

TECHNICAL INSTRUCTIONS

FOR

SAFETY RECALL 90L

ACCELERATOR PEDAL MODIFICATION

2003 – Certain 2009 MODEL YEAR 4RUNNER

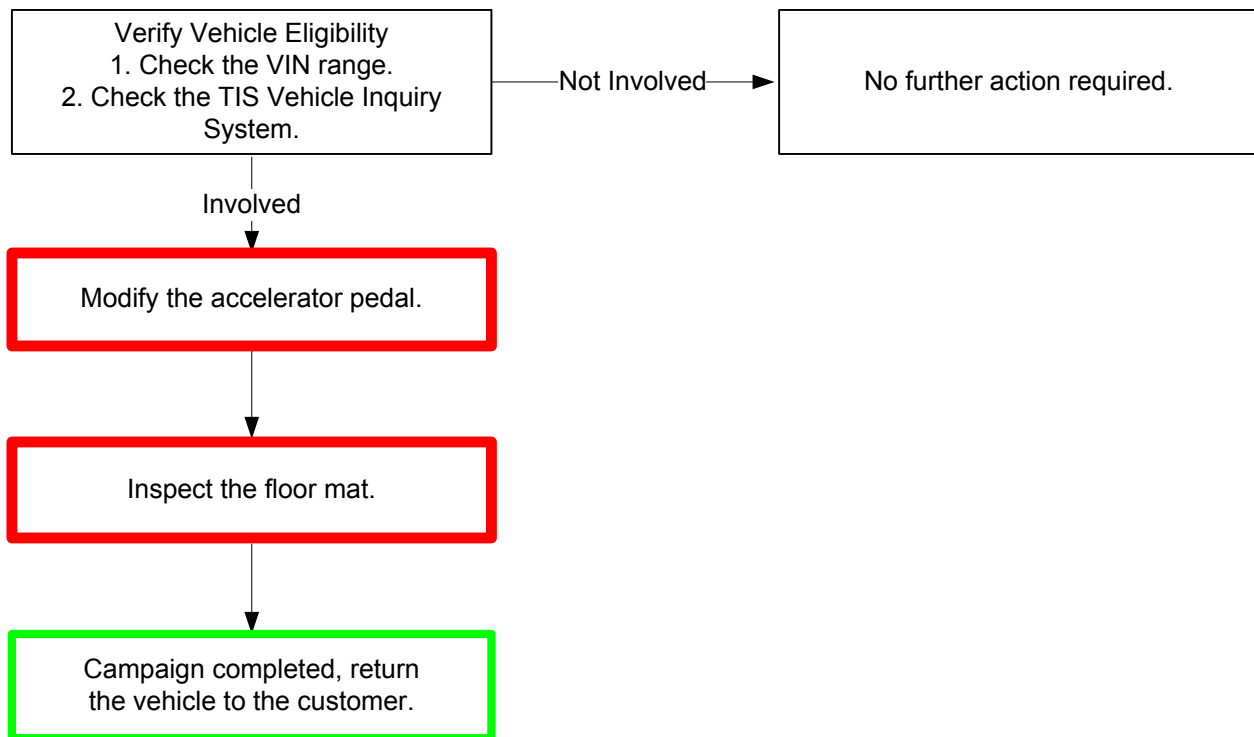
REVISED APRIL 1, 2011

TECHNICAL INSTRUCTION REVISION NOTICE:

- Information has been updated for AWFM. ([SECTION V, STEP A, #10](#))

Previous versions of these Technical Instructions should be discarded.

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

A. AFFECTED VIN RANGE

Model	WMI	Year	VIN Range	
			VDS	Range
4Runner	JTE	2003	BT14R	0001001 – 0027987
				8000002 – 8008446
			BT17R	0001002 – 0027988
				8000001 – 8008445
			BU14R	0001011 – 0020655
				8000008 – 8011066
			BU17R	0001001 – 0020650
				8000006 – 8011067
			ZT14R	0001002 – 0013961
				8000002 – 8002921
			ZT17R	0001001 – 0013960
				8000001 – 8002914
		2004	ZU14R	0001001 – 0017585
				8000001 – 8009335
			ZU17R	0001010 – 0017583
				8000000 – 8009332
			BT14R	0027993 – 0045577
				8008448 – 8018438
			BT17R	0024699 – 0045578
				8008377 – 8018439
			BU14R	0020656 – 0055678
				8011068 – 8028634
			BU17R	0020664 – 0055674
				8011070 – 8028630
		2005	ZT14R	0013962 – 0019929
				8002923 – 8005474
			ZT17R	0013964 – 0019903
				8002922 – 8005460
			ZU14R	0017586 – 0043433
				8009233 – 8023058
			ZU17R	0017591 – 0043423
				8009342 – 8023057
			BT14R	0045579 – 0057703
				8018440 – 8028797
			BT17R	0045581 – 0057702
				8018363 – 8028795
		2006	BU14R	0055680 – 0078573
				8028317 – 8052039
			BU17R	0054626 – 0078555
				8028641 – 8052032
			ZT14R	0019931 – 0024360
				8005442 – 8008272
			ZT17R	0019893 – 0024354
				8005476 – 8008271
		2007	ZU14R	0043434 – 0063954
				8023059 – 8041023
		2008	ZU17R	0043441 – 0063943
				8023068 – 8041004

AFFECTED VIN RANGE CONTINUED...

