

**TECHNICAL INSTRUCTIONS**

**FOR**

**SAFETY RECALL D0T**

**HVAC ASSEMBLY**

13V-442

REVISED

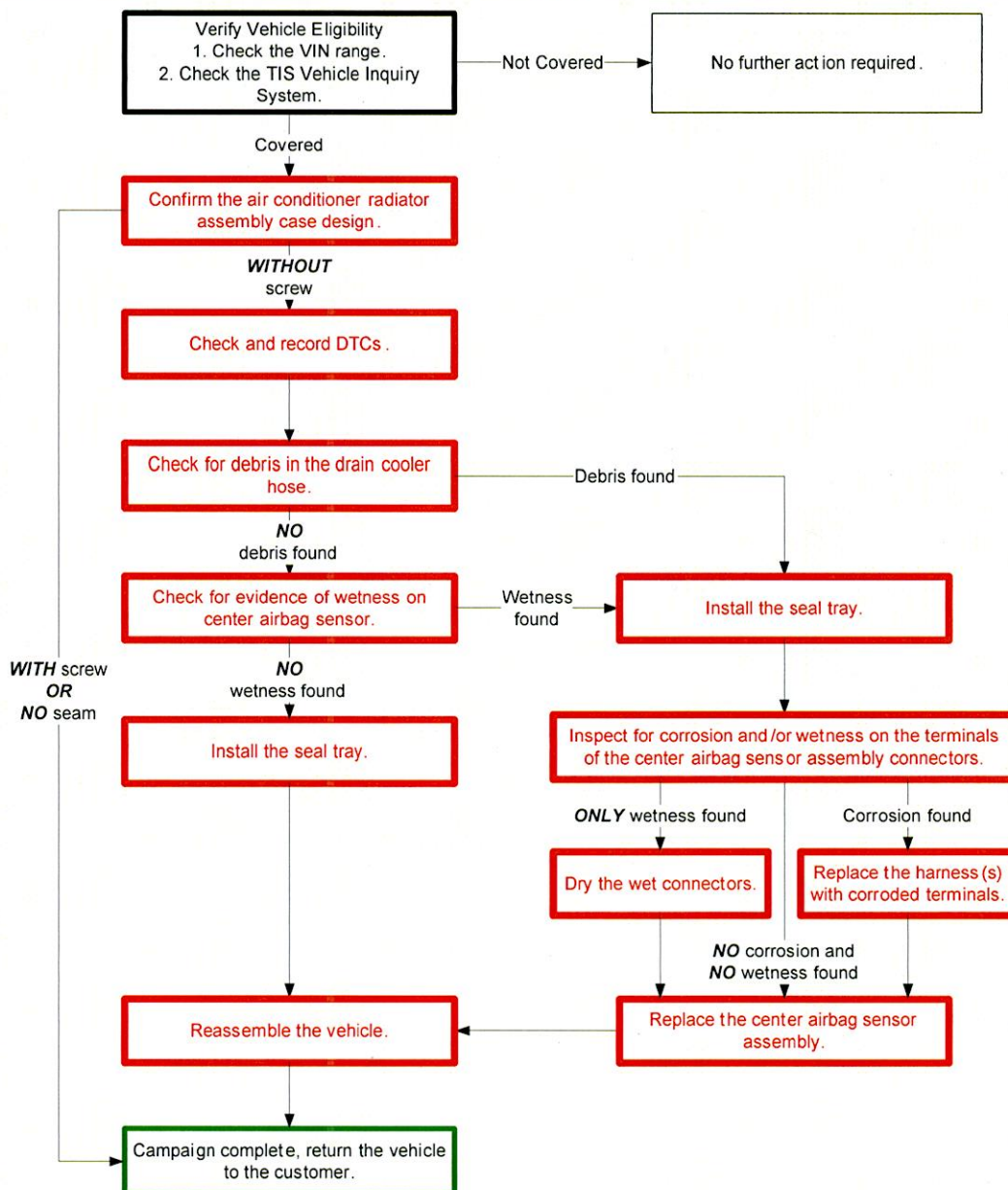
12/02/2013

**CERTAIN 2012 – 2013 MODEL YEAR AVALON  
CERTAIN 2013 MODEL YEAR AVALON HYBRID**

**ONLY TECHNICIANS WHO HAVE COMPLETED TRAINING COURSE SC13A AND ARE TOYOTA  
ELECTRICAL EXPERT, MASTER TECHNICIAN, OR MASTER DIAGNOSTIC TECHNICIAN CAN  
PERFORM THIS REPAIR**

## 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

Condensed water can accumulate at the bottom of the HVAC unit housing in the subject vehicles if the HVAC drain hose becomes clogged. Due to the location of the housing seam, which is directly above the airbag control module, the accumulated water could leak through the seam onto the module. If the circuit board inside the module becomes wet, a short circuit could occur between adjacent terminals of specific circuits, resulting in illumination of the airbag warning light. In some instances, the air bag(s) could become disabled or could inadvertently deploy. An airbag that deploys inadvertently can, under some circumstances, increase the risk of minor injury or the possibility of a crash. An inoperative airbag can increase the risk of injury in a severe crash.

In limited instances, the power steering assist function could become inoperative because the CAN communication line in the airbag control module is damaged. Loss of power steering assist results in increased steering effort and can increase the risk of a crash at low speeds.



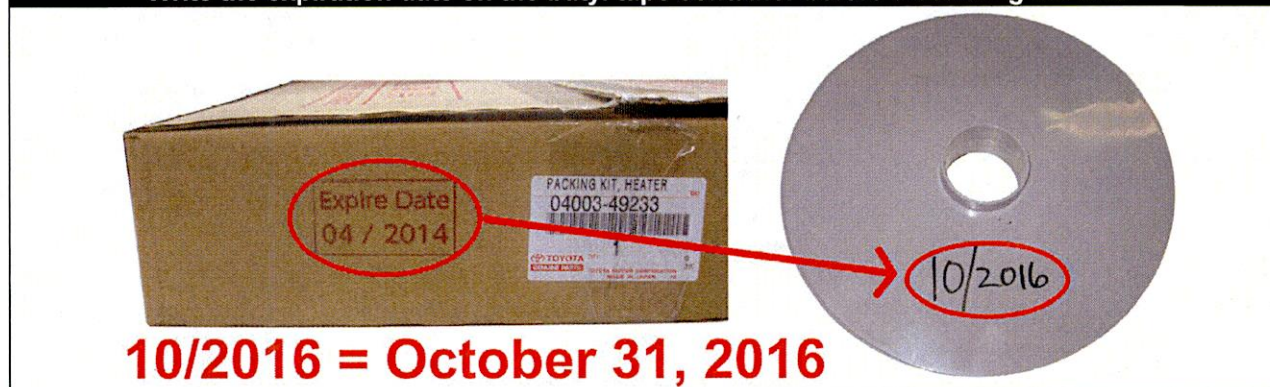
### III. PREPARATION

#### A. PARTS

Part Number	Part Description	Quantity
04003-49133	Heater Cover Kit	1
*The kit above includes the following parts.		
-	Seal Tray	1
-	Screws with washers	2

Part Number	Part Description	Quantity
04003-49333 or 04003-49233	Heater Packing Kit (butyl tape)	1
<ul style="list-style-type: none"> <li>The two part numbers are interchangeable.</li> <li>The kit above contains butyl tape sufficient for approximately 50 vehicles.</li> <li>The butyl tape has an expiration date, <b>DO NOT</b> use tape that is beyond the expiration date.</li> <li>If the expiration date is '04/2014' <b>THIS IS AN ERROR</b>, the actual expiration date is 10/2016.</li> </ul>		

**Write the expiration date on the butyl tape container before discarding the box.**



If airbag sensor assembly or wire harness replacement is required based on the inspection instructions in this document, refer to the parts catalog for applicable part number(s). These parts will be placed on MAC, refer to the dealer letter for details.

