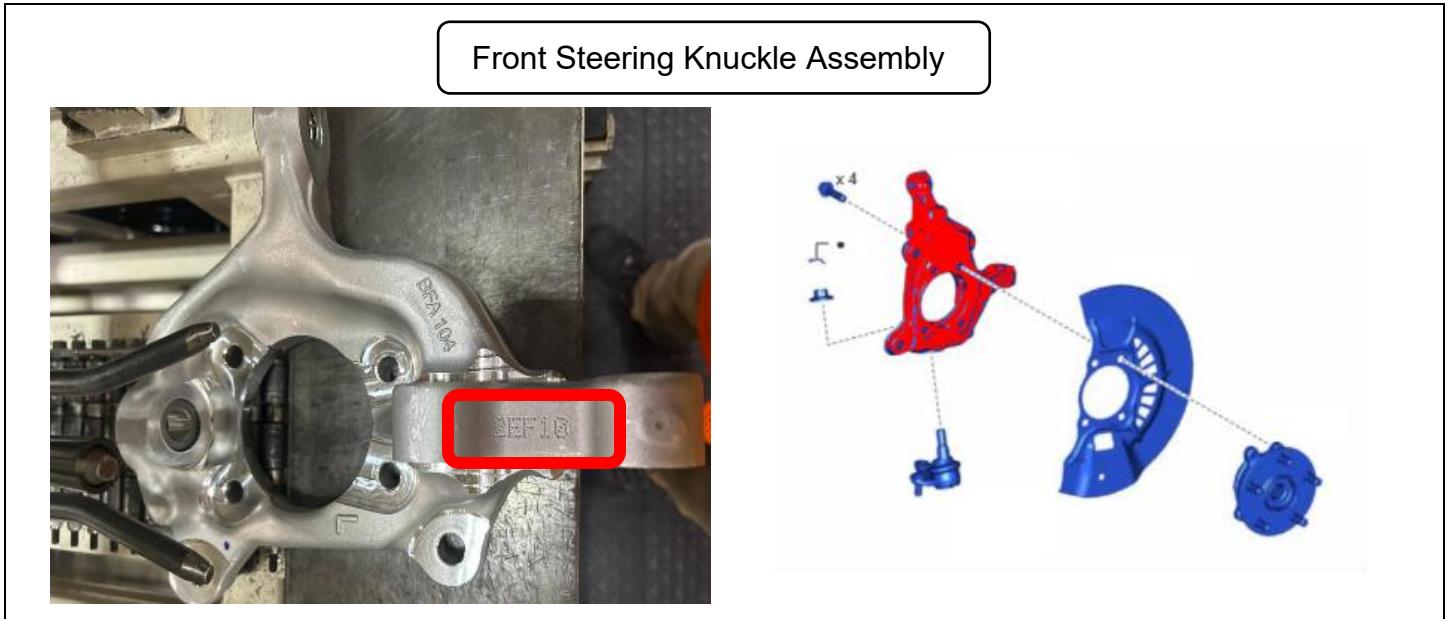
Part Number	Description	Quantity
43201-0E010	Knuckle, Steering, RH	1
43202-0E010	Knuckle, Steering, LH	1
95381-03225	PIN, COTTER (for Castle Nut/front ball joint)	1
95381-03025	PIN, COTTER (for Castle Nut/tie rod end)	1
90080-17238	NUT (for front axle shaft RH/LH)	1

B. TOOLS & EQUIPMENT

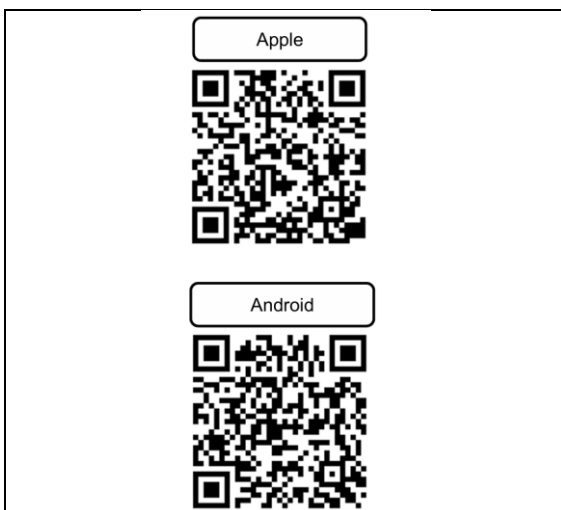
• Borescope	• Flashlight	• Mobile Device (Dealer Inspection App)
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IV. BACKGROUND

The front steering knuckles in the subject vehicles may not have been manufactured properly. After a sudden large impact (such as hitting a pothole or a curb), the front steering knuckle can break. In some operating conditions, this can lead to a loss of vehicle control and increase the risk of a crash.



V. DEALER INSPECTION APP

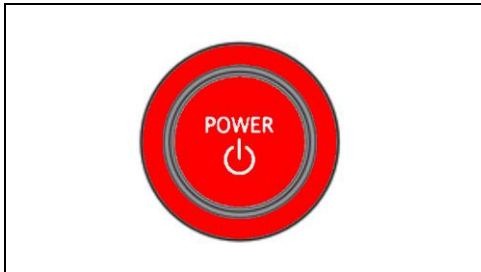


- Install the mobile inspection app on your device using the QR code or by clicking on the links below:

Apple: [Click Here](#)

Android: [Click Here](#)

VI. INSPECTION PROCEDURE



1. PREPARE VEHICLE FOR INSPECTION

a. Turn ignition switch to ENGINE ON or READY ON for HV models.

b. Set parking brake.

c. Turn steering wheel full mast to the right.

2. INSPECT DRIVER FRONT STEERING KNUCKLE

a. Lay down a mover's blanket or kneeling pad to lower yourself down to find the front lower shock absorber tube and steering knuckle mating area.





b. Locate the lower shock absorber tube and steering knuckle mating area.