Model	WMI	Year	VIN Range	
			VDS	Range
4Runner	JTE	2006	BT14R	0057704 – 0064970
				8025215 – 8037731
			BT17R	0052901 – 0064969
				8028800 – 8037730
			BU14R	0078574 – 0105502
				8052040 – 8076761
			BU17R	0078576 – 0105498
				8051301 – 8076759
			ZT14R	0024363 – 0027476
				8008273 – 8010764
			ZT17R	0024378 – 0027474
				8008274 – 8010763
			ZU14R	0063955 – 0083732
				8041024 – 8065628
			ZU17R	0063956 – 0083729
				8041027 – 8065611
		2007	BT14R	0064981 – 0068708
				8037737 – 8043478
			BT17R	0064972 – 0068710
				8037746 – 8043481
			BU14R	0105504 – 0128700
				8076763 – 8107416
			BU17R	0105503 – 0128690
				8076077 – 8107412
			ZT14R	0027486 – 0029364
				8010765 – 8012348
			ZT17R	0027558 – 0029360
				8010768 – 8012347
			ZU14R	0083733 – 0098487
				8065165 – 8091957
			ZU17R	0082918 – 0098485
				8065658 – 8091956

AFFECTED VIN RANGE CONTINUED...

Model	WMI	Year	VIN Range	
			VDS	Range
4Runner	JTE	2008	BT14R	0068712 – 0069543
				8043483 – 8043931
				K001001 – K006778
			BT17R	0068711 – 0069539
				8043482 – 8043933
				K001002 – K006779
			BU14R	0128702 – 0132699
				8107418 – 8108989
				K001001 – K035458
			BU17R	0128701 – 0132692
				8107417 – 8108988
				K001003 – K035456
			ZT14R	0029372 – 0029565
				8012351 – 8012351
				K001001 – K001633
			ZT17R	0029373 – 0029546
				8012349 – 8012394
				K001002 – K001634
			ZU14R	0098488 – 0101911
				8091160 – 8093257
				K001001 – K023191
			ZU17R	0098493 – 0101909
				8091965 – 8093250
				K001006 – K023189
		2009	BT14R	K006789 – K007095
			BT17R	K006780 – K007091
			BU14R	K026839 – K041367
			BU17R	K035470 – K041364
			ZT14R	K001635 – K001681
			ZT17R	K001651 – K001678
			ZU14R	K023192 – K026864
			ZU17R	K023360 – K026863

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

- No parts are required for this activity.

B. TOOLS & EQUIPMENT

- Dust mask
- Hack saw
- Hand file
- 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 were provided to each dealership during Phase 1 of this Safety Recall.

C. ACCELERATOR PEDAL TEMPLATE & GAUGE

 The Tacoma Template and Shape Gauge will be used to modify the 4Runner accelerator pedal	
Cutting Template (Color: RED)	Shape Gauge (Color: RED)
	

NOTE:

- Cutting templates and shape gauges were provided to each dealership during phase 9 of this Safety Recall.
- If additional cutting templates and shape gauges are needed, contact your regional representative.

D. MATERIALS

- Bubble wrap
- Masking tape
- Sandpaper 400 grit
- Shop cloth

IV. BACKGROUND

The defect is 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. A stuck open accelerator pedal may result in very high vehicle speeds and make it difficult to stop the vehicle, which could cause a crash, serious injury or death.

Toyota has determined that this defect does not exist in vehicles in which the driver's side floor mat is compatible with the vehicle and properly secured.

To make it less likely that an unsecured or incompatible driver's floor mat can interfere with the accelerator pedal, dealerships are requested to do the following:

- Modify the rigid plastic accelerator pedal (floor surface modification is not necessary on 4Runner vehicles).
- If the vehicle is equipped with a set of optional genuine Toyota All Weather Floor Mats (AWFM), it must be inspected to determine if the AWFM set is of an older design. If it is, the older design AWFM's for the driver and the front seat passenger positions will be replaced with newly designed mats. Newly designed AWFM's will not be available until late April 2011. Owner letters will be sent once AWFM's are available.
- Before the vehicle is returned to the customer, inspect the front carpet and floor mat and clean them as appropriate.

V. WORK PROCEDURE



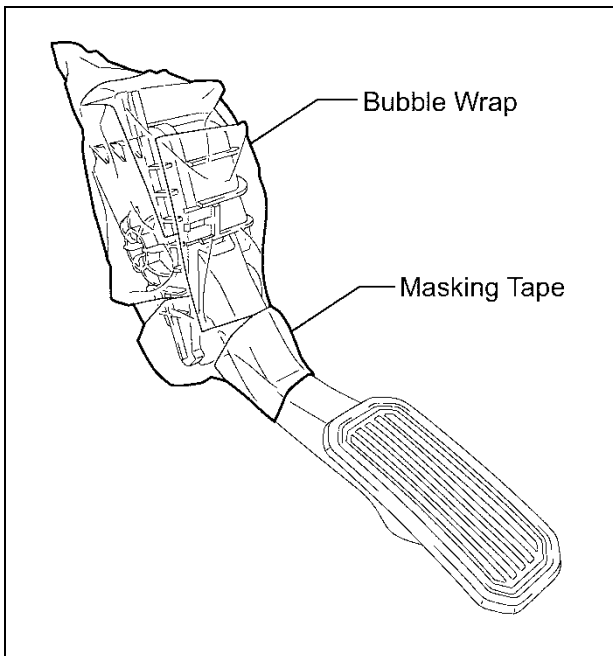
ACCELERATOR PEDAL HANDLING NOTES:

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

A. ACCELERATOR PEDAL MODIFICATION

All of the videos contained in these instructions were originally created for 90L Phase 9 (Tacoma), refer to these videos when performing 90L Phase 10 (4Runner).

