

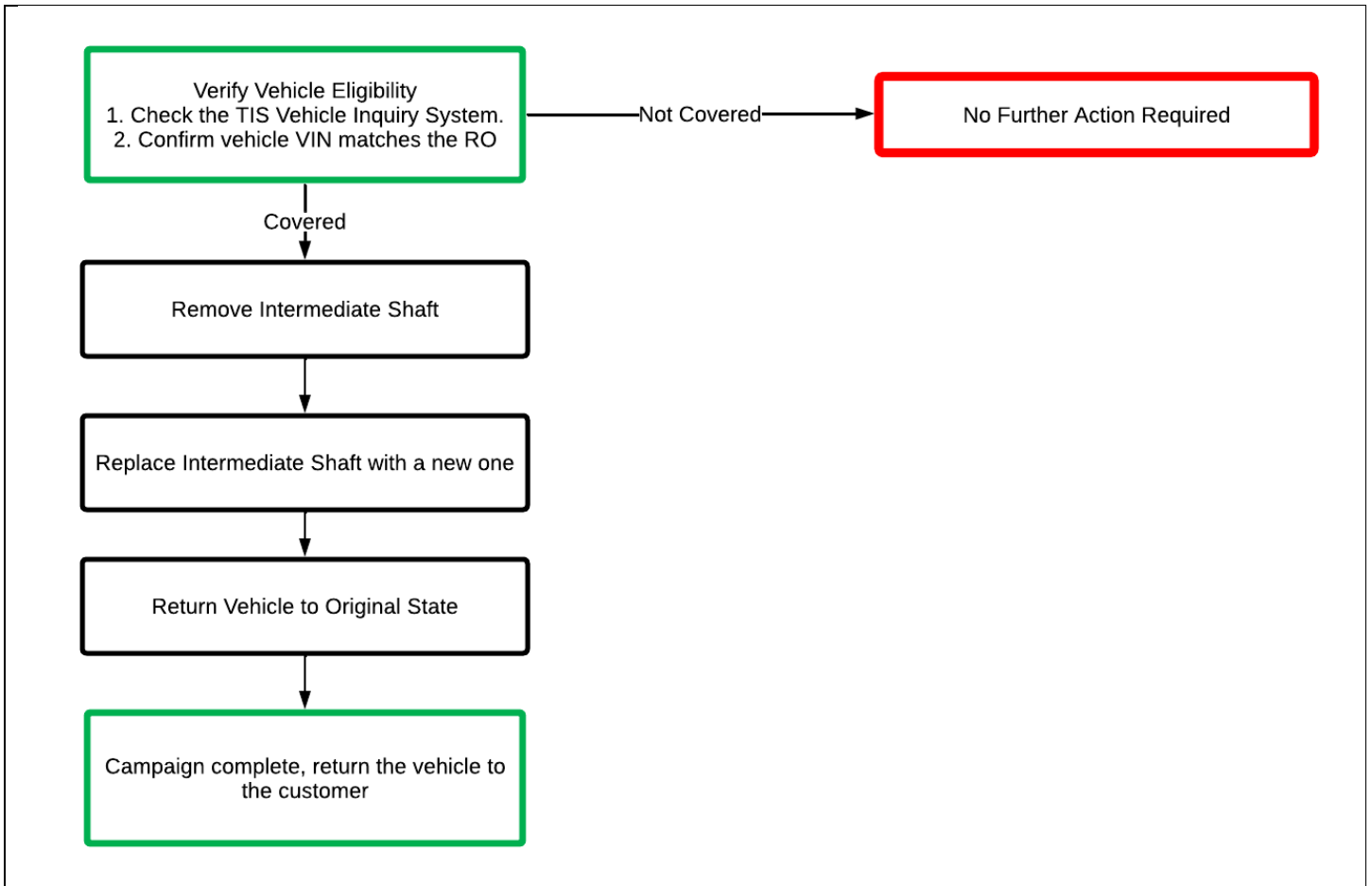
TECHNICAL INSTRUCTIONS
FOR
SAFETY RECALL 24TA13
POTENTIAL LOSS OF STEERING
CERTAIN 2023-2024 MODEL YEAR Corolla and Corolla HV

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 and 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



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

- a) Compare the vehicles VIN to the VIN listed on the Repair Order to ensure they match.
- b) Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Campaign, 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	Part Description	Quantity
04004-04216	SHAFT ASSY, STEERING INTERMEDIATE, NO.2*	1