#### B. TOOLS & EQUIPMENT

- Standard hand tools
- Flashlight
- Techstream
- Duct Tape

**CAMPAIGN TOOLS** – These tools are provided to the dealership.

Part Name	Sample
Nylon Loop Handle Brush	

**NOTE:** These tools **CANNOT** be ordered through the parts or tools system. There is a very limited supply of tools, but if additional tools are needed, contact your regional representative.

**SST** – This is an essential special service tool that the dealership should have.

Part Number	Part Name
09961-00950 or 09249-63010-01	Torque Wrench Adapter

### IV. IDENTIFICATION OF AFFECTED VEHICLES

#### A. COVERED VIN RANGE

MODEL	WMI	MY	VDS	START	FINISH
AVALON	4T1	2012	BK3DB	U458892	U474015
		2013	BK1EB	U001091	U046345
AVALON HYBRID	4T1	2013	BD1EB	U001041	U011159

**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.

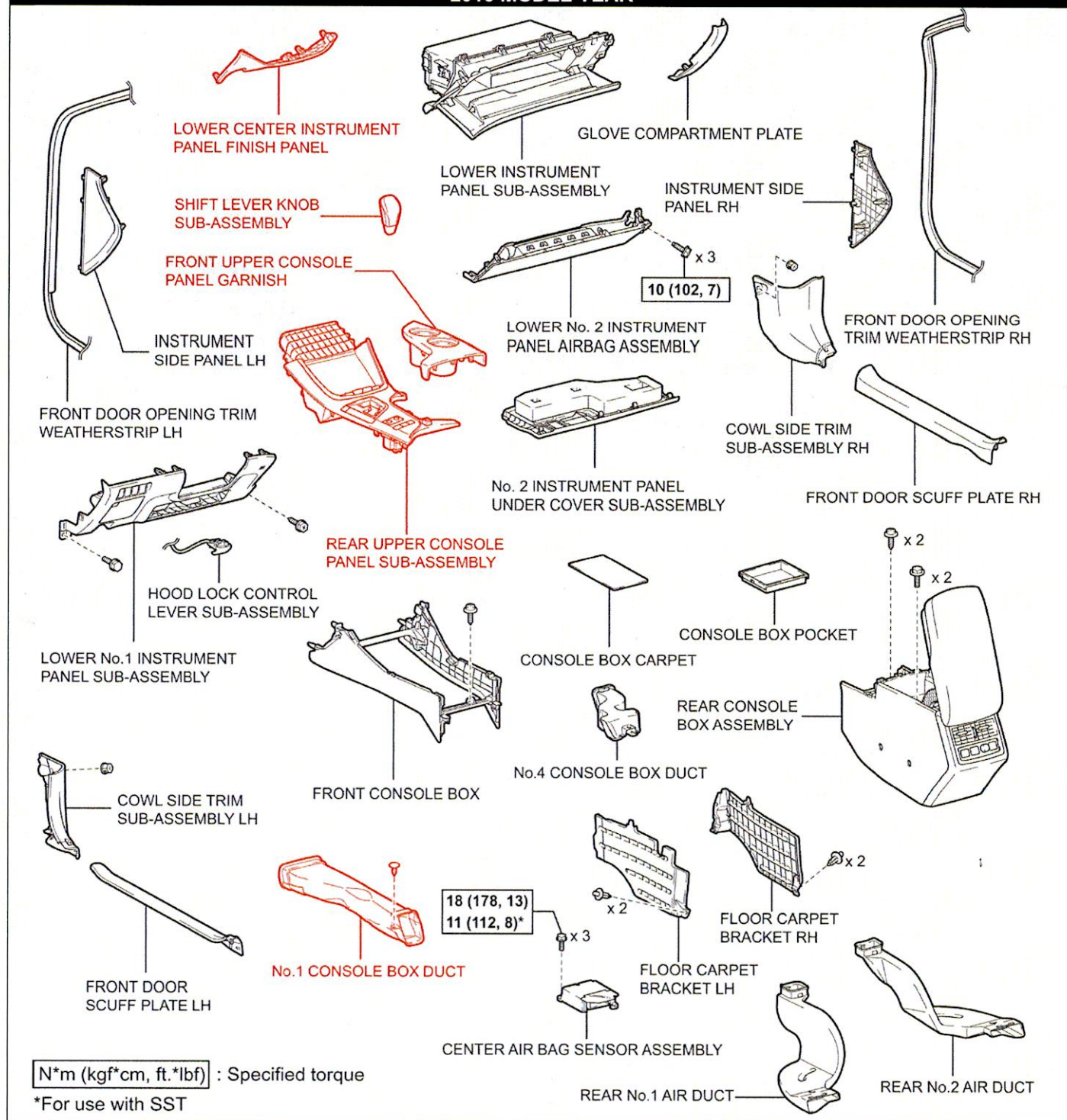


## V. AIR CONDITIONER RADIATOR ASSEMBLY INSPECTION

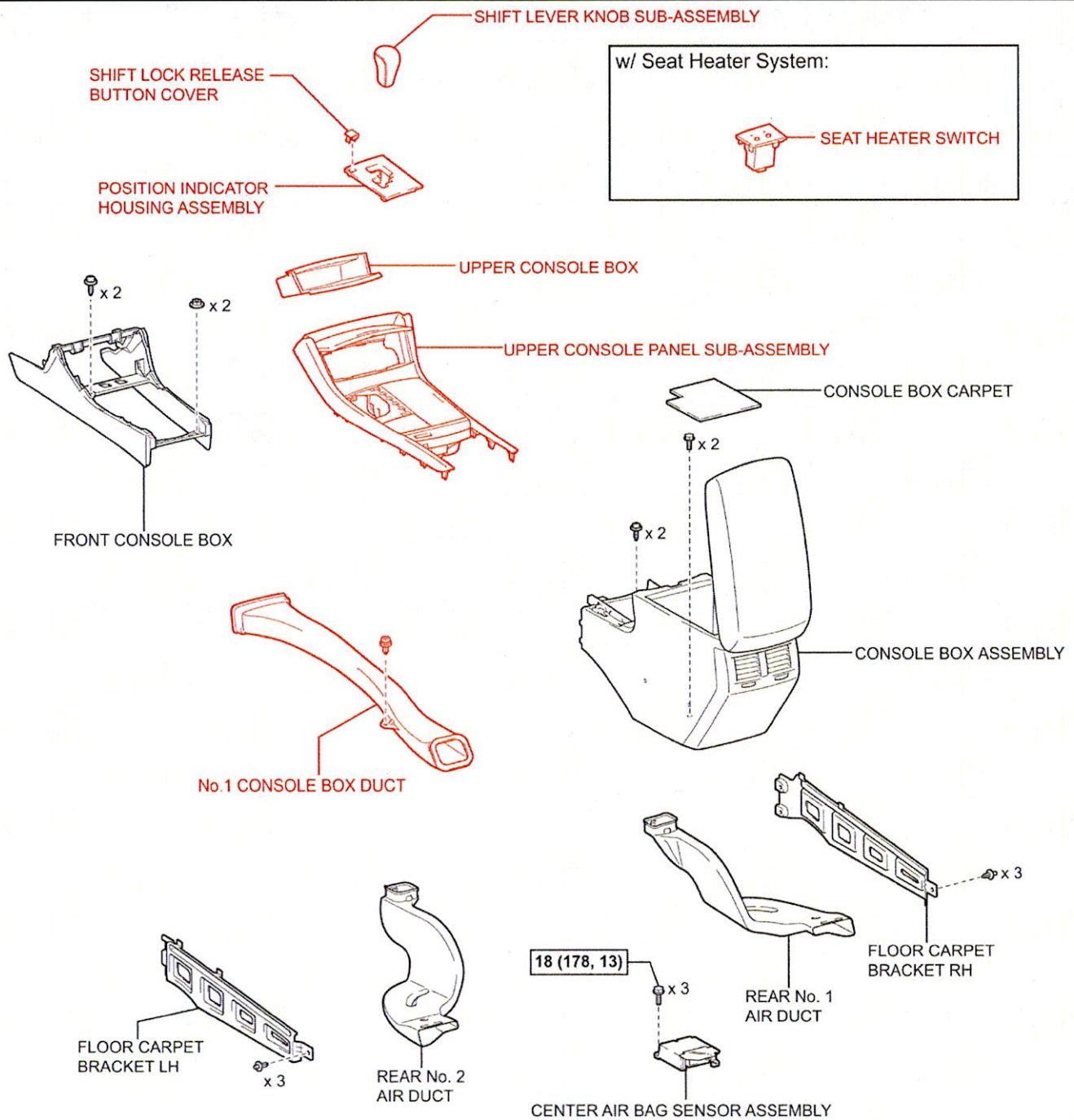
