

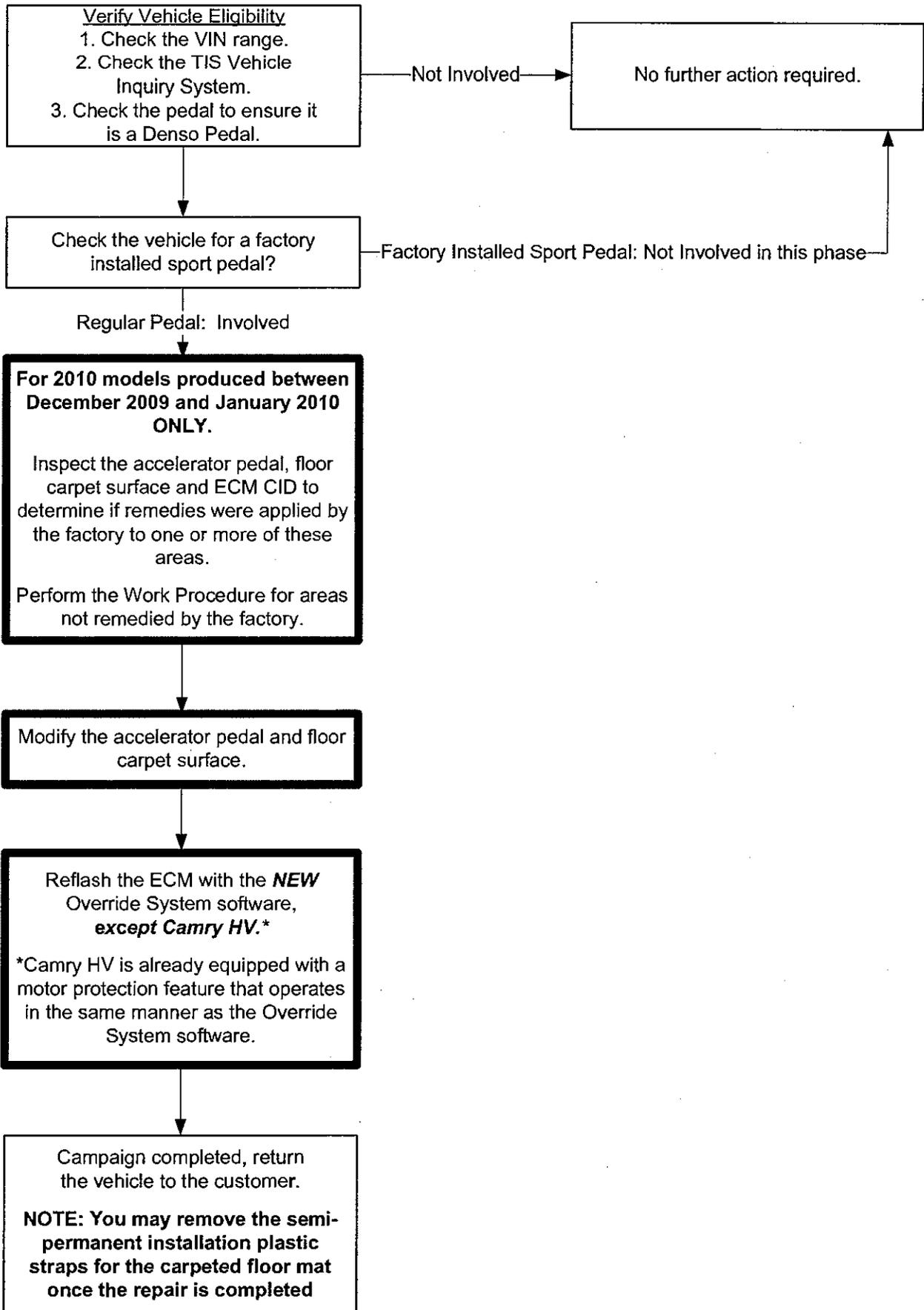
TECHNICAL INSTRUCTIONS
FOR
SAFETY RECALL 90L
DENSO ACCELERATOR PEDAL MODIFICATION
2007 – 2010 MODEL YEAR CAMRY
REVISED MARCH 3, 2010

TECHNICAL INSTRUCTION REVISION NOTICE:

- **February 5, 2010:**
 - The VIN ranges for Camry and Camry Hybrid were separated.
 - The VIN ranges for the 2010 model year Camry were updated.
- **February 25, 2010:**
 - The data list menu for Hybrid vehicles has been included in Work Procedure Section F, step 4 b.
- **March 2, 2010:**
 - Battery cable removal Work Procedure has been added. Section C, step 4 (d,e)
 - Battery cable installation Work Procedure has been added. Section F, step 1 (e,f,g)
- **March 3, 2010:**
 - An additional step was added in Work Procedure Section F, step 1d "REINSTALL THE ACCELERATOR PEDAL ASSEMBLY"

Previous versions of this Technical Instruction should be discarded.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. AFFECTED VIN RANGE

MODEL	WMI	MY	VDS	RANGE
CAMRY	4T1	2007	BE46K	U500024 - U730108
			BK46K	U500028 - U560047
		2008	BE46K	U725848 - U793305
			BK46K	U559317 - U576879
		2009	BE46K	U790316 - U920877
			BK46K	U576373 - U596843
	2010	BF3EK	U500012 - U579848	
		BK3EK	U596376 - U609349	
	JTN	2007	BE46K	3000053 - 3129796
			BK46K	3000019 - 3031526
		2008	BE46K	3128414 - 3149926
			BK46K	3031540 - 3037065
		2009	BE46K	3149226 - 3194277
			BK46K	3037071 - 3046078
2010	BF3EK	3000006 - 3003616		
	BK3EK	3046058 - 3049905		
CAMRY HYBRID	4T1	2007	BB46K	U001025 - U030790
		2008	BB46K	U029356 - U062522
		2009	BB46K	U061175 - U111424
		2010	BB3EK	U109087 - U125678
	JTN	2007	BB46K	3000101 - 3044808
		2008	BB46K	3044111 - 3049003
		2009	BB46K	3048659 - 3053539
		2010	BB3EK	3053459 - 3053755

NOTE:

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this SSC, 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.

Important Sport Pedal Information

Sport Pedal Type	Involvement	Method of Identification	Action
Dealer/Port Installed Sport Pedal Cover Accessory	Involved	Plastic pedal arm	Notify ASM, Remove pedal cover and perform campaign. Do not reinstall the pedal cover after modification. Reimburse customer for the cost of the sport pedal cover accessory.
Factory Installed Sport Pedal	Not involved in this phase	Metal pedal arm	Notify ASM, Return vehicle to customer.

III. PREPARATION

A. PARTS

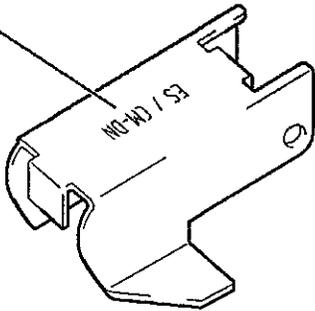
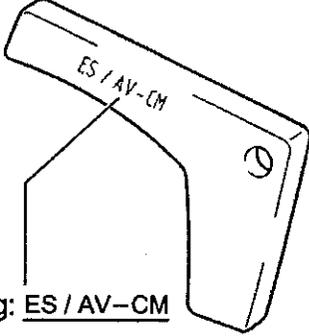
Part Number	Part Description	Quantity
04009-52106	Tibia Pad	1
78118-41010	Rubber Pad	1

B. TOOLS & EQUIPMENT

- Dust mask
- Hair dryer or
- Low temperature heat gun
- Hand file
- Hack saw
- Orbital sander *
- Protective eyewear
- Protective work gloves
- Reciprocating Saw *
- Scribe
- Standard hand tools
- Techstream
- Torque wrench
- Workbench with vise

* One orbital sander and one reciprocating saw will be provided to each dealership.

C. ACCELERATOR PEDAL TEMPLATE & GAUGE

Cutting Template (Color: Silver) ** Application: DENSO Accelerator Pedal	Shape Gauge (Color: Silver) ** Application: All Accelerator Pedals
<p data-bbox="342 569 643 600">Stamping : <u>ES / CM-DN</u></p> 	 <p data-bbox="987 884 1271 915">Stamping: <u>ES / AV-CM</u></p>

** One DENSO cutting template and one shape gauge will be provided to each dealership.

D. MATERIALS

- Bubble wrap
- Double sided tape – (¾" wide Scotch ® Heavy Duty Mounting Tape 110-Long)
- Industrial tape – (2" wide Gorilla Tape ®)
- Masking tape
- Sandpaper 400 grit
- Shop cloth

