

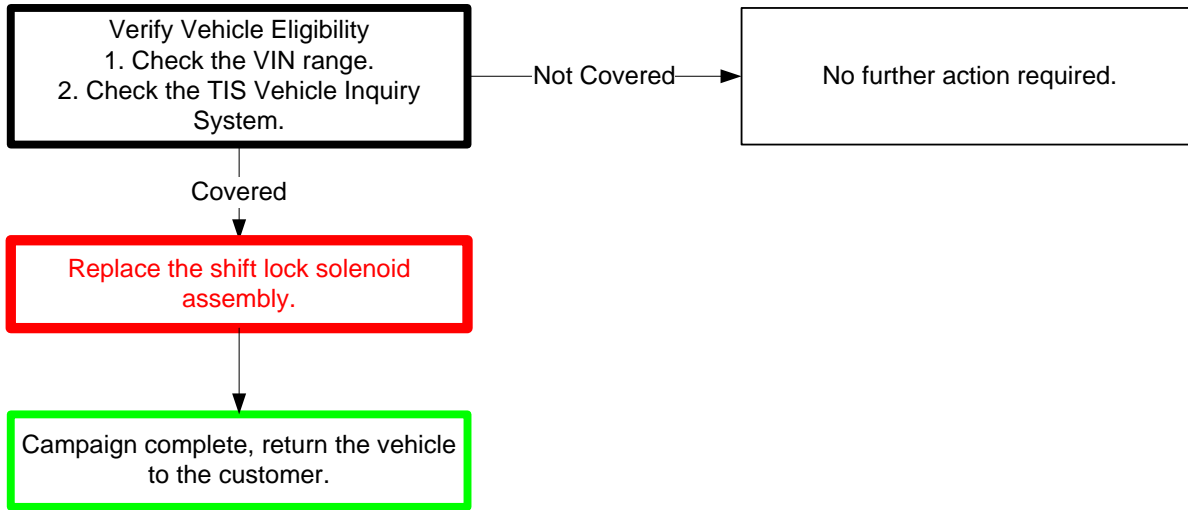
TECHNICAL INSTRUCTIONS
FOR
SAFETY RECALL H0V
SHIFT LOCK SOLENOID ASSEMBLY
CERTAIN 2005 – 2007 & CERTAIN 2009 – 2010 MODEL YEAR SIENNA

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 repair are required to currently hold at least one of the following certification levels:

- **Toyota Certified (all classifications)**
- **Toyota Expert (all classifications)**
- **Master**
- **Master Diagnostic Technicians**

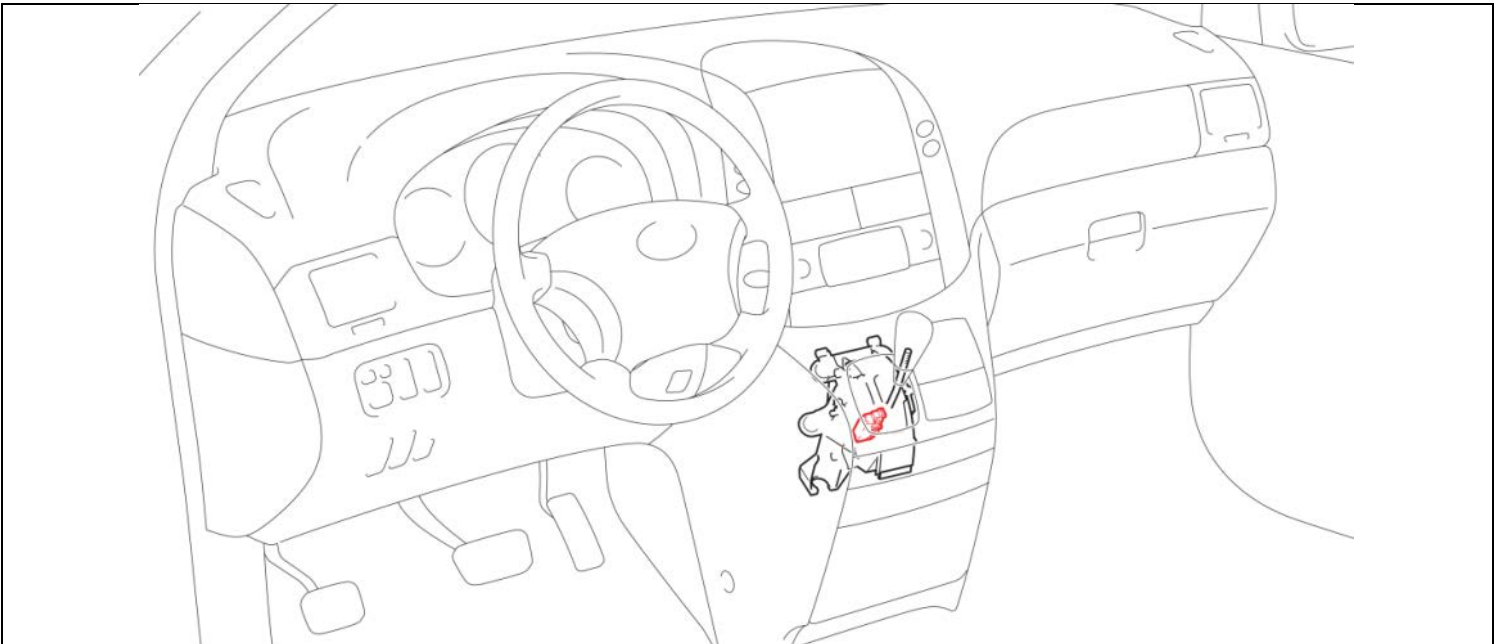
I. OPERATION FLOW CHART

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. BACKGROUND

In the involved vehicles, grease inside the shift lever assembly could transfer to other internal components, causing them to function improperly. This could allow the shift lever to be moved out of the "Park" position without depressing the brake pedal. If this occurs when the parking brake is not engaged, it could lead to a vehicle rollaway and increase the risk of a crash.