### 1. REMOVE ONLY THE COMPONENTS HIGHLIGHTED RED

**NOTE: The No.1 Console Box Duct DOES NOT need to be completely removed, it only needs to be displaced.**

2013 MODEL YEAR



# 2012 MODEL YEAR



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



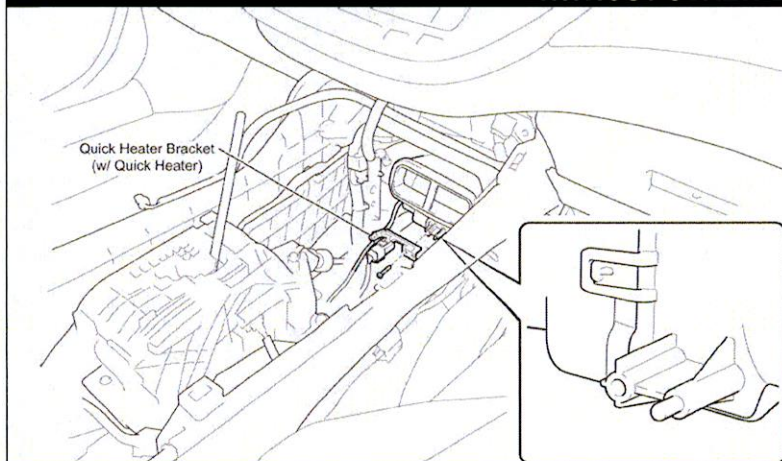
## 2. INSPECT THE DESIGN OF THE AIR CONDITIONER RADIATOR ASSEMBLY

a) Inspect **VISUALLY AND BY HAND** to determine the case design.



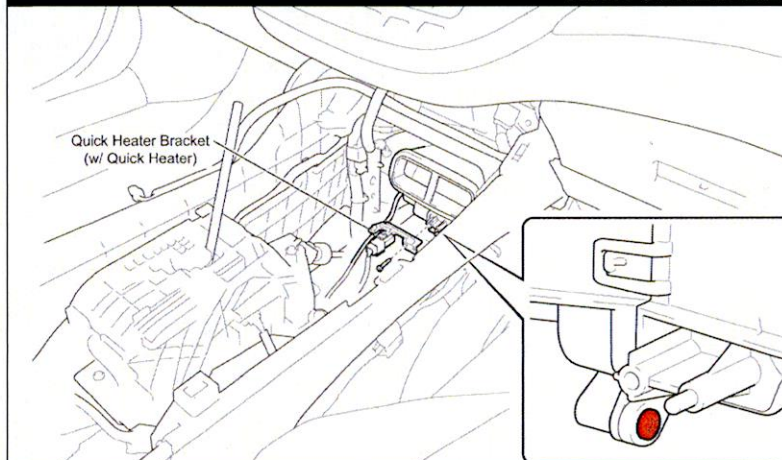
- The old design case may develop a leak at the case seam if there is a buildup of condensed water. This inspection step is **CRITICAL** to determine which case design is installed in the vehicle.
- **DO NOT** attempt to inspect the case design by pulling down the carpet along the tunnel, this is not an accurate inspection method.

### WITHOUT SCREW DESIGN



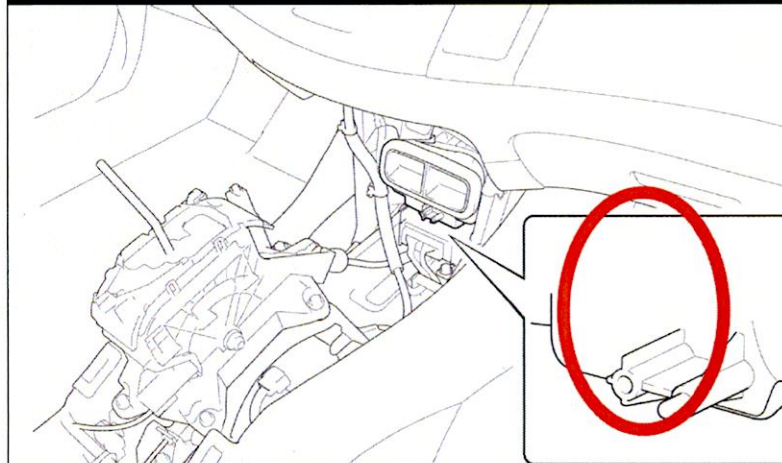
This is the **OLD** case design. **Additional inspection is required. Proceed to STEP 3.**

### WITH SCREW DESIGN



This is the **NEW** case design. No further action required. Campaign Complete.