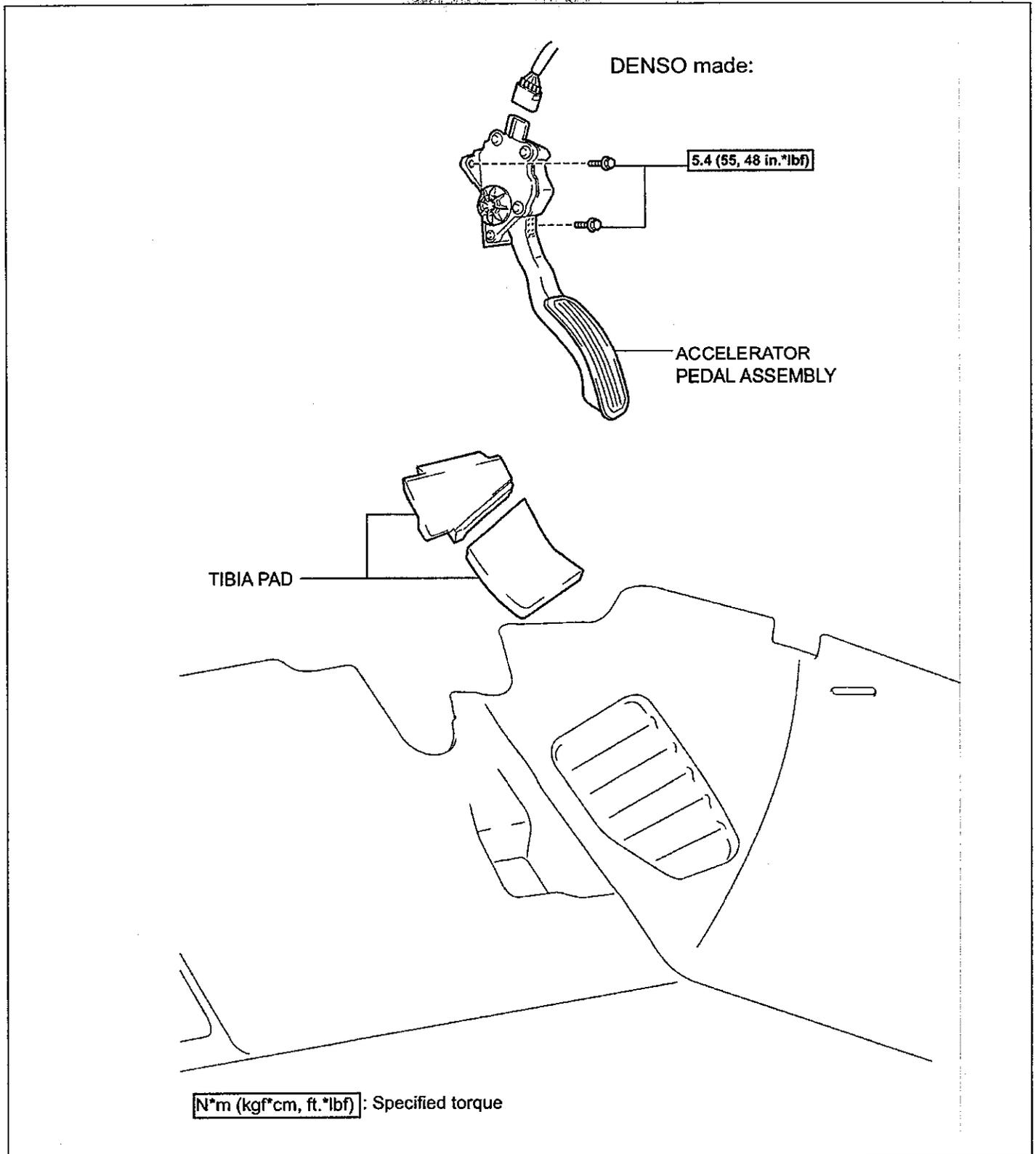
IV. BACKGROUND

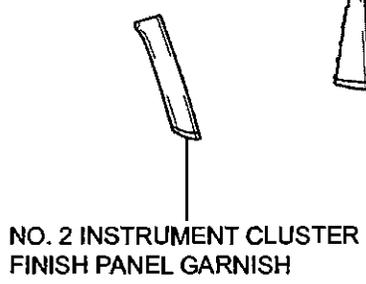
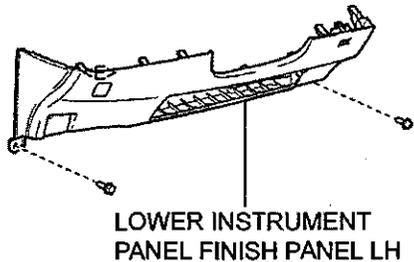
In early October, Toyota announced it will initiate a Safety Recall Campaign (Special Service Campaign) for potential floor mat interference with the accelerator pedal. The condition involves the potential for an unsecured or incompatible driver's floor mat to interfere with the accelerator pedal and cause it to get stuck in the wide open position.

- The accelerator pedal will be modified to reduce the risk of an unsecured or incompatible floor mat from interfering with the accelerator pedal.
- Foam pads underneath the carpet in the accelerator pedal area will also be removed and/or replaced to modify the shape of the floor.
- Vehicles equipped with the optional genuine Toyota All Weather Floor Mats (AWFM) will be inspected to determine if the AWFM set is of an older design. If it is, the older design AWFM for the driver and the front passenger will be replaced with newly designed ones.
- Finally, the ECM will be reflashed with newly designed software to provide customers an extra measure of confidence. This reflash will allow the system to cut engine power in case of simultaneous application of both the accelerator and brake pedals during certain driving speeds.
- This phase will include 2007 – 2010 Camry vehicles equipped with a Denso accelerator pedal only.
- Owners of vehicles equipped with the CTS pedal will receive a different owner letter and the CTS equipped vehicles will have a separate repair procedure. Due to pedal differences it is vital that only Denso pedals are repaired in this phase.

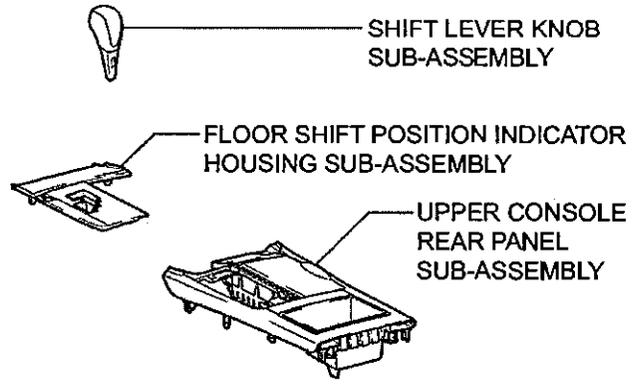
V. WORK PROCEDURE

A. COMPONENTS

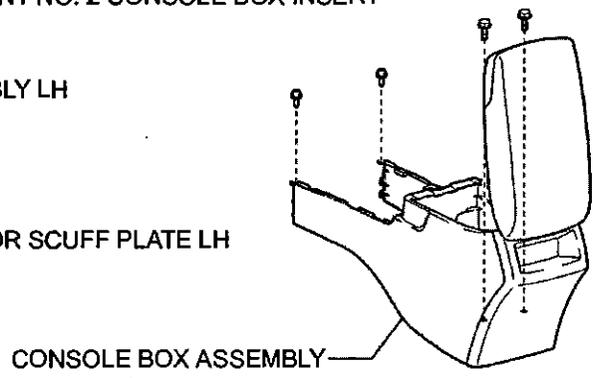
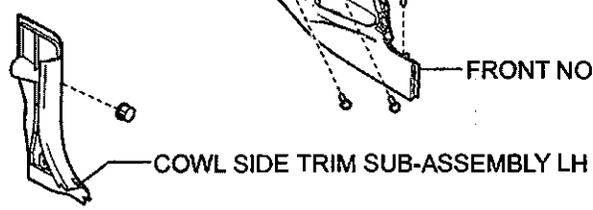
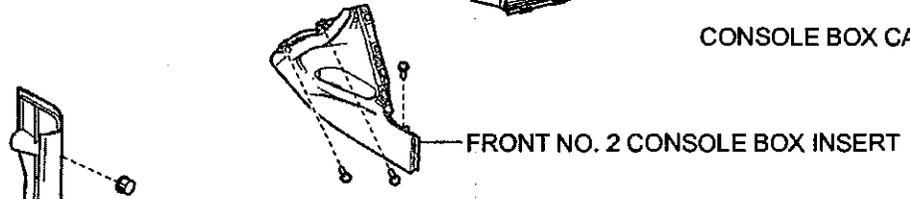
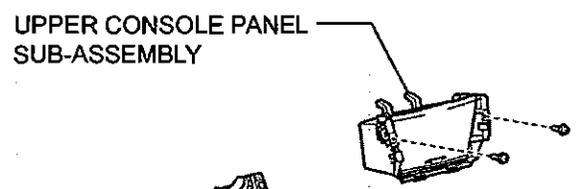
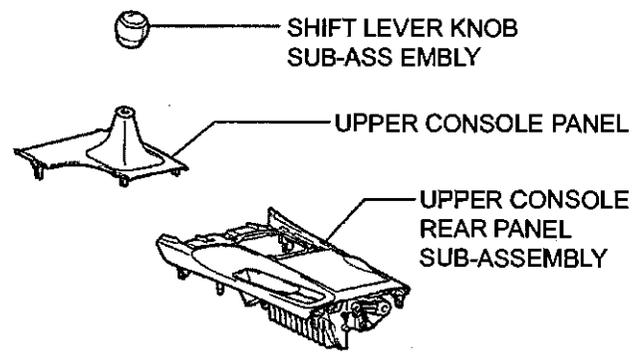




for Automatic Transaxle:



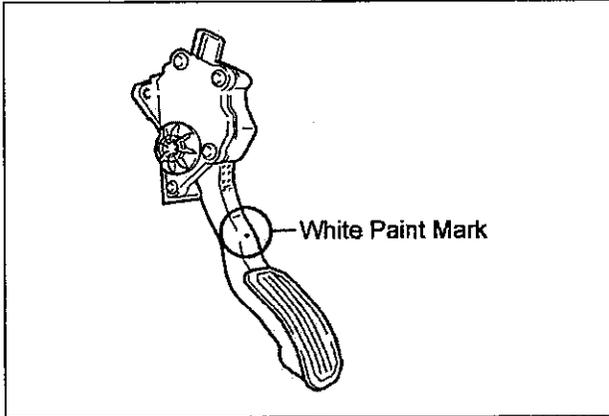
for Manual Transaxle:



B. PRELIMINARY INSPECTION FOR 2010 MODELS ONLY



- The following inspection procedure is to determine if some 2010 models produced between December 2009 and January 2010 may have had remedies applied to the accelerator pedal, floor carpet or ECM CID by the factory.
- If applicable, perform the Work Procedure **ONLY** for areas **NOT** remedied by the factory.