[CLICK HERE TO WATCH THE VIDEO BEFORE BEGINNING THE WORK PROCEDURE](#)



1. REMOVE THE ACCELERATOR PEDAL ASSEMBLY

[Click here to watch the video to supplement this step](#)

- Record the radio station preset.
- Disconnect the negative battery cable and wait 90 seconds.
- Disconnect the accelerator pedal connector.
- Remove the 2 nuts.
- While still inside the vehicle, use bubble wrap and masking tape to cover and protect the pedal sensor.

NOTE:

- For additional information on accelerator pedal removal, refer to TIS.
- 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.

2. MARK THE AREA TO BE CUT

[Click here to watch the video to supplement steps 2-3](#)

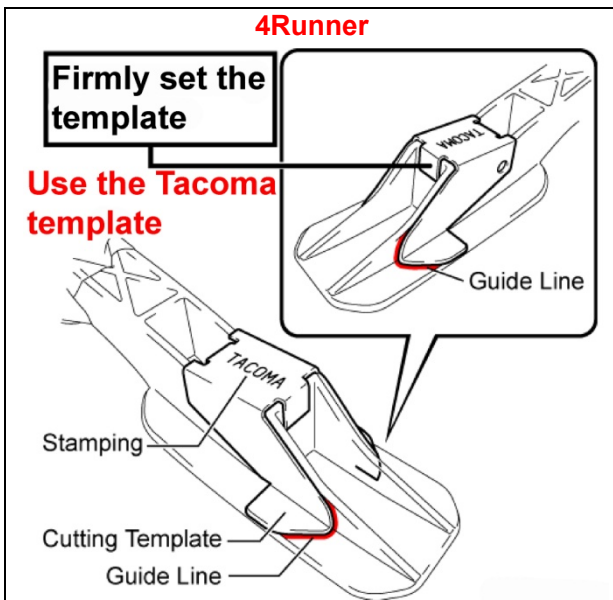
- Firmly set the template to the pedal and scribe guide lines to outline the area to be cut.

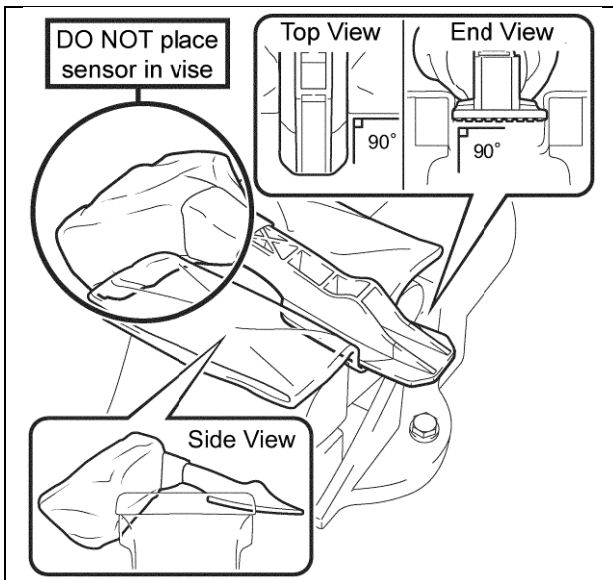
Cutting Template:

- Color: Red
- Stamping: TACOMA (Use for 4Runner)

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.



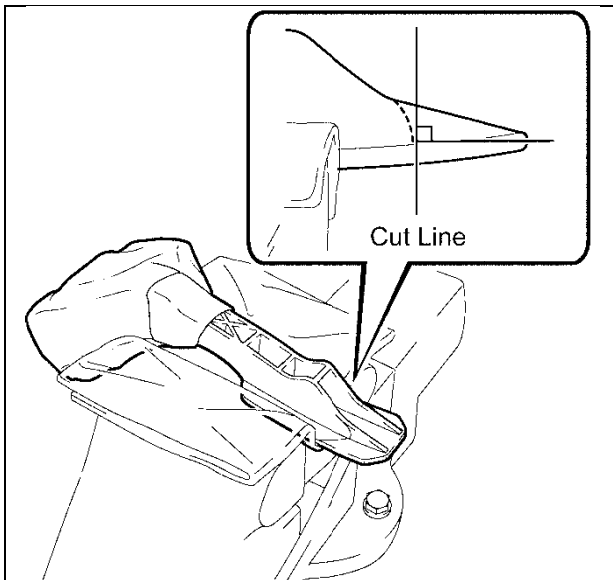


3. SECURE THE ACCELERATOR PEDAL ASSEMBLY

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

NOTE:

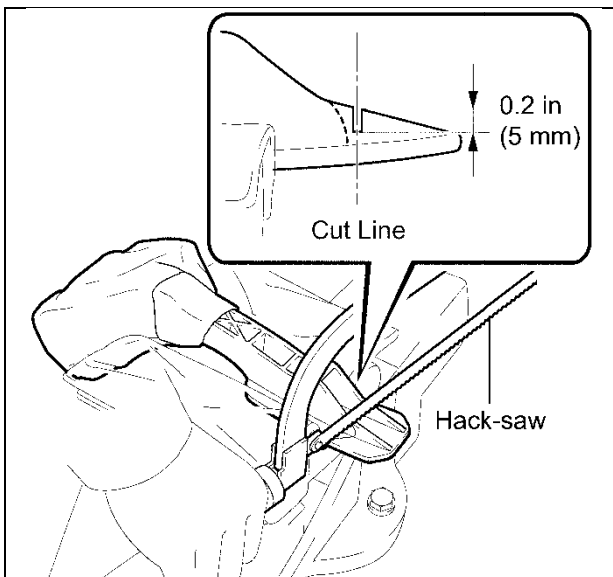
- DO NOT** place the sensor in the vise to avoid damage.
- Firmly secure the pedal to prevent it from moving.**
- DO NOT** over tighten the vise.