### WITHOUT SEAM DESIGN – 2012MY ONLY



This case design will only be found on **SOME** 2012 model year Avalon vehicles. This case design **IS NOT** affected. No further action required. Campaign Complete.

### 3. CHECK AND RECORD DTCs

- a) Check and record any DTCs.

### 4. DISCONNECT THE NEGATIVE BATTERY TERMINAL

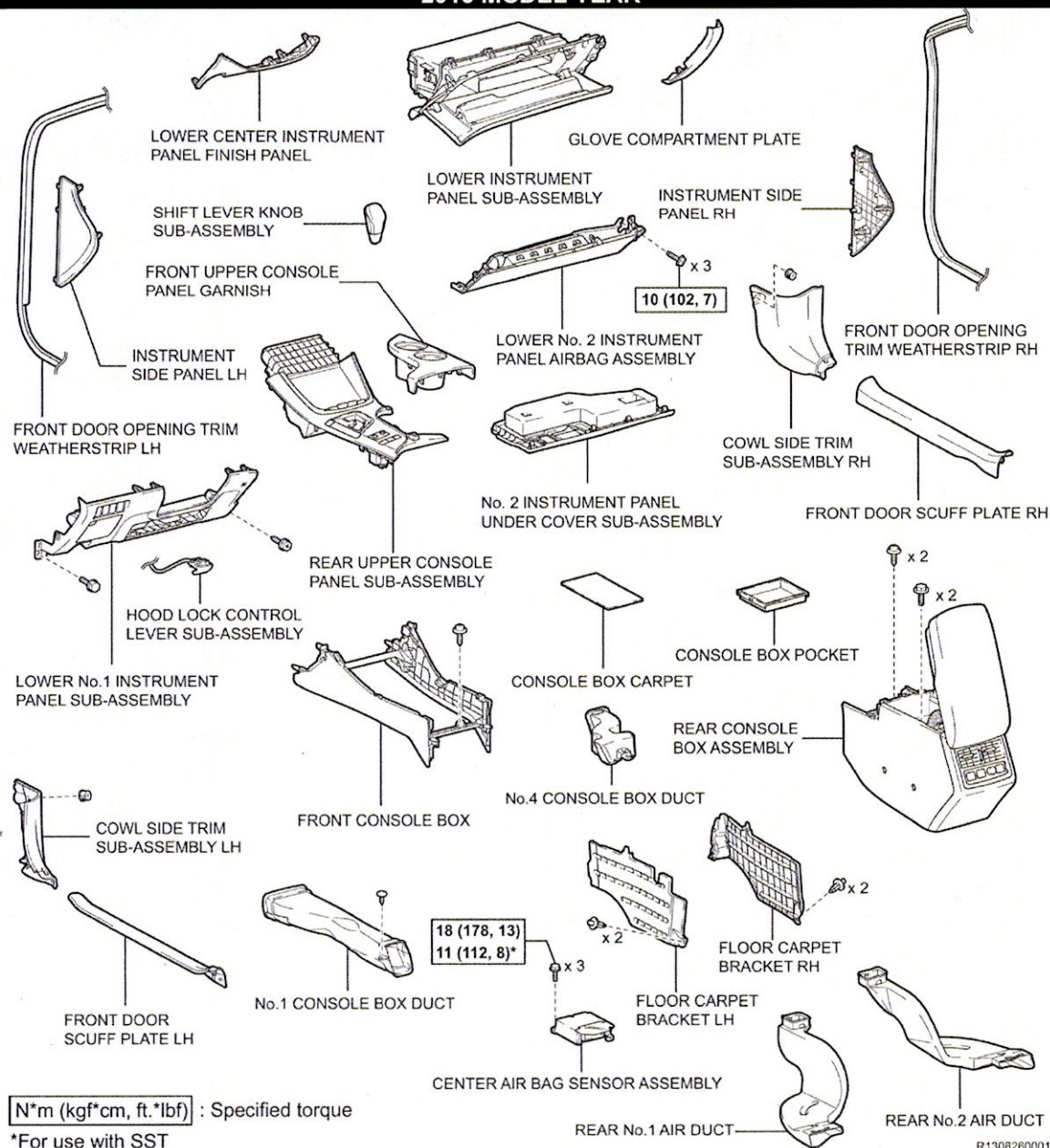


- Wait at least 90 seconds after disconnecting the cable from the negative battery terminal to prevent airbag and seat belt pretensioner deployment.
- Follow all precautions as outlined on TIS before servicing the SRS system.