III. PREPARATION

A. PARTS

Part Number	Part Description	Quantity
04003-48145	Solenoid Assembly kit	1
The kit above includes the following parts		
33525-42010	Push Nut	2
85431-45010	Shift Lock Solenoid Assembly	1
Part Number	Part Description	Quantity
04003-55145	Grease Kit	1
The kit above includes the following parts		
-	Grease Packet	10

This kit includes 10 grease packets, each vehicle only requires one packet.

B. TOOLS & EQUIPMENT

- Standard hand tools
- Molding remover set
- Torque wrench
- Techstream
- Protective tape
- Duct tape or similar
- Shop cloth

IV. IDENTIFICATION OF AFFECTED VEHICLES

A. COVERED VIN RANGE

NOTE:

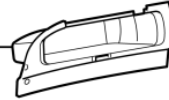
- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Safety Recall, and that the campaign has not already been completed prior to dealer shipment or by another dealer.
- TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not affected or were completed by another dealer.

V. COMPONENTS

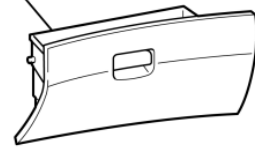
INSTRUMENT PANEL SAFETY
PAD INSERT SUB-ASSEMBLY NO.1



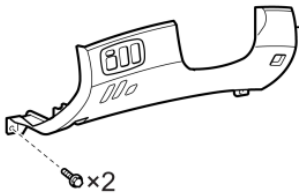
INSTRUMENT PANEL
BOX NO.2



GLOVE COMPARTMENT
DOOR ASSEMBLY



INSTRUMENT PANEL
FINISH PANEL SUB-ASSEMBLY
LOWER LH



GLOVE COMPARTMENT
DOOR STOPPER
SUB-ASSEMBLY

INSTRUMENT
CLUSTER FINISH
PANEL CENTER NO.1

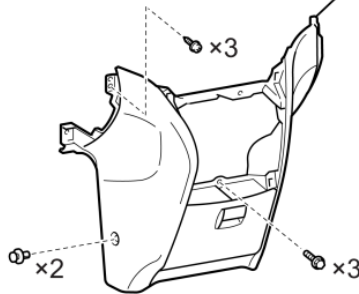
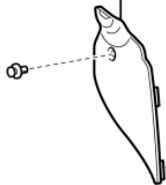


INSTRUMENT CLUSTER
FINISH PANEL CENTER NO.2

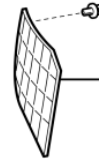


INSTRUMENT CLUSTER FINISH PANEL
SUB-ASSEMBLY LOWER CENTER

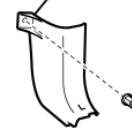
FLOOR CARPET
COVER CENTER LH



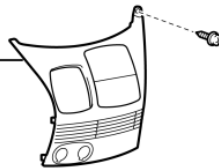
FLOOR CARPET COVER
CENTER RH



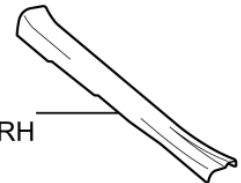
COWL SIDE TRIM
BOARD RH



INSTRUMENT CLUSTER FINISH PANEL
ASSEMBLY CENTER



FRONT DOOR
SCUFF PLATE RH



COWL SIDE TRIM
BOARD LH



SHIFT LEVER KNOB
SUB-ASSEMBLY



FRONT DOOR
SCUFF PLATE LH



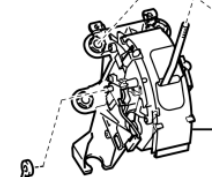
21 (214, 15)