1. INSPECT THE ACCELERATOR PEDAL ASSEMBLY

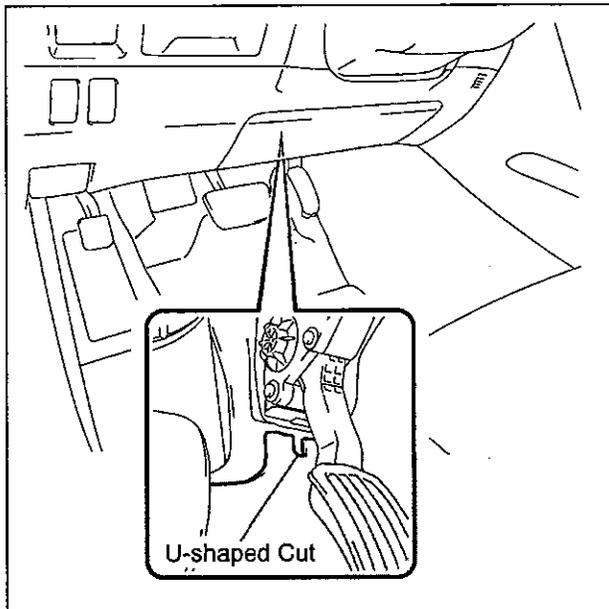
- a) Verify if the accelerator pedal assembly has a white paint mark in the location shown.

With White Paint Mark:

- The accelerator pedal remedy has been applied by the factory, **NO** modification is required.

NO Paint Mark:

- The accelerator pedal requires modification. Make sure to perform the modification process during the Work Procedure.



2. INSPECT THE FLOOR CARPET

- a) Verify if the floor carpet has a "U" shaped cut in the location shown.

With "U" Shaped Cut:

- The floor carpet remedy has been applied by the factory, **NO** modification is required.

NO "U" Shaped Cut:

- The floor carpet requires modification. Make sure to perform the modification process during the Work Procedure.

ECM CID

AZAR Engine	Current CID	New CID
2010 Model Year AR AT/ULEV	333B5000	333B5100
2010 Model Year AR MT/ULEV	30669000	30669100
2010 Model Year AR AT/PZEV	333B6000	333B6100

3. INSPECT THE ECM CALIBRATION ID (CID)

- a) Verify if the ECM has the **NEW** CID.

With **NEW** ECM CID:

- The ECM CID has been applied by the factory, **NO** modification is required.
- Confirm the vehicle has the correct floor mat following the instructions on page 18.

With **Current** ECM CID:

- The ECM CID requires updating. Make sure to perform the updating process during the Work Procedure.

GR Engine	Current CID	New CID
2010 Model Year GR	333B8000	333B8100

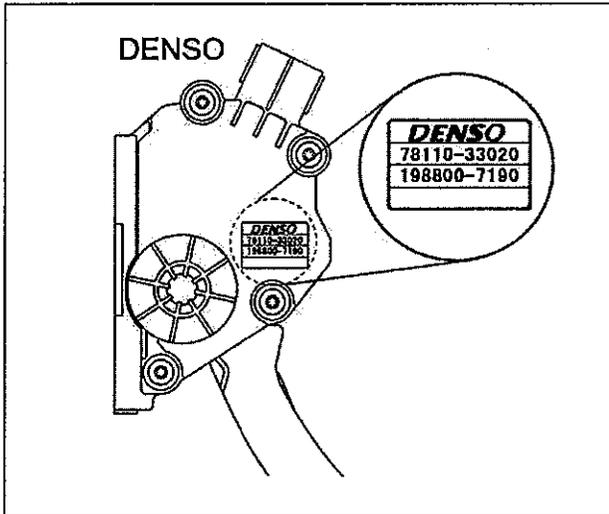
C. REMOVE THE ACCELERATOR PEDAL



ACCELERATOR PEDAL HANDLING NOTES:

- DO NOT drop
- DO NOT reuse an accelerator pedal that has been dropped
- Avoid vibration and shock
- DO NOT place the sensor portion of the pedal in a vise
- Cover and uncover the sensor while in the vehicle to prevent damage and debris from entering

CLICK HERE TO WATCH THE VIDEO BEFORE BEGINNING THE WORK PROCEDURE



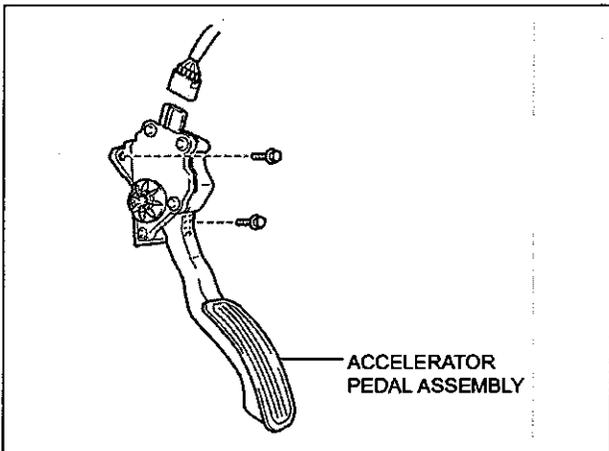
4. IDENTIFY AND REMOVE THE DENSO ACCELERATOR PEDAL ASSEMBLY

Click here to watch the video to supplement this step.

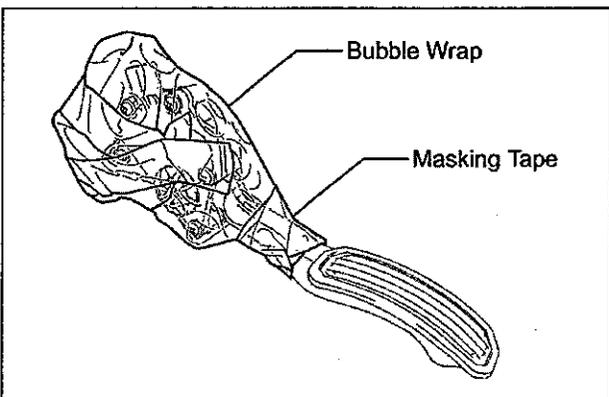
- Verify the vehicle has a Denso accelerator pedal assembly by identifying the manufacturing imprint as illustrated here.
- If the pedal is manufactured by Denso continue following the instructions.
- If the pedal is manufactured by CTS, DO NOT CONTINUE WITH THESE INSTRUCTIONS.

NOTE

Modifications should only be performed on Denso pedals.



- Record radio station presets.
- Disconnect the negative battery cable and wait 90 seconds.
- Disconnect the accelerator pedal electrical connector.
- Remove the 2 bolts.

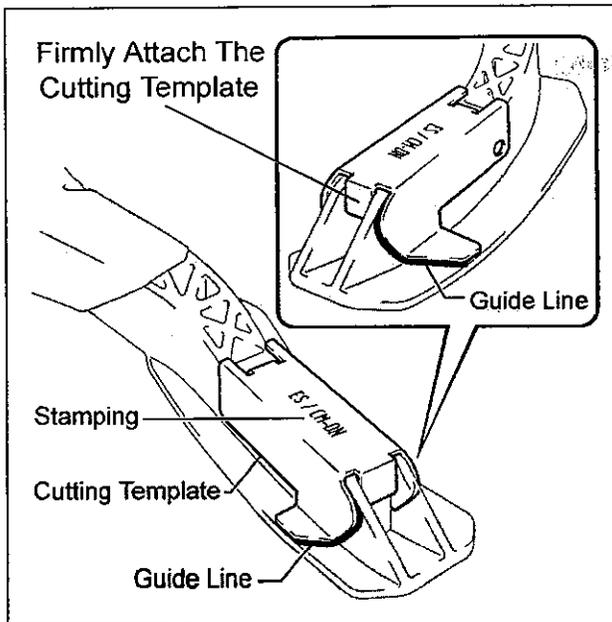


- While still inside the vehicle, use bubble wrap and masking tape to cover and protect the sensor.

NOTE:

- Be sure to use bubble wrap to protect the sensor.
- Be sure to seal the bubble wrap with masking tape to prevent damage to the sensor, and cutting debris from entering the pedal's movable lock.
- DO NOT reuse the bubble wrap.

D. CUT THE DENSO ACCELERATOR PEDAL



5. MARK THE AREA TO BE CUT

[Click here to watch the video to supplement steps \(5-6\).](#)

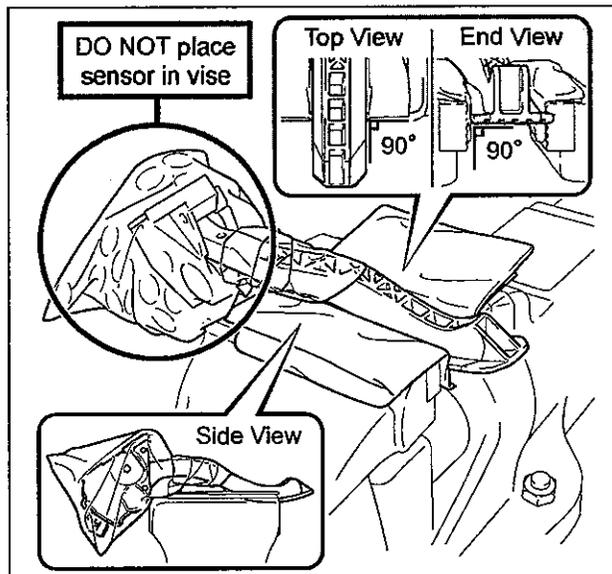
- Firmly set the template to the pedal. Scribe guide lines to outline the area to be cut.

