

TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL A0P

BRAKE LIGHT (STOP LAMP) SWITCH BRACKET REPLACEMENT

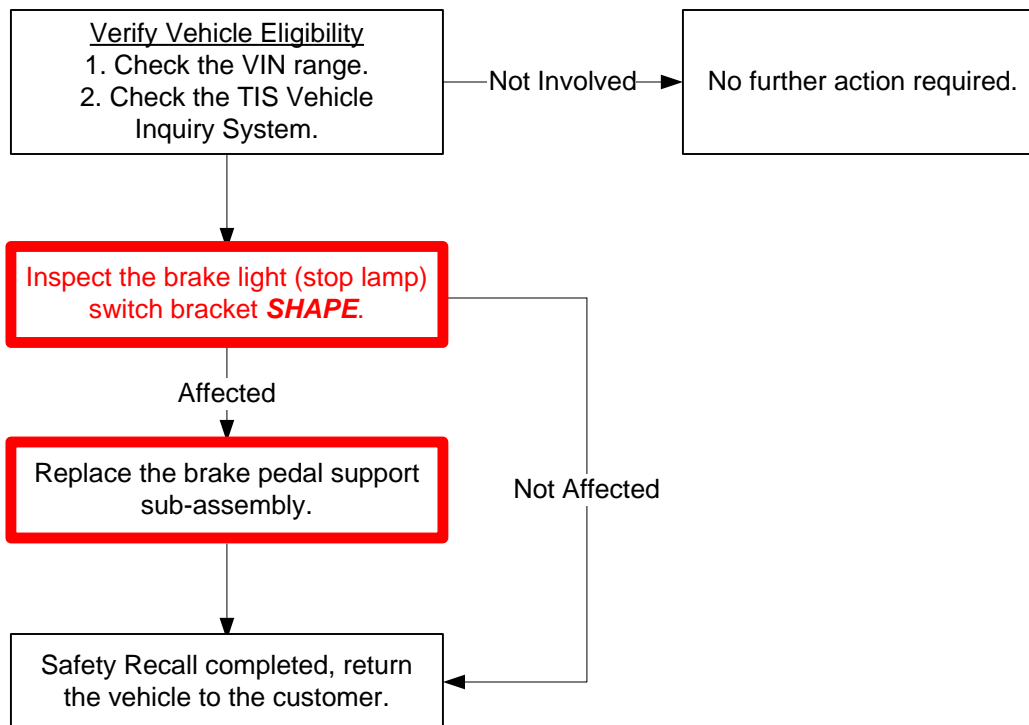
2011 MODEL YEAR SIENNA

REVISED MAY 17, 2011

TECHNICAL INSTRUCTION REVISION NOTICE:

- **May 17, 2011**
 - Information has been modified for 'REMOVE / INSTALL THE NO. 1 INSTRUMENT PANEL LOWER FINISH PANEL'. (Section V, Step B #5d and #5e, and section V, Step E #5)
- **January 21, 2011:**
 - An addition grease part number has been added to the Equipment & Materials list. (Section III, step C)
 - Information has been modified for 'CHECK THE BRAKE PEDAL HEIGHT'. (Section V, step E, #8)
 - Information has been modified for 'CHECK THE BRAKE PEDAL RESERVE DISTANCE'. (Section V, step E, #10)
- **March 1, 2011**
 - Information has been modified for 'REMOVE / INSTALL THE STOP LIGHT SWITCH MOUNTING ADJUSTER'. (Section V, Step C #5 and step D #1)

I. OPERATION FLOWCHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. AFFECTED VIN RANGE

Model	WMI	Year	VIN Range	
			VDS	Range
SIENNA	5TD	2011	DK3DC	S001067 – S015118
			JK3DC	S001069 – S015114
			KA3DC	S001016 – S005729
			KK3DC	S001254 – S094404
			XK3DC	S025859 – S094403
			YK3DC	S001250 – S094408
			ZK3DC	S001251 – S094394

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.

III. PREPARATION

A. PARTS

Part Number	Part Description	Quantity
04000-80108	SSP, Support Sub-Assembly, Brake Pedal Kit*	1
*The kit above includes the following parts:		
55106-08031	Support Sub-Assembly, Brake Pedal	1
T0105-TR001	Bolt	2
T0179-08001	Nut	2
90468-07027	Clip	1

B. TOOLS

- Standard Hand Tools
- Torque Wrench

C. EQUIPMENT & MATERIALS

- Toyota White Lithium Grease (P/N 00289-1WG00* or 00289-1WG02*) or equivalent = Quantity 1**

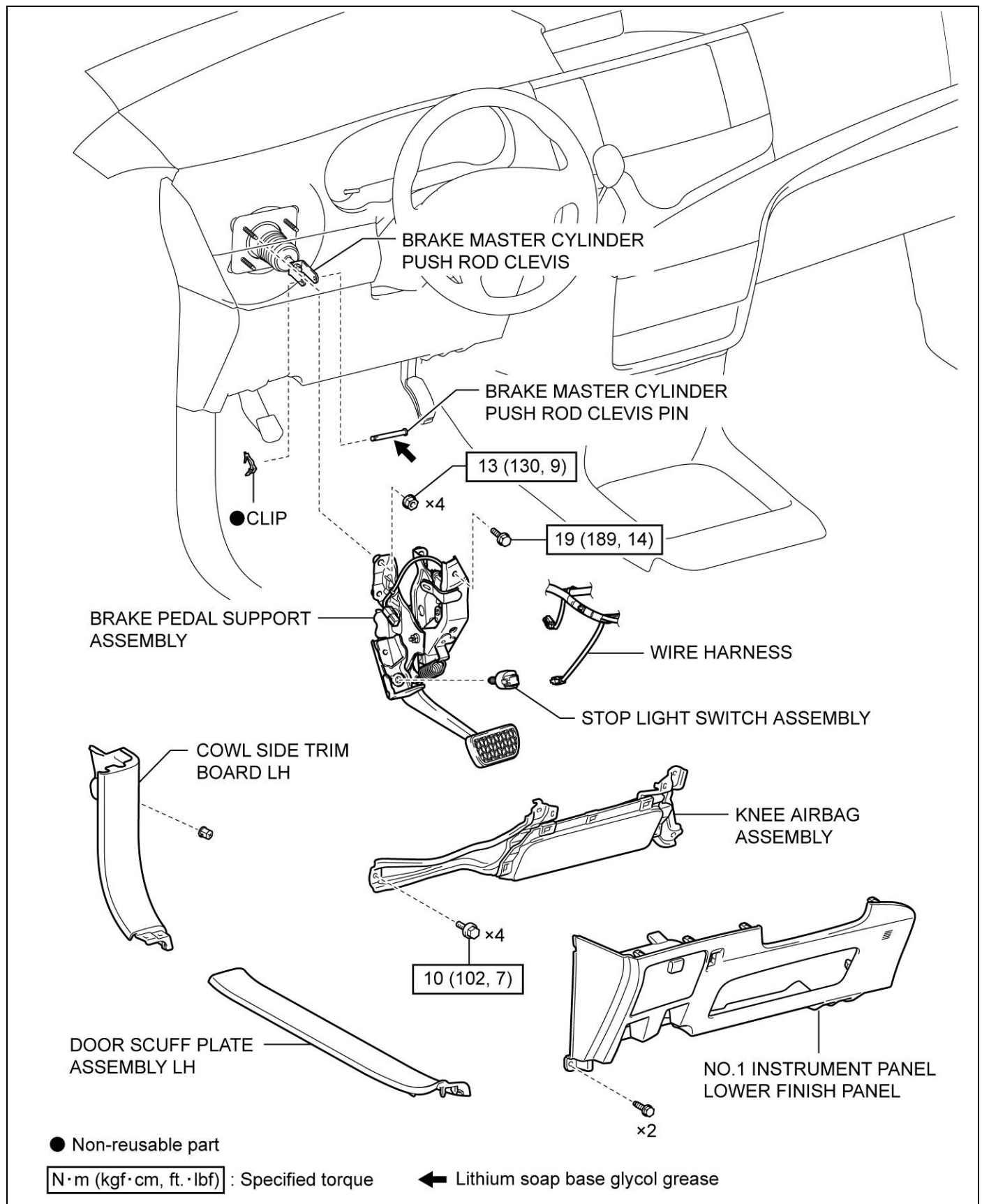
*The grease is shipped in cases of 12 cans.