B. TOOLS, SUPPLIES & EQUIPMENT

- Standard Hand Tools
- Torque wrench

C. MATERIALS

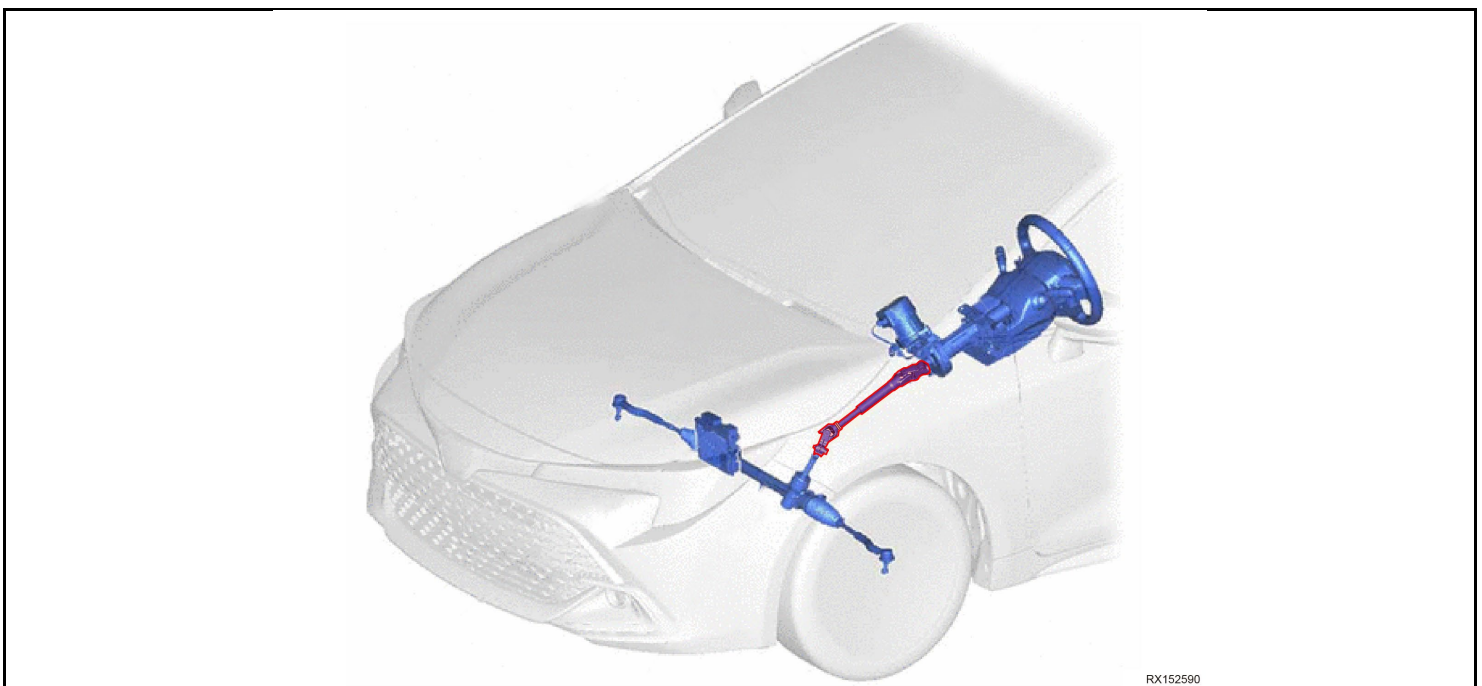
- Protective Gloves
- Protective Tape
- Marker Pen

IV. WORK PROCEDURE TABLE OF CONTENTS

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COMPONENTS	SECTION VI.
REMOVE SURROUNDING PARTS	SECTION VII.
REPLACE NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY	SECTION VIII.
RESTORE THE VEHICLE	SECTION IX.
WORK COMPLETION CHECK	SECTION X.
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V. BACKGROUND

A part of the steering shaft, which allows the steering wheel to control the direction of the front wheels, may have been manufactured with cracks. If the cracks grow over time, this part of the steering shaft can separate and can lead to a loss of steering, increasing the risk of a crash.

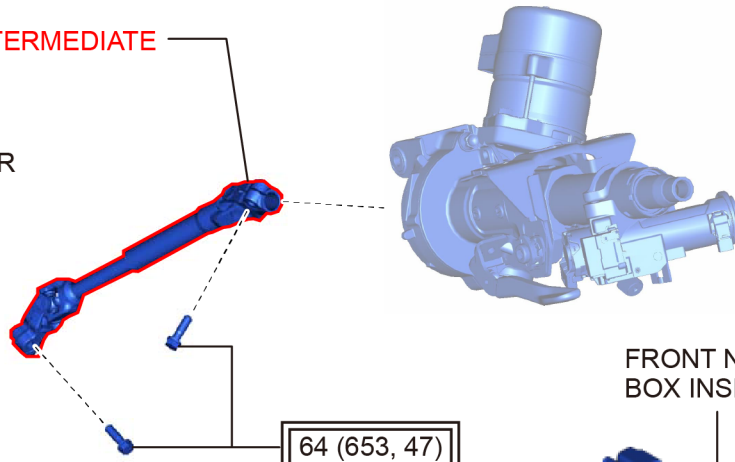


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VI. COMPONENTS

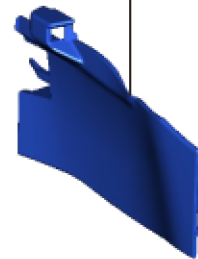
● NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY

COLUMN HOLE COVER
SILENCER SHEET

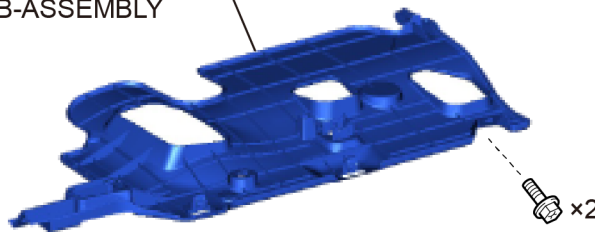


64 (653, 47)

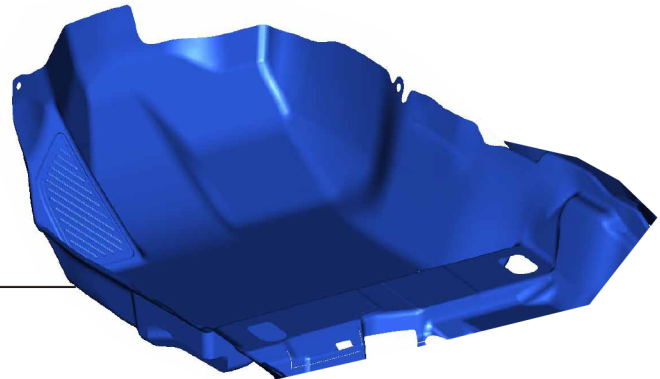
FRONT NO. 1 CONSOLE
BOX INSERT



NO. 1 INSTRUMENT PANEL
UNDER COVER SUB-ASSEMBLY



FRONT FLOOR
CARPET ASSEMBLY



● : Replacement part

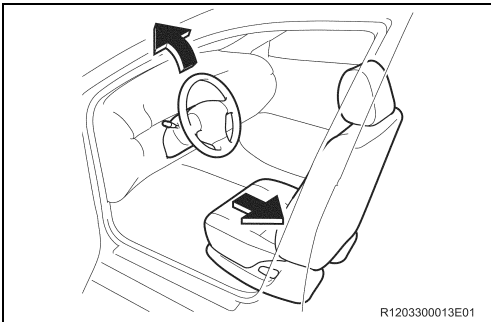
$\boxed{\text{N*m (kgf*cm, ft.*lbf)}}$: Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping"

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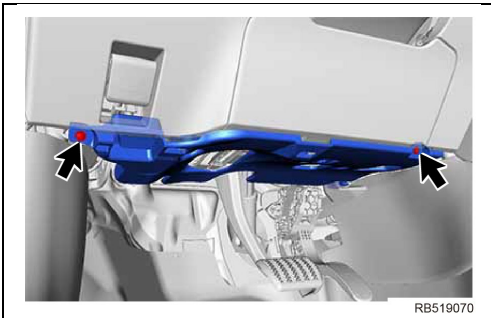
VII. REMOVE SURROUNDING PARTS

Critical

- Always remember "**SAFETY FIRST**".