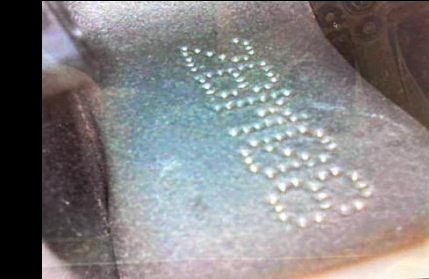


c. Notice the gap between the lower shock absorber tube and the steering knuckle mating area. This is the entryway where the borescope will be inserted for inspection.





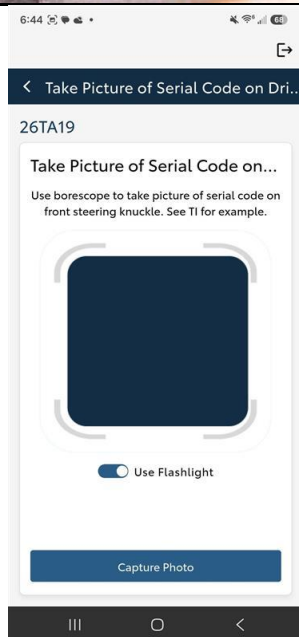
- d. Insert the camera tip of the borescope into the space indicated and search for the dimpled alpha-numeric serial code.

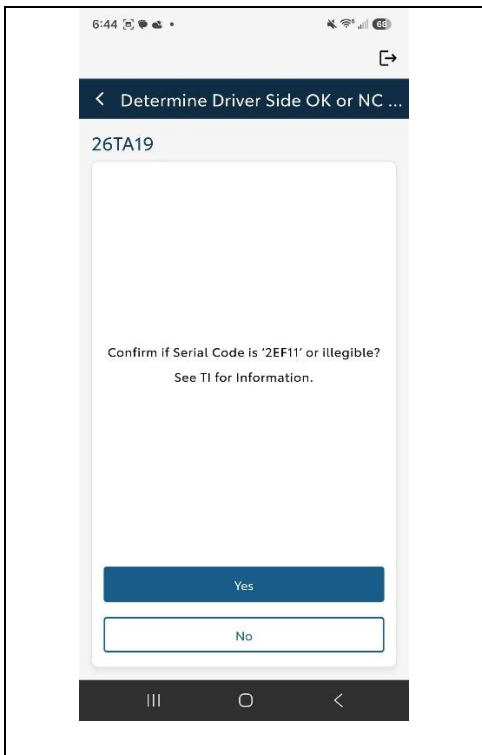


- e. Manipulate the angle of the borescope tip to view the alpha-numeric code.

NOTE: Depending on the borescope being used, you may not be able to view the entire code all at once.

- f. Using dealer inspection app (shown left), capture photo of borescope screen.



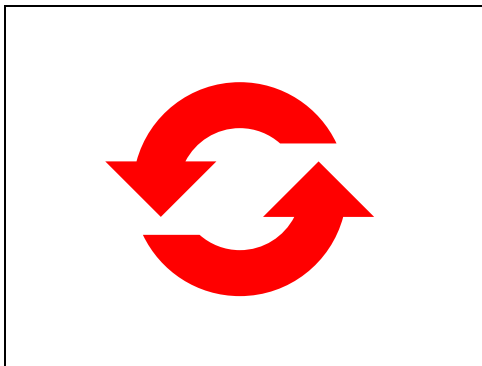


g. Determining OK or NC condition:

Select "YES" if:

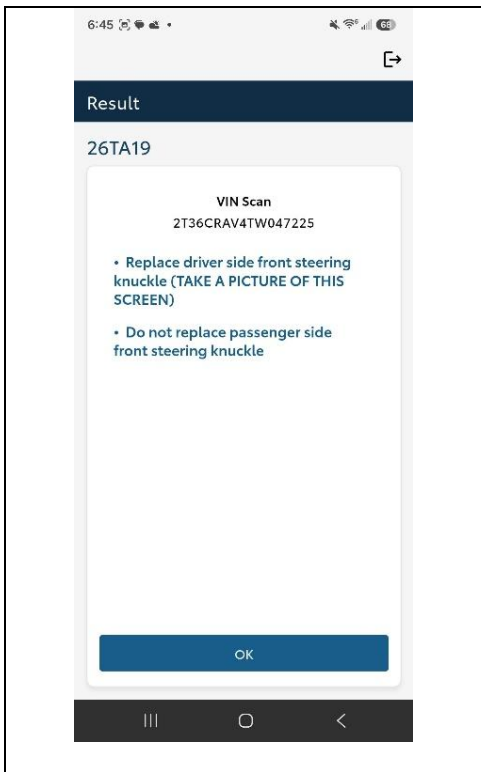
- Date code "2EF11" is present
- Date code is missing or entirely illegible.

Select "NO" if: Date code is any code other than "2EF11".



3. INSPECT PASSENGER FRONT STEERING KNUCKLE

a. Repeat inspection process for passenger front steering knuckle.



b. Upon submission, dealer inspection app will show the results screen on the left. SCREENSHOT THIS PAGE for inspection documentation.

c. Follow results instructions. If one or both steering knuckles needs replaced follow the procedure below, otherwise, return the vehicle to the customer.

VII. REPAIR PROCEDURE

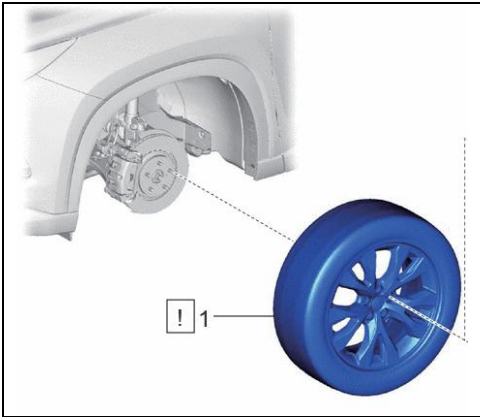
I. REMOVAL PROCEDURE

1. Procedure is the same for both RH and LH sides.
 - a. The following procedure is for the LH side.
2. Disable Brake Control (*Except Gasoline Model*).
 - a. Perform the following procedure to prohibit brake control.
 - a. To put the skid control ECU into sleep mode, turn the ignition switch off and wait for 4 minutes.