Cutting Template:

- Color: Silver
- Stamping: ES / CM-DN

NOTE:

- **DO NOT** mark the area beyond the template.
- Use a flat tip screwdriver if a scribe is not available.
- **Make sure to use the correct cutting template by verifying the color and stamping.**
- **Never cut or sand the pedal while the template is on the pedal.**

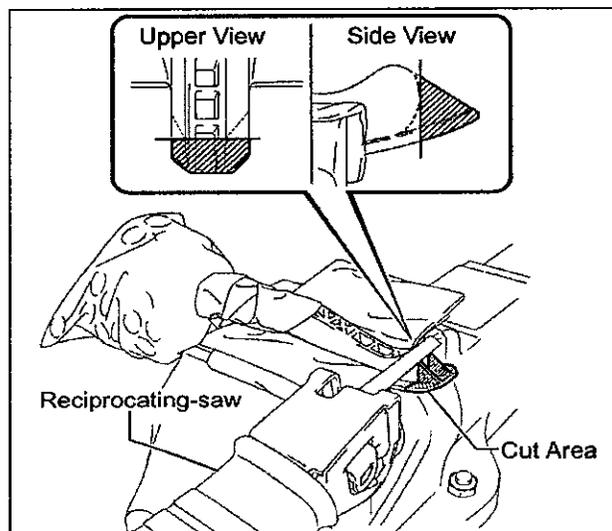


6. SECURE THE ACCELERATOR PEDAL ASSEMBLY

- Set the pedal in the vise at a right angle using a shop cloth while avoiding the sensor portion.

NOTE:

- **DO NOT** place the sensor in the vise to avoid damage.
- **Firmly secure the pedal to prevent it from moving.**
- **DO NOT** over tighten the vise.



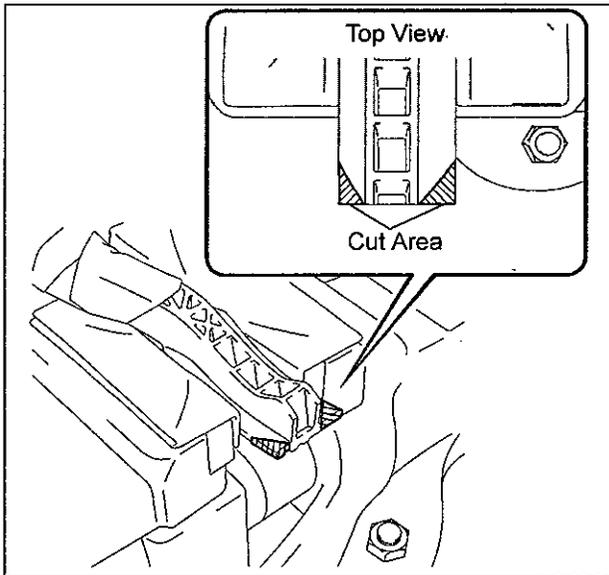
7. CUT THE ACCELERATOR PEDAL

[Click here to watch the video to supplement steps \(7-10\).](#)

- Using a reciprocating saw, cut the lower section of the pedal.

NOTE:

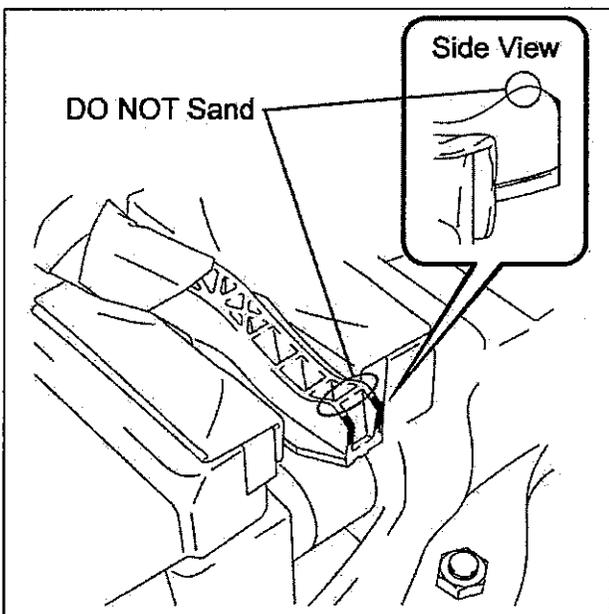
- **Always wear protective eyewear, gloves, and dust mask when cutting.**
- **The cut must be straight and clean.**
- **Apply consistent pressure during cutting.**
- **Do not stop while cutting.**



- b) Using a reciprocating saw, cut the corners of the pedal.

NOTE:

- Always wear protective eyewear, gloves, and dust mask when cutting.
- Each cut must be straight and clean.
- Apply consistent pressure during cutting.
- Do not stop while cutting.

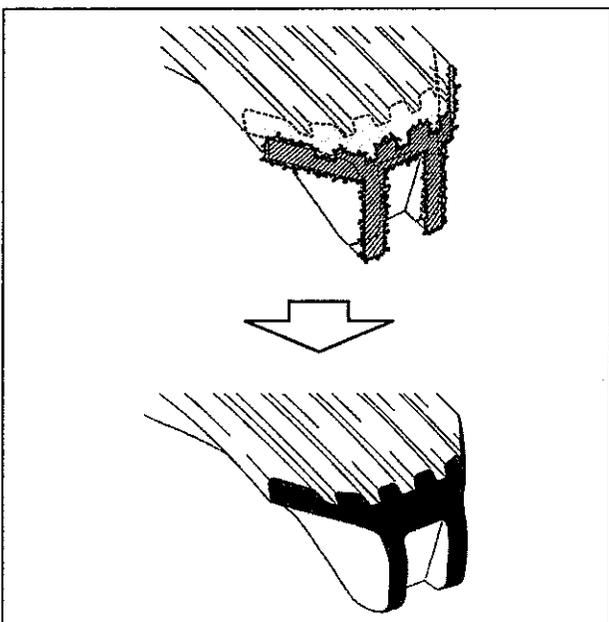


8. SAND THE RADIUS LINE

- a) Using an orbital sander, sand the radius line which was scribed and remove the sharp edges and burrs.

NOTE:

- Always wear protective eyewear, gloves, and dust mask when sanding.
- DO NOT sand the back of the pedal arm.