4. CUT THE LOWER SECTION OF THE ACCELERATOR PEDAL ASSEMBLY

[Click here to watch the video to supplement steps 4-8](#)

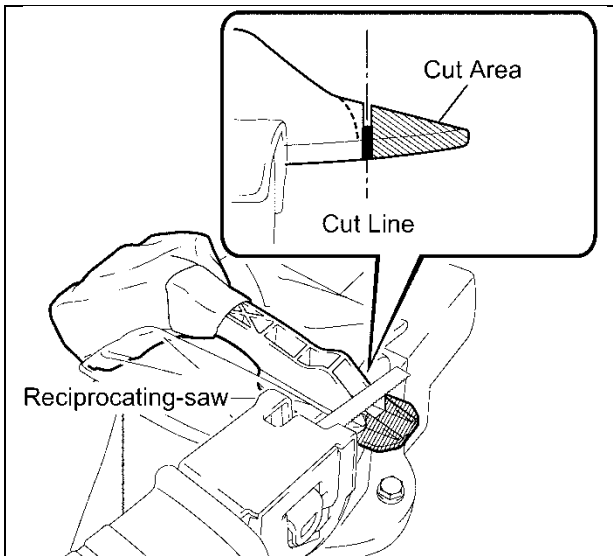
- The cut line is slightly outside from the scribed line and it is positioned 90 degrees from the pedal foot pad as illustrated.



- Using a hack-saw, cut the pedal 0.2 in (5 mm) to create a guide cut for the reciprocating-saw.

NOTE:

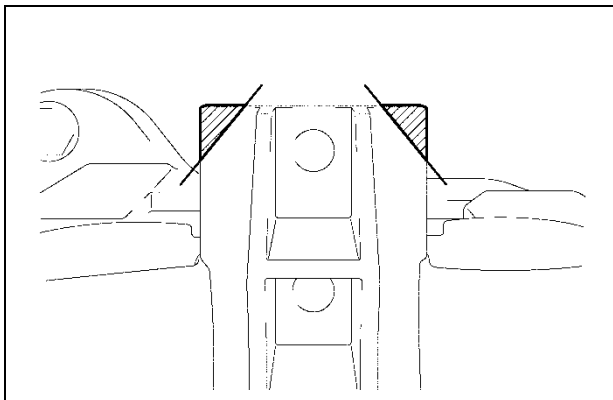
- ALWAYS** wear protective eyewear, gloves, and dusk mask when cutting.
- Guide cut must be straight and clean.**



- c) Using the reciprocating-saw, cut off the lower section of the pedal as illustrated.

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.

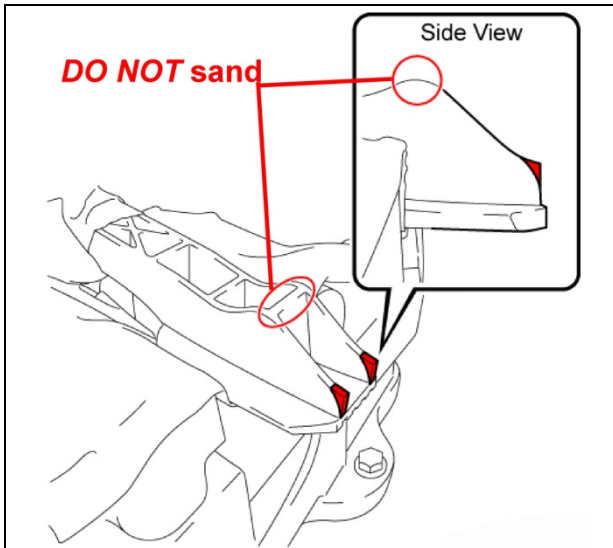


5. CUT THE CORNERS OF THE ACCELERATOR PEDAL ASSEMBLY

- a) Using the reciprocating-saw, cut off the pedal corners as illustrated.

NOTE:

- **ALWAYS** wear protective eyewear, gloves, and dust mask when cutting.
- Guide cut must be straight and clean.
- Apply consistent pressure during cutting.
- **DO NOT** stop while cutting.

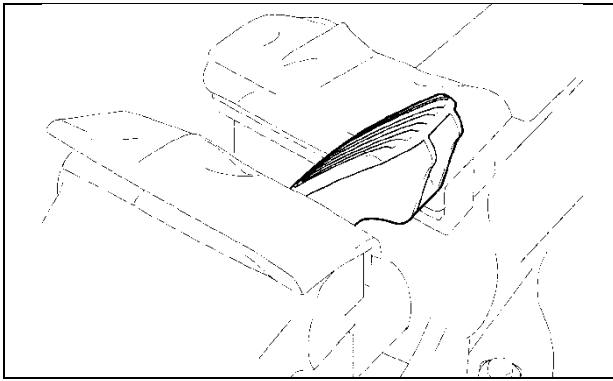


6. SAND THE RADIUS LINE

- 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 as illustrated.



7. REMOVE ALL BURRS FROM THE CUTTING SURFACE

- a) Remove the pedal from the vise.
- b) Turn the pedal over and set it in the vise using a shop cloth while avoiding the sensor.