NOTE:

- After turning the ignition switch off, opening/closing doors or operating the brake pedal will activate the brake control system, so do not open/close any doors or operate the brake pedal.

- b. Disconnect the cable from the negative (-) auxiliary battery terminal.
- c. To put the skid control ECU into sleep mode completely, depress the brake pedal 40 times or more.
- d. Check that the brake pedal does not stroke.



3. Remove driver front wheel



4. Remove front axle shaft nut

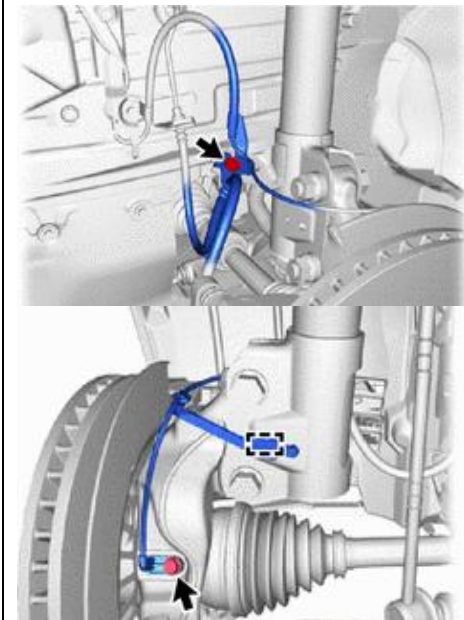
- a. Using SST and a hammer, release the staked part of the front axle shaft nut.

SST: 09930-00010

NOTICE:

Fully loosen the staked part of the front axle shaft nut, otherwise the threads of the drive shaft may be damaged.

- b. While applying the brakes, using a 30 mm deep socket wrench, remove the front axle shaft nut.



5. Separate front speed sensor

- a. Remove the bolt and separate the front speed sensor and front flexible hose from the front shock absorber assembly.

NOTICE:

Be sure to separate the front speed sensor and front flexible hose from the front shock absorber assembly completely.

- b. Remove the bolt, disengage the clamp and separate the front speed sensor from the front shock absorber assembly and steering knuckle.

NOTICE:

- Prevent foreign matter from contacting the sensor tip.
- Be careful not to damage the front speed sensor.
- Clean the speed sensor installation hole and the contact surfaces every time the front speed sensor is removed.

6. Separate tie rod assembly

- Remove the cotter pin and nut.
- Install SST to the tie rod assembly LH as shown in the illustration.

SST: 09960-20010

09961-02060

NOTICE: Make sure that the upper ends of the tie rod assembly LH and SST are aligned.

- Using SST, separate the tie rod assembly LH from the steering knuckle LH as shown in the illustration.

SST: 09960-20010

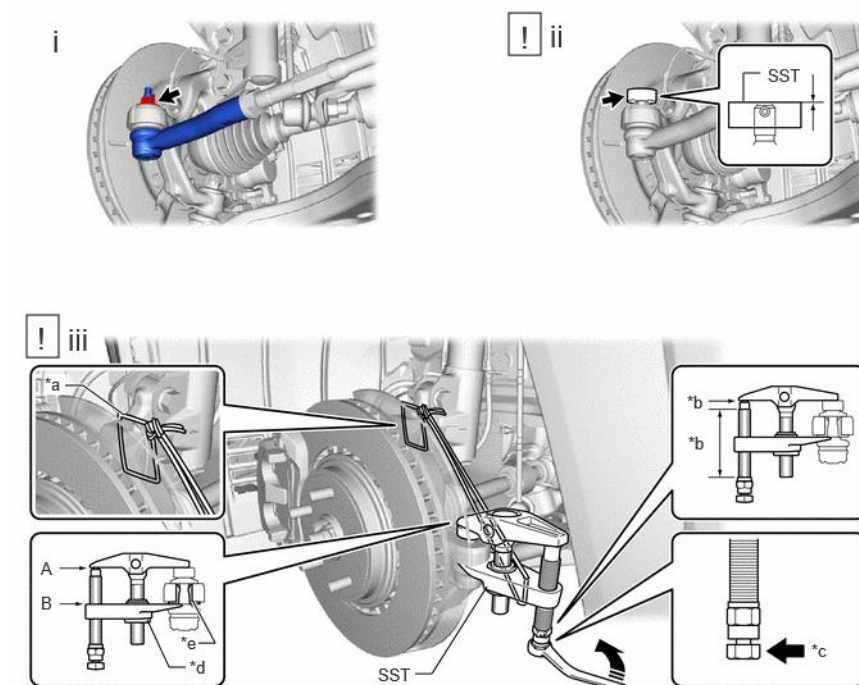
09961-02010

09961-02060

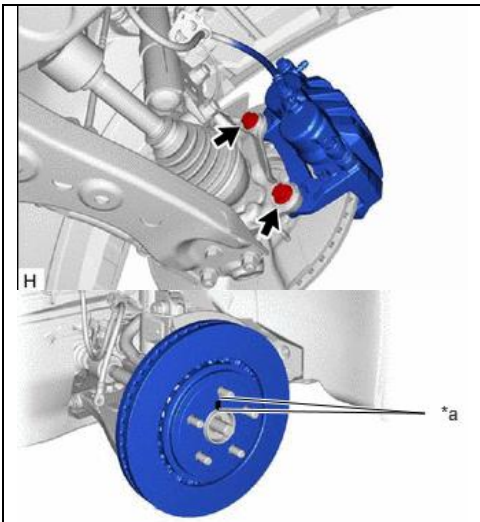
WARNING: Apply molybdenum grease to the threads and end of the SST bolt.