x4

POSITION INDICATOR
HOUSING ASSEMBLY



SHIFT LEVER ASSEMBLY



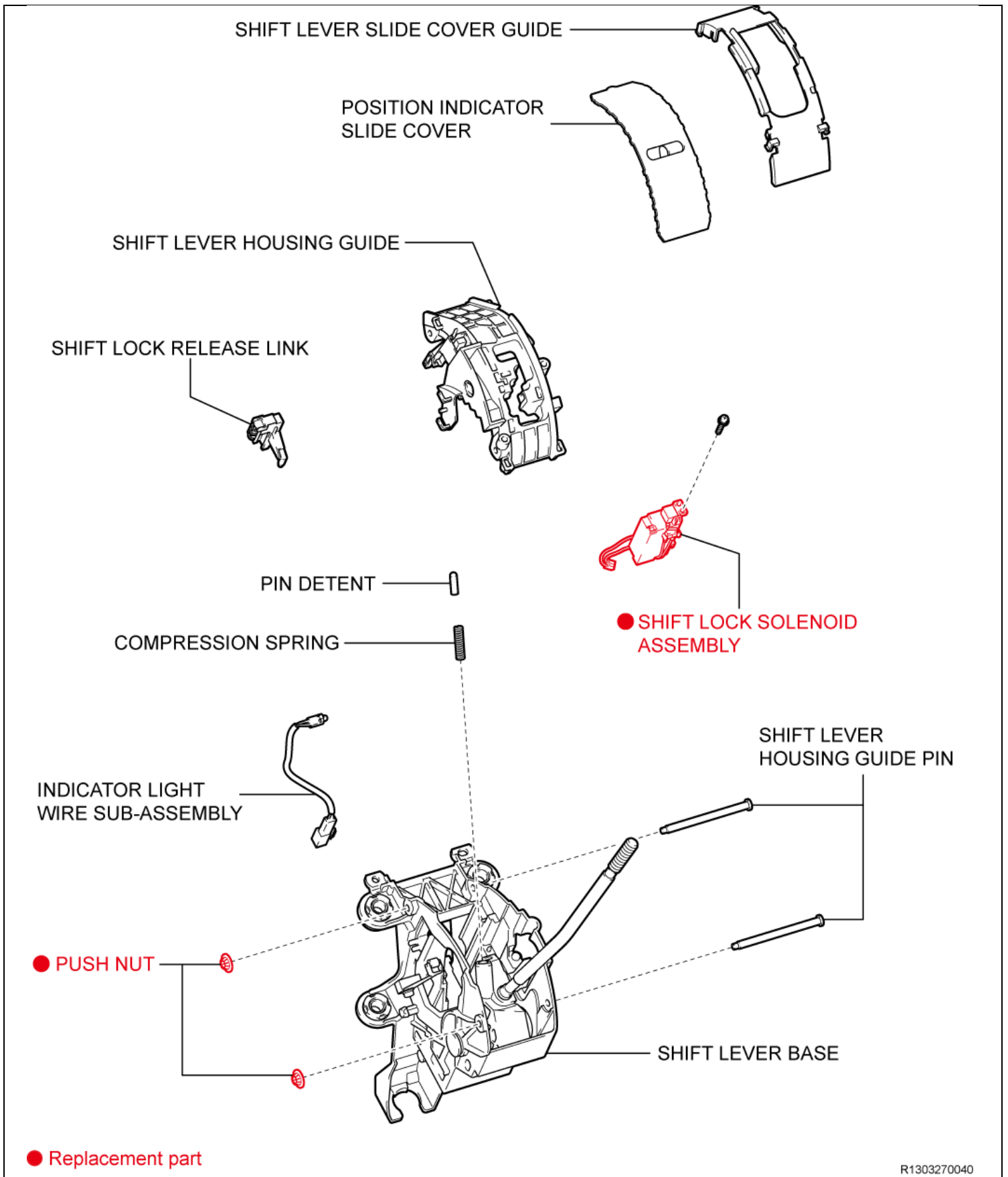
TRANSMISSION CONTROL CABLE ASSEMBLY



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

C119296E02

COMPONENTS CONTINUED...



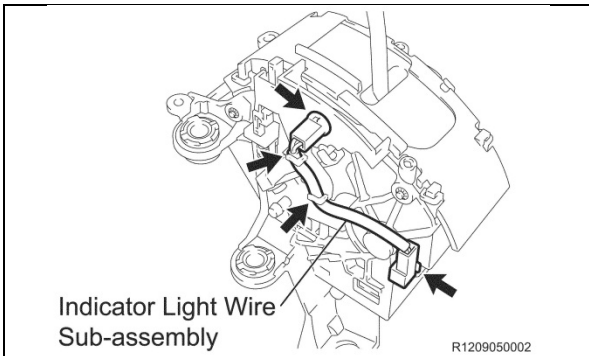
VI. SHIFT LOCK SOLENOID ASSEMBLY REMOVAL



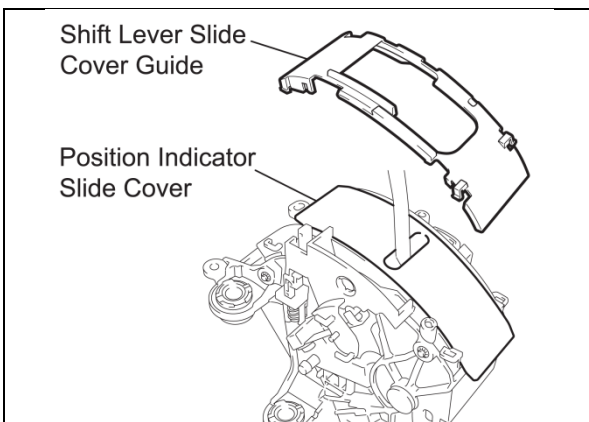
- **ALWAYS** wear appropriate protective equipment.
- Keep the work area clean to prevent foreign materials from entering the shift lever assembly.
- **DO NOT** use any chemicals other than specified in these instructions.

1. **CHECK AND RECORD DTCs**
 - a) Check and record any DTCs.
2. **REMOVE THE SHIFT LEVER ASSEMBLY**
 - a) Refer to [TIS](#) for removal instructions.

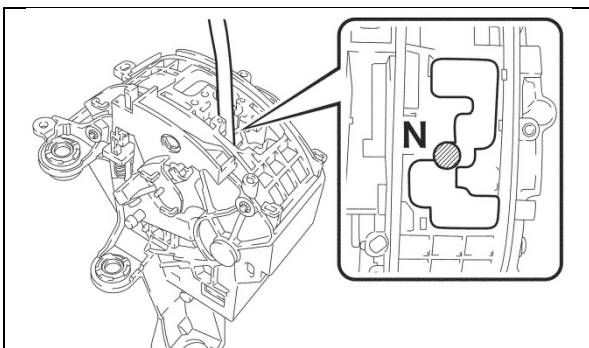
[SHIFTER REPAIR OVERVIEW VIDEO](#)



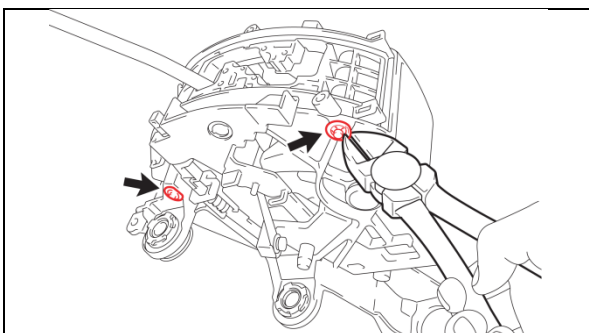
3. **REMOVE THE INDICATOR LIGHT WIRE SUB-ASSEMBLY**
 - a) Remove the wire sub-assembly from the shift lever.