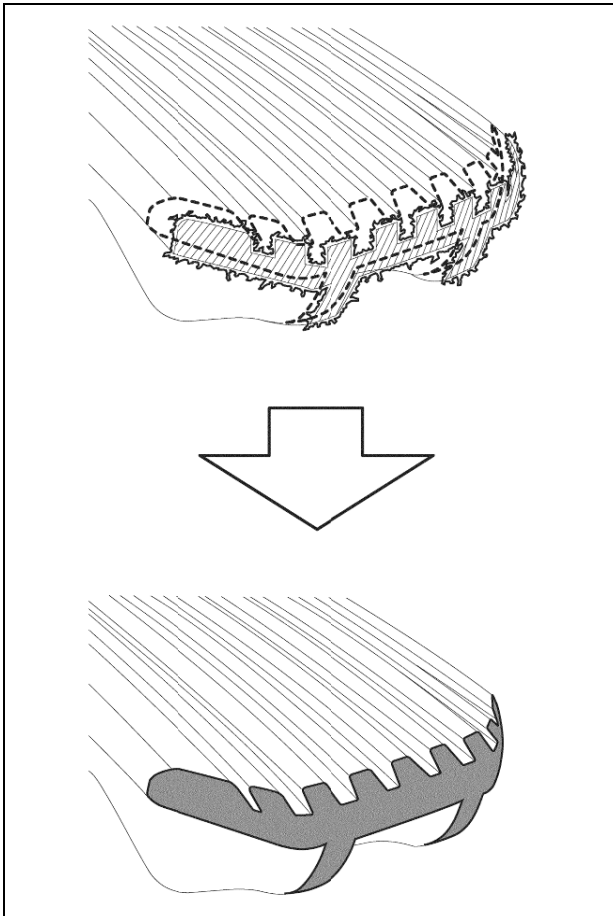
NOTE:

- **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.

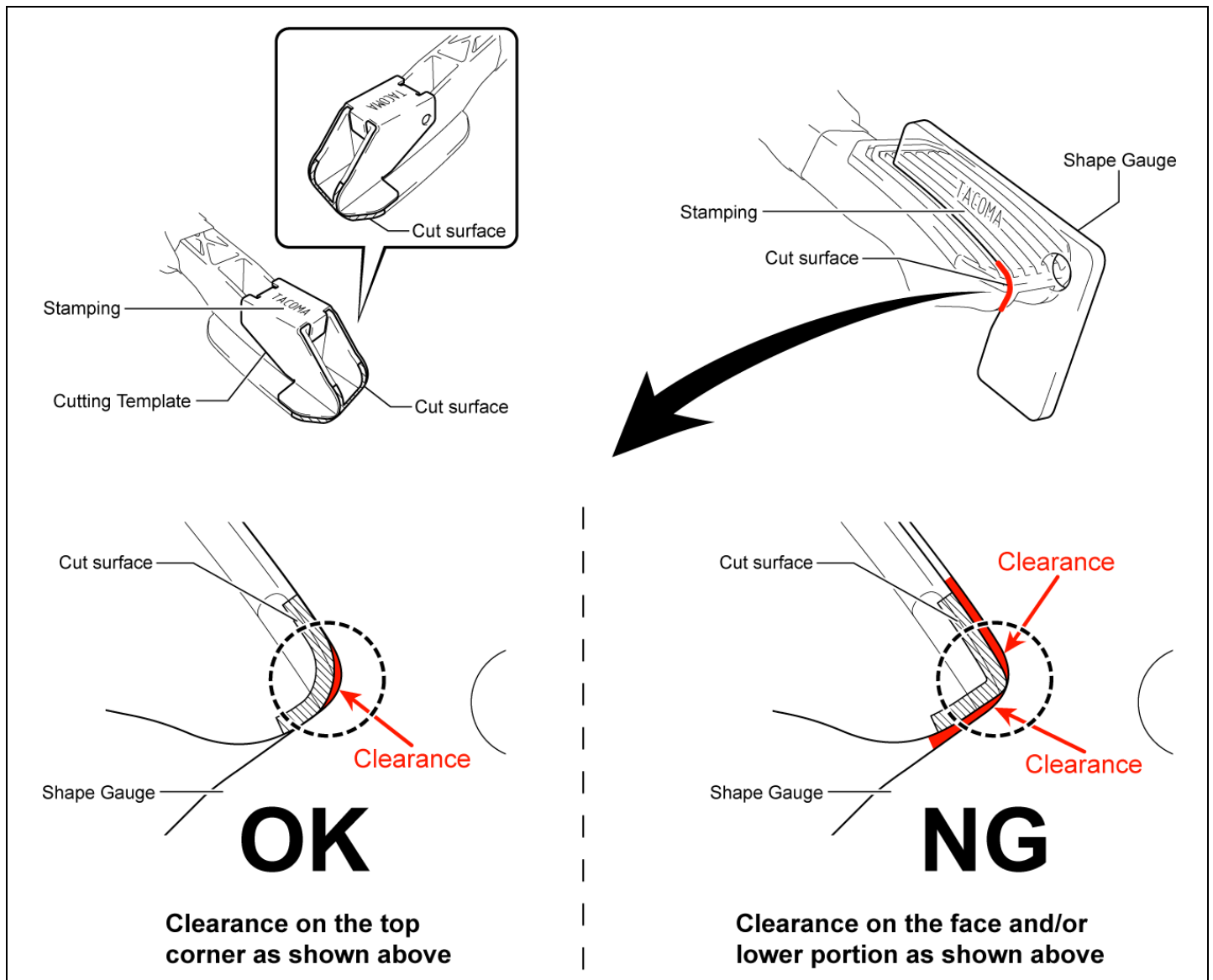
- c) Using an orbital sander and file, remove all burrs from the cutting surface. The cut edges along the foot pad should be rounded and not square.
- d) Finish the cut surface and all edges with 400 grit sandpaper.

NOTE:

ALWAYS wear protective eyewear, gloves, and dust mask when sanding or filing.