**One can of Toyota White Lithium Grease can be used on approximately 800~1,000 vehicles.

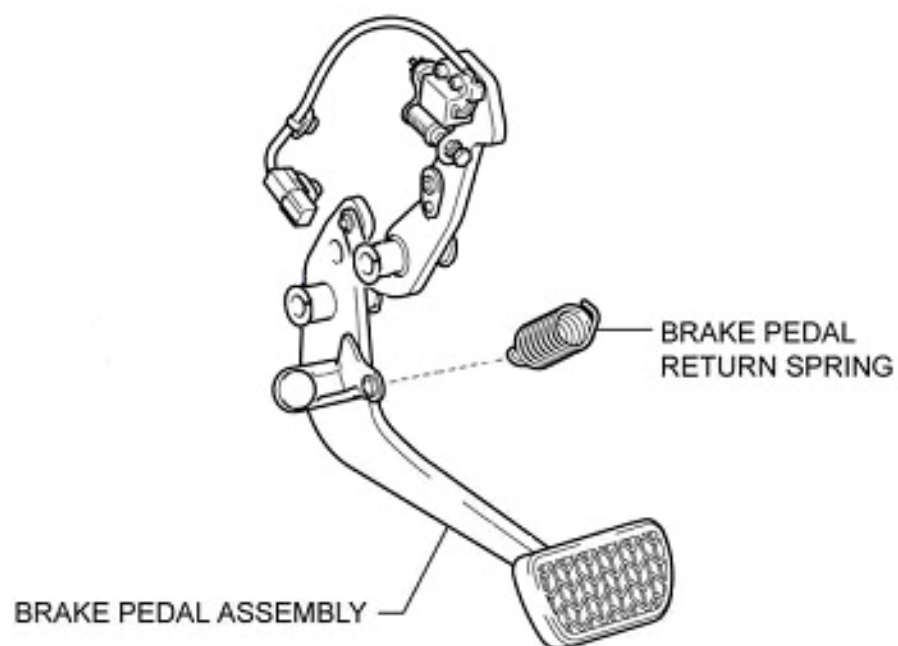
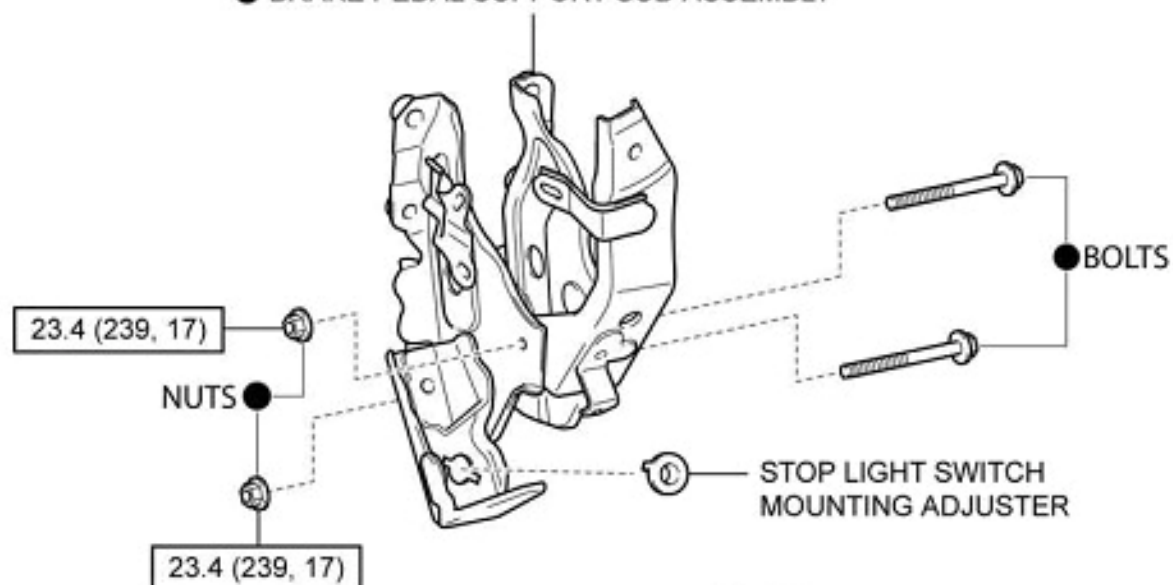
IV. BACKGROUND

The stop lamp switch is mounted on a small bracket welded on the left side of the brake pedal support assembly. The bracket is relatively close to the parking brake pedal when the parking brake is fully applied. Due to its proximity to the parking brake pedal, in limited circumstances the stop lamp switch bracket could be deformed (bent) by the driver's foot during parking brake application. Depending on the amount of bracket deformation, this condition could result in the stop lamp switch engaging and causing the brake lights to remain on. If the deformation is significant, the service brake could become partially engaged due to contact from the bracket, resulting in brake drag with associated brake noise, vibration, and/or illumination of the brake warning light. If the driver does not notice these conditions and continues to drive the vehicle, braking effectiveness could be reduced.

V. WORK PROCEDURE



● BRAKE PEDAL SUPPORT SUB-ASSEMBLY



● Non-reusable part

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

A. LOCATE AND INSPECT THE BRACKET ASSEMBLY



1. VISUALLY INSPECT THE BRAKE LIGHT (STOP LAMP) SWITCH MOUNTING BRACKET SHAPE

- a) If the bracket shape is as shown the vehicle ***IS NOT*** affected. The campaign is completed.



OK: NOT covered by Safety Recall



NG: Covered by Safety Recall

- b) If the bracket shape is as shown continue to ***STEP B*** (Replace the bracket assembly).

B. REMOVE THE BRACKET ASSEMBLY



CAUTION:

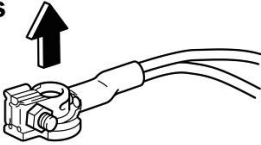
- Some of the following procedures affect the SRS airbag system. Read the precautionary notices concerning the SRS airbag system outlined in the repair manual located on TIS.
- Wear protective gloves to prevent injury from burrs on the pedal support assembly.

1. CHECK FOR DIAGNOSTIC TROUBLE CODES

- a) If any DTCs are output, record the data and perform the repairs as necessary.

2. DISCONNECT THE NEGATIVE BATTERY TERMINAL

Wait 90 seconds or longer after disconnecting.