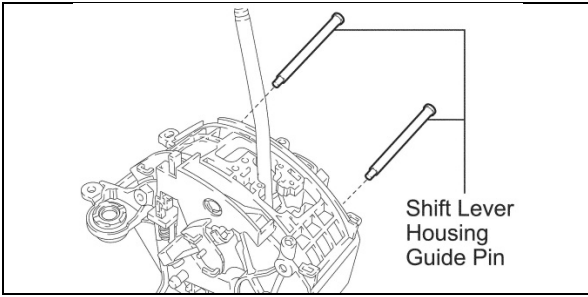
4. **REMOVE THE SHIFT LEVER SLIDE COVER GUIDE**
 - a) Disengage the 4 tabs and remove the cover.
5. **REMOVE THE POSITION INDICATOR SLIDE COVER**



6. **REMOVE THE PUSH NUTS**
 - a) Depress the shift lock release button and move the shift lever to the N position.



- b) Remove the 2 push nuts by cutting them off.

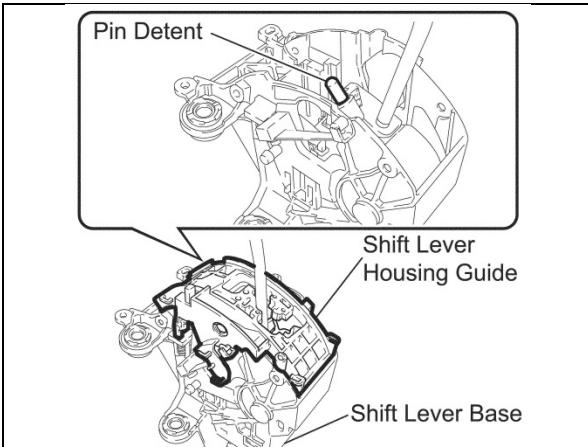


7. REMOVE THE SHIFT LEVER HOUSING GUIDE

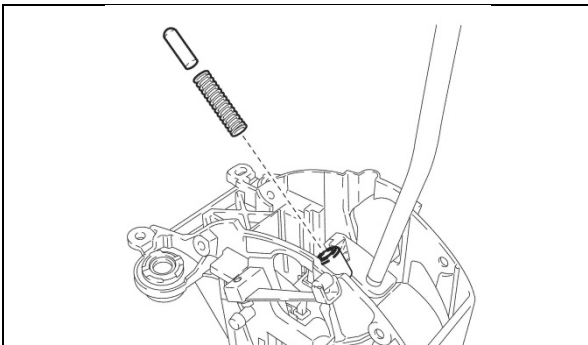
- a) Remove the 2 shift lever housing guide pins.



- **ALWAYS** perform step b) below with the shift lever in the N position because the spring tension is the least in this position.
- Remove the housing guide carefully as pin detent could fly off due to the compression spring.

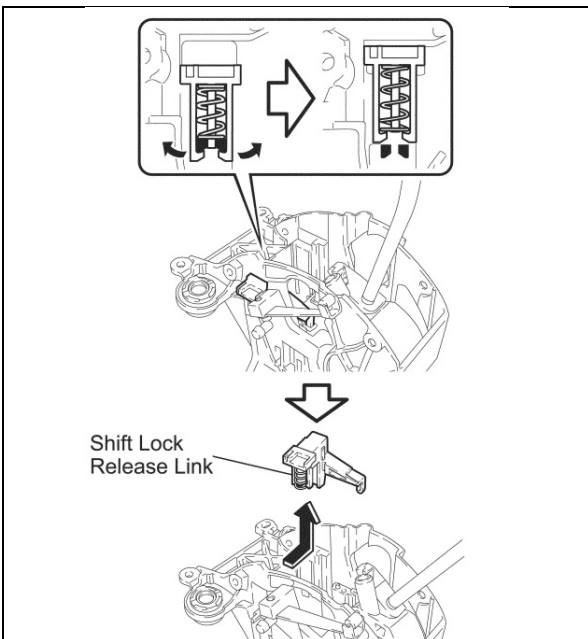


- b) Confirm the shift lever in in the N position, then carefully remove the housing from the base.



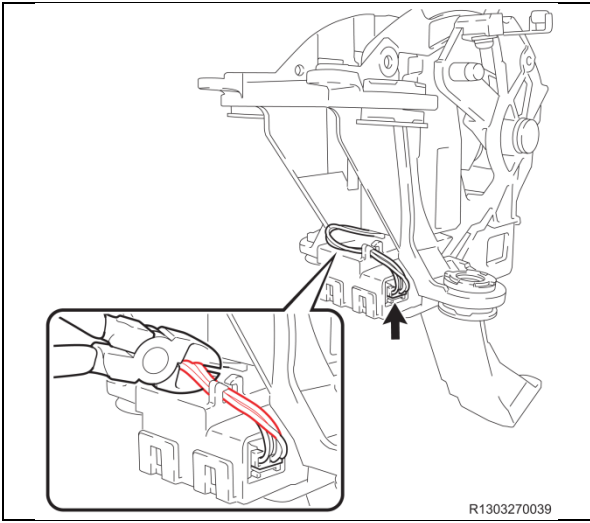
8. REMOVE THE PIN DETENT AND COMPRESSION SPRING

- a) Remove the pin detent and compression spring from the shift lever sub-assembly.



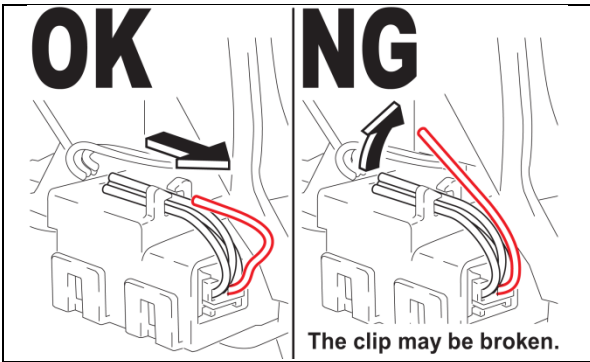
9. REMOVE THE SHIFT LOCK RELEASE LINK

- a) Disengage the 2 claws on the shift lock release link.
- b) Slide the link upward and toward the center of the shift lever base to remove.



