

**TECHNICAL INSTRUCTIONS**

**FOR**

**SAFETY RECALL 25TA09**

**INCREASED RISK OF VEHICLE FIRE**

**CERTAIN**

**2020-2022 MODEL YEAR SUPRA**

**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 Recall repair are required to currently hold at least one of the following course levels:**

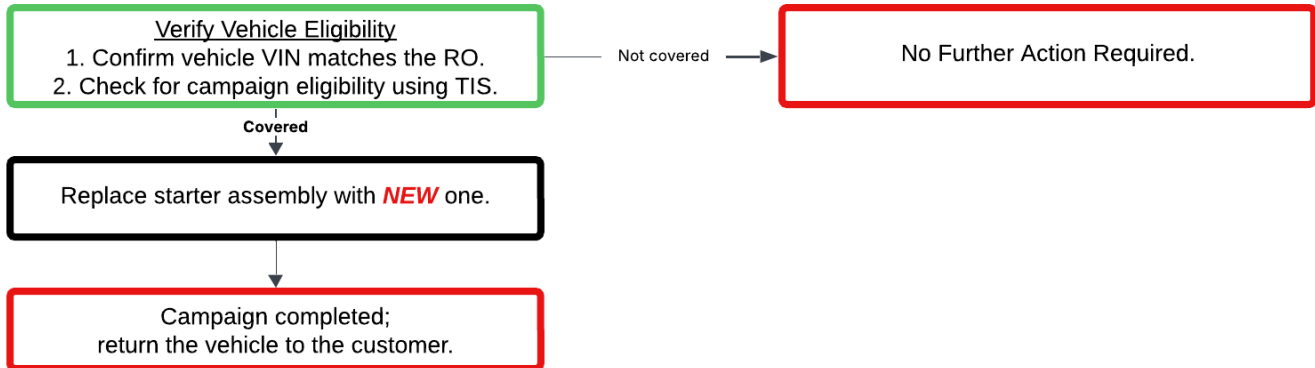
**TIC206B - Electrical Repair 2**

**TIN519B - 2020 GR Supra New Model Technical Introduction**

**It is the dealership’s responsibility to select technicians with the above course level or greater to perform this Recall 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

Flow chart is for reference only. **DO NOT** use in place of full technical instruction. Follow ALL steps as outlined in full technical instruction to confirm 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.

Note:

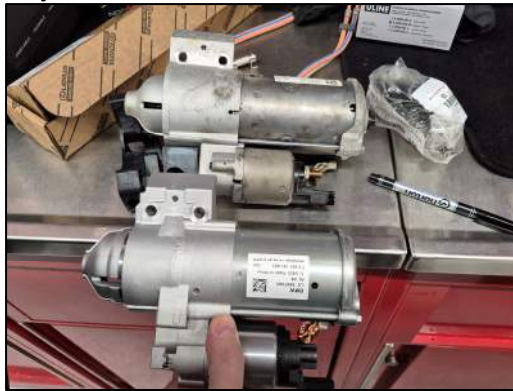
TMNA warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were previously completed, even by another dealer.

## III. PREPARATION

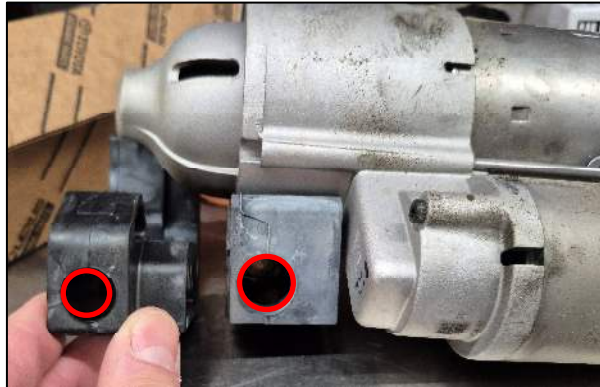
### 1. PARTS

Part Number	Part Name	Quantity
28100-WAA09	STARTER ASSEMBLY	1
28192-WAA01	COVER, STARTER	1
90118-WA089	SCREW	3
90118-WA364	CLIP	1
90118-WA818	FRONT SUSPENSION MEMBER LOWER PROTECTOR BOLT	12

NOTE: The new starter is significantly smaller than the starter which will be removed.



NOTE: The through hole in the rubber grommet is smaller in diameter than the one which will be removed.



### 2. TOOLS, SUPPLIES & EQUIPMENT

- Techstream+ with ISTA
- ISTA Cable
- Battery Charger
- Standard Hand Tools
- Digital Torque wrench with angle measurement
- "TORX" Socket Wrench E-type E10\*1

\*1: "TORX ®" is a trademark of Acument ® Intellectual Properties, LLC / CAMCAR Innovations ®.