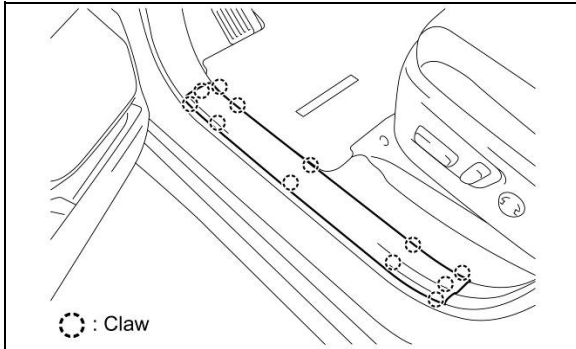
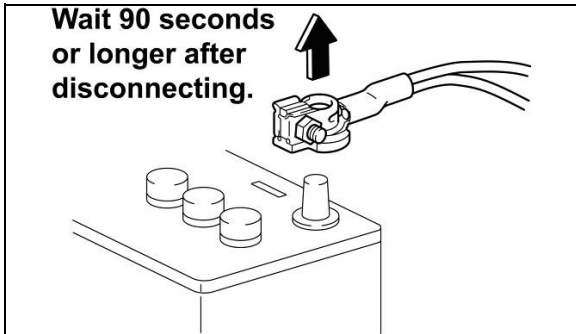


- a) Record the radio station presets.
- b) Turn IG OFF, disconnect the negative battery terminal, then wait for a minimum of 90 seconds.



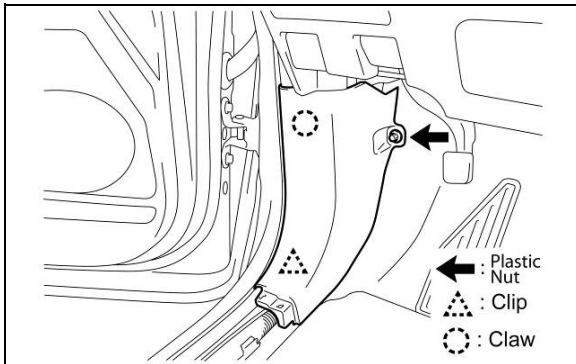
CAUTION:

- Airbag deployment may occur if work is started before waiting at least 90 seconds.



3. REMOVE THE DOOR SCUFF PLATE ASSEMBLY LH

- a) Disengage the 12 claws and remove the door scuff plate.

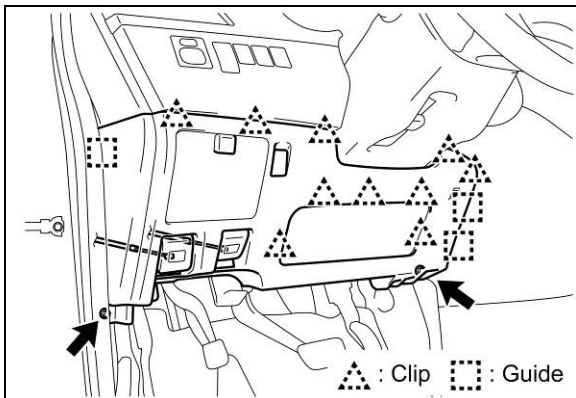


4. REMOVE THE COWL SIDE TRIM BOARD LH

- a) Remove the plastic nut.
- b) Disengage the claw and clip and remove the cowl side trim board.

NOTE:

If the clip remains on the vehicle, install it back onto the cowl side trim board before reinstalling the trim board.

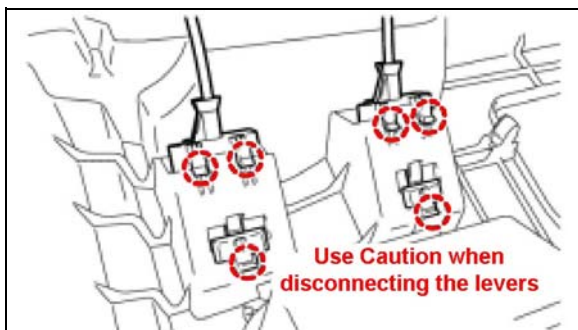


5. REMOVE THE NO. 1 INSTRUMENT PANEL LOWER FINISH PANEL

- a) Remove the 2 bolts.
- b) Disengage the 10 clips and 3 guides and remove the lower finish panel.
- c) Disconnect the electrical connectors.

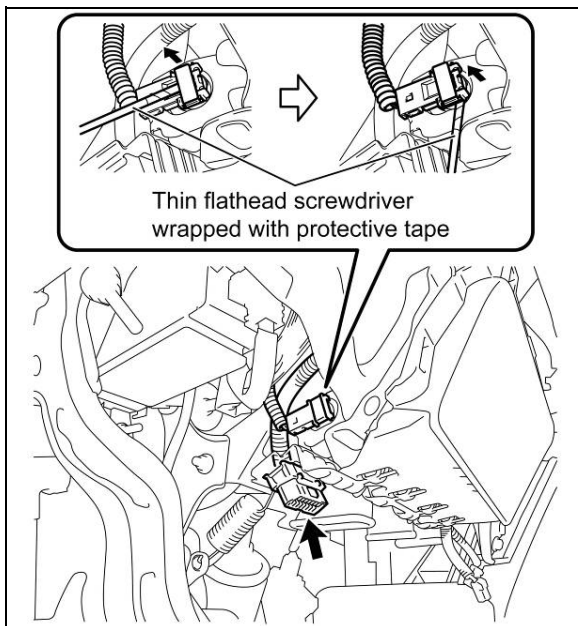
NOTE:

If there are clips remaining on the knee airbag assembly, install them onto the lower finish panel before reinstalling the finish panel.



- d) Disengage the 3 claws and separate the fuel lid opener.
- e) Disengage the 3 claws and separate the engine hood opener.

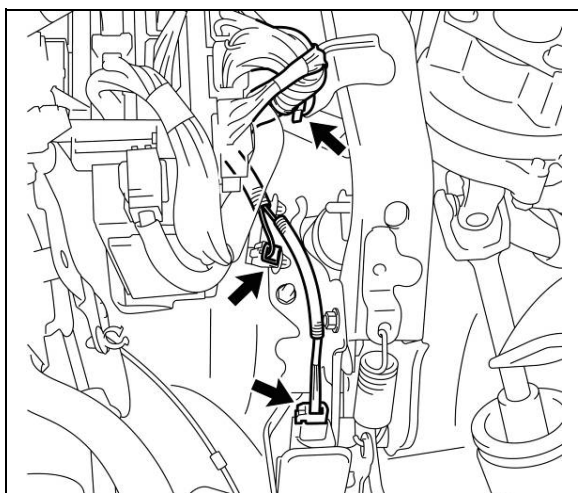
NOTE:
Use caution when disconnecting the levers to avoid breaking the claws.



6. REMOVE THE KNEE AIRBAG ASSEMBLY

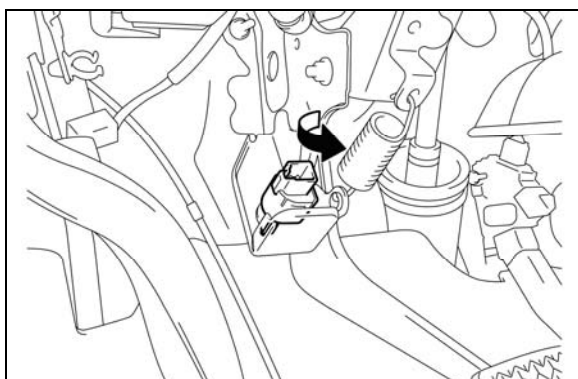
- a) Use a thin flathead screwdriver wrapped with protective tape to disengage the lock button, then disconnect the airbag connector.
- b) Disengage the 2 claws to remove the DLC3.
- c) Remove the 4 bolts to remove the knee airbag assembly.