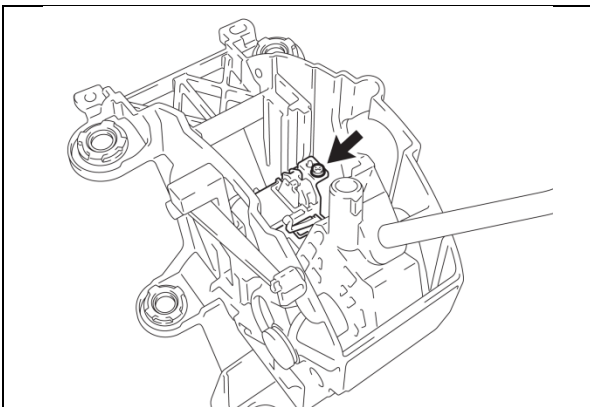
10. REMOVE THE SHIFT LOCK SOLENOID ASSEMBLY

- a) Cut the 4 wires for the solenoid harness.

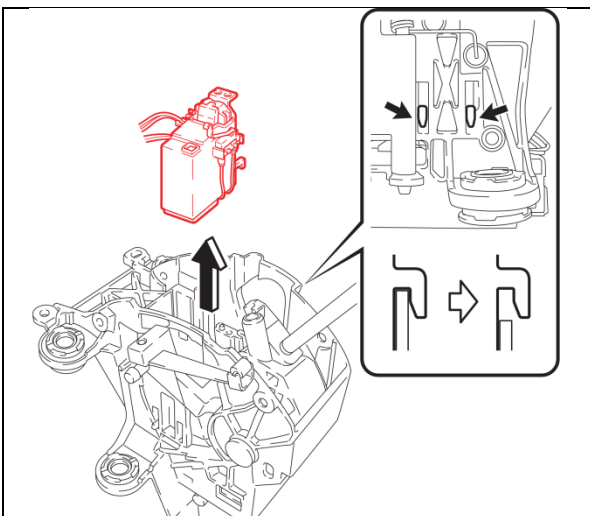


- b) Pull the 4 wires from the harness clamp.
- c) Disconnect the connector.

STOP The wires **MUST** be cut prior to removal, this will prevent the solenoid from being reused **AND** will prevent the harness clamp from being damaged during wire removal.



- d) Remove the screw at the top of the solenoid.

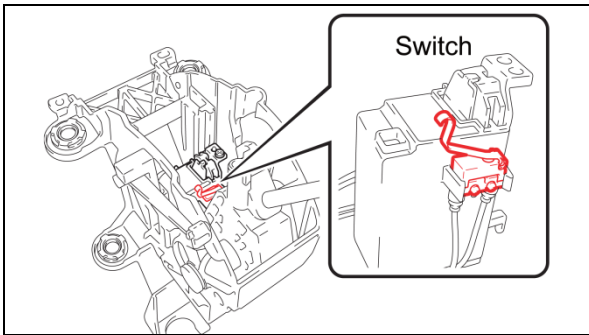


- e) Lift up on the solenoid to disengage it from the 2 guides, then completely remove the solenoid.

VII. SHIFT LOCK SOLENOID ASSEMBLY INSTALLATION



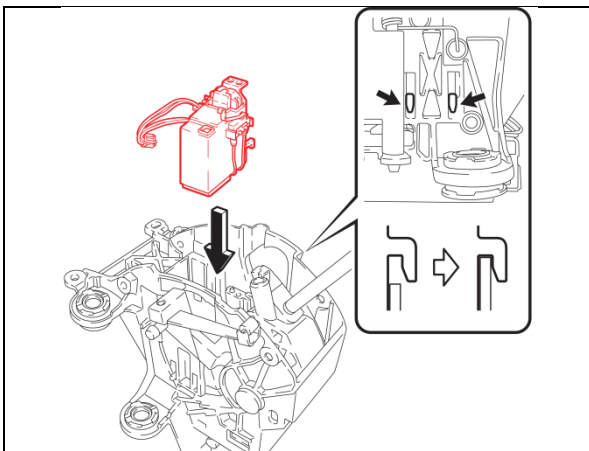
- Keep the work area clean to prevent foreign materials from entering the shift lever assembly.
- **DO NOT** use any chemicals other than specified in these instructions.



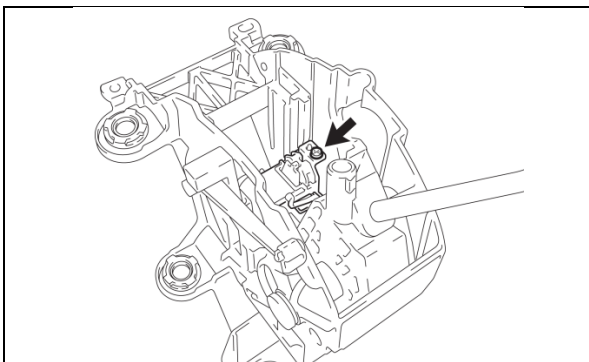
1. INSTALL THE NEW SHIFT LOCK SOLENOID ASSEMBLY



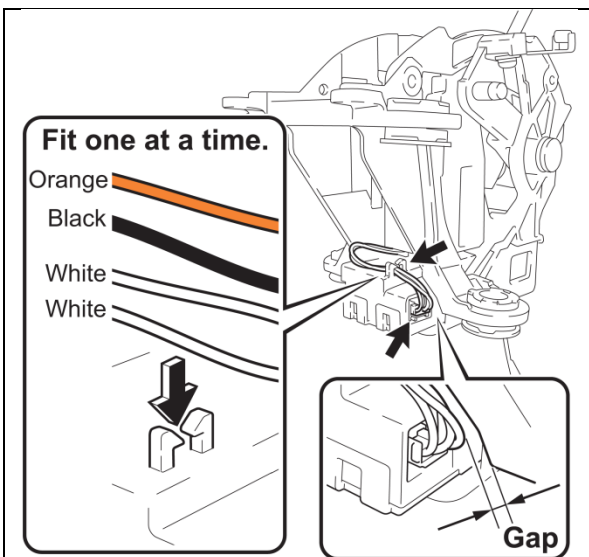
DO NOT deform the switch on the new solenoid during installation.



