

IMPORTANT UPDATE

TECHNICAL INSTRUCTIONS
FOR
SPECIAL SERVICE CAMPAIGN JSD
CONTINUOUSLY VARIABLE TRANSAXLE SOFTWARE UPDATE
CERTAIN 2014-2017 TOYOTA Corolla
CERTAIN 2017 TOYOTA Corolla iM
CERTAIN 2016 SCION iM

UPDATE 9-17-2018

Update 9-17-2018

- **Added steps to update the MongoosePro MFC VIM. This is to remedy the issue where Techstream loses connection after pushing the record button (See the Appendix section at the end of the technical instructions)**

Update 8-20-2018

- **Updated the flowchart**

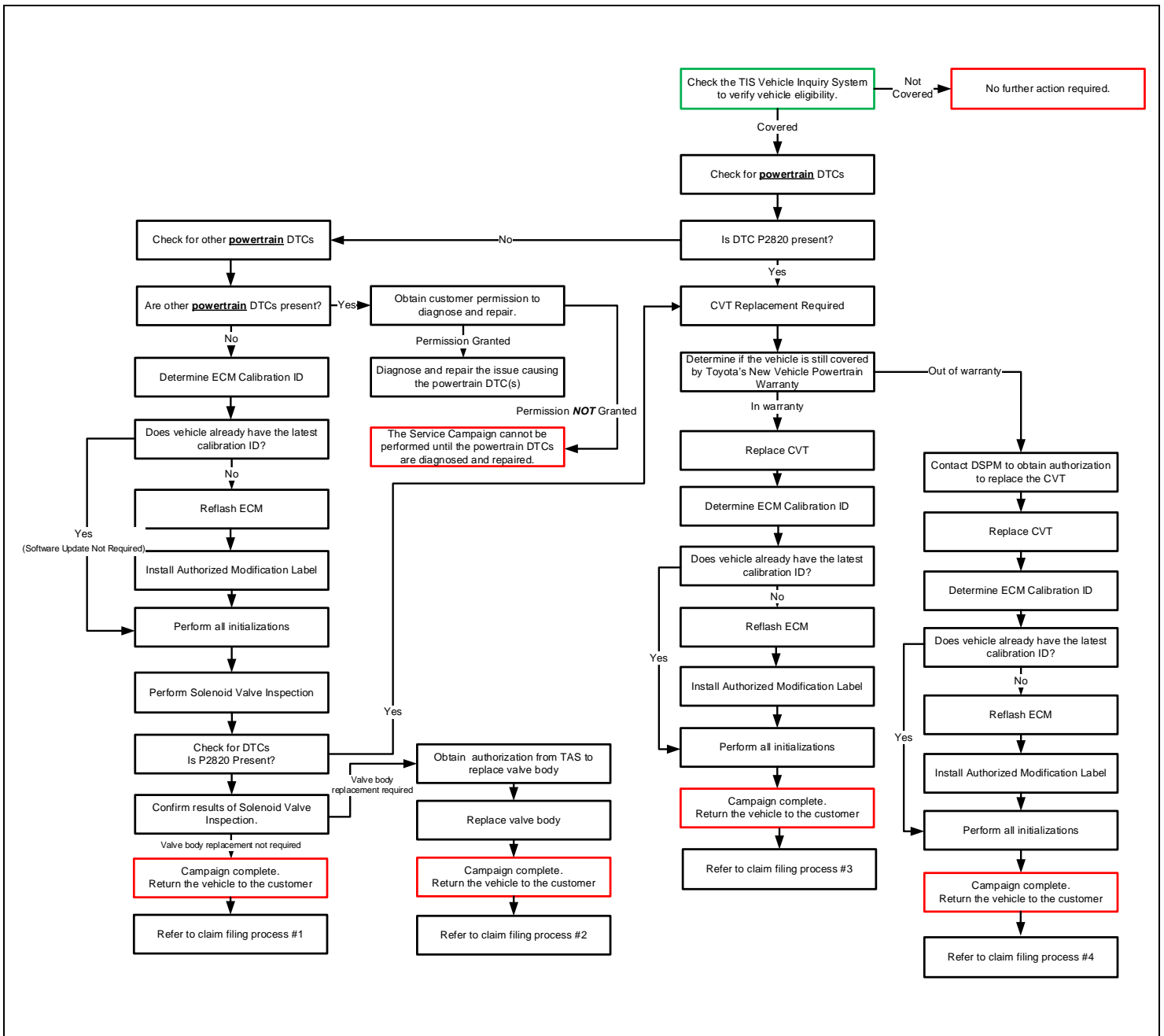
Update 8-7-2018

- **Valve Body Part Number Updated**
- **Clarification added for Initialization steps**

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this recall are required to successfully complete the most current version of the E-Learning course "Safety Recall and Service Campaign Essentials". To ensure that all vehicles have the repair performed correctly; technicians performing this recall repair are required to currently hold at least one of the following certification levels:

- **Certified Technician (Drivetrain)**
- **Expert Technician (Any specialty)**
- **Master Technician**
- **Master Diagnostic Technician**

I. OPERATION FLOW CHART



II. IDENTIFICATION OF AFFECTED VEHICLES

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.