### 5. REMOVE ALL OF THE REMAINING COMPONENTS

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

#### 2013 MODEL YEAR





# 2012 MODEL YEAR

SHIFT LEVER KNOB SUB-ASSEMBLY

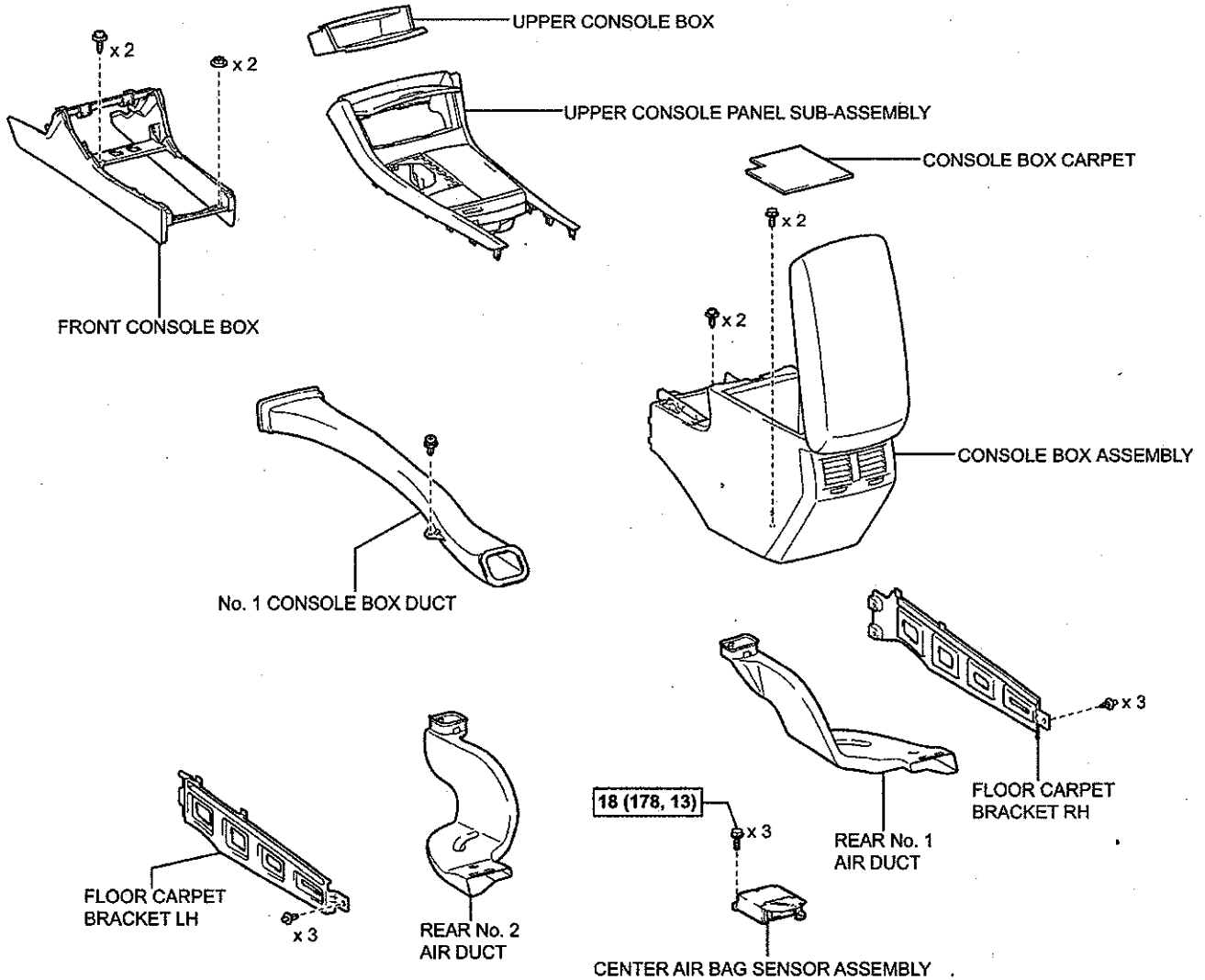
SHIFT LOCK RELEASE  
BUTTON COVER

POSITION INDICATOR  
HOUSING ASSEMBLY

w/ Seat Heater System:



SEAT HEATER SWITCH



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

R1309240001

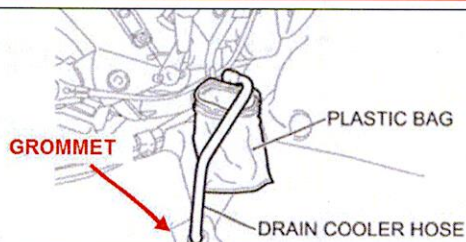


## WATCH THESE VIDEOS BEFORE PROCEEDING

**HOSE WITH DEBRIS**



**HOSE WITH NO DEBRIS**



### 6. REMOVE THE DRAIN COOLER HOSE

- a) Place a bag or shop cloth under the hose to catch any water that may be remaining in the hose.

**NOTE: Use caution to avoid displacing the grommet during hose removal and installation.**

### 7. MOUNT THE WIRE BRUSH IN A VISE

- a) Mount the brush so that the bristles are above the bench, this will allow for any debris that is forced out of the hose to land on the bench for inspection.
- b) Place a clean sheet of paper on the bench directly below the brush.
- c) Verify the brush is clean and free of debris.

**NOTE: If paper is not available, confirm the bench is clean to allow for an accurate debris inspection.**

### 8. BRUSH THE HOSE

- a) Stretch the hose to straighten it and carefully work the hose onto the brush using a twisting motion, push the brush **COMPLETELY** through the hose.



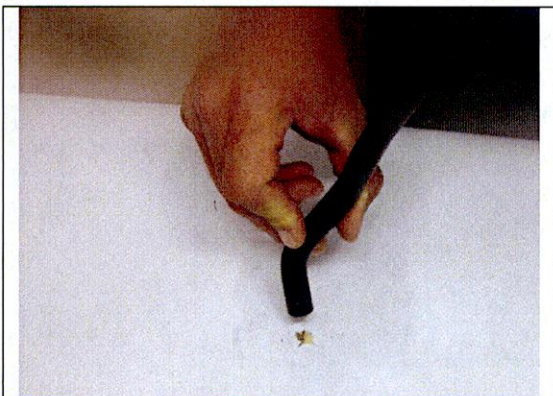
The tip of the brush may catch on the tube, to help prevent damage keep the tube as straight as possible.

- b) Check the brush for any debris, **REMOVE DEBRIS FROM THE BRUSH IF FOUND.**
- c) Slowly pull the hose off of the brush.



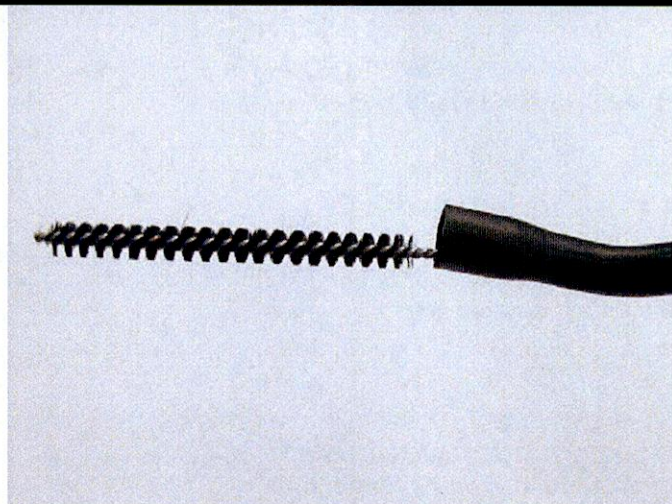
After pushing the brush completely through the hose it is critical to remove any debris from the brush so that the debris does not get lodged in the hose.