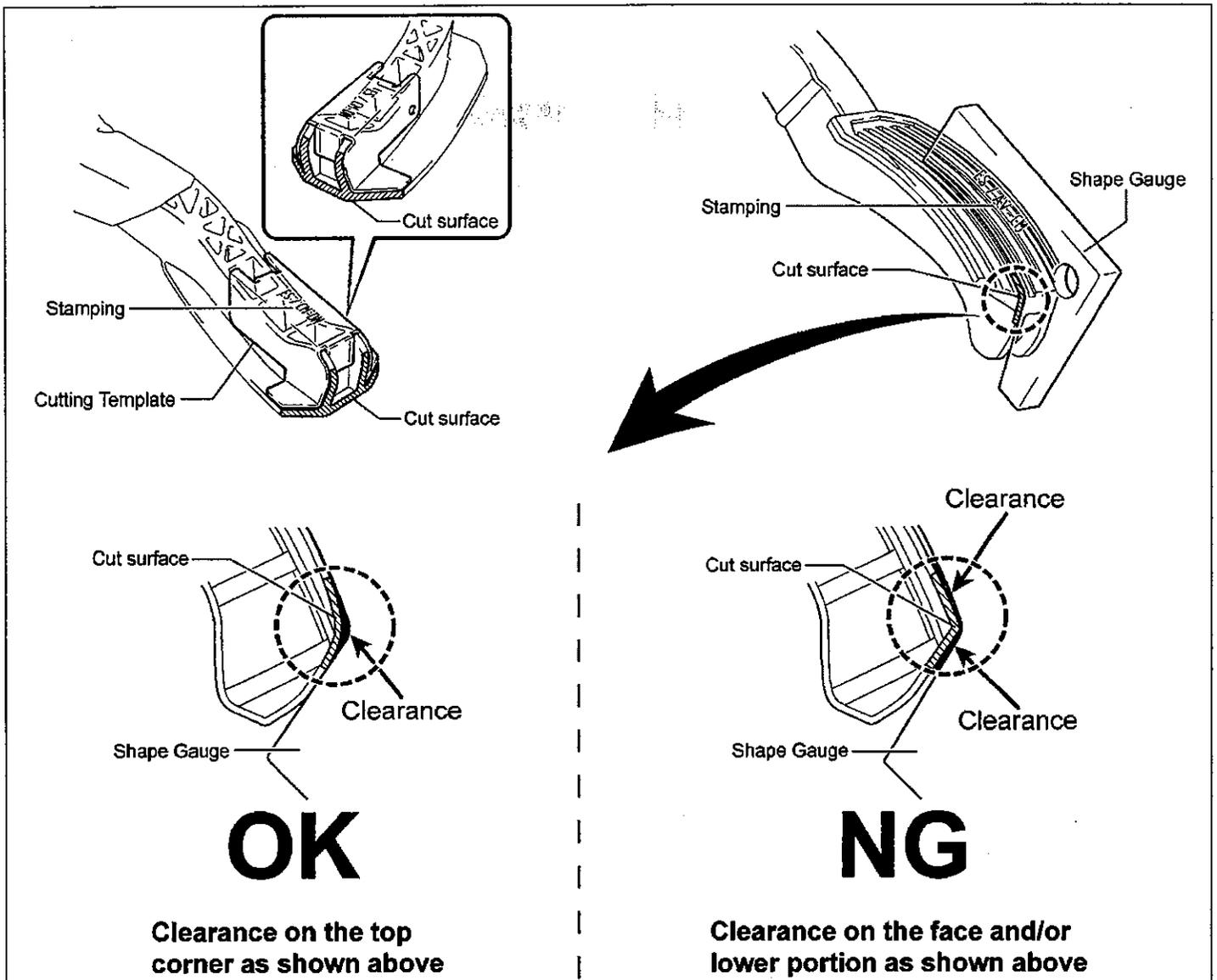


9. REMOVE ALL BURRS FROM THE CUTTING SURFACE

- a) Remove the pedal from the vise.
 b) Turn the pedal over and set the pedal in the vise using a shop cloth while avoiding the sensor.
 c) Using an orbital sander and file, remove all burrs from the cutting surface. The cut edges along the foot pad should be rounded and not square.
 d) Finish the cut surface and all edges with 400 grit sandpaper.

NOTE:

- Always wear protective eyewear, gloves, and dust mask when sanding or filing.
- DO NOT place the sensor in the vise to avoid damage.
- Firmly secure the pedal to prevent it from moving.
- DO NOT over tighten the vise.



10. CHECK THE SHAPE OF THE PEDAL

- a) Using the correct cutting template and shape gauge, check the shape of the pedal.

Cutting Template

Color: Silver,
Stamping: ES / CM-DN

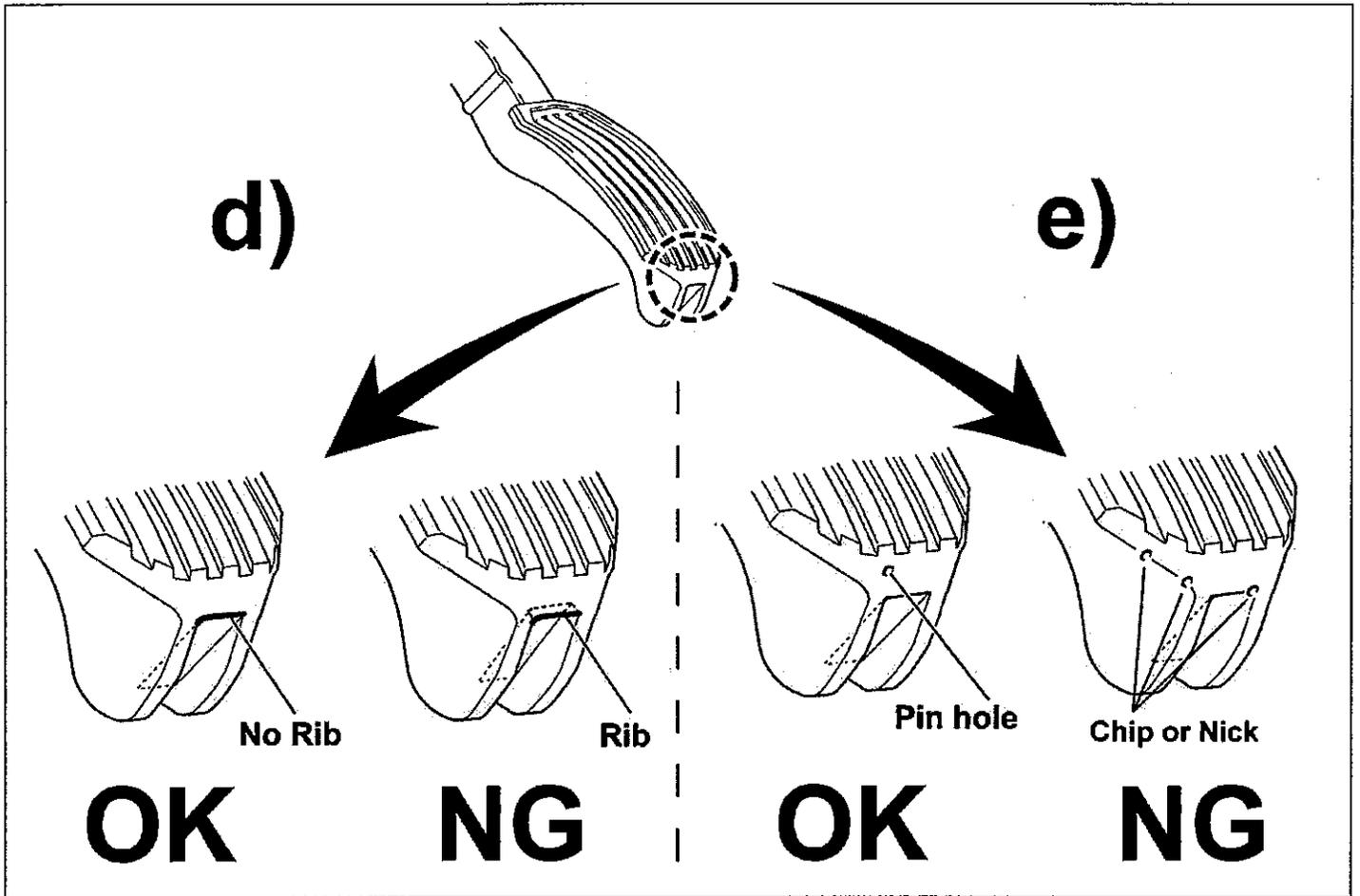
Shape Gauge

Color: Silver
Stamping: ES / AV-CM

- b) If the shape does NOT match the template and or gauge, continue filing.
- c) If the shape matches the template and gauge, touch the cut surface with your hand to verify it is smooth and free of burrs.

NOTE:

- Always wear protective eyewear, gloves, and dust mask when sanding or filing.
- A tolerance of -1.0 mm is permissible between the final cut surface and the template.



d) Check for a rib as shown. If there is a rib, file it until it is gone.

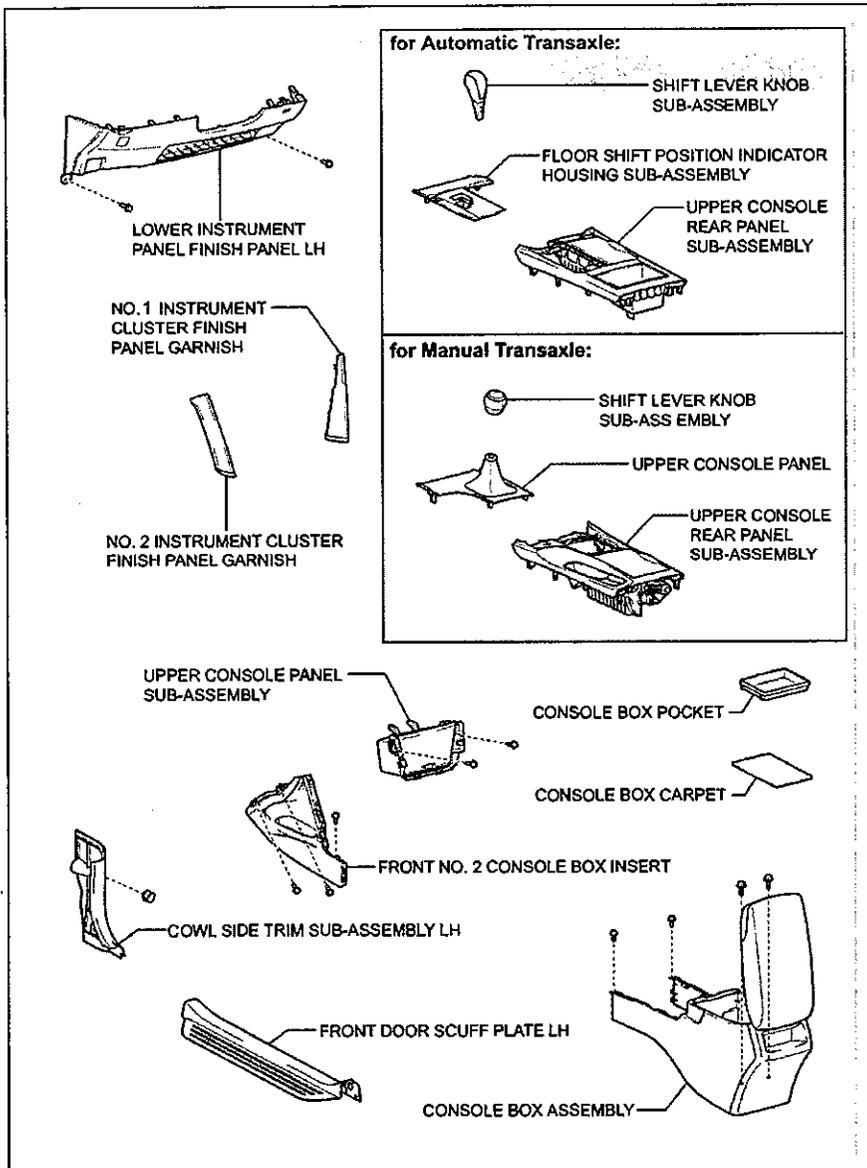
e) Check for any chips, nicks or sharp edges on the finished surface edge. If there are any chips, nicks or sharp edges file them to make them smooth.

f) DENSO accelerator pedal modification is now complete.