III. PREPARATION

A. PARTS

Part Number	Part Description	Quantity
00451-00001-LBL*	Authorized Modification Label	1

*Labels can be ordered in packs of 25 from the MDC through the Dealer Daily Website

The following parts are ONLY needed for valve body replacement.

***DO NOT ATTEMPT TO ORDER THE PARTS BELOW UNTIL YOU HAVE PERFORMED THE SLP VALVE TEST AND JUDGED THE VALVE BODY NO GOOD**

Part Number	Part Description	Quantity
35410-12871-84	Body Assy, Transmission Valve	1
04008-28102	Gasket kit, valve body replacement *	1

* The kit above includes the following parts.

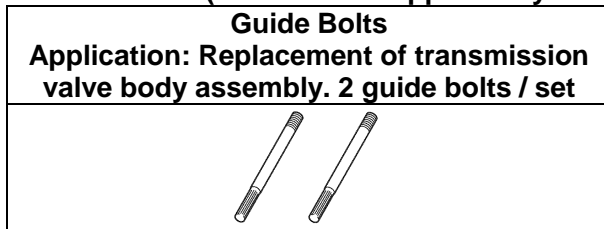
Part Description	Quantity
Gasket, Transaxle Oil Pan	1
Gasket, Transaxle Case	1
Ring, O	1
Ring, O	1
Gasket, Overflow Plug	1
Gasket, Refill Plug	1

B. TOOLS & EQUIPMENT

- Standard Hand Tools
- Techstream
- Torque Wrench
- 6 mm Hexagon Socket Wrench
- Protective Eyewear
- Work Gloves

-SST

GUIDE BOLTS (These were supplied to your dealership at the launch of JSD)