NOTICE:

- Be sure to tighten the string firmly to secure SST to the steering knuckle LH to prevent SST from falling off.
- Install SST with the center nut so that (A) and (B) shown in the illustration are parallel. Otherwise, the ball joint dust cover may be damaged.
- Be sure to place the wrench on the part shown in the illustration.
- Do not damage the front disc brake dust cover.
- Do not damage the ball joint dust cover.
- Do not damage the steering knuckle LH.
- Make sure that SST is securely positioned on the spacer.
- If the steering knuckle spacer has come off, replace the steering knuckle with a new one.



*a	String	*b	Molybdenum Grease Application Area
*c	Place wrench here	*d	Center Nut
*e	Spacer	-	-
➡	Turn	-	-



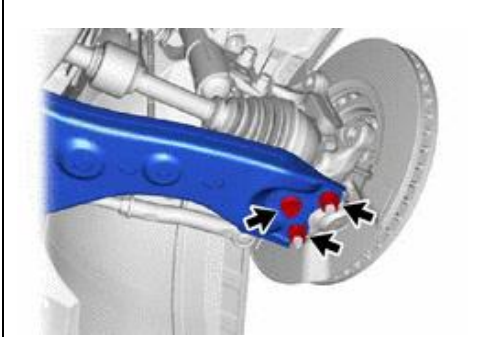
7. Remove brake caliper assembly

- a. Remove the 2 bolts and separate the front disc brake caliper assembly from the steering knuckle.

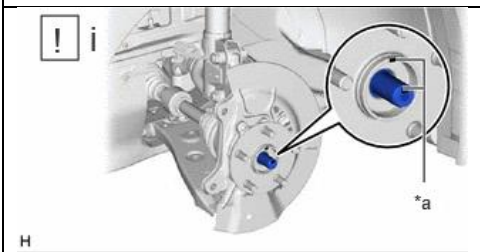
NOTICE:

Use wire or an equivalent tool to keep the front disc brake caliper assembly from hanging by the front flexible hose.

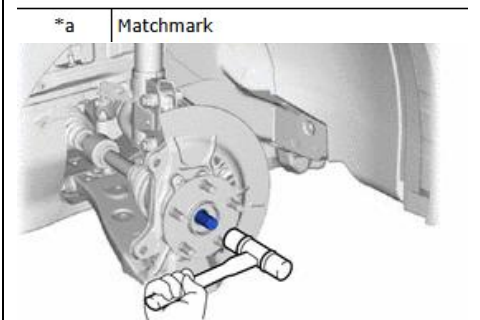
- b. Remove rotor.



8. Separate lower suspension arm sub-assembly



9. Separate front drive shaft assembly



10. Separate front drive shaft assembly

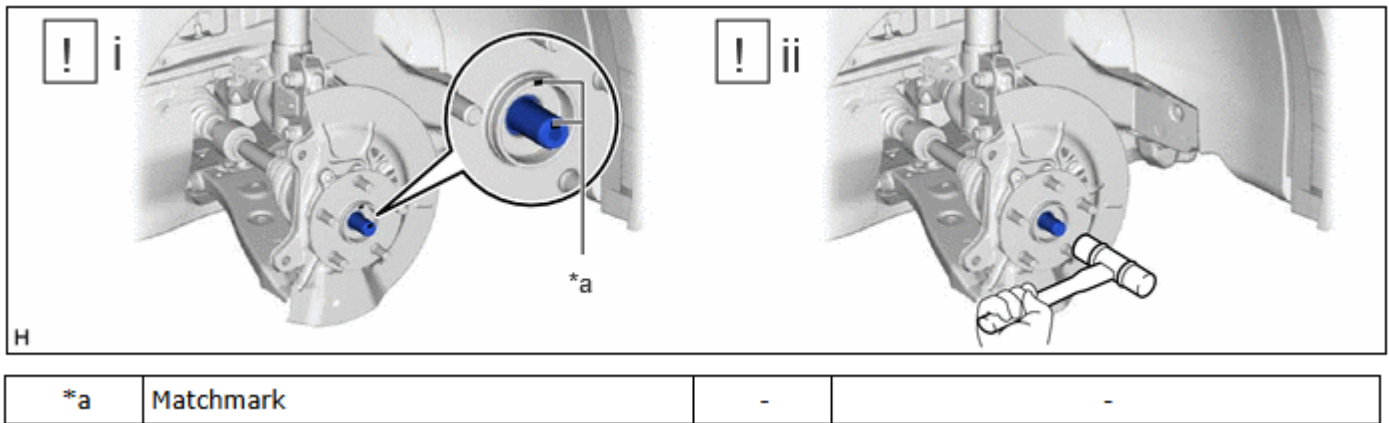
- Put matchmarks on the front drive shaft assembly and the front axle hub sub-assembly.
- Using a plastic hammer, separate the front drive shaft assembly from the front axle assembly.

NOTICE:

- Do not push the front axle assembly towards the outside of the vehicle any further than necessary.
- Do not damage the front drive shaft outboard joint boot.
- Be careful not to damage the front speed sensor.
- Do not damage the front disc brake dust cover.
- Check that there is no foreign matter on the speed sensor rotor or contact surfaces.

HINT:

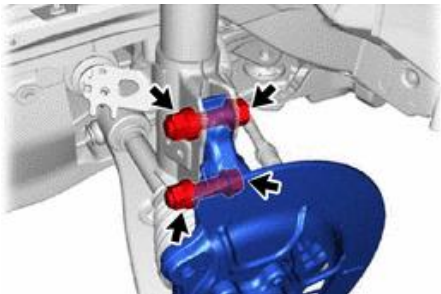
If it is difficult to separate the front drive shaft assembly from the front axle assembly, tap the end of the front drive shaft assembly using a brass bar and a hammer.