NOTE:
Store the airbag in a safe location with the deploying surface facing upwards. **DO NOT** place any objects on top of the airbag.



7. DISCONNECT THE WIRE HARNESS

- a) Disconnect the 2 connectors and 1 harness clamp.

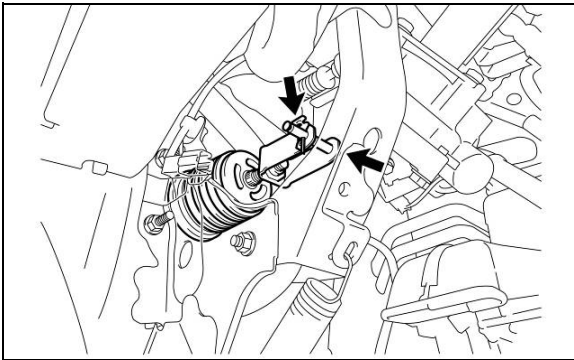


8. REMOVE THE STOP LIGHT SWITCH ASSEMBLY

- a) Rotate the stop light switch a quarter turn counter-clockwise to disengage the lock and remove the switch.

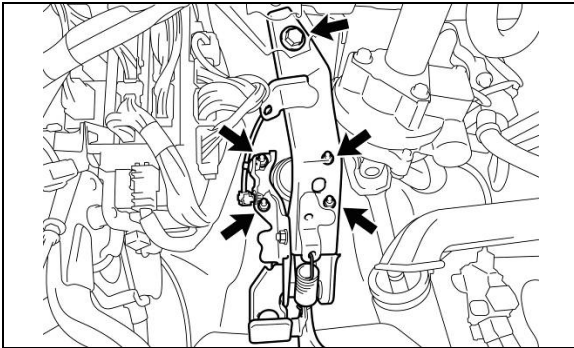


CAUTION:
To prevent damage to the stop light switch mounting adjuster, **DO NOT** rotate the stop light switch greater than 90 degrees.



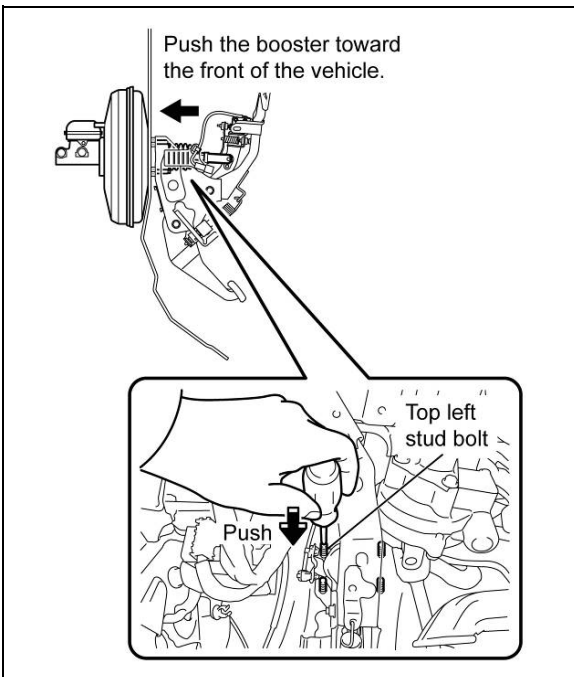
9. DISCONNECT THE BRAKE MASTER CYLINDER PUSH ROD CLEVIS

- a) Remove the clip and clevis pin.



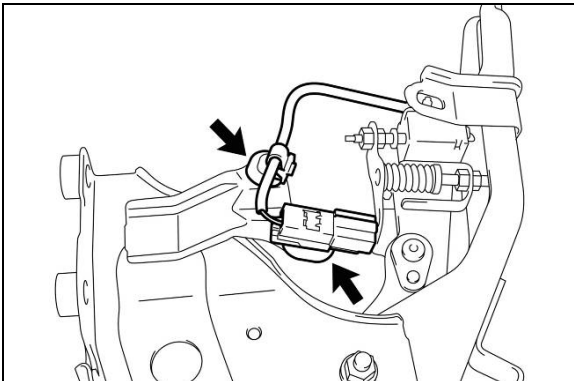
10. REMOVE THE BRAKE PEDAL SUPPORT ASSEMBLY

- a) Remove the 4 nuts and 1 bolt.
- b) Press the upper left stud bolt to move the booster toward the front of the vehicle and remove the pedal support assembly.

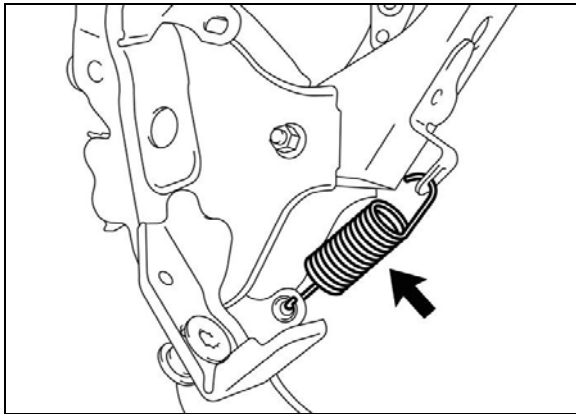


NOTE:
To avoid putting excessive force on the brake tubes **DO NOT** push the booster forward more than necessary.

C. DISASSEMBLE THE BRACKET ASSEMBLY

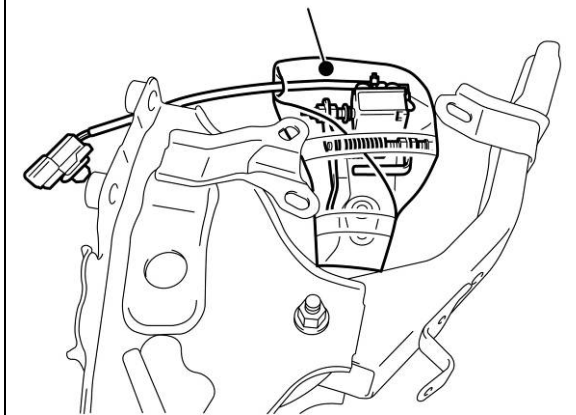


1. DISENGAGE THE 2 BRAKE PEDAL LOAD SENSING SWITCH WIRE HARNESS CLIPS



2. REMOVE THE BRAKE PEDAL RETURN SPRING

Protect by wrapping with piece of cloth.