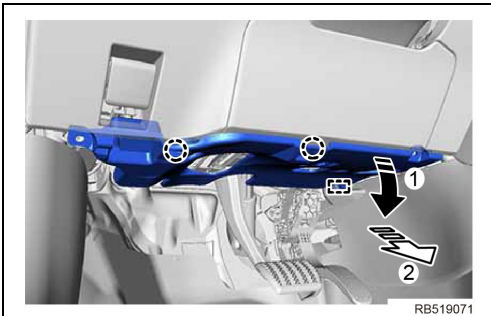


1. RECORD THE POSITIONS OF THE STEERING COLUMN AND THE DRIVER SEAT
2. MAKE SPACE FOR WORK

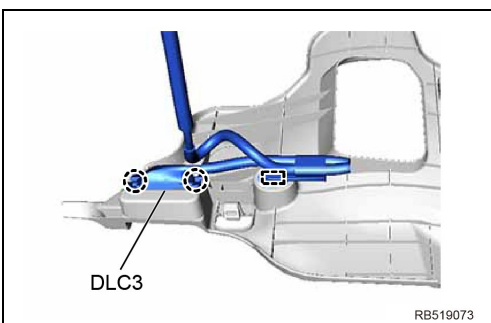


3. REMOVE NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY

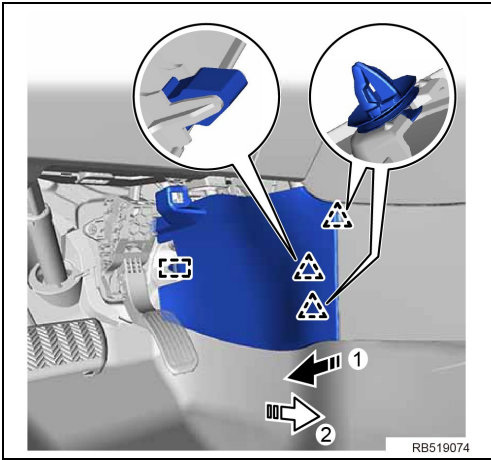
- a) Remove the 2 screws.



- b) Pull the No. 1 instrument panel under cover sub-assembly in the direction indicated by the arrow (1) shown in the illustration to disengage the 2 claws.
- c) Pull the No. 1 instrument panel under cover sub-assembly in the direction indicated by the arrow (2) shown in the illustration to disengage the guide.

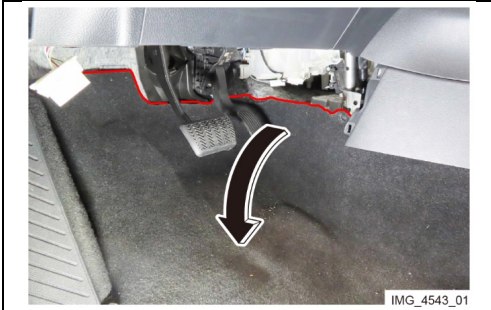


- d) Disengage the 2 claws to disconnect the DLC3.
- e) Disengage the clamp to remove the No. 1 instrument panel under cover sub-assembly.



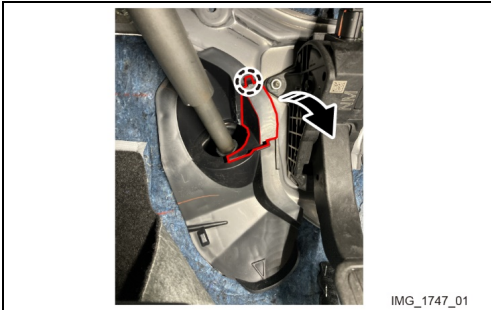
4. REMOVE FRONT NO. 1 CONSOLE BOX INSERT

- a) Pull the front No. 1 console box insert in the direction indicated by the arrow (1) shown in the illustration to disengage the 3 clips.
- b) Pull the front No. 1 console box insert in the direction indicated by the arrow (2) shown in the illustration to disengage the guide and remove it.



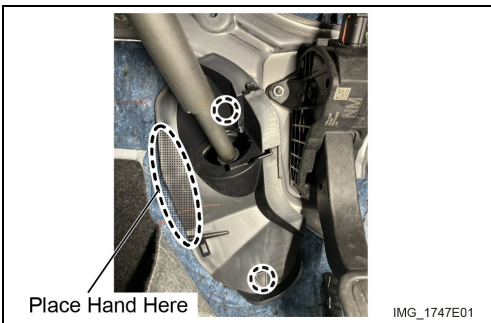
5. TURN OVER FRONT FLOOR CARPET ASSEMBLY

- a) Turn the front floor carpet assembly over.



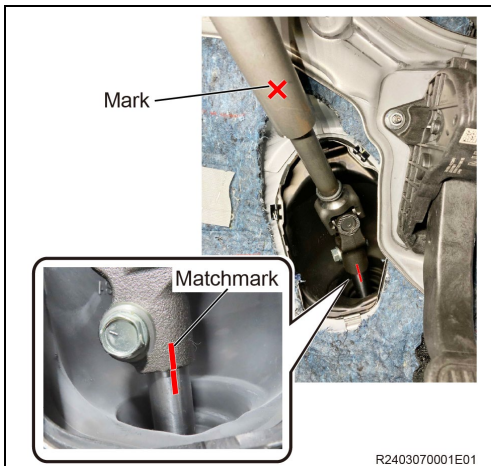
6. REMOVE COLUMN HOLE COVER SILENCER SHEET

- a) Disengage the claw and open the column hole cover silencer sheet.