- a) Slide the solenoid into place and engage the 2 guides of the solenoid.



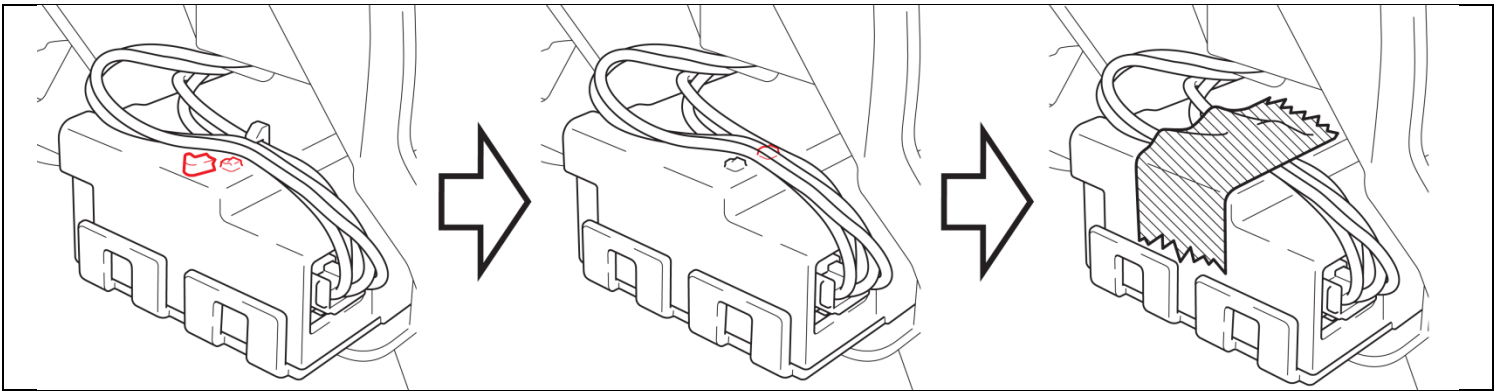
- b) Install the screw.



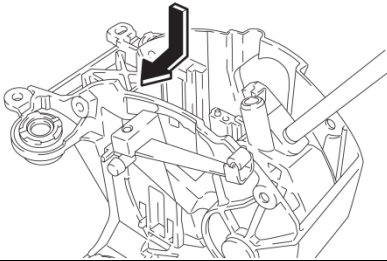
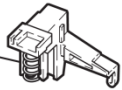
- c) Connect the connector.
 d) Fit the 4 wires into the clamp **ONE AT A TIME** in color order: White, White, Black, Orange.
 e) To prevent wires rubbing, confirm the wires are not contacting the shift lever base.



- It is **CRITICAL** to install the wires in the clamp one at a time to prevent the clip from breaking.
- If the clamp breaks, remove the **ENTIRE** clamp, then secure the wires with a strong tape.
- Failure to secure the wires correctly could cause abnormal noise or wire damage.



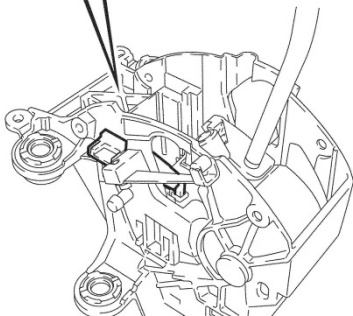
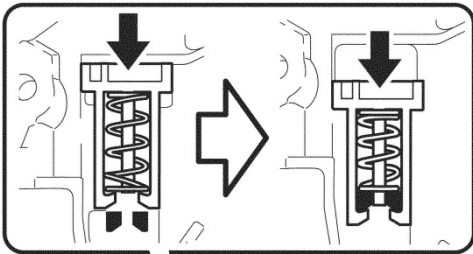
Shift Lock
Release Link

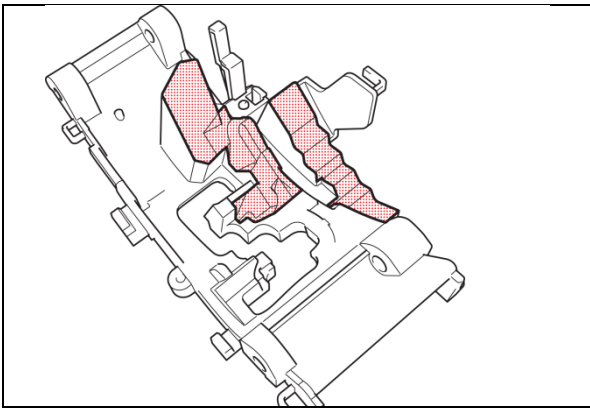


2. INSTALL THE SHIFT LOCK RELEASE LINK

a) Insert the shift lock release link into the center of the base, then slide it over and down.

b) Engage the 2 claws to secure the shift lock release link into place.