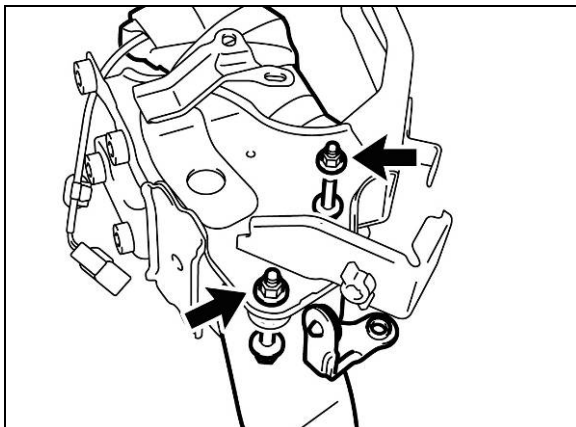


3. WRAP THE BRAKE PEDAL LOAD SENSING SWITCH WITH CLOTH TO PROTECT IT FROM DAMAGE



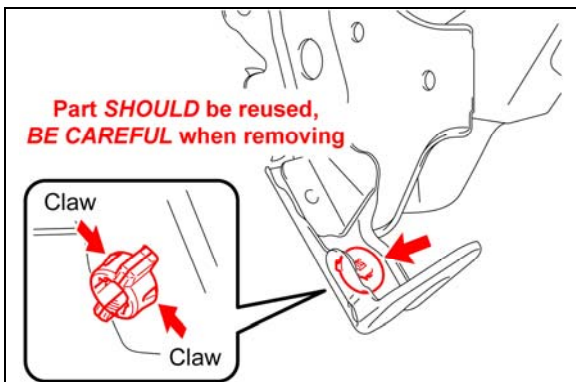
CAUTION:

If the brake pedal load sensing switch is adjusted or damaged, it will be necessary to replace the brake pedal support assembly.



4. REMOVE THE BRAKE PEDAL SUB-ASSEMBLY

- Remove the 2 nuts and 2 bolts.
- Remove the brake pedal sub-assembly from the brake pedal support sub-assembly.

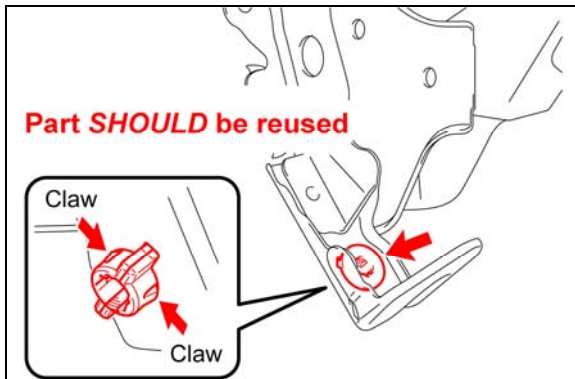


5. REMOVE THE STOP LIGHT SWITCH MOUNTING ADJUSTER



Be careful to not damage the mounting adjuster during removal. The mounting adjuster **SHOULD** be reused.

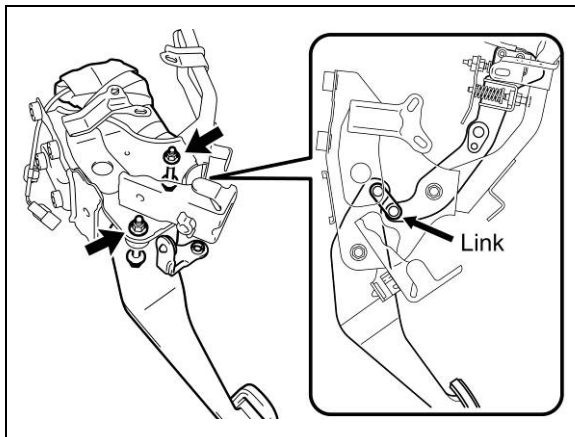
D. REASSEMBLE THE BRAKE PEDAL SUPPORT ASSEMBLY



1. INSTALL THE STOP LIGHT SWITCH MOUNTING ADJUSTER

NOTE:


- The mounting adjuster **SHOULD** be reused.
- Be sure to use the **NEW** brake pedal support sub-assembly.



2. INSTALL THE BRAKE PEDAL SUB-ASSEMBLY TO THE **NEW** BRAKE PEDAL SUPPORT SUB-ASSEMBLY

- a) Install the 2 **NEW** bolts and 2 **NEW** nuts.

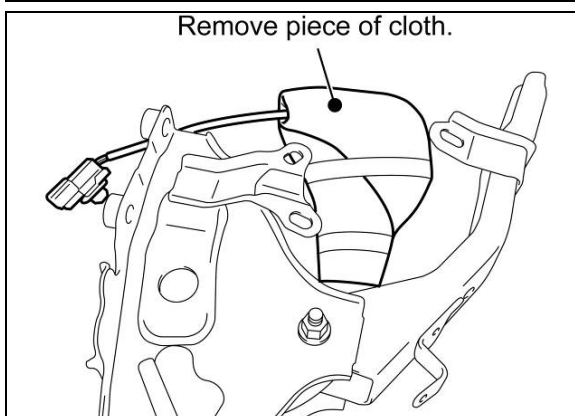
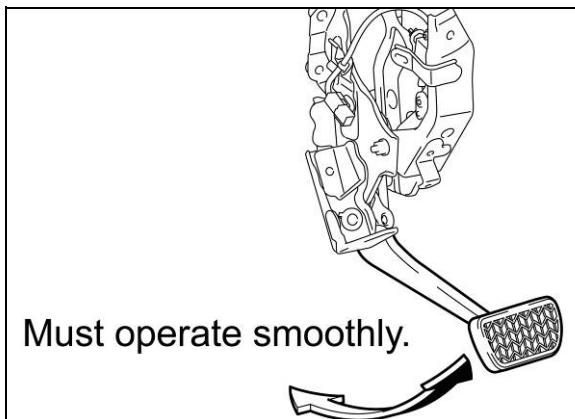
Torque: 23.4 N·m (239 kgf·cm, 17 ft·lbf)



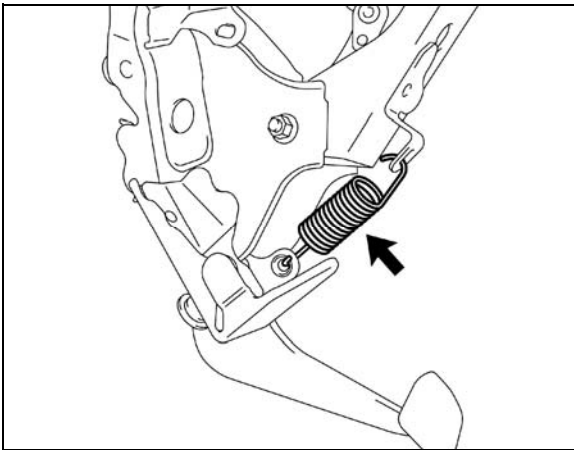
CAUTION:

- To assure correct torque of the pedal bolts, **NEW** nuts and bolts **MUST** be used.
- Assure that the pedal link is aligned as shown.

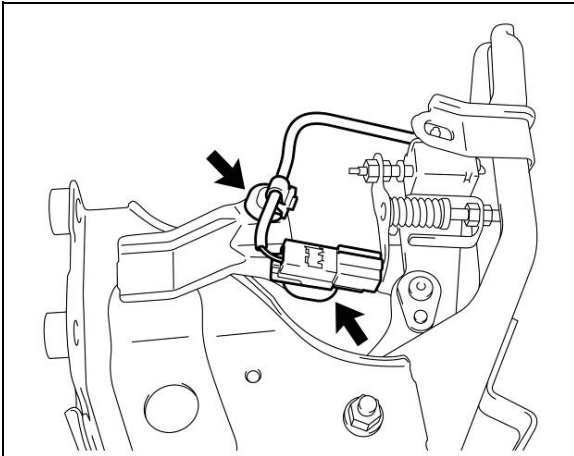
- b) Check that the pedal operates smoothly.