11. Remove shock absorber bolts

- Remove the 2 bolts, 2 nuts and front axle assembly from the front shock absorber assembly.

NOTICE: When removing the nuts, keep the bolts from rotating.



12. Remove front lower ball joint assembly

- Secure the front axle assembly in a vise using aluminum plates.

NOTICE: Do not overtighten the vise.

- Remove the cotter pin and nut.
- Install SST to the front lower ball joint assembly as shown in the illustration.

SST: 09960-20010

09961-02050

NOTICE:

- Be sure to install SST because the steering knuckle spacer may shift.
- Check that the clearance measurement between SST and the front axle assembly is 1 mm (0.0394 in.).

- Using SST, remove the front lower ball joint assembly from the front axle assembly as shown in the illustration.

SST: 09960-20010

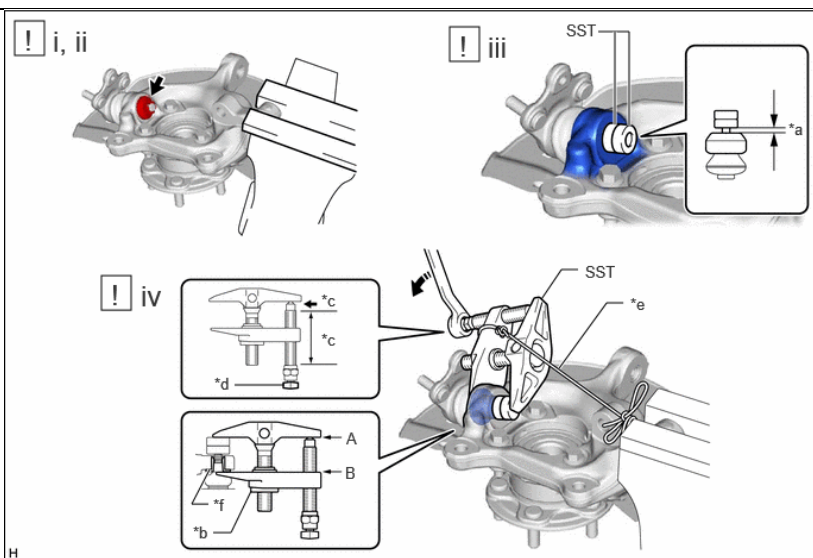
09961-02010

09961-02050

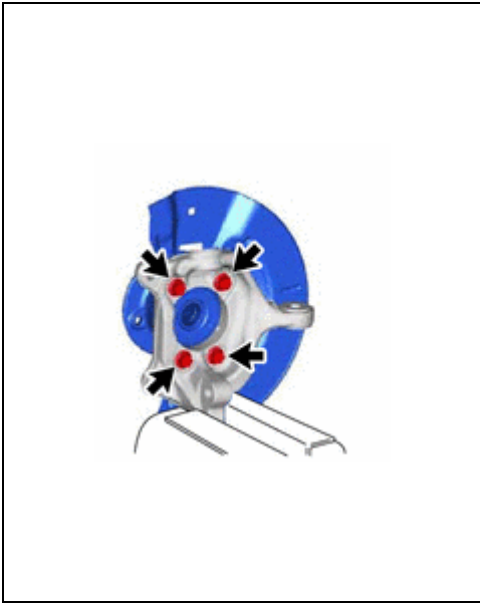
CAUTION: Apply molybdenum grease to the threads and end of the SST bolt.

NOTICE:

- Be sure to tighten the string firmly to secure SST to the front axle assembly to prevent SST from falling off.
- Install SST with the center nut so that (A) and (B) shown in the illustration are parallel. Otherwise, the front lower ball joint dust cover may be damaged.
- Be sure to place a wrench on the part shown in the illustration.
- Do not damage the front lower ball joint dust cover.
- Do not damage the steering knuckle.
- Do not damage the front disc brake dust cover.
- Make sure that SST is securely positioned on the spacer.
- If the steering knuckle spacer has come off, replace the steering knuckle with a new one.



*a	1 mm (0.0394 in.)	*b	Center Nut
*c	Molybdenum Grease Application Area	*d	Place wrench here
*e	String	*f	Spacer
➡	Turn	-	-



13. Remove steering knuckle assembly

- a. Secure the front axle assembly between aluminum plates in a vise.

NOTICE:

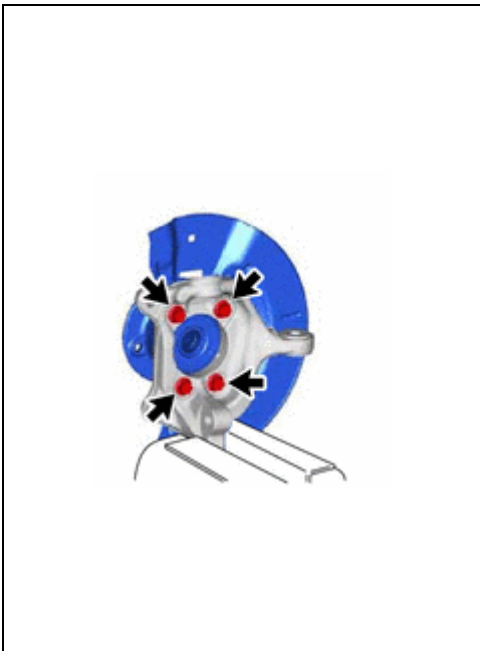
Do not overtighten the vise.

- b. Remove the 4 bolts, front axle hub sub-assembly and front disc brake dust cover from the steering knuckle.

NOTICE:

- Do not drop the front axle hub sub-assembly.
- Be careful not to damage the speed sensor rotor or contact surfaces.
- Do not allow foreign matter to contact the speed sensor rotor or contact surfaces.