### 3. MATERIALS

- Protective Glasses
- Protective Gloves
- Protective Tape
- Marking Pen

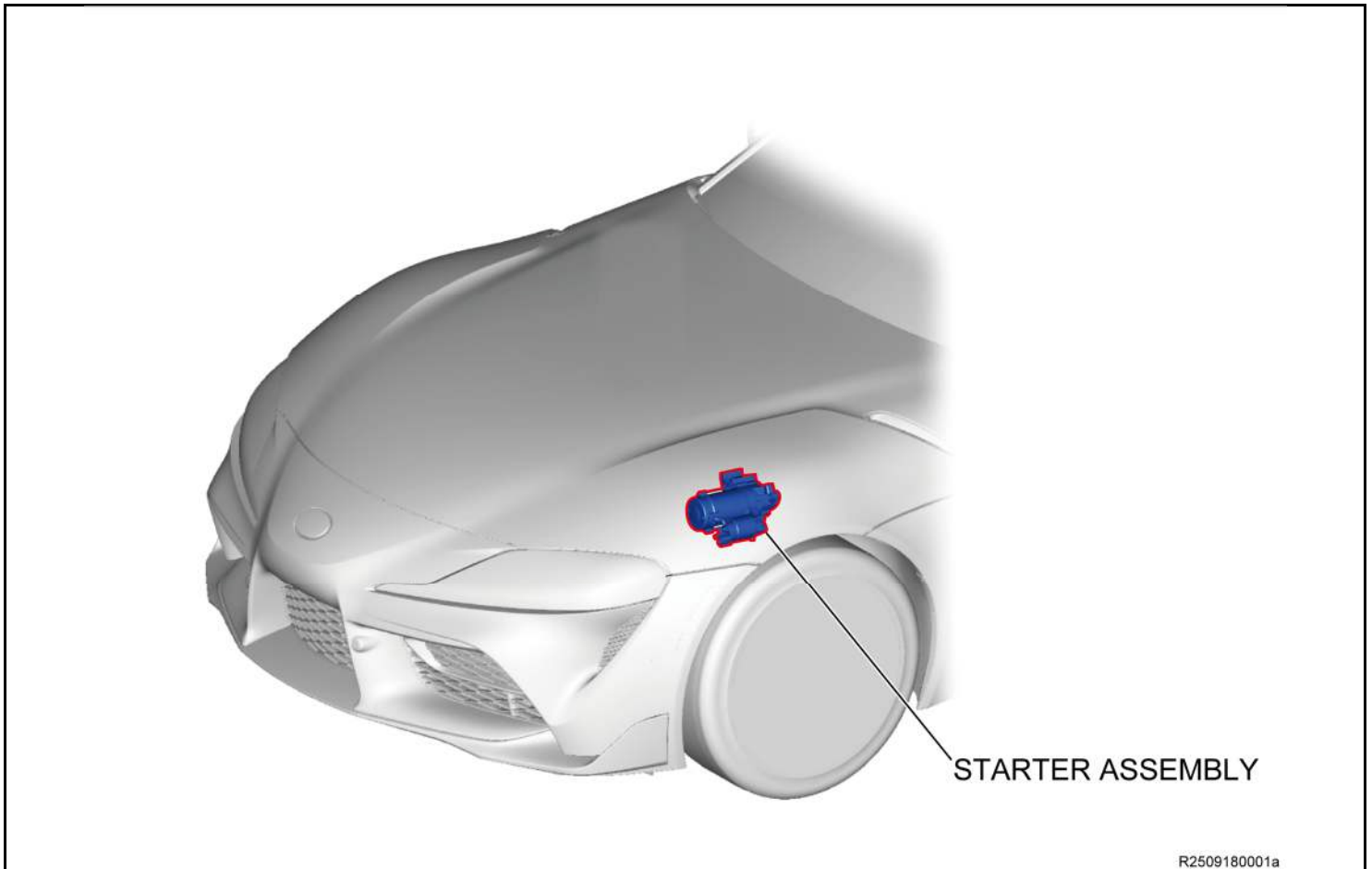
### IV. WORK PROCEDURE TABLE OF CONTENTS

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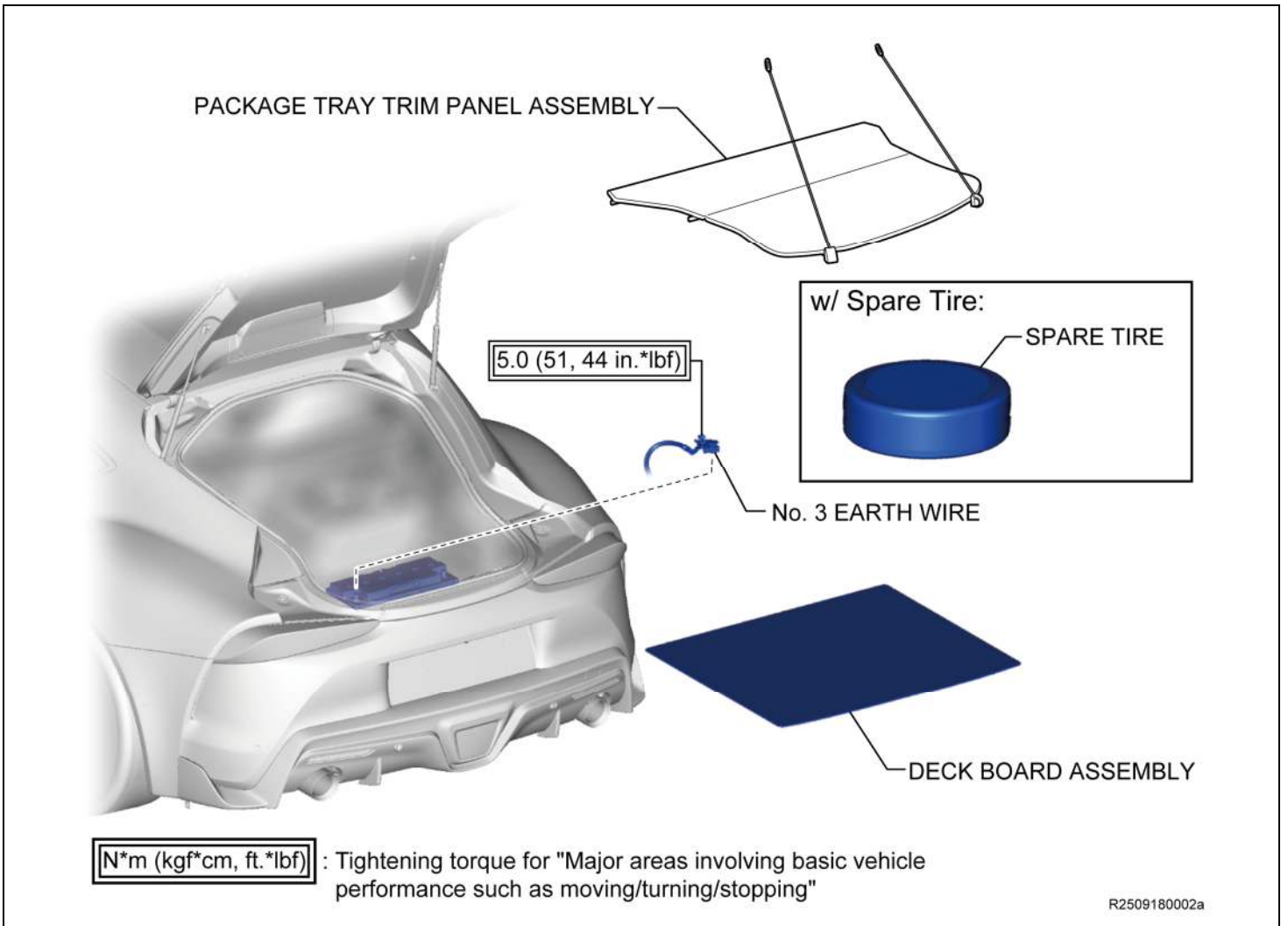
### V. BACKGROUND