NOTE:

The key point of judgment is a "smooth pedal surface".

E. FLOOR CARPET MODIFICATION

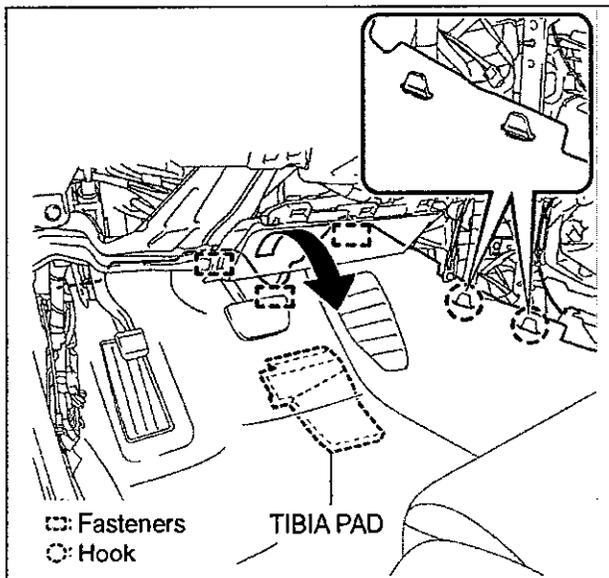


1. REMOVE THE FOLLOWING COMPONENTS

Click here to watch the video to supplement steps (1-6).

- Front door scuff plate LH
- Cowl side trim sub-assembly LH
- Lower instrument panel finish panel LH
- Shift lever knob sub-assembly
- No. 1 instrument cluster finish panel garnish
- No. 2 instrument cluster finish panel garnish
- Floor shift position indicator housing sub-assembly (*automatic transmission ONLY*)
- Upper console panel (*manual transmission ONLY*)
- Upper console rear panel sub-assembly
- Upper console panel sub-assembly
- Console box pocket
- Console box carpet
- Console box assembly
- Front No. 2 console box insert

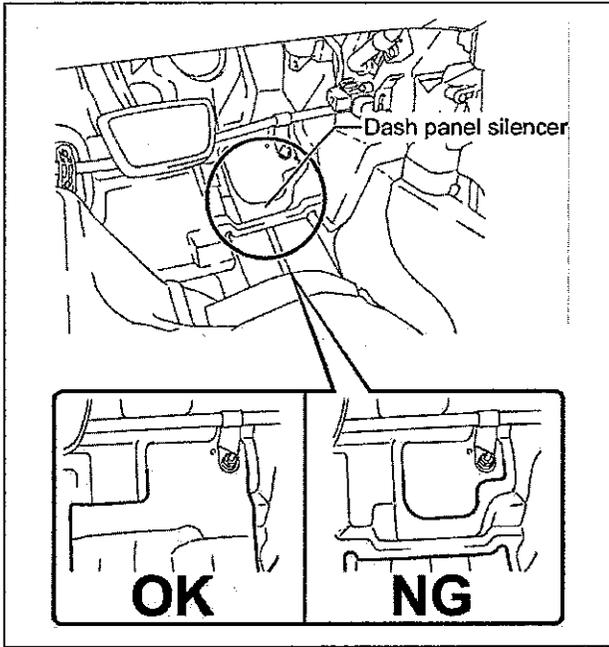
NOTE
For additional information on removal of the components above, please refer to TIS.



2. PULL BACK THE FLOOR CARPET

- Disengage the 3 fasteners.
- Disengage the floor carpet from the 2 hooks and pull it back as illustrated.

NOTE:
There are some vehicles with a hole, two holes or no hole in the floor carpet for a hook.

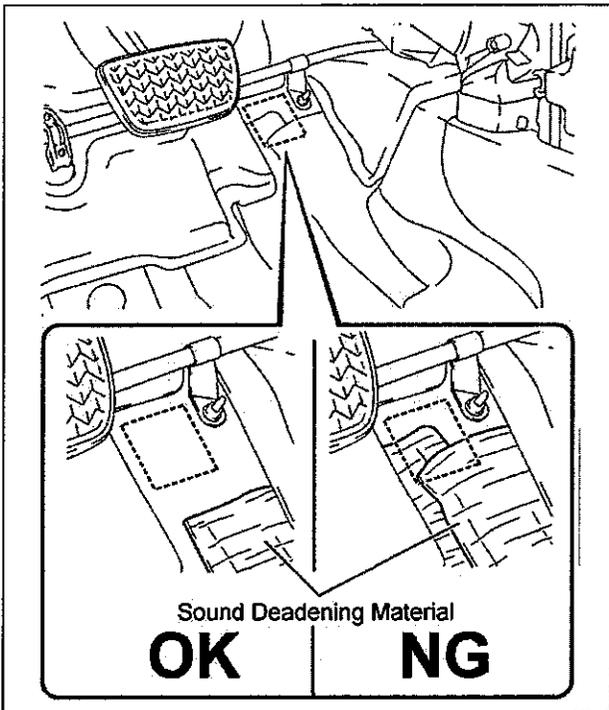


3. INSPECT THE LOWER PORTION OF THE FABRIC FLOOR SILENCING MATERIAL

- a) Inspect the lower portion of the fabric floor silencing material.
 - If OK, proceed to step 4 "RUBBER PAD APPLICATION" below.
 - If NG, please refer to APPENDIX "B" for "CUT THE FLOOR SILENCING MATERIAL"

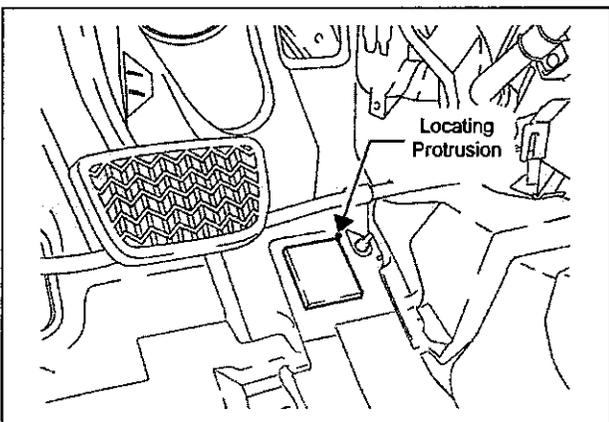
NOTE:

The fabric floor silencing material is a soft, gray, paper-like material beneath the carpet.

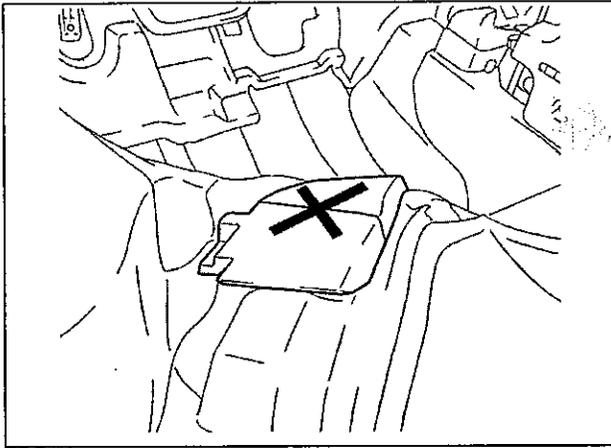


4. RUBBER PAD APPLICATION

- a) Inspect the rubber pad application area for sound deadening material.
 - If OK (no sound deadening material in pad application area), proceed to step "b" below.
 - If NG (sound deadening material found in application area), please refer to APPENDIX "C" for "REMOVE THE SOUND DEADENING MATERIAL".



- b) Clean and degrease the rubber pad application area.
- c) Peel the double sided tape cover off the **NEW** rubber pad.
- d) Apply the rubber pad to the floor pan. The upper right corner of the rubber pad needs to be positioned next to the locating protrusion.

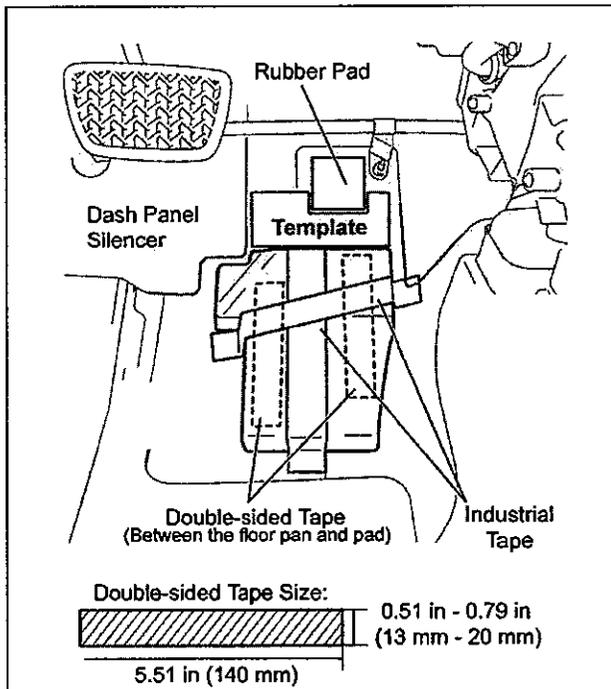


5. REMOVE THE TIBIA PADS

- a) Place an "X" mark on the tibia pads before removing. This will prevent them from being mixed up with the new pads.
- b) Using a hair dryer or a low temperature heat gun, warm up the carpet side of the 2 tibia pads until the adhesive is loose. This will make it easier to remove the 2 tibia pads from the carpet. **Pay close attention when using the hair dryer or low temperature heat gun to prevent damage to the carpet.**
- c) Remove the tibia pads. **CAUTION: DO NOT** forcefully pull the pads. Doing so may damage the carpet. If necessary, re-heat the carpet to make the adhesive more pliable.