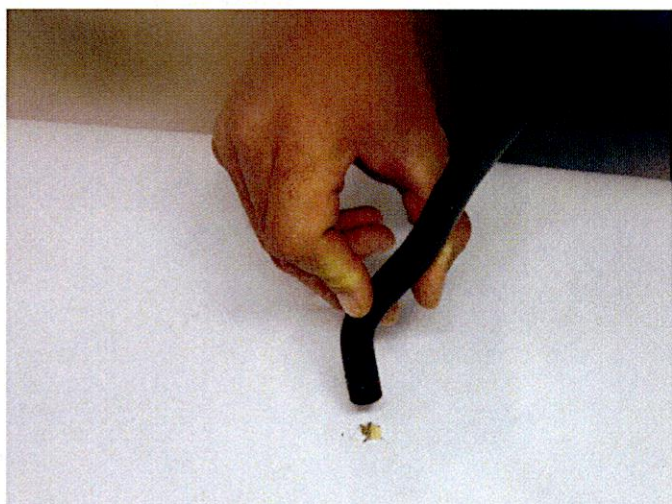
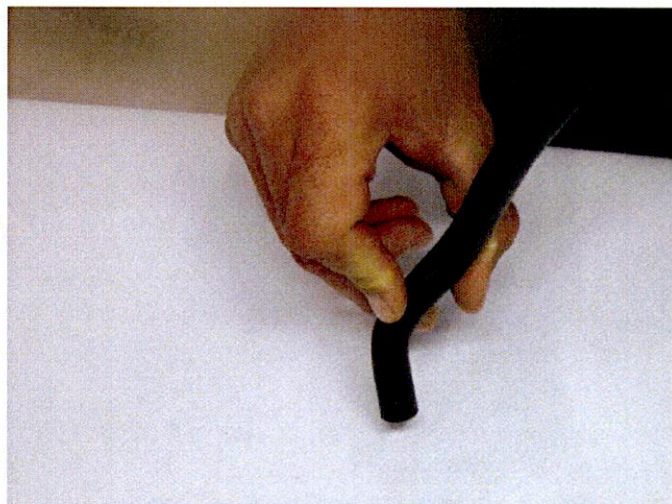
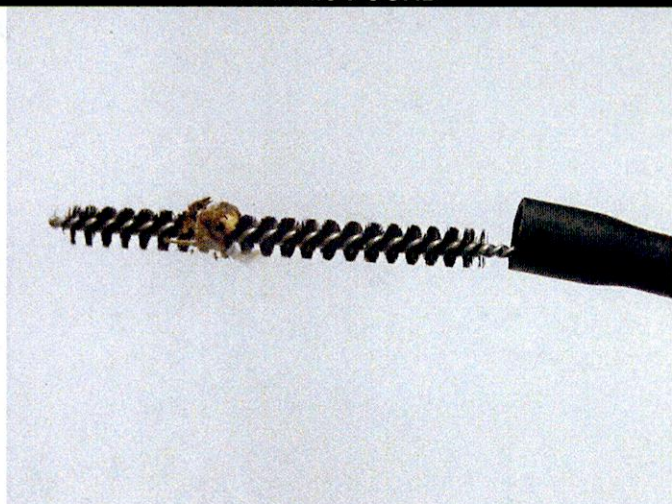


- d) Tap the hose on the bench to remove any debris that may remain in the hose.
- e) Check for debris on the brush **AND** on the bench.

**NO DEBRIS FOUND**



**DEBRIS FOUND**



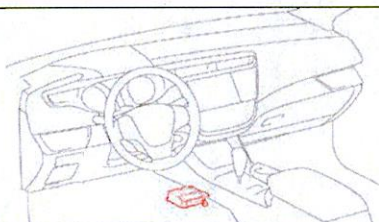
Additional inspection is required. Proceed to **STEP 9**.

The center airbag sensor assembly **MUST** be replaced. Proceed to **SECTION VI.** for instructions on seal tray installation.





**ONLY** perform this inspection step if **NO** debris was found in the drain hose.



**9. CHECK FOR EVIDENCE OF WETNESS ON THE CENTER AIRBAG SENSOR ASSEMBLY**

- If not yet removed, remove the 3 bolts and the center airbag sensor assembly.
- Inspect visually for any water stains **ON** the center airbag sensor assembly.

**NO WETNESS FOUND**



**WETNESS FOUND**



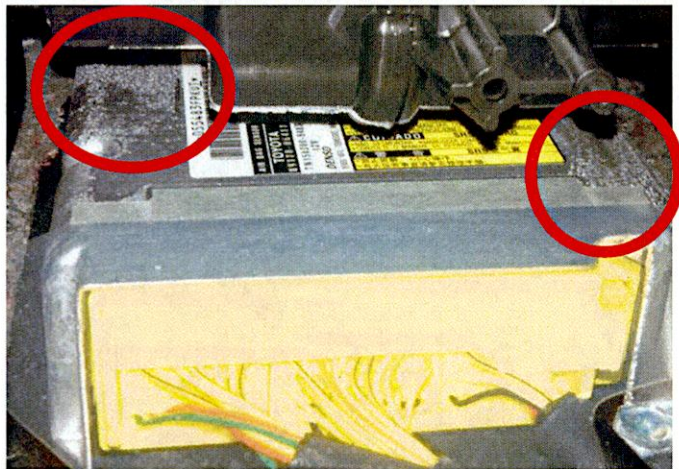
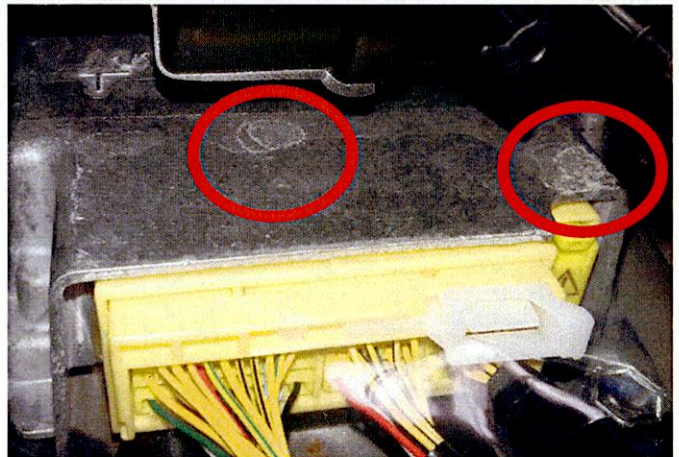
**INSPECTION CONTINUED ON NEXT PAGE...**



**NO WETNESS FOUND**



**WETNESS FOUND**



**NO WETNESS FOUND**

The center airbag sensor assembly **DOES NOT** require replacement. Proceed to **SECTION VI.** for instructions on seal tray installation.

**WETNESS FOUND**

The center airbag sensor assembly **MUST** be replaced. Proceed to **SECTION VI.** for instructions on seal tray installation.



## VI. SEAL TRAY INSTALLATION



**Confirm the center airbag sensor assembly has been removed, the seal tray cannot be installed correctly with the assembly installed.**



### 1. CUT THE BUTYL TAPE

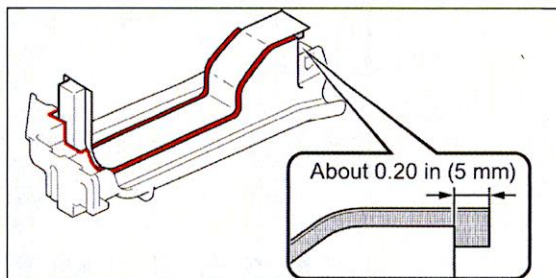
- Cut approximately 6 inches of butyl tape.

#### NOTE:

- Use scissors or diagonal cutting pliers to cut the tape, to prevent the tape from stretching, **DO NOT** tear the tape.
- DO NOT** use locally sourced butyl tape that was used in the training instructions.



**The butyl tape has an expiration date, *DO NOT* use tape that is beyond the expiration date.**

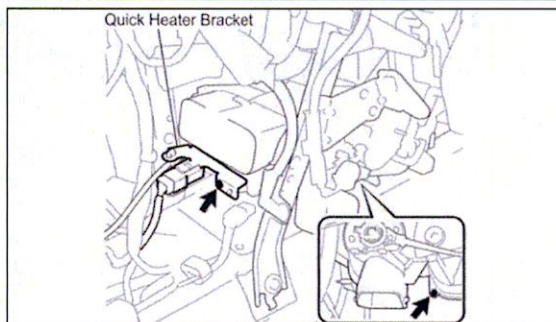


### 2. ATTACH THE BUTYL TAPE TO THE CENTER GROOVE OF THE SEAL TRAY

- Attach the tape so that it overhangs approximately ¼ inch at each end.