- b) Disengage the 2 claws to remove the column hole cover silencer sheet.

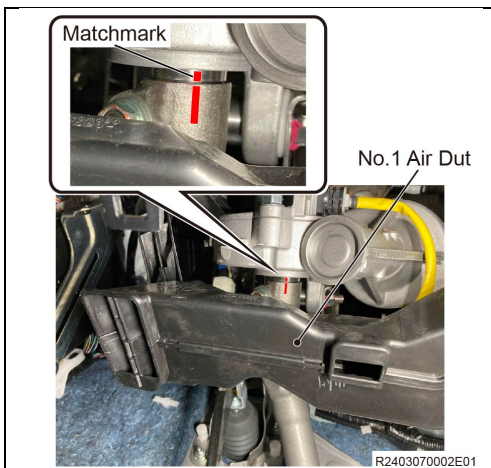
VIII. REMOVE THE NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY



1. PLACE STEERING WHEEL STRAIGHT AHEAD

2. REMOVE NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY

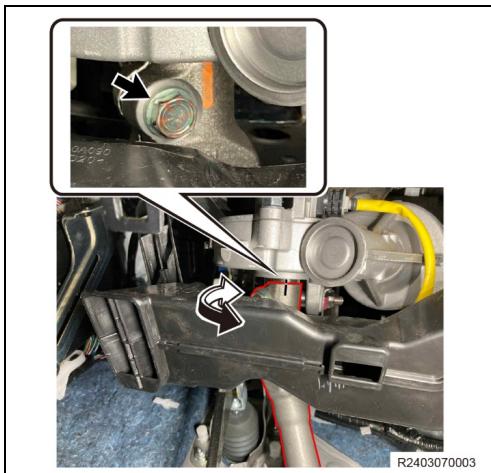
- Mark the No.2 steering intermediate shaft assembly to be replaced in order to prevent it from being reinstalled.
- Put matchmarks on the No. 2 steering intermediate shaft assembly and steering gear assembly.



- Put matchmarks on the No. 2 steering intermediate shaft assembly and steering column assembly.

NOTICE:

- DO NOT** remove the air duct since it may be broken during removal.
- Be careful not to damage the air duct with the tools.



- Turn the steering wheel to allow access to the upper bolt.

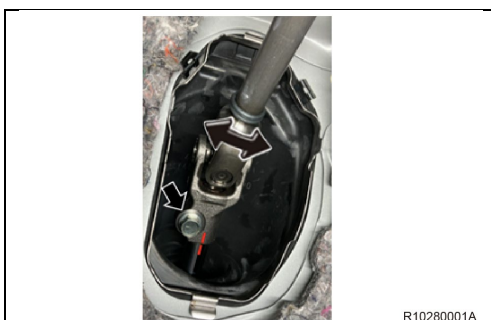
NOTICE:

- DO NOT** remove the air duct since it may be broken during removal.
- Be careful not to damage the air duct with the tools.

- Loosen the upper bolt.

NOTICE:

- DO NOT** remove the bolt at this step.
- DO NOT** apply lubricant even if engagement is strong. If lubricant is applied on the threads, friction coefficient decreases and may cause the bolt to become loosen or broken during tightening.



- Turn the steering wheel to allow access to the lower bolt.

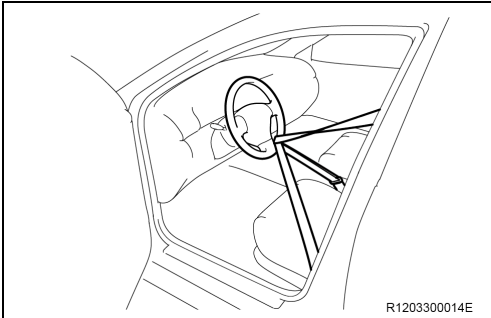
- Loosen the lower bolt.

NOTICE:

- DO NOT** remove the bolt at this step.
- DO NOT** apply lubricant even if engagement is strong. If lubricant is applied on the threads, friction coefficient decreases and may cause the bolt to become loosen or broken during tightening.



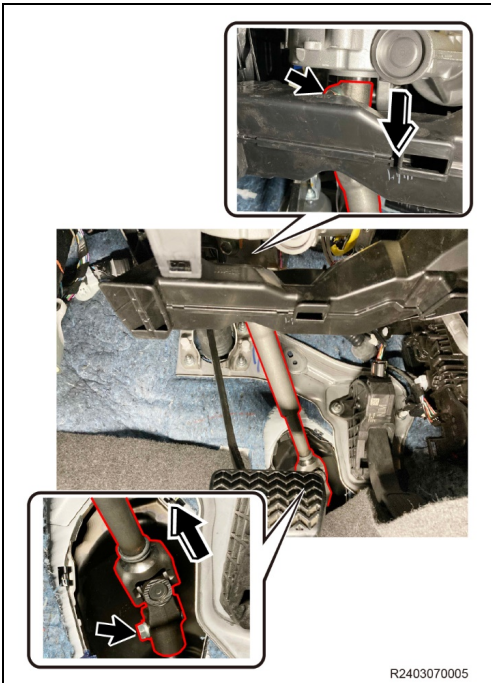
h) Place the steering straight and put a matchmark.



i) Using the seat belt, hold the steering wheel in position as shown in the illustration, in order to prevent damage to the spiral cable sub-assembly.

NOTICE:

- **DO NOT** damage the steering wheel during this process.
- If the seat belt cannot reach the steering wheel slide the seat forward a little.



j) Remove the 2 bolts and No.2 steering intermediate shaft assembly.

NOTICE:

DO NOT apply lubricant even if engagement is strong. If lubricant is applied on the threads, friction coefficient decreases and may cause the bolt to become loosen or broken during tightening.