3. REMOVE THE PROTECTIVE MATERIAL FROM THE BRAKE PEDAL LOAD SENSING SWITCH



4. REINSTALL THE BRAKE PEDAL RETURN SPRING

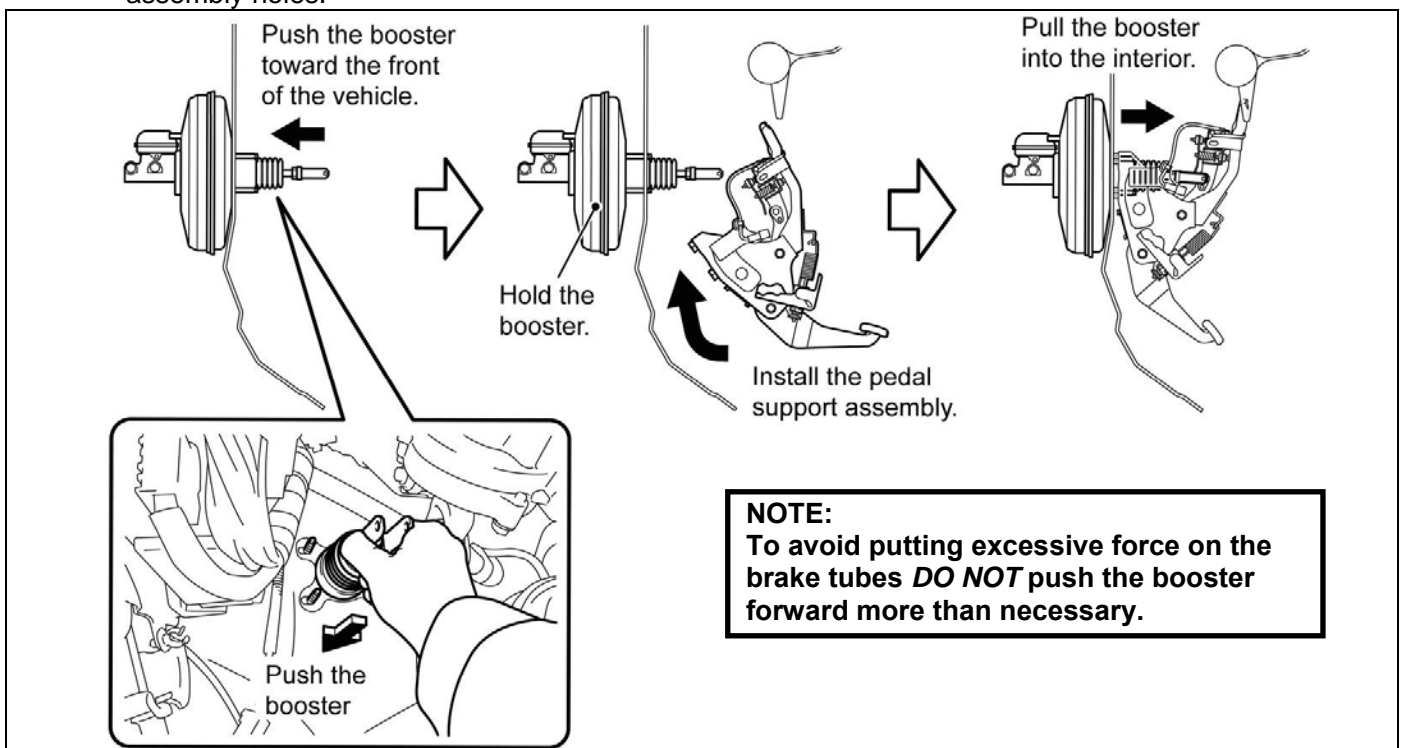


5. REINSTALL THE BRAKE PEDAL LOAD SENSING SWITCH WIRE HARNESS CLIPS

E. INSTALL THE BRACKET ASSEMBLY

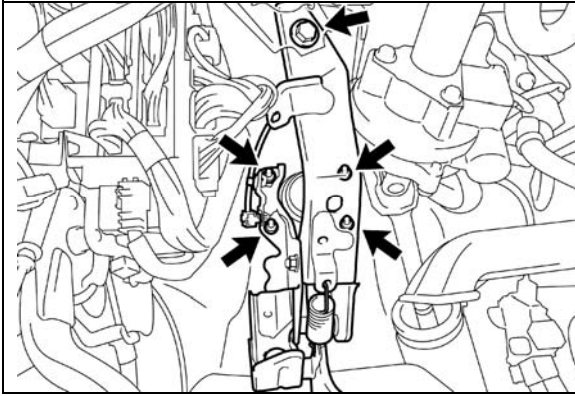
1. POSITION THE BRACKET ASSEMBLY INSIDE THE VEHICLE

- Push the booster towards the front of the vehicle.
- Install the bracket assembly.
- Pull the booster towards the rear of the vehicle to position the booster studs through the bracket assembly holes.



NOTE:

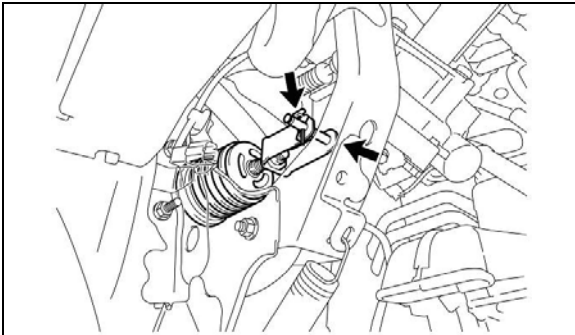
To avoid putting excessive force on the brake tubes **DO NOT** push the booster forward more than necessary.



d) Install the 4 nuts and 1 bolt.

Torque:

- Bolt – 19 N·m (189 kgf·cm, 14 ft·lbf)
- Nuts – 13 N·m (130 kgf·cm, 9 ft·lbf)



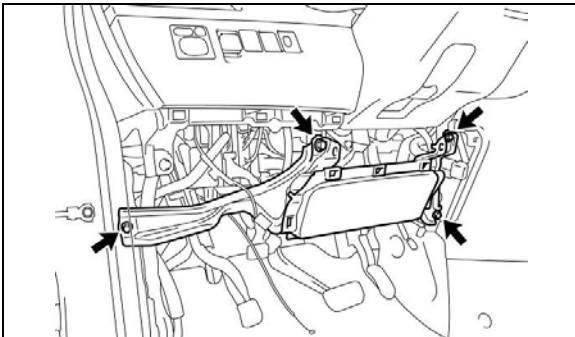
2. INSTALL THE BRAKE MASTER CYLINDER PUSH ROD CLEVIS PIN

- a) If no grease remains on the clevis pin, use a shop cloth to wipe clean the clevis pin, then apply lithium soap base glycol grease.
- b) Install the push rod clevis pin, then install a **NEW** clevis pin clip.