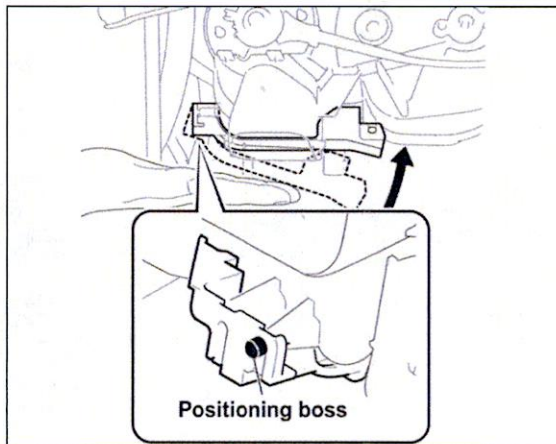
#### NOTE:

- Trim the ends of the tape if necessary.
- Press the tape firmly into the tray for good adhesion.



### 3. REMOVE THE SCREW(S)

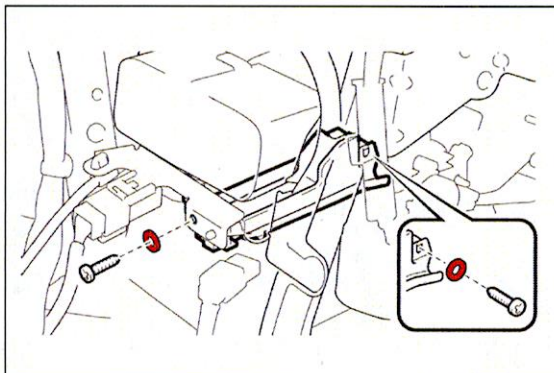
- Remove the screw from the rear of the HVAC box.
- If the vehicle is equipped with Quick Heater**, remove the screw holding the bracket and move the bracket out of the way.
- Discard the screws, they will be replaced with longer screws.



### 4. PUT THE SEAL TRAY IN PLACE

- Remove the paper backing from the tape.
- Align the front of the seal tray with positioning boss.
- Firmly press the seal tray up against the HVAC box.



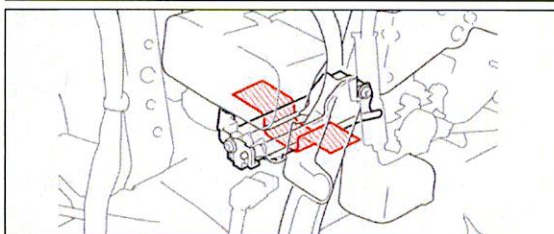


#### 5. INSTALL THE SEAL TRAY SCREWS

- If the vehicle is equipped with Quick Heater**, place the quick heater bracket into position on the front of the HVAC box.
- Install the 2 **NEW** long screws with washers.
- Confirm the screws are tightened completely.

#### NOTE:

- ALWAYS** use the screws and washers included in the parts kit.
- DO NOT** forget to reinstall the quick heater bracket if equipped.



#### 6. ATTACH TAPE

- Attach duct tape or similar to the seal tray and HVAC box as shown.

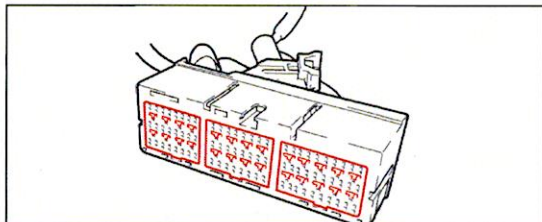
### CONFIRM WHICH STEPS ARE NEXT BY FOLLOWING THE TABLE(S) BELOW

#### DOES THE CENTER AIRBAG SENSOR ASSEMBLY REQUIRE REPLACEMENT BASED ON THE INSPECTION PROCESS IN SECTION V.?

CONDITION 1	ACTION REQUIRED
Replacement <b>NOT</b> required	Reassemble the vehicle. Proceed to <b>SECTION VII</b> .
CONDITION 2	ACTION REQUIRED
Replacement required	The center airbag sensor <b>MUST</b> be replaced <b>AND</b> additional inspection is required. Proceed to the <b>ADDITIONAL INSPECTION STEP</b> .

#### ADDITIONAL INSPECTION STEP

#### ONLY PERFORM THIS STEP IF THE CENTER AIRBAG SENSOR ASSEMBLY REQUIRES REPLACEMENT



#### 1. INSPECT THE TERMINALS OF THE CENTER AIRBAG ASSEMBLY HARNESS CONNECTOR

- Inspect the terminals for corrosion.
- Inspect the terminals for wetness.

#### WAS CORROSION OR WETNESS FOUND ON THE TERMINALS OF THE CONNECTOR?

CONDITION 1	ACTION REQUIRED
<b>NO</b> corrosion <b>AND</b> <b>NO</b> wetness found	The harness(s) <b>DOES NOT</b> require replacement. Proceed to <b>SECTION VII. STEP 2-8</b> for center airbag sensor assembly replacement and vehicle reassembly.
CONDITION 2	ACTION REQUIRED
<b>ONLY</b> wetness found	The center airbag sensor must be replaced and the harness connector(s) must be dried, the harness(s) <b>DO NOT</b> require replacement. Proceed to <b>SECTION VII. STEP 1-8</b> for connector drying procedure.
CONDITION 3	ACTION REQUIRED
Corrosion found	The harness(s) with corrosion <b>MUST</b> be replaced. Refer the <b>SECTION IX.</b> for additional information on harness replacement. The center airbag sensor must also be replaced, refer to <b>SECTION VII.</b> for center airbag sensor assembly replacement and vehicle reassembly.



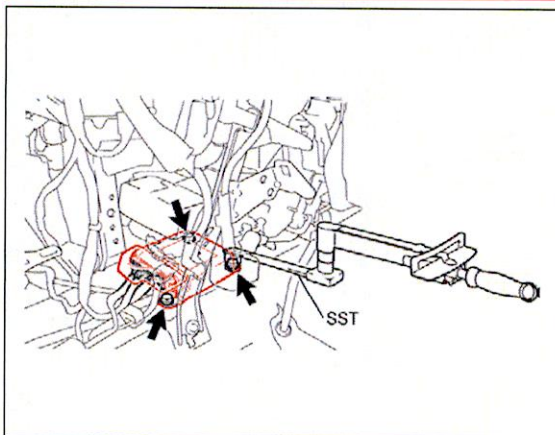
## VII. VEHICLE REASSEMBLY



**ONLY PERFORM THIS STEP IF WETNESS WAS FOUND ON THE CONNECTOR DURING THE INSPECTION ON THE PREVIOUS PAGE**

### 1. USE COMPRESSED AIR TO DRY THE CONNECTOR

- Lightly blow compressed air **FROM THE BACK SIDE** of the connector to dry the connector.