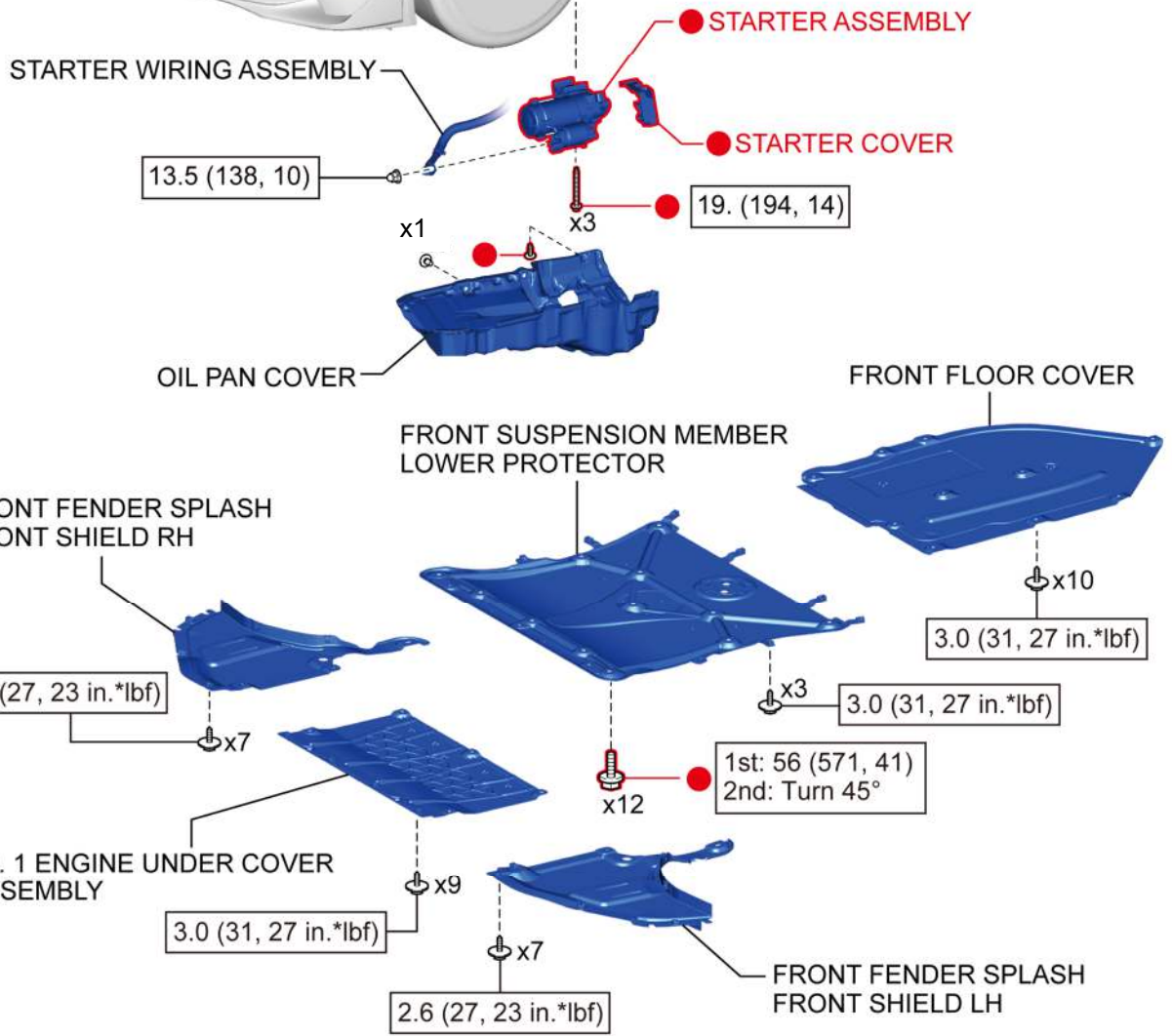
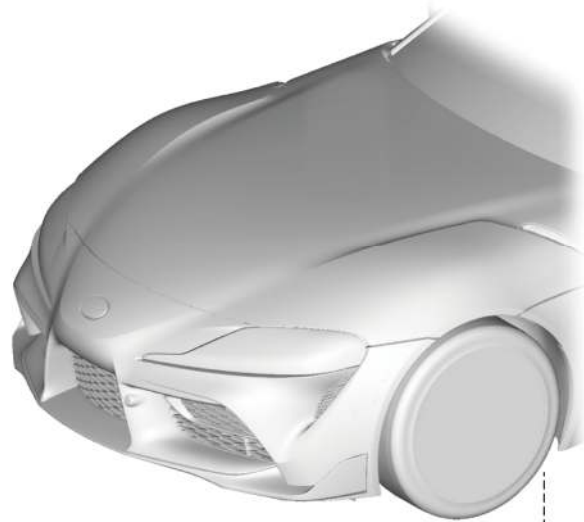
The subject vehicles were manufactured by BMW. According to BMW, water can enter a part of the engine starter in affected 4-cylinder Supra vehicles and could lead to corrosion that can cause a short circuit. In an extreme case, this could increase the risk of vehicle fire during vehicle operation or where the vehicle is parked and the ignition is off.

Replace starter assembly with a **NEW** one.



## VI. COMPONENTS





● : Replacement part

**N\*m (kgf\*cm, ft.\*lbf)** : Specified torque

R2509180003a

## VII. REPLACE STARTER ASSEMBLY



**Always remember "SAFETY FIRST"**  
**Risk of short circuits! Risk of fire!**

### 1. CHECK FOR DTCs

- a) Use the latest version of ISTA.



**If any DTC's are found that indicate a safety risk at performing this repair, do not proceed until they have been resolved.**

**Note:** This Service Campaign covers only the ECUs listed as detailed in these instructions. It does not cover the diagnosis or replacement of any other parts on the vehicle.