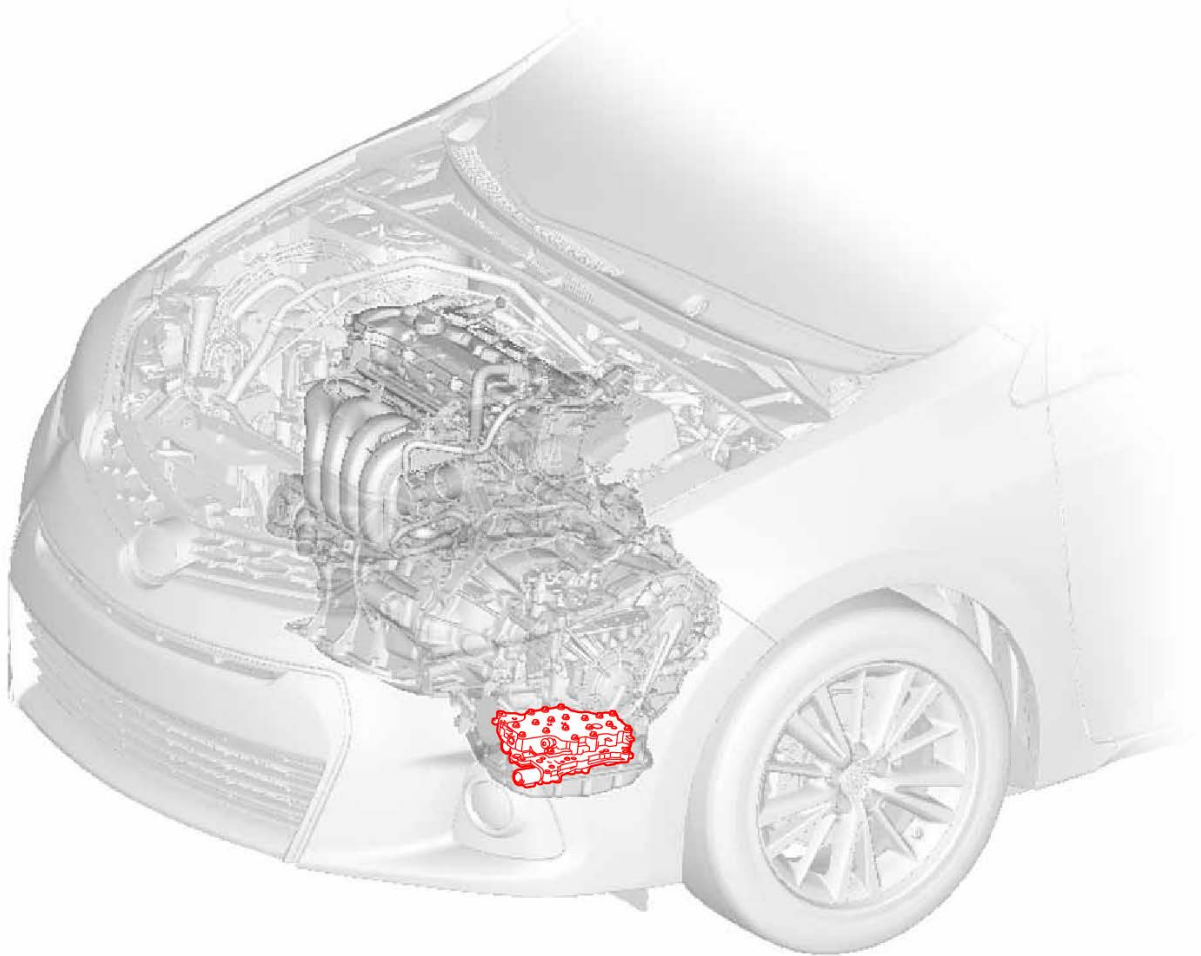


C. MATERIALS

- Protective Tape
- Plastic Bag
- String
- Lint Free Shop Cloth
- ATF CVT FE (4 L can) = 08886-02505 = Quantity 2
- Toyota genuine MP grease No.2 or equivalent
- Marker pen

IV. BACKGROUND

Toyota previously announced Special Service Campaign J0D, which involved performing a software update to the CVT control software to address the condition described below. Following the completion of the software update in Special Service Campaign J0D, Toyota dealers received reports from some customers stating that the vehicle experienced harsh shifting and/or abnormal engine RPM between shifts. These issues occurred close to the completion date of the campaign and/or within relatively low mileage from the completion of the campaign remedy, prompting Toyota to suspend Special Service Campaign J0D. Toyota has now identified the cause of these issues and has developed a new remedy. Special Service Campaign JSD, which replaces Special Service Campaign J0D, applies this new remedy. Owners of all vehicles previously involved in Special Service Campaign J0D, including those who have previously completed Special Service Campaign J0D, are requested to visit an authorized Toyota dealer to have Special Service Campaign JSD performed.



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V. SAFETY PRECAUTIONS

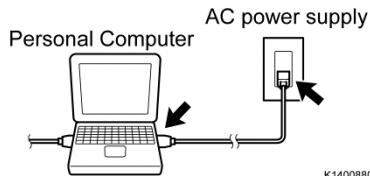


CRITICAL INFORMATION - READ THOROUGHLY



An ECM could be damaged if an error occurs in the communication while reflashing the ECM. Confirm all work is performed as described in these instructions.

Be sure to connect the personal computer to an external AC power supply.



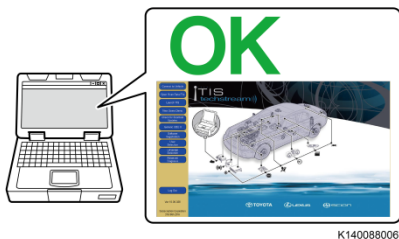
1. STABILIZE THE POWER TO THE PERSONAL COMPUTER SIDE

- Be sure to connect the personal computer to an external AC power supply.

NOTE:

The ECM could be damaged if the battery voltage of the personal computer drops while reflashing.

Exit all applications.



- Exit all applications except Techstream 2.0 (TIS Techstream / Techstream Lite).

Turn off the screen saver and power saving mode.



- Turn off the screen saver and power saving mode of the personal computer so that the power to the hard disk is kept supplied.

NOTE:

If the screen saver or power saving mode launches while reflashing, the communication may be disconnected, resulting in damage of the ECM.

DO NOT block the ventilation opening.



- DO NOT** block the ventilation opening for the cooling fan of the personal computer.

NOTE:

If the ventilation opening for the cooling fan is blocked with a sheet cover or the like, the personal computer may be heated excessively, causing the operation of the personal computer to stop.

Due to the stop of the operation, the communication for reflashing signals could be stopped, resulting in damage of the ECM.

VI. ECM CALIBRATION ID VERIFICATION AND DTC(s) CHECK



1. CHECK FOR DTC'S


- a. Using a Techstream, perform a Health Check to check for any Diagnostic Trouble Codes.
- b. If DTC P2820 is present, perform one of the two options below. An example of each option is shown on the next page. **ONLY 1 OF THE 2 OPTIONS IS REQUIRED FOR PARTS RELEASE**
 - **Run and save a Customer Health Check/Diagnostic Report to prove DTC 2820 is present. [CLICK HERE](#) to access instructions on how to create and save a diagnostic report**
 - **Take a screenshot of the vehicle Health Check to prove DTC P2820 is present.**
- c. CVT assembly replacement is required at this point. Toyota will require this screenshot/Diagnostic report prior to releasing parts for this repair. Refer to the Dealer Letter for complete parts ordering instructions.