Use the Tacoma Template and Shape Gauge for 4Runner



8. CHECK THE SHAPE OF THE PEDAL

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

Cutting Template

Color: Red

Stamping: TACOMA (Use for 4Runner)

Shape Gauge

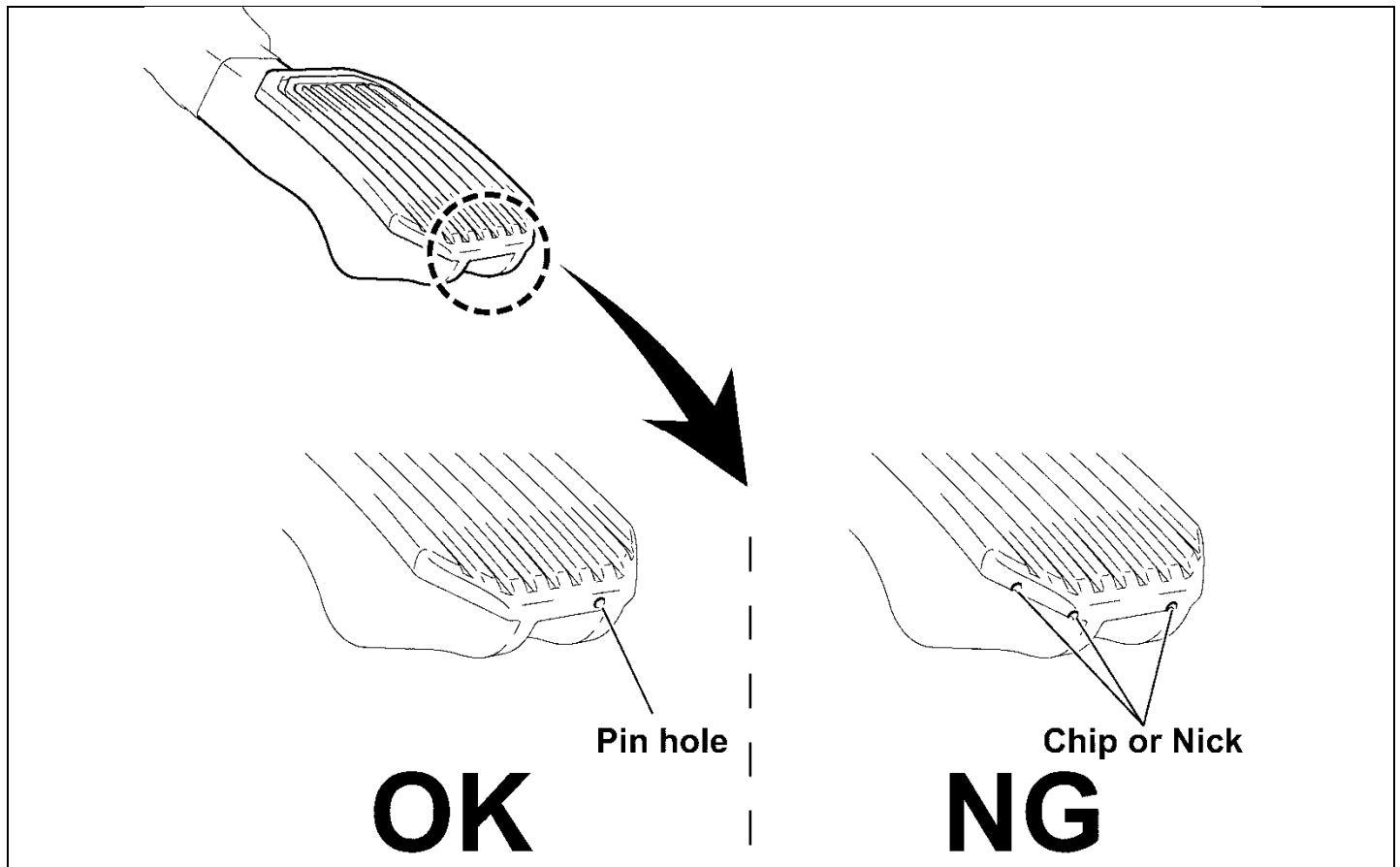
Color: Red

Stamping: TACOMA (Use for 4Runner)

- 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 dusk mask when sanding or filing.
- A tolerance of -1.0 mm is permissible between the final cut surface and the template.



- d) Check for any pin holes, 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.

NOTE:

The key point of judgment is a “**smooth pedal surface**”.

- e) If a “smooth pedal surface” cannot be achieved due to a pinhole / cavity, repair the pedal utilizing the steps below.

Materials Needed:

- KBS Coatings - NuMetal® Epoxy Putty (Black)
Contact: 1-888-531-4527
Website: www.kbs-coatings.com/KBS-NuMetal-Epoxy-Putty_p_9-19.html

OR

- Milliput® Black Epoxy Putty
Website: www.milliput.com/home.htm

Repair Instructions:

- **Make sure to follow all manufacturer directions and cautions when using the Epoxy Putty.**
- Fill in the pin hole/cavity with the Epoxy Putty, and then smooth it out with a wet finger as outlined in the instructions included with the putty.

Notes:

- Make sure to use black Epoxy Putty, both brands listed above are offered in that color.
- Milliput® Black Epoxy Putty is from a UK supplier, and may be difficult to locate in the US. If you should encounter this, please utilize KBS Coatings - NuMetal® Epoxy Putty (Black) that is locally supplied and easier to locate.

9. REINSTALL THE ACCELERATOR PEDAL ASSEMBLY

- With the pedal inside the vehicle, remove and discard the masking tape and bubble wrap from the accelerator pedal assembly.
- Reinstall the pedal with the 2 bolts and torque to specification.
Torque: 5.0 Nm (51 kgf cm, 44 in. lbf)
- Reconnect the accelerator pedal connector.
- 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.