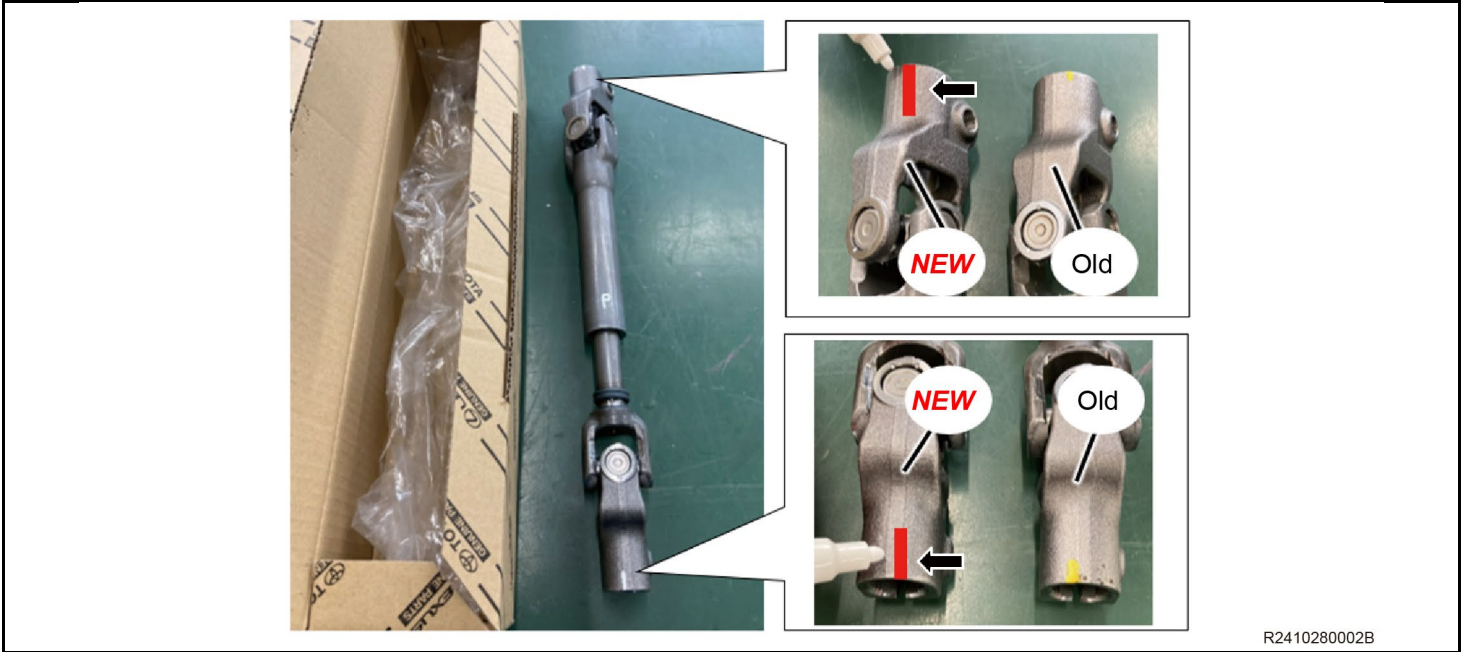
HINT:

If there isn't enough space to remove the bolt, turn the steering wheel within the minimum range with the seat belt installed and remove the bolt.

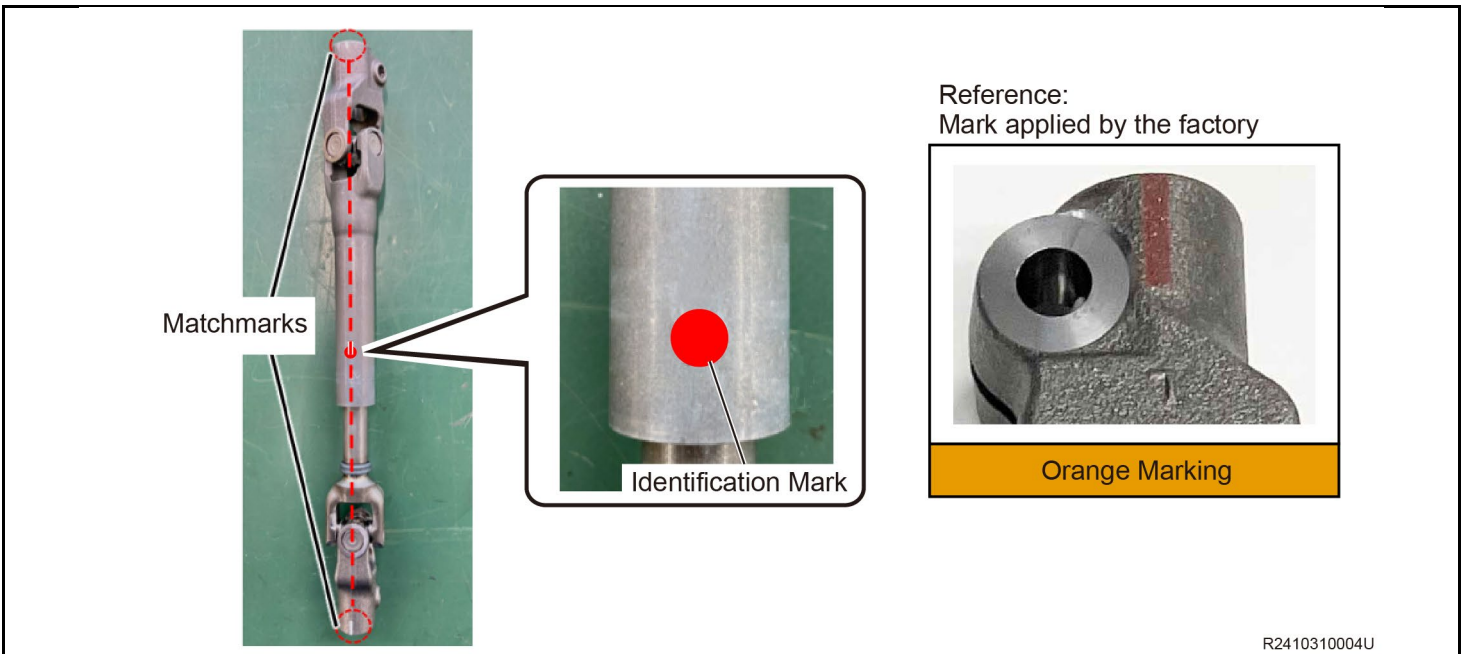
- k) Check that the steering wheel is in the straight-ahead position.
 l) Remove the No.2 steering intermediate shaft assembly.