Carefully take the time to understand Step 6 (Next step). It is necessary to correctly complete this procedure to prevent the tibia pads from slipping.

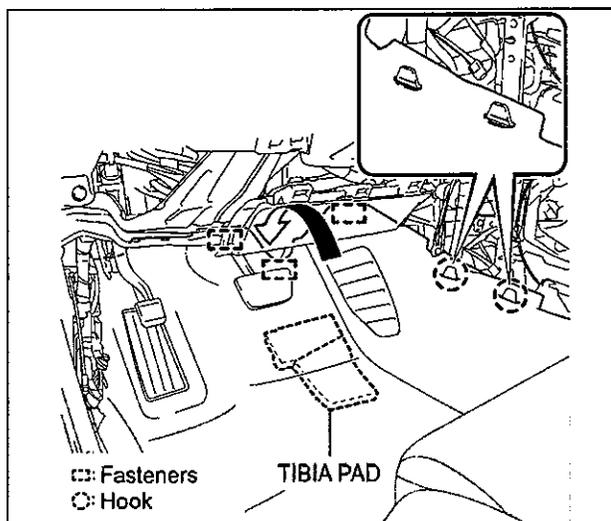


6. INSTALL THE NEW TIBIA PAD

- a) Apply double sided tape to the bottom (floor pan side) of the tibia pad.
- b) Using the Tibia Pad Placement Template as a guide (Template is located in the Appendix), position and apply the **NEW** Tibia pad to the floor pan.
- c) Remove template.
- d) Apply a piece of industrial adhesive tape from the top to the bottom of the tibia pad.
- e) Apply a second piece of industrial adhesive tape from the left to the right side of the tibia pad.

NOTE:

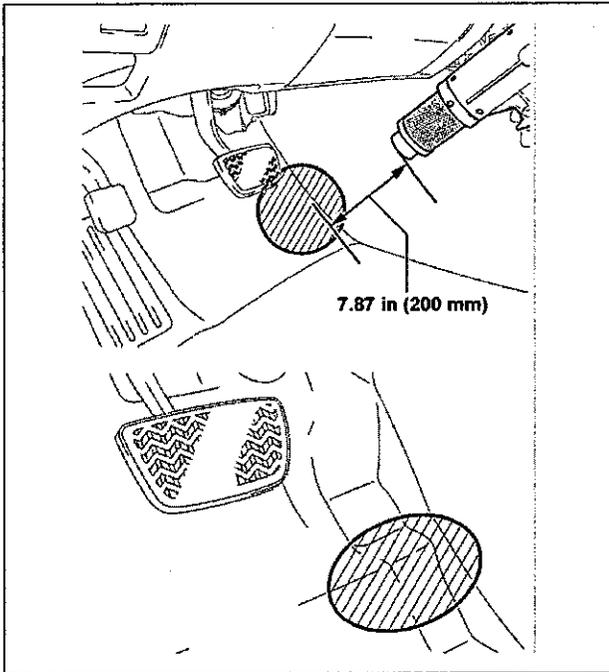
- Both pieces of industrial adhesive tape should have a good contact surface to the floor pan.
- Angle the industrial adhesive tape running left to right to ensure that both tibia pads are covered.



- e) Place the floor carpet back into position and engage the 2 hooks as shown in the illustration.
- f) Engage the 3 fasteners.

NOTE:

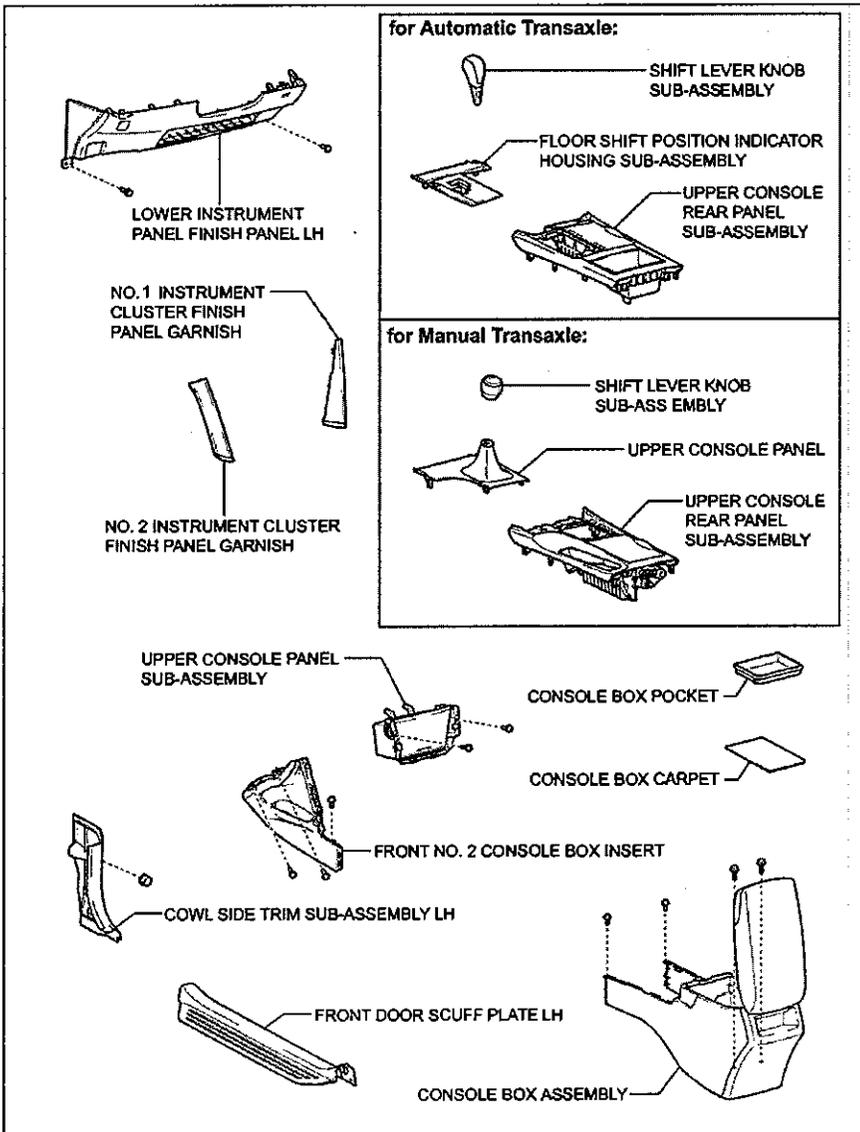
- Be careful not to detach the tibia pads when placing the carpet back into position.
- There are some vehicles with a hole, two holes or no hole in the floor carpet for a hook. For the vehicles with a hole(s), please be certain to install the hook to the hole(s). If the vehicle has no hole in the floor carpet for a hook, please reset the floor carpet to the original position.



- g) Heat the floor carpet area for 2 minutes as shown and smooth it out by pushing it with your hand. Heat the same area again for another minute, and smooth the carpet firmly.

NOTE:

- Always wear protective gloves when heating the floor carpet.
- Keep the hair dryer/ low temperature heat gun more than 8 inches (20 cm) away from the floor carpet, and stop after 1 or 2 minute intervals. Continuous heating of the floor carpet may cause damage.
- **DO NOT** leave hair drier or low temperature heat gun inside the vehicle when it is hot, to prevent unintended heat damage to interior parts.



7. REINSTALL THE FOLLOWING COMPONENTS

- Front No. 2 console box insert
- Console box assembly
- Console box carpet
- Console box pocket
- Upper console panel sub-assembly
- Upper console rear panel sub-assembly
- Upper console panel (*manual transmission ONLY*)
- Floor shift position indicator housing sub-assembly (*automatic transmission ONLY*)
- No. 2 instrument cluster finish panel garnish
- No. 1 instrument cluster finish panel garnish
- Shift lever knob sub-assembly
- Lower instrument panel finish panel LH
- Cowl side trim sub-assembly LH
- Front door scuff plate LH

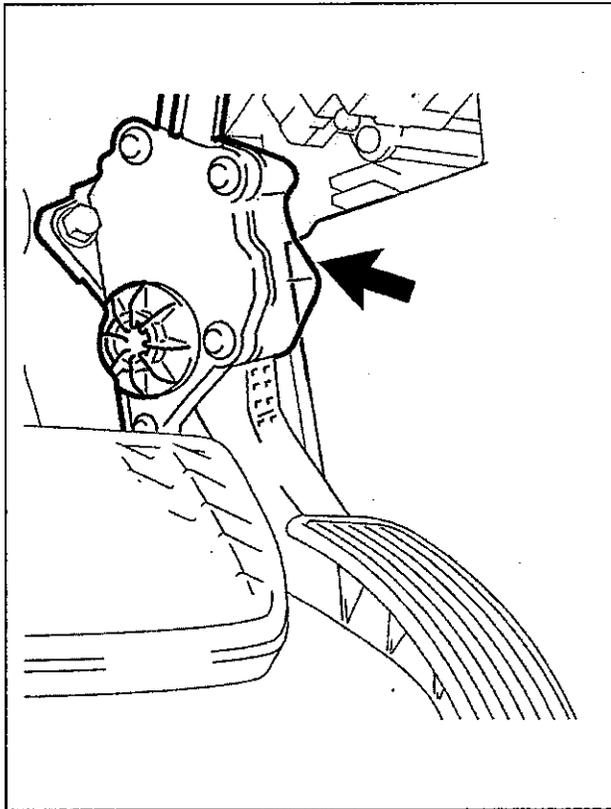
NOTE

For additional information on installation of the components above, please refer to TIS.