II. INSTALLATION PROCEDURE



1. Install front axle hub sub-assembly

- a. Secure the new steering knuckle between aluminum plates in a vise.

NOTICE: Do not overtighten the vise.

- b. Install the front axle hub sub-assembly and front disc brake dust cover to the steering knuckle with the 4 bolts.

Torque:

120 N·m {1224 kgf·cm, 89 ft·lbf}

NOTICE:

- Be careful not to damage the speed sensor rotor or contact surfaces.
- Do not allow foreign matter to contact the speed sensor rotor or contact surfaces.

2. Install front lower ball joint assembly

- Secure the front axle assembly in a vise using aluminum plates.

NOTICE: Do not overtighten the vise.

- Install the front lower ball joint assembly to the front axle assembly with the nut.

Torque:

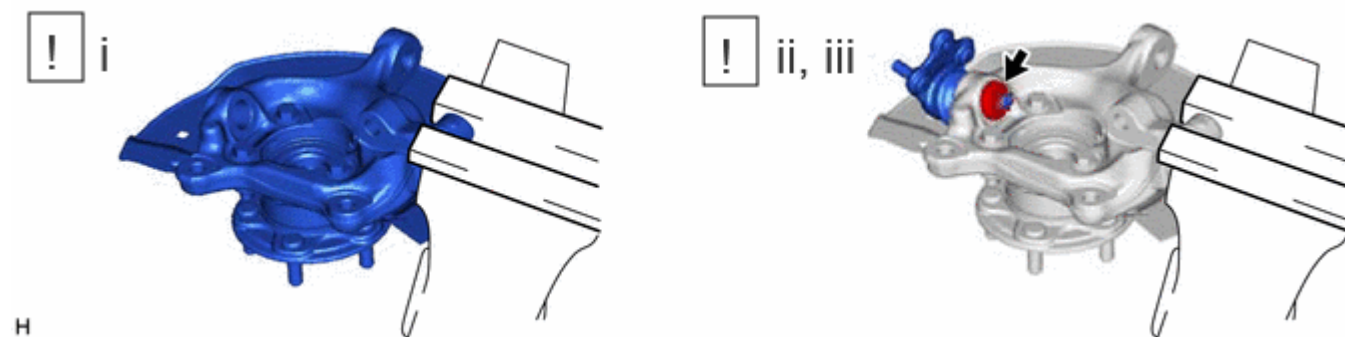
133 N·m {1356 kgf·cm, 98 ft·lbf}

NOTICE:

- Do not apply lubricants to the ball joint stud taper and threads.
- Remove any foreign matter from the contact surface of the steering knuckle and ball joint stud taper.

- Install a new cotter pin.

NOTICE: Further tighten the nut up to 60° if the holes for the cotter pin are not aligned.



3. Install front axle assembly

- Apply 0.1 to 0.3 g (0.00353 to 0.0105 oz) of Toyota Body Grease W to each of the 4 areas shown in the illustration.
- Install the front axle assembly to the front shock absorber assembly with the 2 bolts and 2 nuts.

Torque:

290 N·m {2957 kgf·cm, 214 ft·lbf}

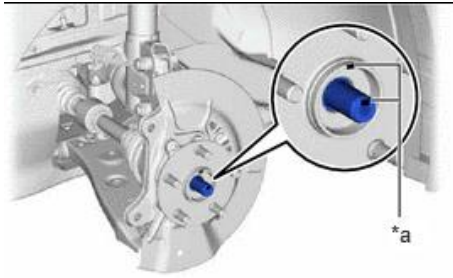
NOTICE:

- Do not apply lubricants to the steering knuckle and shock absorber contact surfaces.
- When installing the nuts, keep the bolts from rotating.

HINT:

The bolts can be installed in either direction, however, make sure that they are both installed in the same direction.



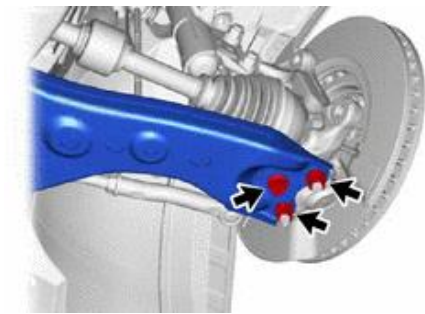


4. Install front drive shaft assembly

- a. Align the matchmarks on the front drive shaft assembly and front axle hub sub-assembly, and connect the front drive shaft assembly to the front axle assembly.

NOTICE:

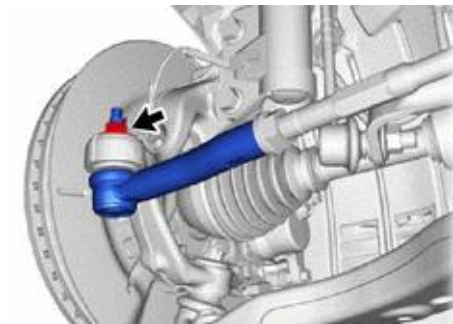
- Do not push the front axle assembly towards the outside of the vehicle any further than necessary.
- Check that there is no foreign matter on the speed sensor rotor or contact surfaces.
- Do not damage the front drive shaft outboard joint boot.
- Do not damage the front disc brake dust cover.
- Do not damage the speed sensor rotor.



5. CONNECT FRONT LOWER NO. 1 SUSPENSION ARM SUB-ASSEMBLY

Torque:

92 N·m {938 kgf·cm, 68 ft·lbf}



6. CONNECT TIE ROD ASSEMBLY

- a. Connect the tie rod assembly LH to the steering knuckle LH with the nut.

Torque:

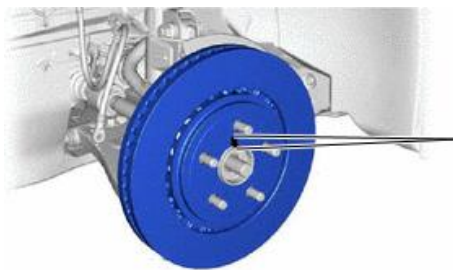
49 N·m {500 kgf·cm, 36 ft·lbf}

NOTICE:

Do not damage the ball joint dust cover.