3. TEMPORARILY INSTALL **NEW** NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY

- a) Apply matchmark on the NEW No.2 steering intermediate shaft assembly at the same position as the old No.2 steering intermediate shaft assembly.



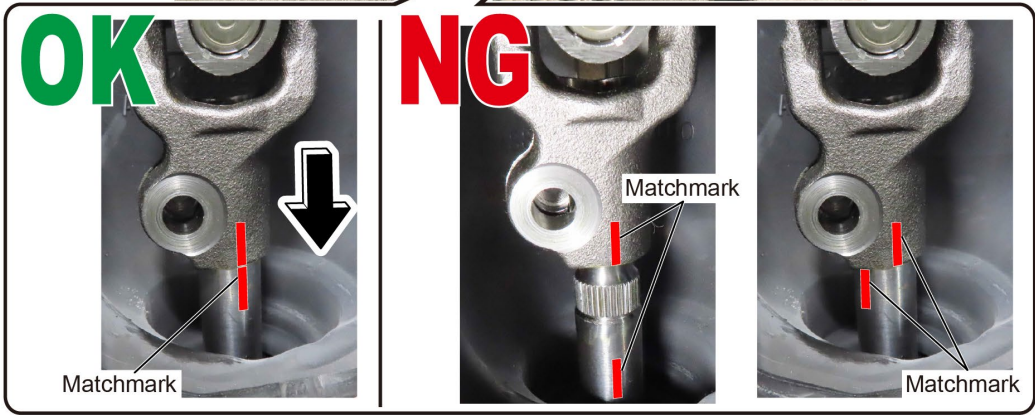
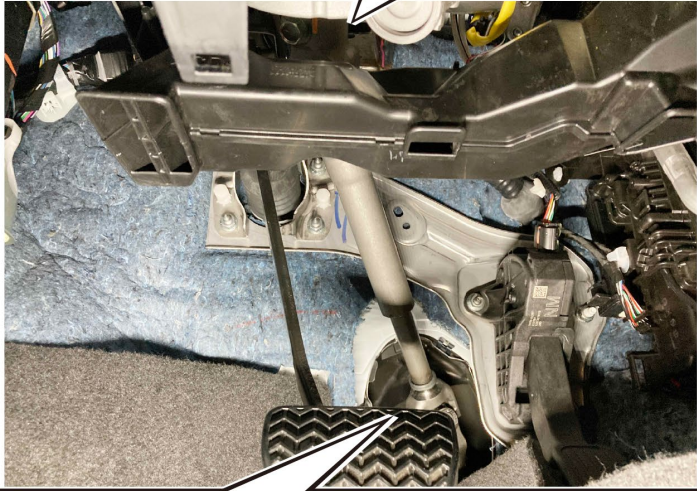
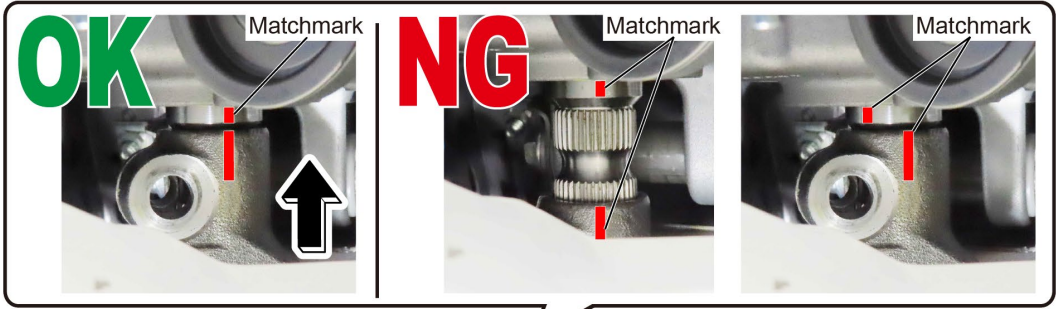
- b) Apply an identification mark on the extension line from top and bottom matchmarks as shown, as an identification mark to prevent installation of a wrong part number.



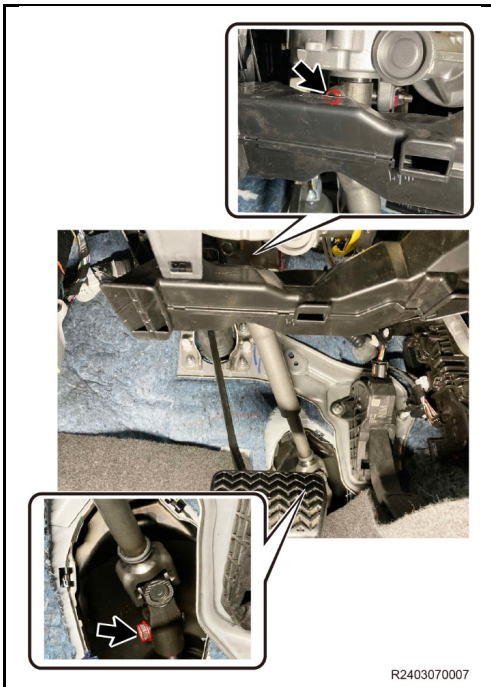
- c) Align the matchmarks and install the No.2 steering intermediate shaft assembly.

NOTICE:

- Since the splines of each intermediate shaft do not have the same shape due to manufacturing process (slight misalignment in rotation direction), it may not be aligned perfectly with the matchmarks, but there is no problem if it is off by 1 to 1.5 threads.
- Check that the No.2 steering intermediate shaft is fully inserted.



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R2403070007

- d) Temporarily install the 2 bolts.