3. INSTALL THE WIRE HARNESS

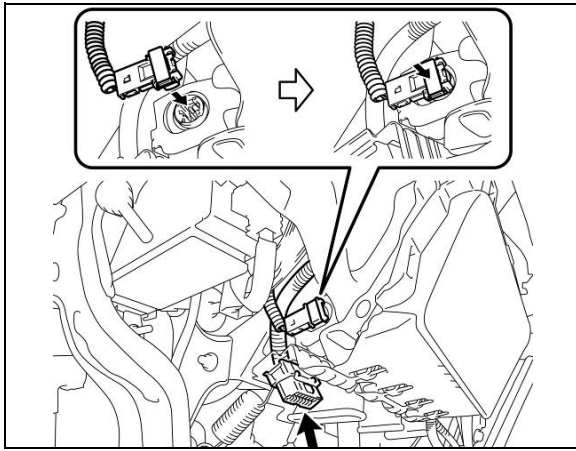
- a) Install the brake pedal load sensing switch connector and the harness clamp.



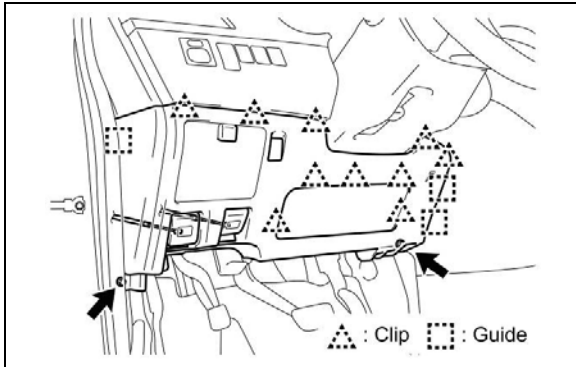
4. INSTALL THE KNEE AIRBAG ASSEMBLY

- a) Use the 4 bolts to install the knee airbag assembly.

Torque: 10 N·m (102 kgf·cm, 7 ft·lbf)



- b) Connect the airbag connector and lock the locking button.
- c) Install the DLC3.



5. INSTALL THE NO. 1 INSTRUMENT PANEL LOWER FINISH PANEL

- a) Connect the electrical connectors.
- b) Connect the fuel lid opener and the engine hood opener.
- c) Engage the 10 clips and the 3 guides.
- d) Install the 2 bolts.

NOTE:

Confirm the fuel lid opener and engine hood opener operates correctly.



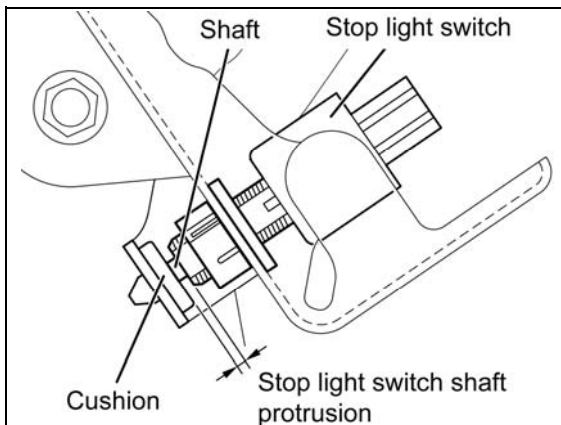
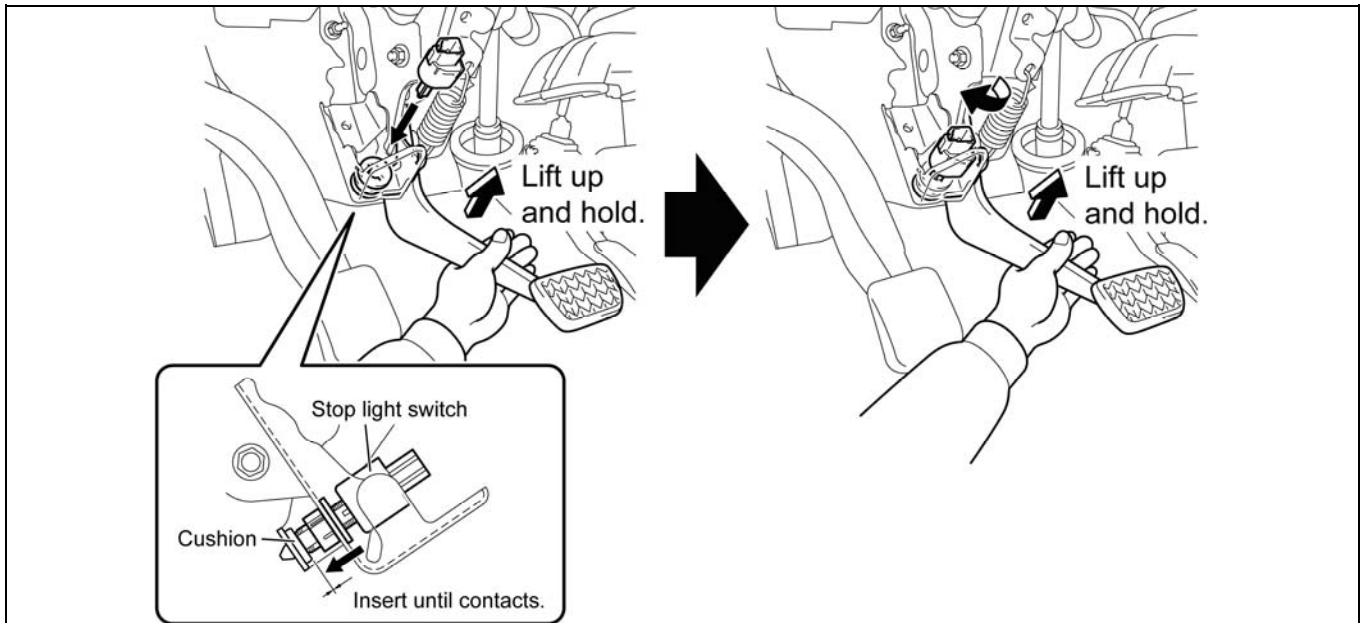
READ and FOLLOW all INSPECTION and ADJUSTMENT INSTRUCTIONS as outlined below!

6. INSTALL THE STOP LIGHT SWITCH ASSEMBLY

- a) Lift and hold up the brake pedal, while holding the pedal up insert the stop light switch until it contacts the cushion, then rotate the switch a quarter turn clockwise.

NOTE:

Be sure to lift the pedal up so that the pedal is not pressed in by the force used to install the switch.



- b) Inspect the amount of stop light switch shaft protrusion.

Standard Value:

0.5 to 2.6 mm (0.020 to 0.102 in.)

NOTE:

- The amount of shaft protrusion is automatically adjusted when the switch is installed.
- If the amount of shaft protrusion is not within the standard values, remove and reinstall the switch.

- c) Connect the stop light switch electrical connector.