- b. Install a new cotter pin.

NOTICE: Further tighten the nut up to 60° if the holes for the cotter pin are not aligned.

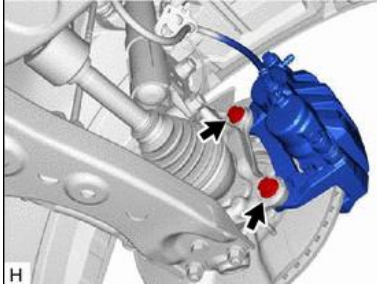


7. Install front rotor

- a. Align the matchmarks of the front disc and front axle hub sub-assembly, and install the front disc.

NOTICE:

When replacing the front disc with a new one, select the installation position where the front disc has minimal runout.



8. Install front brake caliper assembly

- a. Install the front disc brake caliper assembly to the steering knuckle with the 2 bolts.

Torque:

196 N·m {1999 kgf·cm, 145 ft·lbf}

NOTICE:

- Do not twist the front flexible hose when installing the front disc brake caliper assembly.
- Make sure that there is no foreign matter on the threads of the bolt.



9. Install front axle shaft nut

- a. Clean the threaded parts on the front drive shaft assembly and a new front axle shaft nut using non-residue solvent.

NOTICE:

- Be sure to perform this work even when using a new front drive shaft assembly.
- Keep the threaded parts free of oil and foreign matter.

- b. Using a 30 mm deep socket wrench, while applying the brakes, temporarily install the front axle shaft nut.

Torque:

294 N·m {2998 kgf·cm, 217 ft·lbf}

NOTICE:

- Keep depressing the brake pedal to prevent the front drive shaft from rotating.
- Stake the front axle shaft nut after inspecting for looseness and runout in the following steps.

10. Install front speed sensor

- Engage the 2 hooks to install the front speed sensor clamp bracket.

NOTICE: Do not twist the front speed sensor when installing it.

- Install the front speed sensor and front flexible hose to the front shock absorber assembly with the bolt.

Torque:

29 N·m {296 kgf·cm, 21 ft·lbf}

NOTICE: Do not twist the front flexible hose when installing it.

- Install the front speed sensor to the steering knuckle with the bolt and clamp.

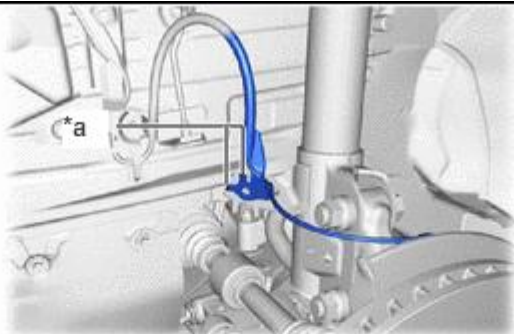
Torque:

8.5 N·m {87 kgf·cm, 75 in·lbf}

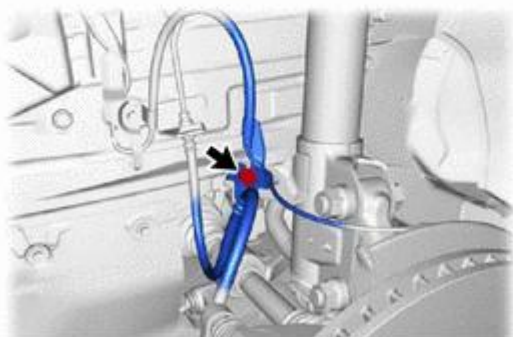
NOTICE:

- Prevent foreign matter from attaching to the front speed sensor tip.
- Firmly insert the front speed sensor body into the steering knuckle before tightening the bolt.
- After installing the front speed sensor to the steering knuckle, make sure that there is no clearance between the front speed sensor stay and steering knuckle. Also make sure that no foreign matter is stuck between the parts.
- Do not twist the front speed sensor when installing it.

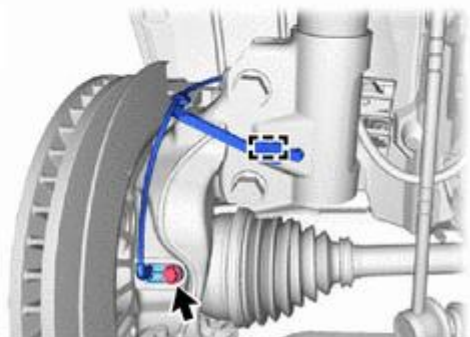
! i



! ii



! iii

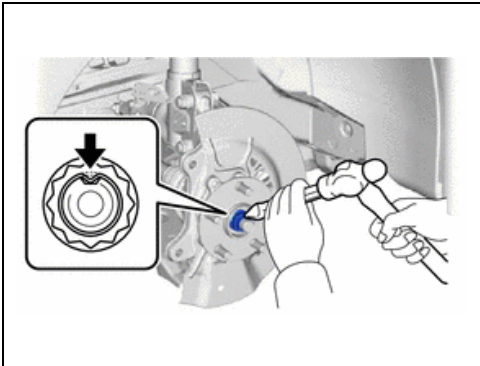


*a

Hook

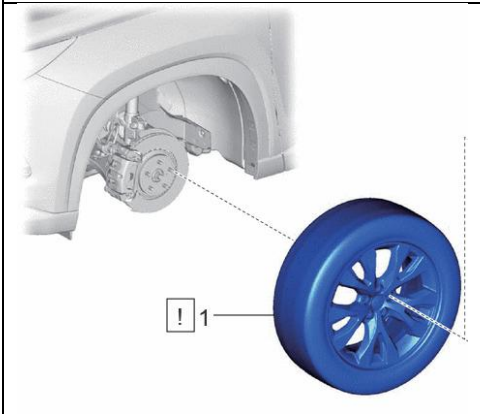
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11. Stake front axle shaft nut