HINT:

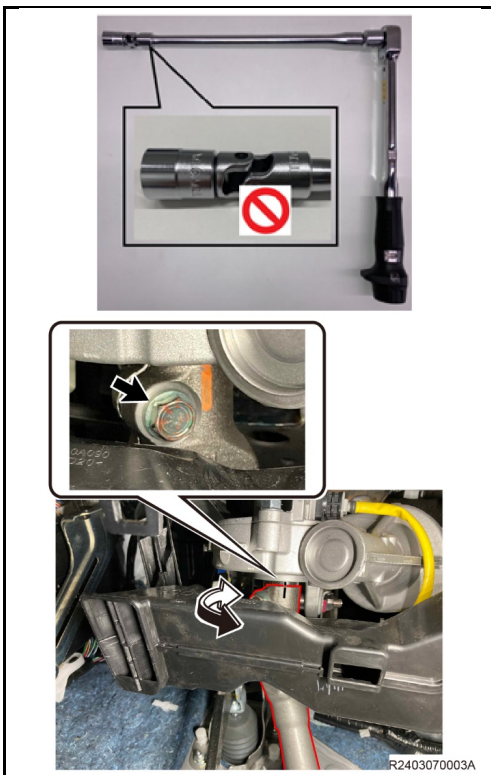
If there isn't enough space to install the bolt, turn the steering wheel within the minimum range with the seat belt installed and temporarily install the bolt.



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4. CHECK THE INSTALLATION STATE OF NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY

- a) Try to move the No.2 steering intermediate shaft assembly up and down to confirm that it does not move.



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5. INSTALL NO. 2 STEERING INTERMEDIATE SHAFT ASSEMBLY

- a) Release the seat belt.
b) Turn the steering wheel to allow access to the upper bolt.

NOTICE:

- **DO NOT** remove the air duct since it may be broken during removal.
- Be careful not to damage the air duct with the tools.

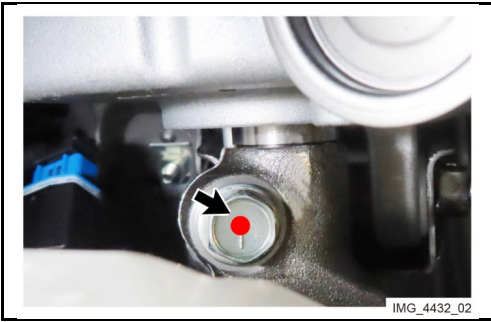
- c) Tighten the upper bolt.

Torque:

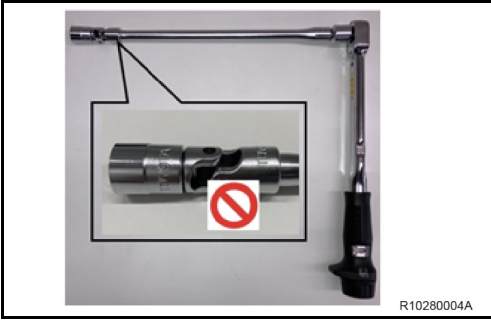
64 N*m (653 kgf*cm, 47 ft.*lbf)

NOTICE:

DO NOT use a universal joint with a torque wrench to avoid change of torque.



- d) Make a mark on the bolt head in order to confirm that the bolt has been tightened properly.



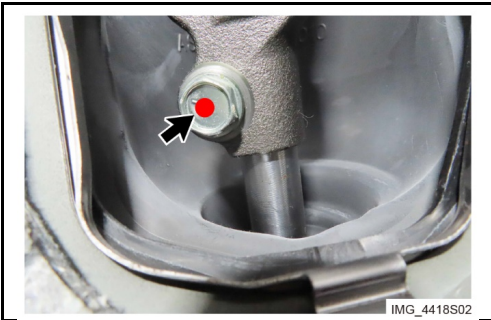
- e) Turn the steering wheel to allow access to the lower bolt.
f) Tighten the lower bolt.

Torque:

64 N*m (653 kgf*cm, 47 ft.*lbf)

NOTICE:

DO NOT use a universal joint with a torque wrench to avoid change of torque.

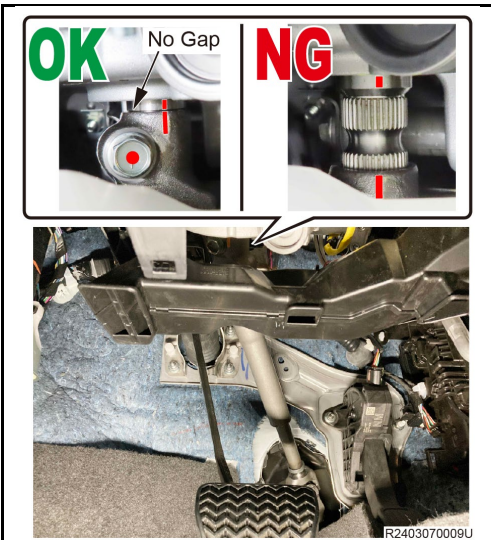


- g) Make a mark on the bolt head in order to confirm that the bolt has been tightened properly.

6. INTERMEDIATE INSPECTION

NOTICE:

To ensure the inspection quality, inspection must be performed by another worker who did not perform the replacement to double-check the installation state.



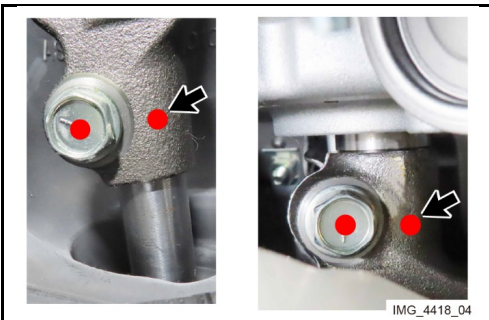
- a) INSERTION CHECK (UPPER)

- (1) Check that the steering intermediate shaft is fully inserted without any gap at the matchmark as shown in the picture, and move the intermediate shaft up and down with your hand to make sure it cannot be removed.



b) INSERTION CHECK (LOWER)

- (1) Check that the steering intermediate shaft is fully inserted without any gap at the matchmark as shown in the picture and move the intermediate shaft up and down with your hand to make sure it cannot be removed.