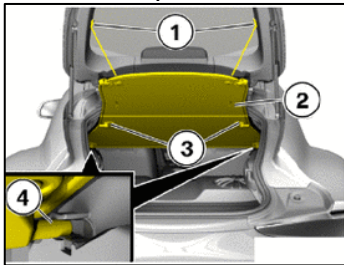
### 2. RECORD CUSTOMER SETTINGS

- a) When the battery cable is disconnected, the settings for the audio, air conditioning etc., may be reset. Therefore, make a note of the settings before disconnecting the cable from the negative (-) auxiliary battery terminal.

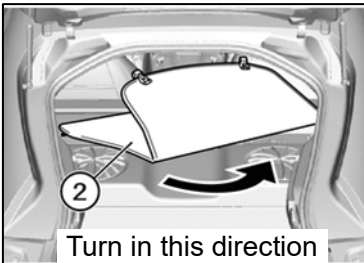
### 3. REMOVE PACKAGE TRAY TRIM PANEL ASSEMBLY

[Reference TIS if needed B48 Starter Removal](#)

- a) Manual Seat - Operate the front seat adjuster assembly to move the front seat assembly RH to the foremost position.
- b) Power Seat - Operate the power seat switch assembly to move the front seat assembly RH to the foremost position.



- c) Detach the retaining straps (1).
- d) Detach the rear mountings (3) to the top.
- e) Detach the front guides (4) to the rear.



- f) Fold the package tray trim panel assembly (2) together and remove.

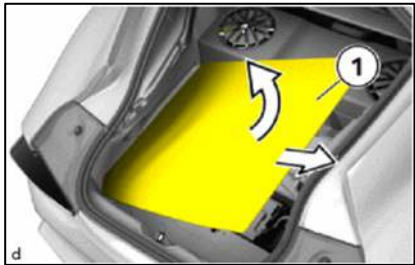
#### **HINT:**

**Turn the package tray trim panel assembly (2) approximately 45° counterclockwise and remove it from the tailgate.**

#### 4. REMOVE DECK BOARD ASSEMBLY



Remove in this Direction



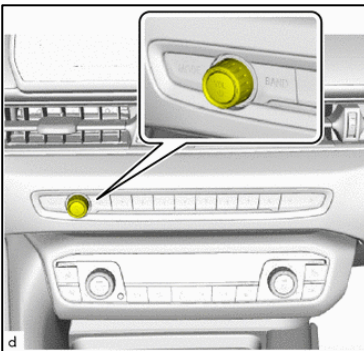
Remove in this Direction



- a) Slightly lift the deck board assembly (1) on the right side with a suitable tool.
- b) Slide the left edge of the deck board assembly (1) into the recess in the direction of the arrow of the deck board assembly.

- c) Remove the deck board assembly (1) in the direction of the arrow.

#### 5. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

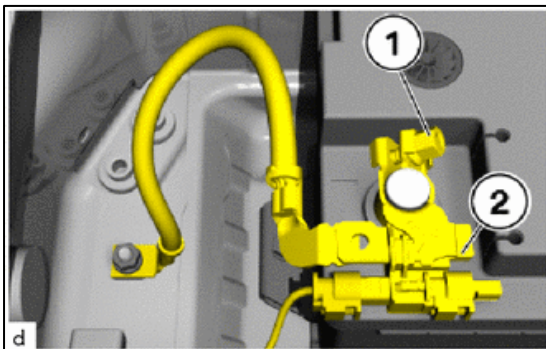


##### NOTICE:

Check that the START-STOP button (engine switch) off.

##### HINT:

Pressing and holding the AUDIO button changes the power source mode to IG OFF.



- a) Unfasten nut (1)
- b) Disconnect the No. 3 earth wire (2) from the negative (-) battery terminal.

##### NOTICE:


Damage to battery terminal, the safety battery terminal or the battery state sensor.

Damaged battery terminals can lead to malfunctions or vehicle electrical system faults.

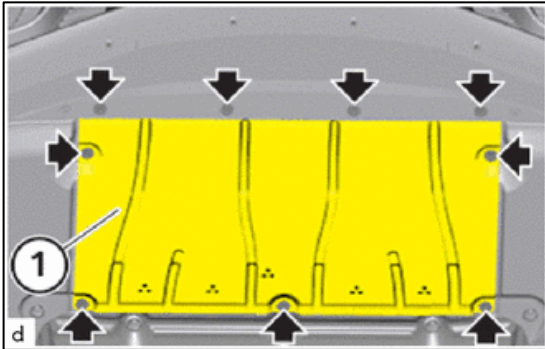
Pull off battery terminal from battery pole by carefully moving back and forth. Do not pry off using a tool.

## 6. REMOVE NO. 1 ENGINE UNDER COVER ASSEMBLY



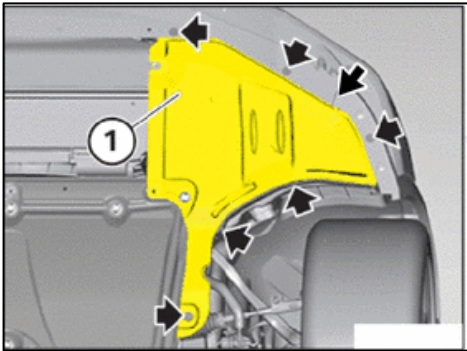
- Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.
- **Danger! Life-threatening injuries!**
- Observe safety information on raising vehicles using a vehicle hoist.
- For additional information see:
- [Click here](#) 

**NOTICE:** Driving without front suspension member lower protector is not permissible.



- Remove screws (arrows).
- Remove the No. 1 engine under cover assembly (1).

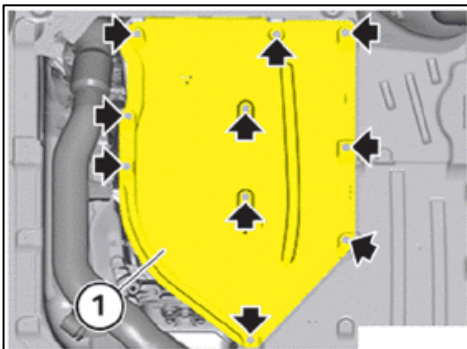
## 7. REMOVE FRONT FENDER SPLASH FRONT SHIELD LH



- Remove screws (arrows).
- Feed out the front fender splash front shield LH (1) to the side and remove.