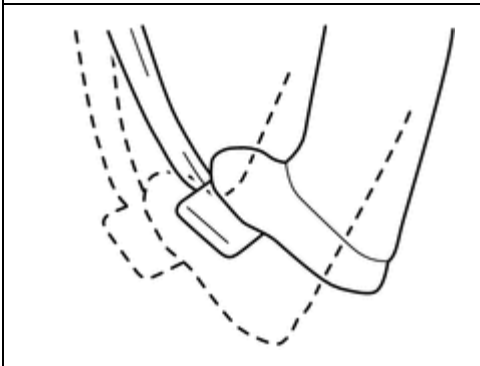
- a. Using a chisel and hammer, stake the front axle shaft nut.



12. Install front wheel

Torque:

140 N·m {1428 kgf·cm, 103 ft·lbf}



13. CONNECT CABLE TO NEGATIVE AUXILIARY BATTERY TERMINAL (except Gasoline Model)

- b. Connect the cable to the negative (-) auxiliary battery terminal.
- c. Perform the following procedure if air bleeding is not necessary:
 1. Turn the ignition switch ON.
 2. Depress the brake pedal and release it.
 3. Clear the DTCs.



14. INSPECT AND ADJUST FRONT WHEEL ALIGNMENT

- a. Inspect and perform alignment according to repair manual linked below.

[RM100000002BSC3](#)

15. CHECK FOR SPEED SENSOR SIGNAL

- a. Perform speed sensor signal check according to repair manual linked below.

HYBRID: [RM100000002BQ6T](#)

Gas: [RM100000002BQBY](#)

16. INITIALIZATION AFTER RECONNECTING AUXILIARY BATTERY TERMINAL (except Gasoline Model)

HINT:

When disconnecting and reconnecting the auxiliary battery, there is an automatic learning function that completes learning when the respective system is used.

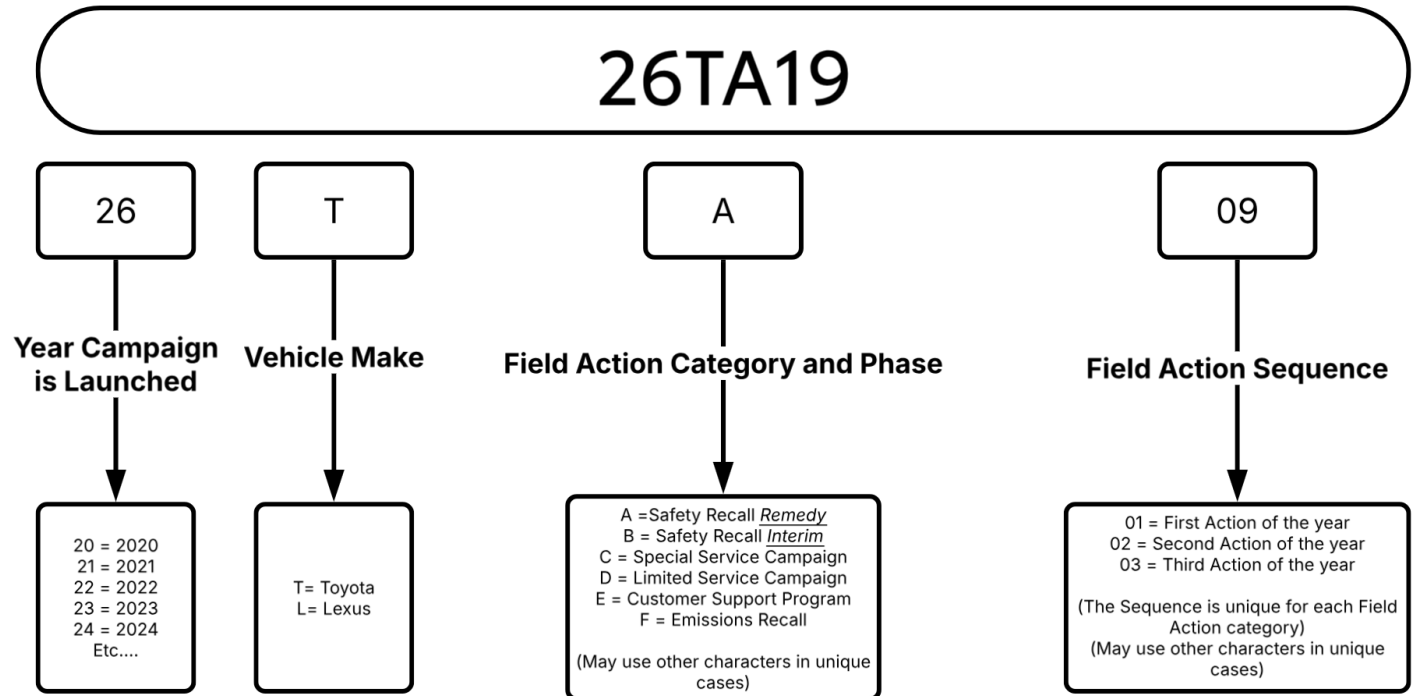
◀ VERIFY REPAIR QUALITY ▶

- Confirm that all tools and devices are removed from the vehicle.
- Confirm that the vehicle windows, doors, and seats are returned to their original condition.

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

APPENDIX

A. CAMPAIGN DESIGNATION DECODER



Examples:

19TA01 = Launched in 2019, Toyota, Safety Recall Remedy Phase, 1st Safety Recall Launched in 2019

20TC02 = Launched in 2020, Special Service Campaign, 2nd Special Service Campaign Launched in 2020

21TE05 = Launched in 2021, Customer Support Program, 5th Customer Support Program Launched in 2021