### 2. INSTALL THE CENTER AIRBAG SENSOR ASSEMBLY

- Install the sensor assembly.



**If debris was found in the hose or if center airbag sensor assembly showed evidence of wetness, REPLACE THE CENTER AIRBAG SENSOR ASSEMBLY.**

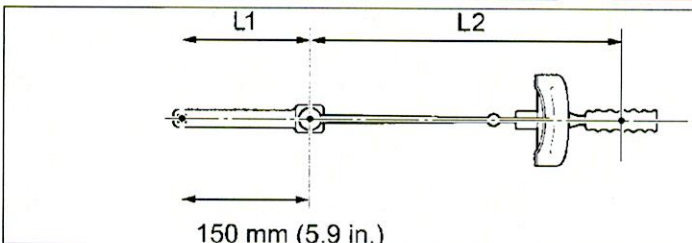
SST: 09961-00950

Torque:

With SST AND 10" torque wrench: 8ft. lbf (11N·m)

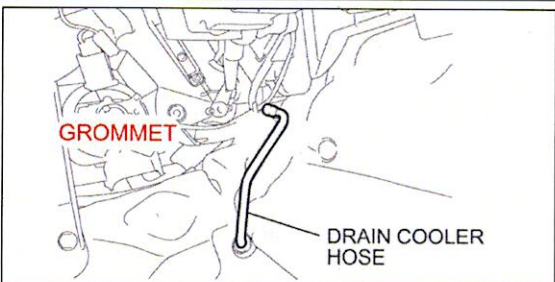


**If a 10" torque wrench or the SST is not available, YOU MUST calculate the correct torque. Use the formula below with T = 13ft. lbf (18N·m).**



Formula  $T' = (L2 / (L1 + L2)) * T$

T'	Reading of torque wrench {N*m (kgf*cm, ft.*lbf)}
T	Torque {N*m (kgf*cm, ft.*lbf)}
L1	Length of SST or extension tool {mm(in.)}
L2	Length of torque wrench {mm(in.)}



### 3. INSTALL THE DRAIN COOLER HOSE

**NOTE: Use caution to avoid displacing the grommet during hose installation.**

### 4. REINSTALL ALL OF THE INTERIOR TRIM COMPONENTS

- Refer to [TIS](#) for detailed instructions.

### 5. RECONNECT THE NEGATIVE BATTERY TERMINAL

### 6. PERFORM YAW RATE AND ACCELERATION SENSOR ZERO POINT CALIBRATION (HV VEHICLES ONLY)

### 7. PERFORM SYSTEM INITIALIZATIONS.

### 8. CHECK FOR DTCs

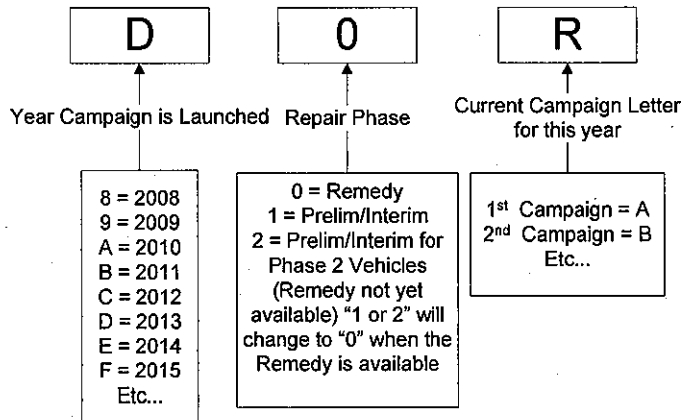
## ◀ VERIFY REPAIR QUALITY ▶

- Use caution to prevent damage to the interior panels
- Confirm inspections are performed thoroughly and the correct ancillary parts are replaced if necessary
- Confirm the seal tray is installed correctly

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

## VIII. APPENDIX

### A. CAMPAIGN DESIGNATION DECODER



### B. CAMPAIGN PARTS DISPOSAL

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.***



## IX. HARNESS REPLACEMENT INFORMATION

**STOP**

**ONLY perform this section if harness replacement is required.**

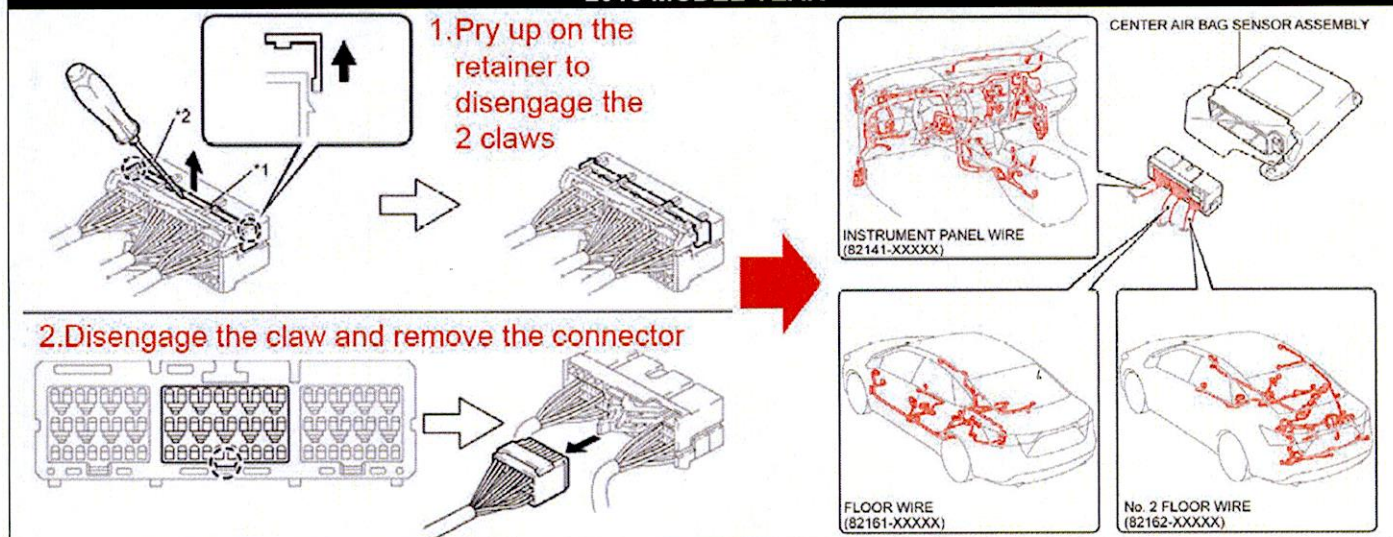
### 1. REPLACE THE HARNESS(S) WITH RUSTED TERMINALS

**IF NO CORROSION IS FOUND ON THE TERMINALS, THE HARNESS DOES NOT REQUIRE REPLACEMENT**

a) Remove the affected harness(s) from the main center airbag sensor assembly connector.

b) Replace the harness, refer to TIS for additional details.

#### 2013 MODEL YEAR



#### 2012 MODEL YEAR