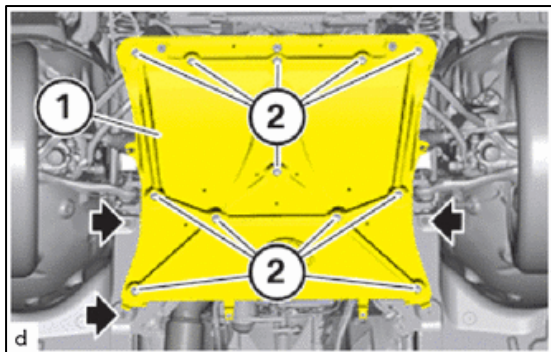
8. REMOVE FRONT FENDER SPLASH FRONT SHIELD RH (Use the same procedure as for the LH side.)

## 9. REMOVE FRONT FLOOR COVER



- Remove screws (arrows).
- Remove the front floor cover (1).

## 10. REMOVE FRONT SUSPENSION MEMBER LOWER PROTECTOR



- a) Remove and discard twelve screws (arrows).
- b) Remove the front suspension member lower protector (1)

## 11. LOOSEN OIL PAN COVER, (DO NOT FULLY REMOVE)

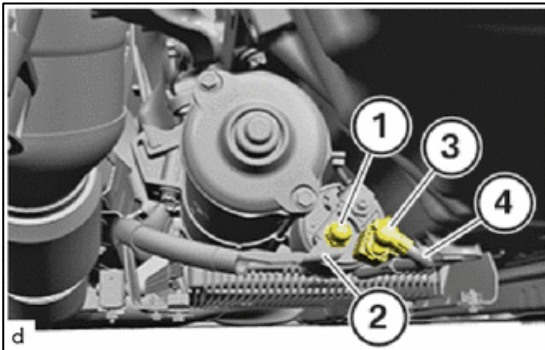
### NOTICE:

Electrostatic discharge required. Damage to or destruction of electrical components. Leave electrical components in original packaging until just before they are installed. Use the original packaging only for any return shipments. Always package removed components straight away.

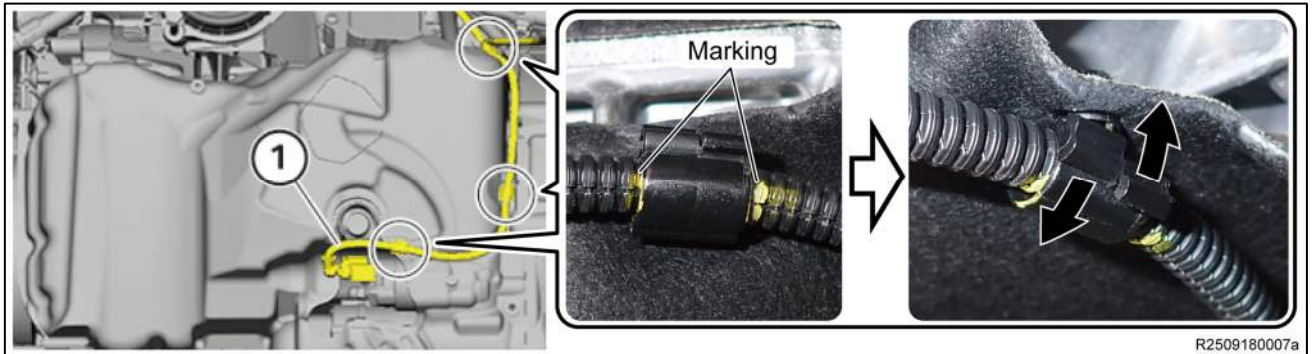
Only touch the housings of electrical components. Do not touch pins or multi-pin connectors directly.

Anti static work clothing and antistatic shoes (with ESD symbol).

Click [HERE](#) for additional information.

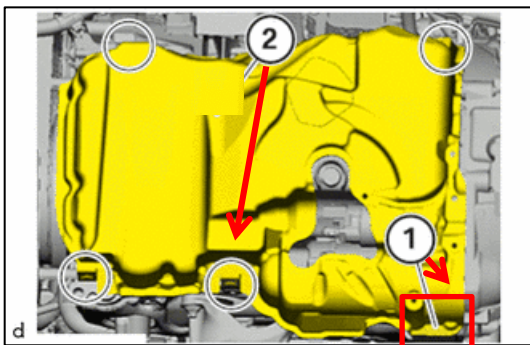


- Unfasten nut (1).
- Remove starter wiring assembly (2) from starter assembly.
- Unlock connector (3) and disconnect.
- Remove the transmission wire (4) for terminal 50 from the starter assembly

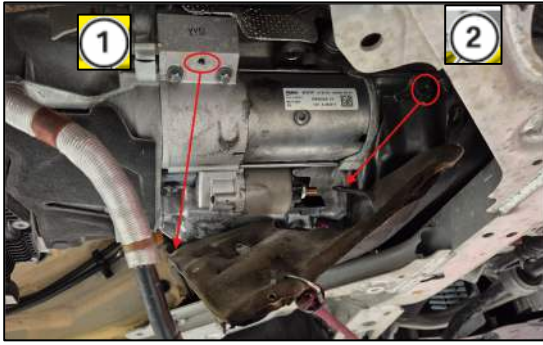


### HINT:

When disconnecting the transmission wire, **DO NOT** remove the harness clamp but first **mark** the clamp position and then release the clamp lock and disconnect only the transmission wire.



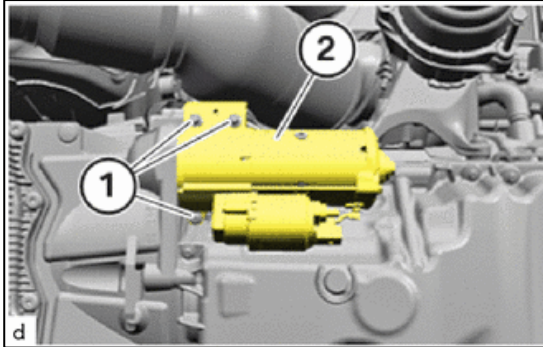
- Remove only two clips (1) and (2). The (1) clip is installed in the starter assembly and may break when removed, however there is no need to remove it, as it will be discarded with the old the starter assy.
- Note: The clip (1) from the starter assembly is non-reusable.