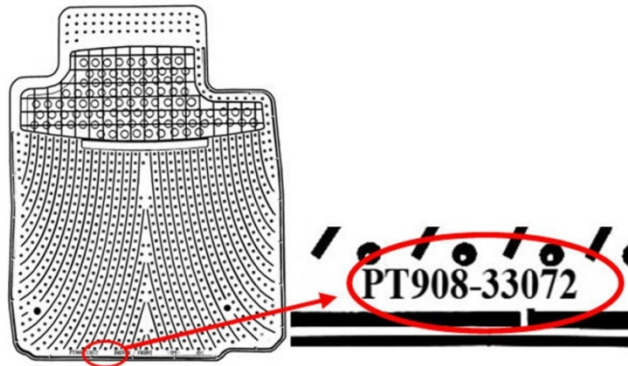
NOTE

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

10. INSPECT THE FLOOR MAT

- Inspect the carpet and floor mat and clean them as appropriate.
- Confirm the correct floor mat for this model is secured with the retaining hooks (clips).
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	'03	'04	'05	'06	'07	'08	'09	Color
PT208-89030-04	X	X	X	X	X	X	X	Taupe
PT208-89030-21	X	X	X	X	X	X	X	Stone

NOTE:

If an incorrect carpet floor mat is found in the vehicle, it should be removed.



DO NOT use the recalled AWFM listed below. If a recalled AWFM is identified, follow the steps below.

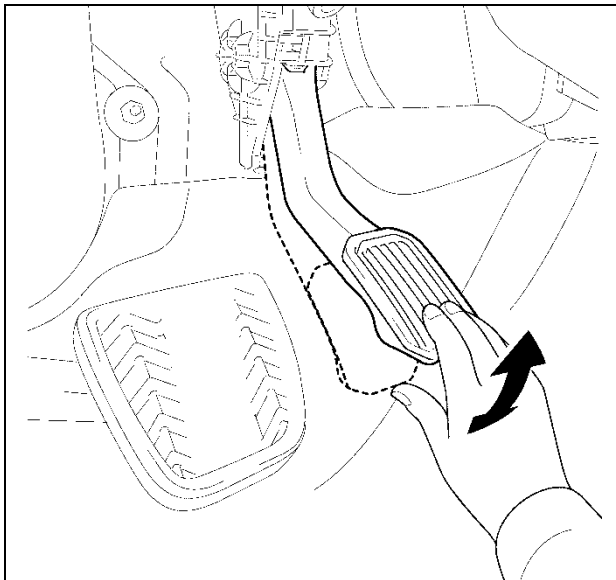
Part Number	'03	'04	'05	'06	'07	'08	'09	Color
PT206-89036-03	X	X						Gray
PT206-89036-16	X	X						Oak
PT908-89060-02			X	X	X	X	X	Black

NOTE:

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.

Confirm the vehicle has the newly designed AWFM listed below.

Part Number	'03	'04	'05	'06	'07	'08	'09	Color
PT908-8900W-02	X	X	X	X	X	X	X	Black



- c) Confirm the pedal does not get caught on the floor or floor mat during operation.
- d) Confirm the pedal operates properly.

12. INSPECT THE ACCELERATOR PEDAL ASSEMBLY OPERATION

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

Tester Display	Measurement: Range (Display)	Normal Condition	Diagnostic Note
Accel Sensor Out No. 1	APP sensor No. 1 voltage	Accelerator Pedal Released: 0.4 to 1.4 V	Read value with ignition switch to ON (Do not start engine)
		Accelerator Pedal Fully Depressed: 3.0 to 4.6 V	
Accel Sensor Out No. 2	APP sensor No. 2 voltage	Accelerator Pedal Released: 0.9 to 2.3 V	Read value with ignition switch to ON (Do not start engine)
		Accelerator Pedal Fully Depressed: 3.4 to 5.5 V	

NOTE:

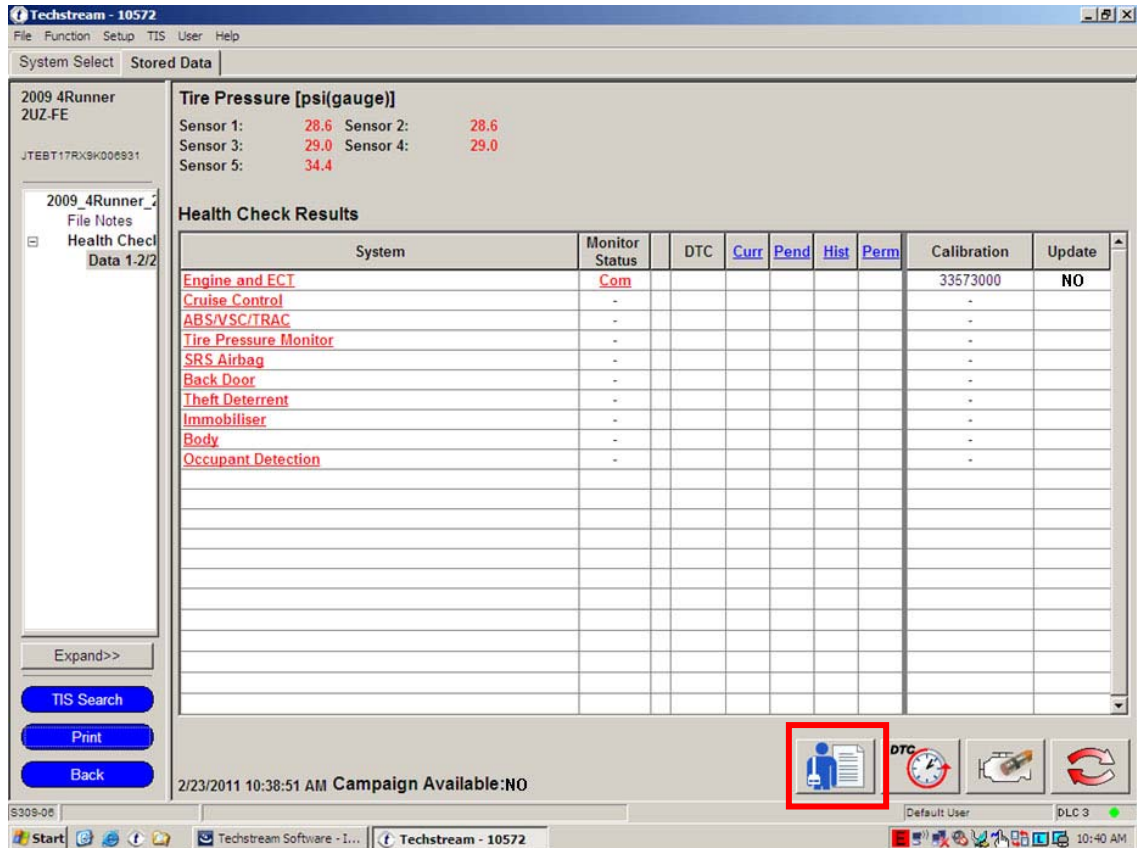
There are two sets of Accel Sensor Out No. 1 & No. 2 parameters. Select **ALL DATA (A to Z)** on the pull down menu at the bottom of the screen when searching for the correct parameter set.