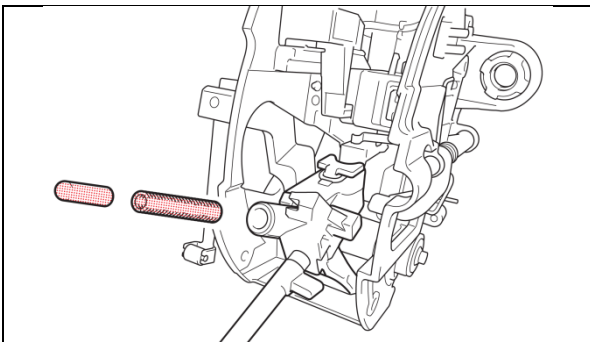


3. CLEAN OFF THE GREASE

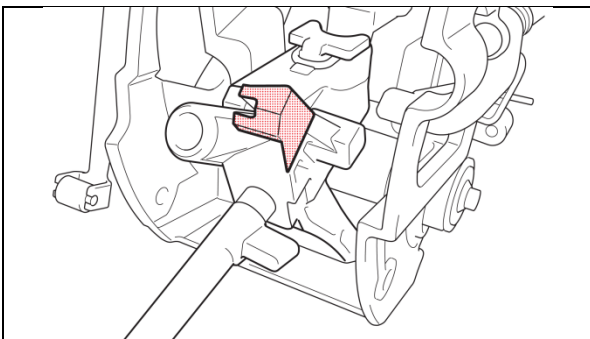
- a) Use a shop cloth to wipe the grease off of the highlighted areas on the back side shift lever housing guide.



DO NOT brake cleaner or any other chemicals, this may damage the plastic



- b) Wipe the grease from the pin detent and compression spring.



- c) Wipe the grease from the highlighted area at the base of the shift lever.



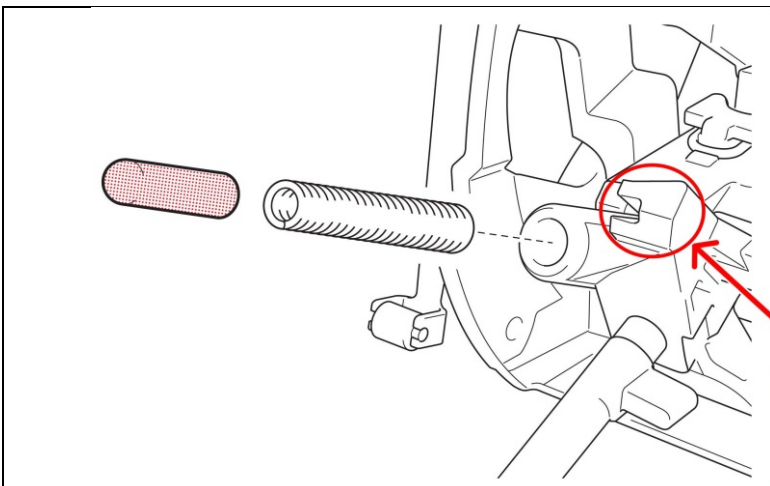
DO NOT apply grease to this area during reinstallation, the grease packet contains an exact amount of grease and must only be applied to specified areas.

4. APPLY NEW GREASE

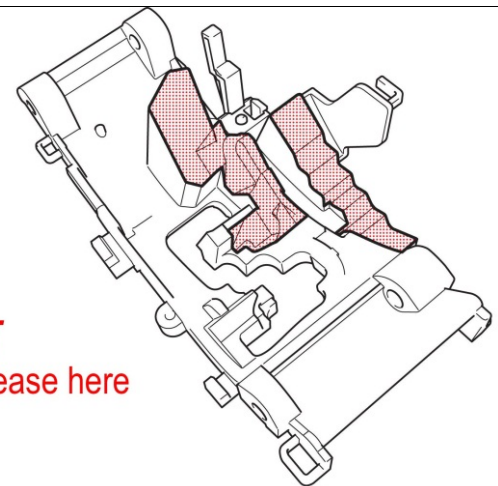
- a) Apply the grease evenly using the grease packet or a clean finger to the pin detent and the highlighted area on the back side of the shift lever housing guide. **USE ALL OF THE GREASE.**

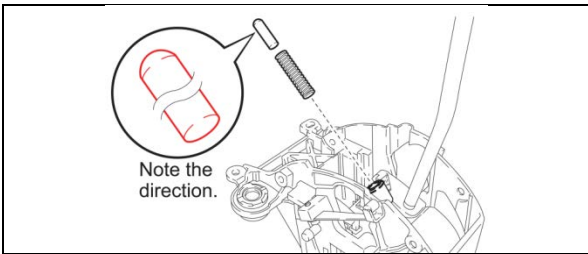


- **ALL** of the grease in the packet **MUST** be used on the shift lever assembly.
- **DO NOT** apply grease to the base of the shift lever highlighted in STEP 3 c).
- **DO NOT** apply grease to any areas that are not specified in this step.



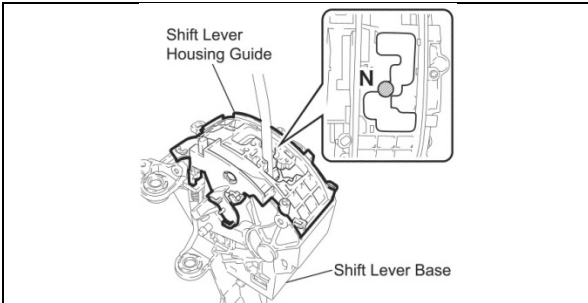
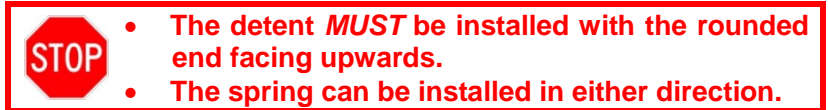
DO NOT
apply grease here





5. INSTALL THE PIN DETENT

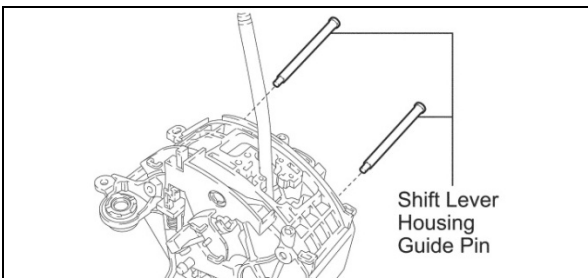
- a) Reinstall the compression spring and pin detent to the shift lever sub-assembly.