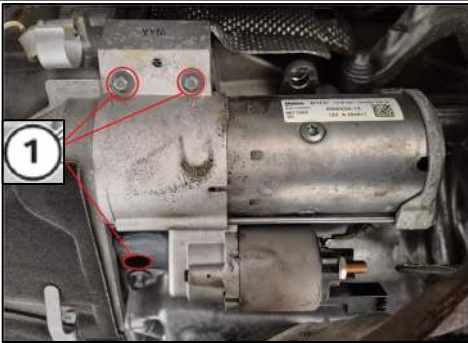
**HINT:**

Although the oil pan cover is removed in the Repair Manual, to avoid damage to the oil pan cover, after removing the two clips, **DO NOT** remove the oil pan cover, but lower the oil pan cover just enough to remove the starter assembly and then remove the starter assembly.

**12. REMOVE STARTER ASSEMBLY**



- a) Loosen the three E10 bolts (1).
- b) Remove the starter assembly (2).

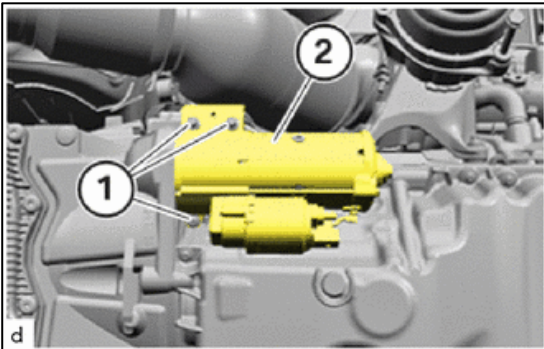


## VIII.RESTORE THE VEHICLE

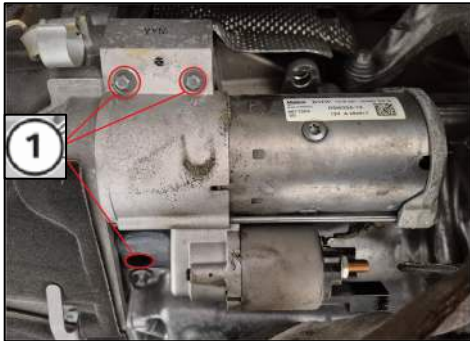
### 1. INSTALL the **NEW** STARTER COVER on the **NEW** STARTER ASSEMBLY



### 2. INSTALL STARTER ASSEMBLY

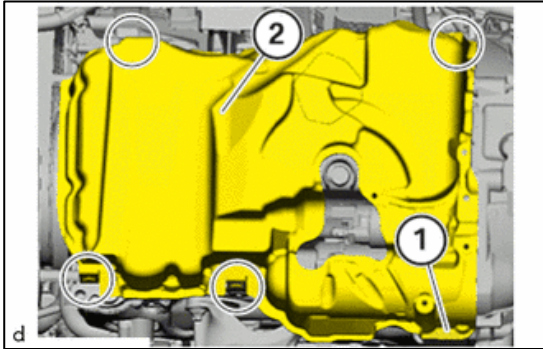


- a) Insert and install the starter assembly (2).
- b) Install and tighten **NEW** E10 bolts (1). (qty three)  
**Torque: 19 Nm, 194 kgf·cm, 14 ft·lbf**

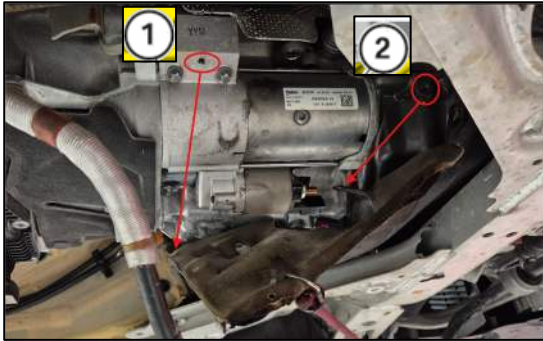


Note: Must use a ¼ drive socket as the hole in the rubber is too small for a 3/8 drive socket.

### 3. SECURE THE OIL PAN COVER



- a) Position the oil pan cover (2)
- b) Install the **NEW** clip (1).



- c) Replace the other reusable clip (2)

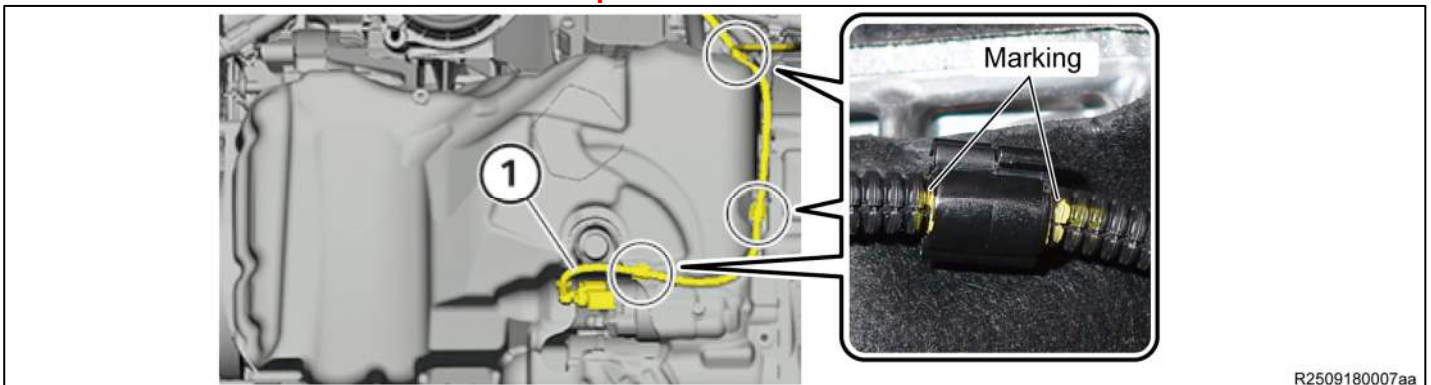
### 4. CONNECT THE WIRING

#### HINT:

Set the harness clamp to the markings on the transmission wire and install the transmission wire to the harness clamp.