F. REINSTALL THE ACCELERATOR PEDAL ASSEMBLY

STOP

Ensure the correct pedal and bolts are being reinstalled in the vehicle from which it was removed.



1. REINSTALL THE ACCELERATOR PEDAL ASSEMBLY

Click [here](#) to watch the video to supplement steps (1-8).

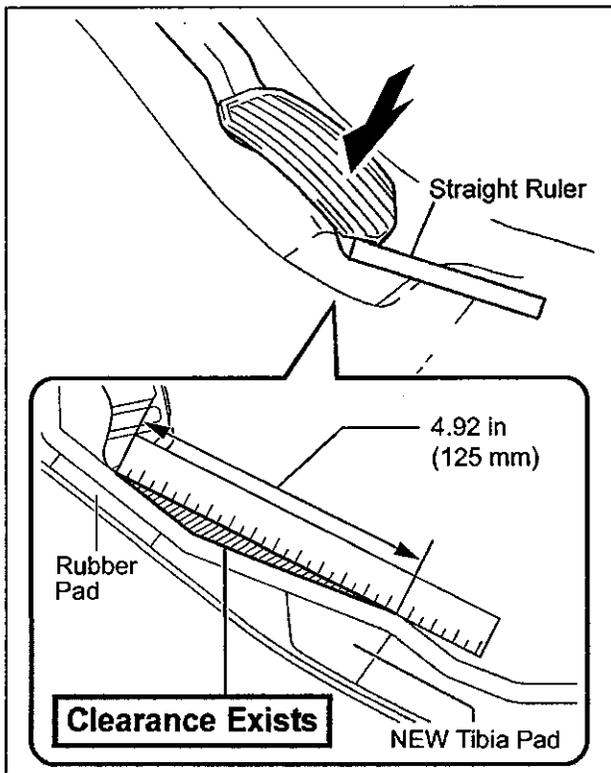
- Remove and discard the masking tape and bubble wrap from the accelerator pedal assembly, while it is inside the vehicle.
- Reinstall the pedal with the 2 bolts and torque to specification.

Torque Specification:
5.4 Nm (55 kgf cm, 48 in. lbf)

- Reconnect the accelerator pedal connector.
- Confirm the corner of the carpet is behind the accelerator pedal assembly as shown.
- Reconnect the negative battery cable.
- Set the clock and radio station presets.
- Reinitialize the vehicle system(s) as outlined in the repair manual on TIS for the vehicle you are working on.

NOTE

- DO NOT** reuse the bubble wrap.
- For additional information on accelerator pedal installation, please refer to TIS.



2. INSPECT THE FLOOR CARPET

- With the accelerator pedal fully depressed, confirm clearance exists between the floor carpet and the straight ruler as shown.
- If no clearance exists, reshape the carpet again.
- Confirm the claw and all fasteners of the floor carpet are securely attached.

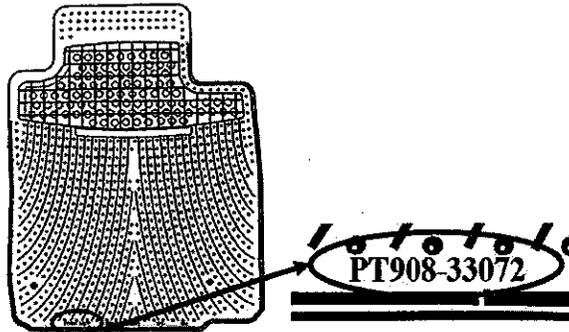
3. INSPECT ACCELERATOR PEDAL OPERATION

- a) Inspect the carpet and floor mat and clean them as appropriate.
- b) Confirm the correct floor mat for this model is secured with the retaining hooks (clips).
 - If the grommets in the floor for the vehicle are in poor condition, refer to the appropriate TSB and repair the grommets.

NOTE:

- If a Recalled All Weather Floor Mat (AWFM) has been identified, remove the AWFM from the vehicle and **CUT THE RECALLED AWFM SO THAT IT CANNOT BE REUSED.**
- You may remove the semi-permanent installation plastic straps for the carpeted floor mat once the repair is completed.

Locate the ten digit floor mat part number on the bottom of the back side of the mat as illustrated below. PLEASE NOTE, the floor mat part numbers are 12 digits but only the first ten are shown.



For Carpeted Floor Mats:

Utilizing the ten digit part number and the chart below, confirm the vehicle has the correct carpeted floor mat.

Part Number	Model	Type	07	08	09	10	Color
PT206-32060-11	Camry / Camry Hybrid	Carpeted	x	x	x	x	Ash
PT206-32060-12	Camry / Camry Hybrid	Carpeted	x	x	x	x	Dk Charcoal
PT206-32060-14	Camry / Camry Hybrid	Carpeted	x	x	x	x	Bisque
PT206-32078-40	Camry Hybrid	Carpeted	x				Bisque
PT206-32100-12	Camry / Camry Hybrid	Carpeted				x	Gray
PT206-32100-45	Camry / Camry Hybrid	Carpeted				x	Brown

For All Weather Floor Mats (AWFM):

Utilizing the ten digit part number and the chart below, confirm the vehicle has the newly designed AWFM.

Part Number	Model	Type	07	08	09	10	Color
PT908-0310W-02	Camry	All Weather	x	x	x	x	Black
PT908-0310W-14	Camry	All Weather	x	x	x	x	Brown

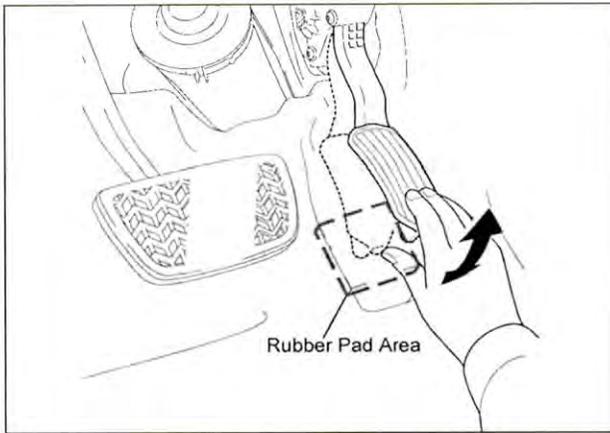
NOTE:

The part numbers listed above are for the 2 piece (driver & front passenger) campaign set ONLY.

DO NOT use the recalled AWFM listed below. These AWFM must be removed from the vehicle and recovered by the dealer.

Part Number	Model	Type	07	08	09	10	Color
PT908-03071-02	Camry - Do not use	All Weather	x	x	x	x	Black
PT908-03071-14	Camry - Do not use	All Weather	x	x	x	x	Brown
PT908-0307F-02	Camry - Do not use	All Weather	x	x			Black
PT908-0307F-14	Camry - Do not use	All Weather	x	x			Brown
PT908-32070-02	Camry - Do not use	All Weather	x				Black
PT908-32070-14	Camry - Do not use	All Weather	x				Brown

All recalled AWFM will be placed on Warranty Parts Recovery, and dealers will be required to return them to TMS. AWFM that are not returned will result in the claim being debited.



- c) Confirm the pedal does not get caught on the floor or floor mat during operation.
- d) Confirm the pedal operates properly.
- e) Confirm that the bottom of the pedal contacts the rubber pad area when the accelerator pedal is fully depressed.

4. INSPECT THE ACCELERATOR PEDAL ASSEMBLY OPERATION

- a) Connect Techstream to the DLC3.
- b) Enter the following menus:
 - For Camry: Powertrain / Engine and ECT / Data List.
 - For Camry HV: Powertrain / Hybrid Control / Data List.
- c) Check the values by referring to the table below.

Tester Display	Measurement:	Normal Condition
Accel Sens. No.1 Volt %	Accelerator pedal position sensor No. 1	Accelerator Pedal Released: 10% - 25%
		Accelerator Pedal Fully Depressed: 60% - 90%
Accel Sens. No.2 Volt %	Accelerator pedal position sensor No. 2	Accelerator Pedal Released: 20% - 45%
		Accelerator Pedal Fully Depressed: 80% - 100%

AZ/AR Engine	Current CID	New CID
2007-2009 Model Year AZ AT/PZEV	333A7200	333A7300
	333A7100	
	333A7000	
	33368100	
	33368000	
2007-2009 Model Year AZ AT/ULEV	333A5200	333A5300
	333A5100	
	333A5000	
	33366100	
	33366000	
2007-2009 Model Year AZ MT/ULEV	333A6100	333A6200
	333A6000	
	33367000	
2010 Model Year AR AT/PZEV	333B6000	333B6100
2010 Model Year AR AT/ULEV	333B5000	333B5100
2010 Model Year AR MT/ULEV	30669000	30669100

5. REFLASH THE ECM

- a) Reflash the ECM with the **NEW** Override System software following TSIB SS002-07.
- b) For Calibration ID, please refer to the table on the left.

NOTE:

ECM reflashing on the Camry HV is NOT required. The Camry HV has a motor protection feature that operates in the same manner as the Override System software.

GR Engine	Current CID	New CID
2007 Model Year GR	33334100	33334200
	33334000	
2008-2009 Model Year GR	333A8100	333A8200
	333A8000	
2010 Model Year GR	333B8000	333B8100