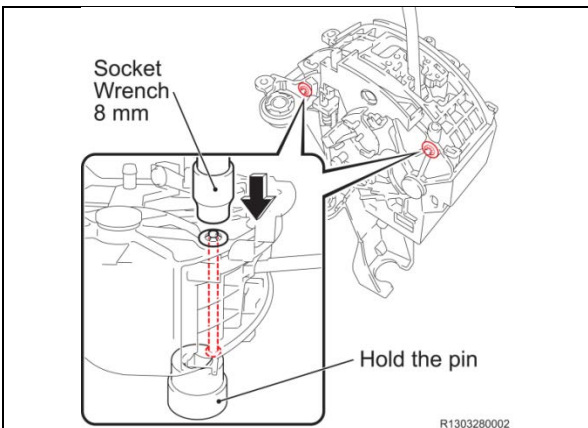
6. INSTALL THE SHIFT LEVER HOUSING GUIDE

- a) Move the shift lever to near the N position and reinstall the shift lever housing guide in the shift lever base.

NOTE: Perform this step with the shift lever in the N position because the spring tension is the least in this position.

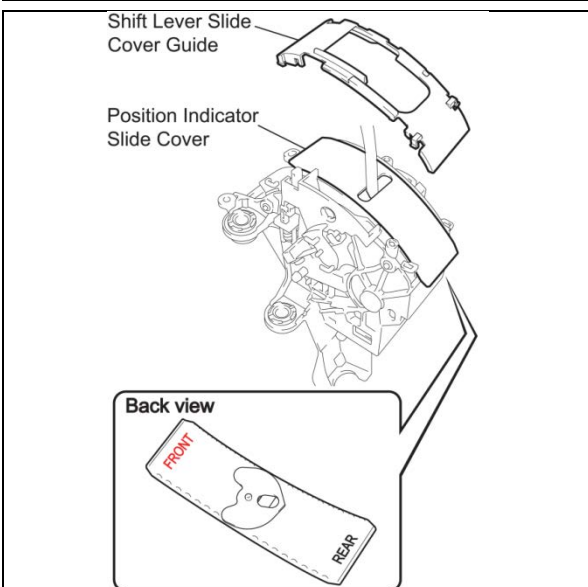


- b) Install the 2 shift lever housing guide pins.



7. INSTALL THE NEW PUSH NUTS

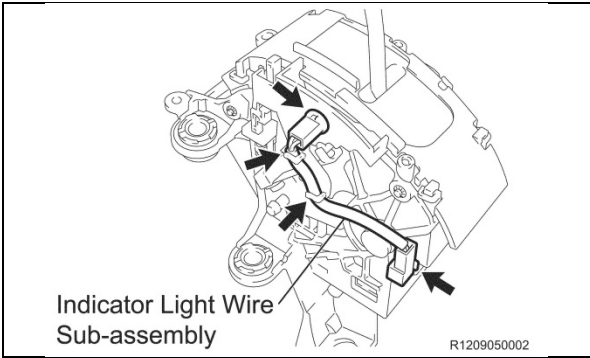
- a) Install the 2 NEW push nuts and secure them by pushing them into place using an 8mm socket.



8. INSTALL THE POSITION INDICATOR SLIDE COVER

- a) Confirm the indicator slide is installed in the correct orientation using the illustration shown.

9. INSTALL THE SHIFT LEVER SLIDE COVER GUIDE



10. INSTALL THE INDICATOR LIGHT WIRE SUB-ASSEMBLY

11. INSTALL THE SHIFT LEVER ASSEMBLY

a) Refer to [TIS](#) for installation instructions.

12. CONFIRM THE OPERATION OF THE SHIFT LEVER

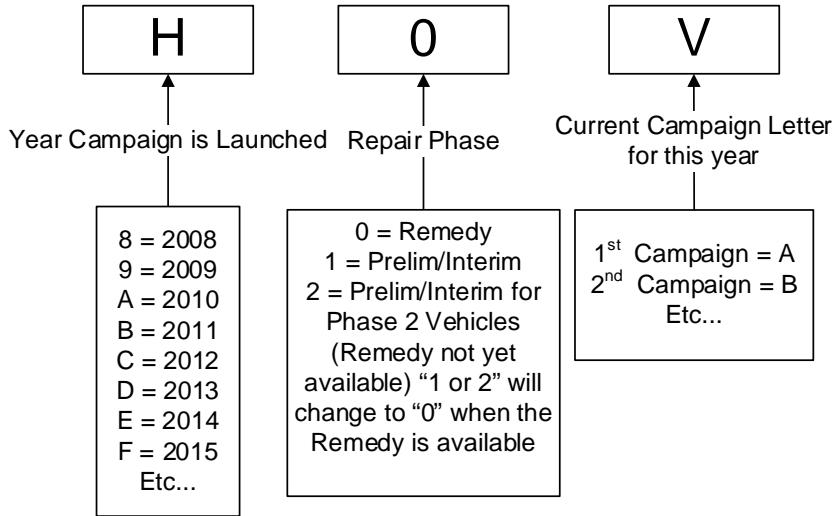
◀ VERIFY REPAIR QUALITY ▶

- Confirm **ALL** interior panel are protected adequately to prevent scratches/damage
- Use **EXTRA CAUTION** when disassembling and reassembling the shift lever assembly as most sub-components are not available separately
- Confirm the solenoid harness wires are secured correctly
- Confirm the old grease is removed and new grease is applied

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

VIII. APPENDIX

A. CAMPAIGN DESIGNATION DECODER



B. CAMPAIGN PARTS DISPOSAL

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.***