#### CAUTION:

Improper routing of the positive battery cable. Risk of short circuits! Route the positive battery cable without abrasions and do not trap.



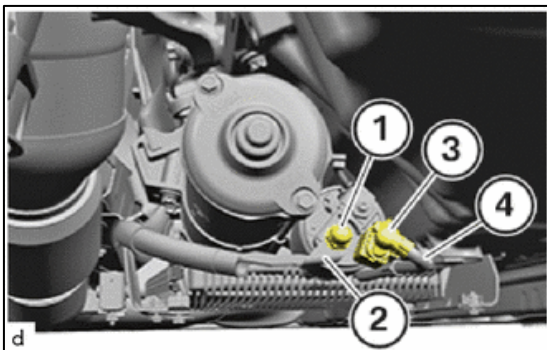
- a) Connect the transmission wire (4) for the terminal 50 to the starter assembly.
- b) Connect the connector (3).

#### HINT:

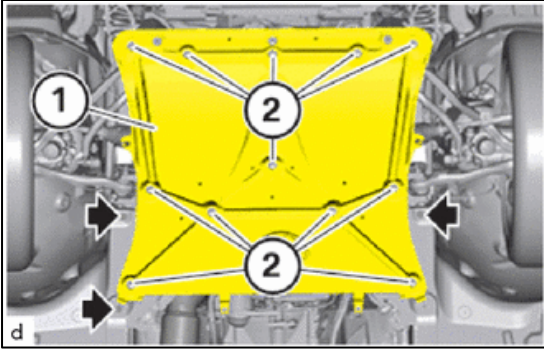
**The Connector must engage audibly.**

- c) Position starter wiring assembly (2) on the starter assembly.
- d) Tighten nut (1)

**Torque: 13.5 Nm (138 kgf-cm, 10 ft-lbf)**

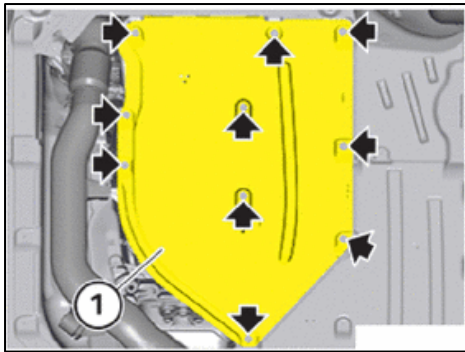


## 5. REPLACE FRONT SUSPENSION MEMBER LOWER PROTECTOR



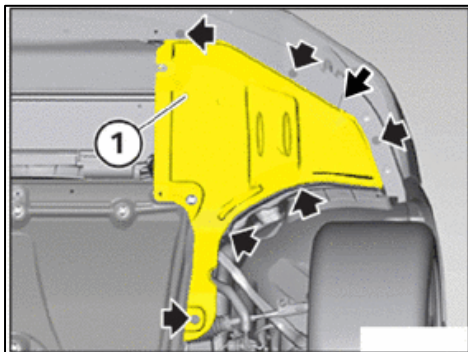
- Position front suspension member lower protector (1).
- Install **NEW** 16mm bolts (2). (qty twelve)
- Tighten the 16mm bolts (2).  
**Torque: 56 Nm (571 kgf·cm, 41 ft·lbf)**
- Tighten the 16mm bolts (2) an additional 45° using the angle setting on the digital torque wrench.

## 6. INSTALL FRONT FLOOR COVER



- Position front floor cover (1).
- Tighten screws (arrows) Tighten the 16mm bolts (2).  
**Torque: 3.0 Nm (31 kgf·cm, 27 in·lbf)**

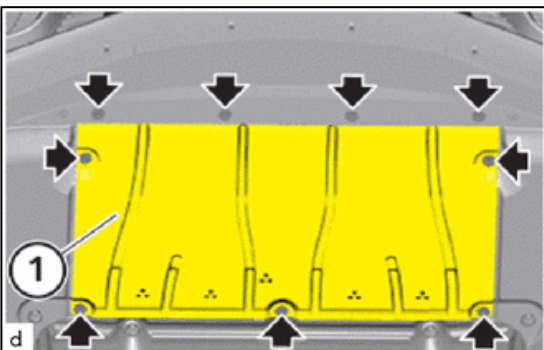
## 7. INSTALL FRONT FENDER SPLASH FRONT SHIELD LH



- Insert the front fender splash front shield LH (1) at the side.
- Tighten screws (arrows)  
**Torque: 2.6 Nm (27 kgf·cm, 23 in·lbf)**

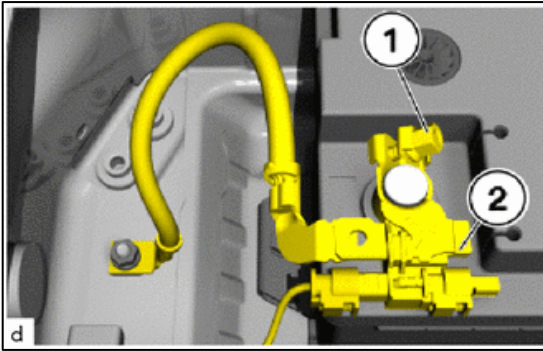
## 8. INSTALL FRONT FENDER SPLASH FRONT SHIELD RH (Use the same procedure as for the LH side.)