7. CONNECT THE NEGATIVE BATTERY TERMINAL

8. CHECK THE BRAKE PEDAL HEIGHT

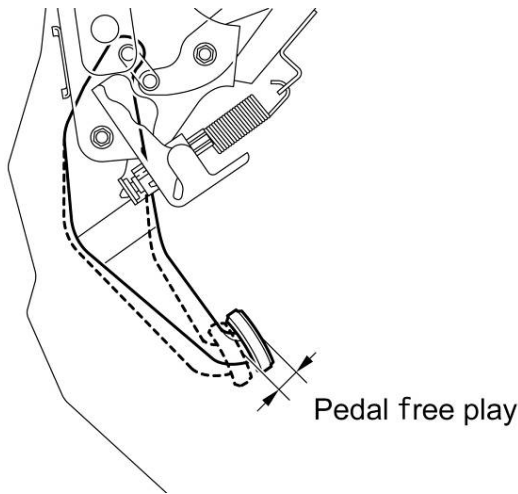
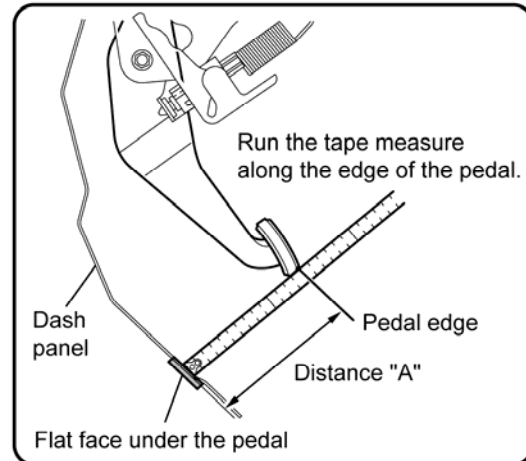
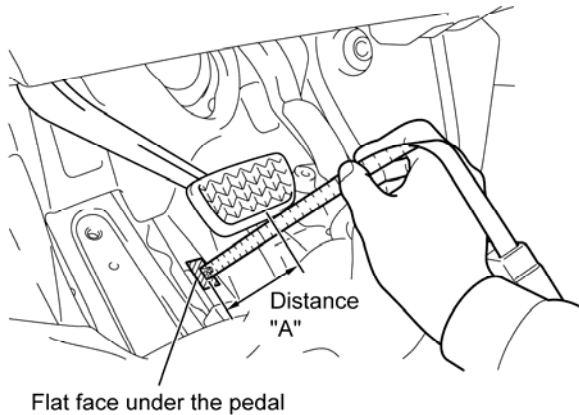
- a) Turn back the carpet directly behind the brake pedal.
b) Measure distance 'A' between the top edge of the brake pedal and the floorboard.
Standard pedal height (distance 'A'): 138 to 148 mm (5.43 to 5.83 in.)

NOTE:

- DO NOT adjust the pedal height. Doing so by changing the push rod length will structurally change the pedal ratio.
- If the pedal height is incorrect, check that there is no damage in the brake pedal, brake pedal lever, brake pedal bracket, dash panel and/or floorboard.



READ and FOLLOW all INSPECTION and ADJUSTMENT INSTRUCTIONS as outlined below!



9. CHECK THE BRAKE PEDAL FREE PLAY

- Stop the engine and firmly depress the brake pedal several times until no vacuum is left in the booster.
- Measure the brake pedal free play.

Standard pedal free play:
1.0 to 6.0 mm (0.0394 to 0.236 in.)

NOTE:

- If the pedal free play is not as specified, inspect the stop light switch clearance.
- If the stop light switch is installed correctly, the free play is acceptable even if it is not within the specified value range.

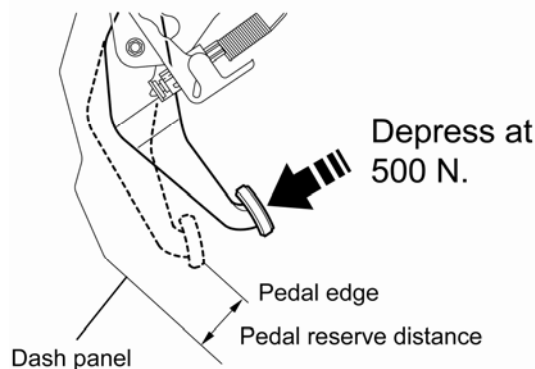
10. CHECK THE BRAKE PEDAL RESERVE DISTANCE

- Start the engine.
- Using a pedal effort gauge depress the brake pedal with a force of 500 N (51kgf, 112.4 lbf) and check the pedal reserve distance.
- If a pedal effort gauge is not immediately available, depress the brake pedal to the bottom of the pedal stroke and check the pedal reserve distance.
- Measure the distance between the top edge of the brake pedal and the floor panel.

Standard pedal reserve distance:
52 mm (2.05 in.) or more

NOTE:

If the brake pedal reserve distance is not within the specified value range, refer to the brake system problem symptoms table outlined in the repair manual on TIS.



11. REINSTALL THE FLOOR CARPET

- a) Install the floor carpet back to the original position.
- b) Operate the accelerator and brake pedals to verify the carpet does not interfere with pedal travel.

12. INSTALL THE COWL SIDE TRIM BOARD LH

13. INSTALL THE DOOR SCUFF PLATE ASSEMBLY LH

14. CHECK THE AIRBAG WARNING LAMP

15. CHECK FOR DTCs

16. REPROGRAM THE RADIO STATION PRESETS

17. RESET THE SLIDE DOOR CLOSE POSITION

18. RESET THE BACK DOOR CLOSE POSITION

19. CHECK STOP LIGHT OPERATION

20. TEST DRIVE THE VEHICLE

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

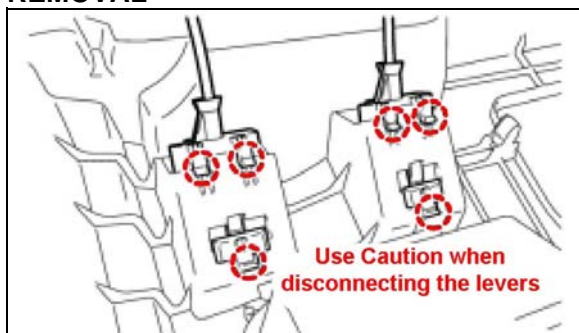
Tyson Siekiera / TMS Toyota Customer Services
Product Quality and Service Support, Quality Compliance
May 18, 2011
Approved By: Bob Waltz

To: All Toyota Dealers
From: Toyota Customer Services

Safety Recall A0P
Certain 2011 Model Year Sienna Vehicles – Brake Light (Stop Lamp) Switch Bracket
*******UPDATE*******

Toyota has updated the A0P technical instructions to clarify the removal and installation of the fuel lid opener and the engine hood opener.

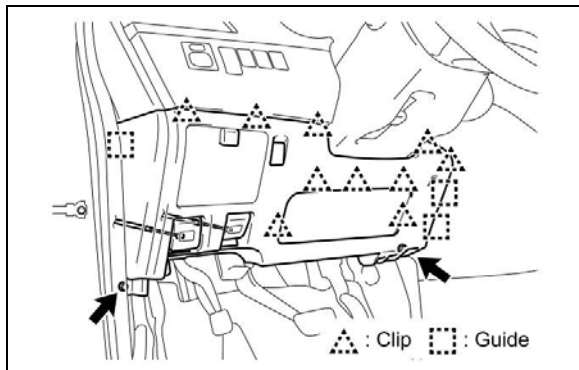
REMOVAL



- a) Disengage the 3 claws and separate the fuel lid opener.
- b) Disengage the 3 claws and separate the engine hood opener.

NOTE:
Use caution when disconnecting the levers to avoid breaking the claws.

INSTALLATION



5. INSTALL THE NO. 1 INSTRUMENT PANEL LOWER FINISH PANEL

- a) Connect the electrical connectors.
- b) Connect the fuel lid opener and the engine hood opener.
- c) Engage the 10 clips and the 3 guides.
- d) Install the 2 bolts.

NOTE:
Confirm the fuel lid opener and engine hood opener operates correctly.

Please refer to the technical instructions found on TIS for full details on this update. Previous versions of these instructions should be discarded.

Thank you for your cooperation