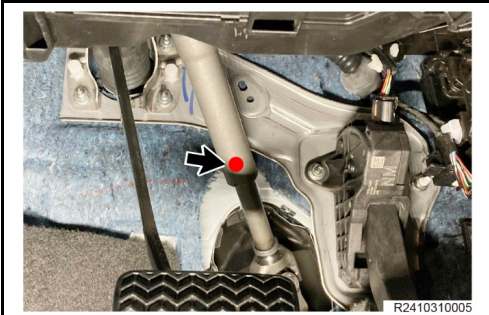


c) TORQUE CHECK (UPPER/LOWER)

- (1) Check that the mark is on the bolt head and apply mark to indicate it is checked.
- (2) iii. Re-check that the bolts are tightened at the specified torque.

Torque:

64 N*m (653 kgf*cm, 47 ft.*lbf)



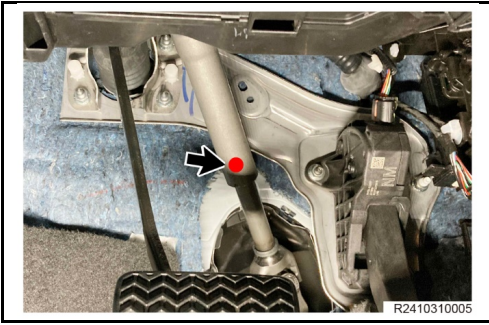
d) CHECK THE NEW PART IDENTIFICATION MARK

- (1) Check there is the identification mark applied after opening the package which means it is the new part.

IX. RETURN THE VEHICLE TO ORIGINAL STATE

1. REINSTALL COLUMN HOLE COVER SILENCER SHEET
2. TURN BACK FRONT FLOOR CARPET ASSEMBLY
3. REINSTALL REMOVE FRONT NO. 1 CONSOLE BOX INSERT
4. REINSTALL NO. 1 INSTRUMENT PANEL UNDER COVER SUB-ASSEMBLY
5. TURN THE STEERING WHEEL FROM-LEFT-TO-RIGHT TO INSPECT FOR PROPER OPERATION AND FEEL
 - a) Check for abnormal feel or abnormal noise.
6. TEST DRIVE
7. ADJUST THE STEERING WHEEL CENTER AS NEEDED
 - a) If needed, adjust the steering wheel straight-ahead position by adjusting the intermediate shaft clock position.
8. RETURN THE POSITIONS OF THE STEERING COLUMN AND THE DRIVER SEAT

X. WORK COMPLETION CHECK



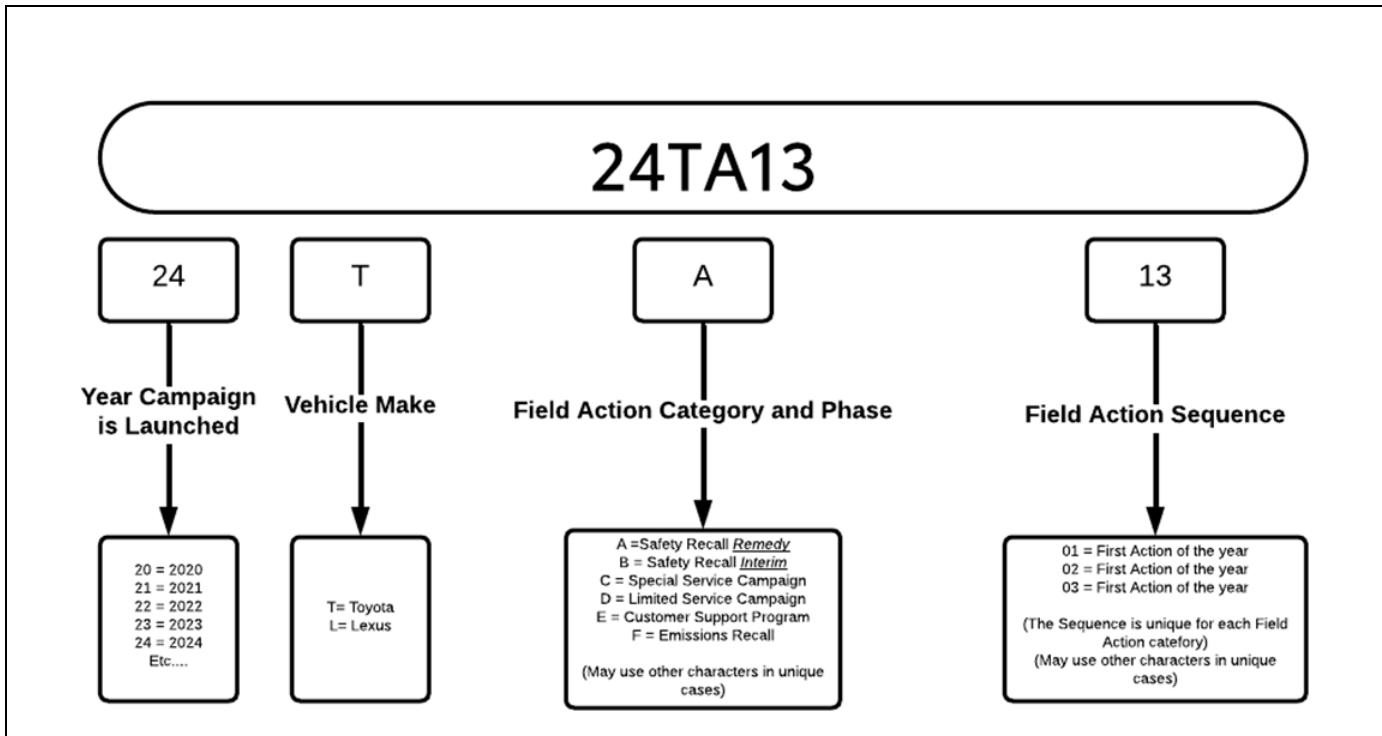
- a) WORK COMPLETION CHECK
- (1) Check the identification mark applied on the intermediate shaft to confirm the correct part is installed.

◀ VERIFY REPAIR QUALITY ▶

- Confirm The No. 2 Intermediate Shaft bolts are torqued to **64 N·m {653 kgf·cm, 47 ft·lbf}**.
- Confirm No. 1 instrument panel under cover assembly is installed and re attached.
- Confirm there are no new DTCs introduced during the repair.

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

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

B. CAMPAIGN PARTS DISPOSAL

As required by Federal Regulations, please make sure all campaign 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.**