## 9. INSTALL NO. 1 ENGINE UNDER COVER ASSEMBLY



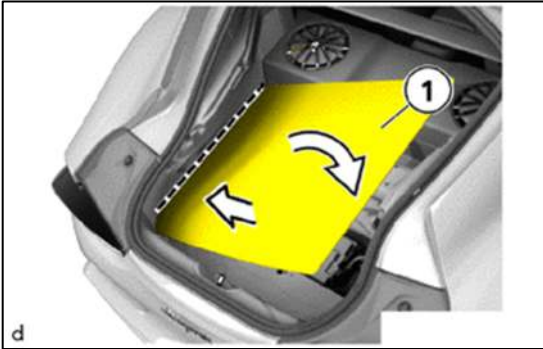
- Guide the No. 1 engine under cover assembly (1) in and position it.
- Tighten screws (arrows).  
**Torque: 3.0 Nm (31 kgf·cm, 27 in·lbf)**

## 10. RECONNECT NEGATIVE BATTERY TERMINAL



- a) Connect the No. 3 earth wire (2) from the negative (-) battery terminal.
- b) Tighten nut (2).  
**Torque: 5.0 Nm (51 kgf·cm, 44 in·lbf)**

## 11. INSTALL DECK BOARD ASSEMBLY

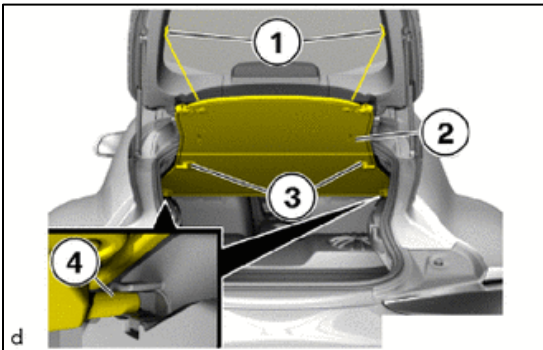


- a) Slide the left edge of the deck board assembly (1) into the recess in the direction of the arrow of the deck board assembly.
- b) Pivot deck board assembly (1) in the direction of the arrow and position centered in the vehicle.

Install in this Direction



## 12. INSTALL PACKAGE TRAY TRIM PANEL ASSEMBLY



- a) Attach the front guides (4) forward.
- b) Attach the rear mounting (3) downward.
- c) Fold the package tray trim panel assembly (2) open.
- d) Attach the retaining straps (1).

## 13. RESTORE CUSTOMER SETTINGS

### 14. CLEAR DTCs

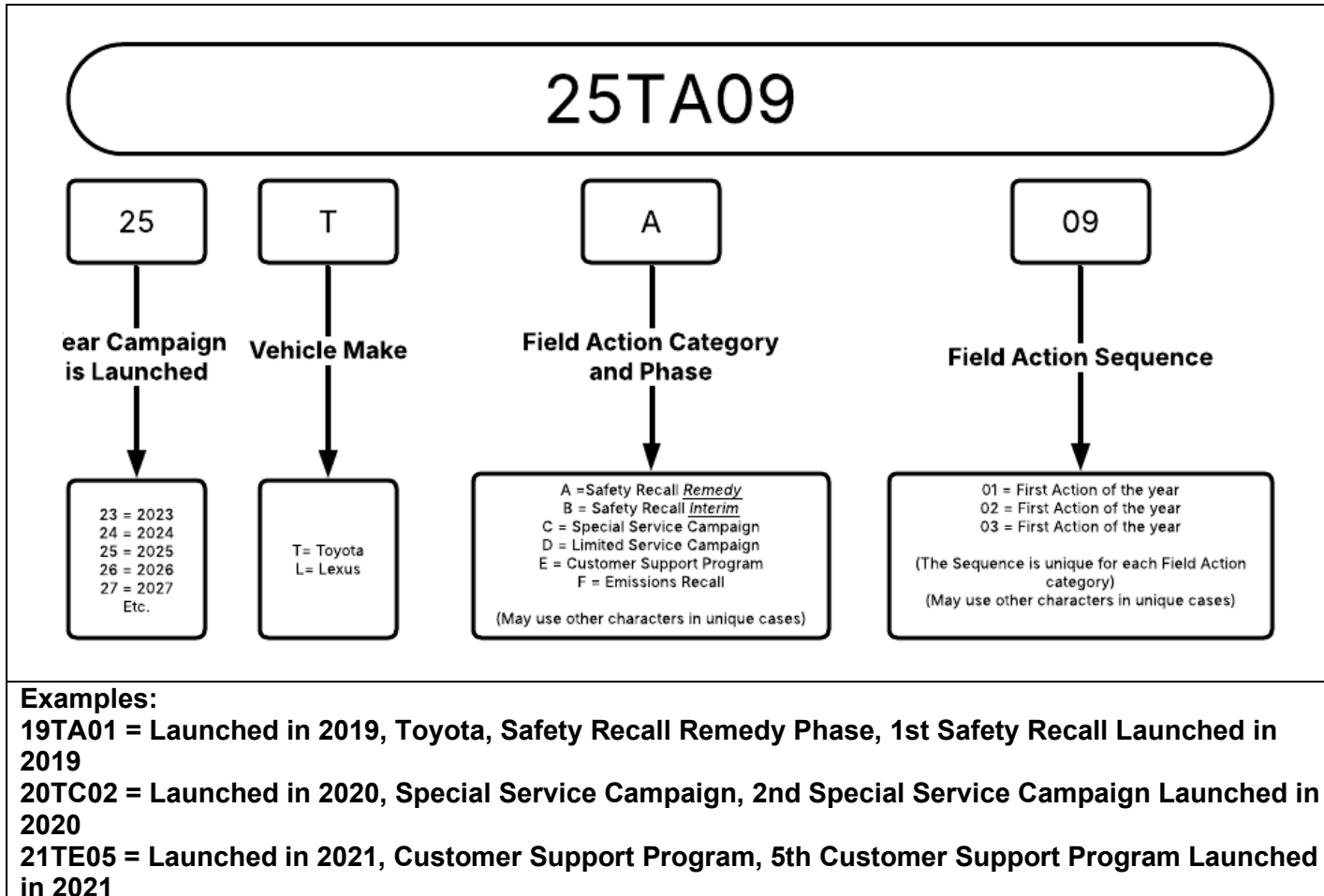
- a) Connect the diagnosis system to the vehicle and enter the following menus:  
**Vehicle management / Service functions / Body / Voltage supply / ABL Register battery change**

◀ VERIFY REPAIR QUALITY ▶

- Start the vehicle and confirm proper operation of the starter.
- If you have any questions regarding this update, please contact your regional representative.

## IX. APPENDIX

### 1. CAMPAIGN DESIGNATION DECODER



### 2. 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.**