13. CHECK FOR DTCs

14. PRINT A CUSTOMER HEALTH CHECK REPORT

- a) From the Health Check Results screen select the Customer Health Check Report button (TIS will launch when button is pressed).





- Log in to TIS.
- Input Vehicle Mileage and Repair Order number.
- Check the "Performed" radio button for the 90L campaign and any other campaigns completed during this service event.
- Select the Report button.




Diagnostic Report

Vehicle Information

Mileage:

Repair Order:

Our systems show the following campaigns are outstanding. Have any of these campaigns been completed? (Check for SSC door label if unsure.)

90B: ☒ Performed ☐ Not Performed

- f) Confirm Customer Health Check Report information is correct.

		Diagnostic Report	
Vehicle Information			
Vehicle: 2010 Tacoma		VIN: 5TETU4CN5A2675652	Mileage: 7787
Repair Order: 77888			
Health Check Summary			
Checkpoints	Status	Comments	
Powertrain Systems	All systems OK		
Chassis Systems	All systems OK		
Electrical Systems	All systems OK		
Network Systems	All systems OK		
Service Campaigns	No Action Required	90L	Performed
Performed: 3/11/10, 10:12 AM			

- g) Print Customer Health Check Report from TIS.
h) Sign and provide to the customer

◀ VERIFY REPAIR QUALITY ▶

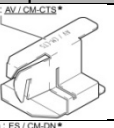
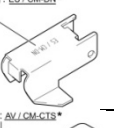
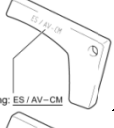
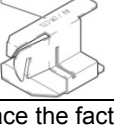
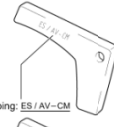
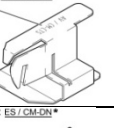
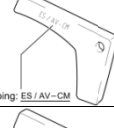
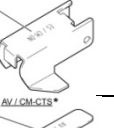
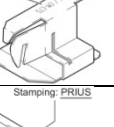
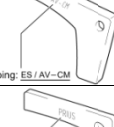
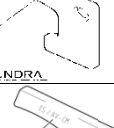
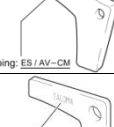
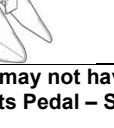
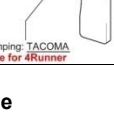
- Confirm that all parts removed from the vehicle are reinstalled correctly
- Confirm the accelerator pedal assembly is modified correctly using the template and gauge
- Confirm the floor mat inspection is performed correctly
- If you have any questions regarding this recall, please contact your regional representative

15. TEST DRIVE THE VEHICLE

VI. APPENDIX

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.***

PROCEDURE SUMMARY CHART

Model	Pedal	Pedal Modification				AWFM	Tibia Pad	Rubber Stopper	Carpet Reshape	BOS	Inspect & Clean Carpet as Needed
		Template	Color	Shape Gage	Color						
Avalon	CTS		White		Silver	✓	✓	✓	✓	✓	✓
Camry	Denso		Silver		Silver	✓	✓	✓	✓	✓†	✓
	CTS		White		Silver	✓	✓	✓	✓	✓†	✓
	Sports Pedal**	Replace the factory installed metallic accelerator sports <i>pedal foot</i> pad with a newly designed one				✓	✓	✓	✓	✓	✓
Corolla & Matrix	Denso		Silver		Silver	✓	✓	✓‡	✓		✓
	CTS		White		Silver	✓	✓	✓‡	✓		✓
Highlander	Denso		Silver		Silver	✓					✓
	CTS		White		Silver	✓					✓
Prius	Denso		Turquoise		Turquoise	✓					✓
Tacoma	Denso		Red		Red	✓				✓	✓
Tundra	CTS		Green		Green	✓					✓
Venza	Denso		Silver		Silver	✓		✓	✓	✓	✓
4Runner	Denso		Red		Red	✓					✓

* Some supplemental templates may not have the stamping.

** Factory Installed Metallic Sports Pedal – Safety Recall 90L Phase

‡ Part number is specific to Corolla & Matrix.

† Non-Hybrid Camry Vehicles ONLY.