- **Parts will not be released if screenshot of Health Check or diagnostic report is not provided.**

- d. If CVT assembly replacement is required, see [T-SB-0289-17](#) (Toyota) or [S-SB-0002-18](#) (Scion) for repair instructions.
Note: This Service Campaign covers only the ECM reflash, as detailed in these instructions. It does not cover the diagnosis or replacement of any other parts on the vehicle.

• Example of required Diagnostic Report:





Diagnostic Report

Vehicle Information

Vehicle: 2015 Corolla **VIN:** 2T1BURHE5FC000000 **Mileage:** 34567
Repair Order: 12345

Health Check Summary


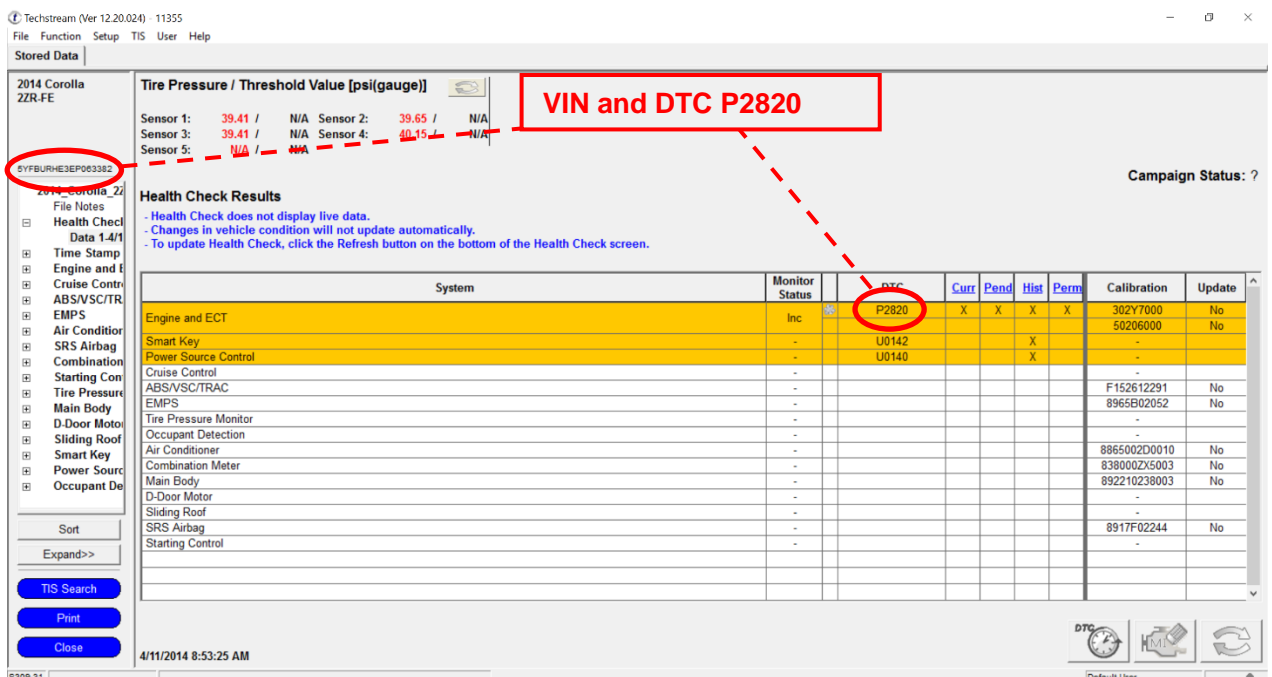
Checkpoints	Status	Comments
Powertrain Systems	ACTION REQUIRED	Diagnostic Codes(s) Detected: P2820
Chassis Systems	All systems OK	
Electrical Systems	All systems OK	
Network Systems	All systems OK	
Service Campaigns	All systems OK	

Performed: 12/23/09, 8:58 AM

Technician Signature: _____
 Manager Signature: _____

MAIN STREET TOYOTA
 4321 SOUTH MAIN STREET
 ANYTOWN, CA 90000
 PHONE NUMBER: (555) 867-5309

• Example of required screenshot:

Techstream (Ver 12.20.024) - 11355

File Function Setup TIS User Help

Stored Data

2014 Corolla
ZZR-FE

Tire Pressure / Threshold Value [psi(gauge)]

Sensor 1: 39.41 / N/A Sensor 2: 39.65 / N/A
 Sensor 3: 39.41 / N/A Sensor 4: 40.15 / N/A
 Sensor 5: N/A / N/A

Health Check Results

- Health Check does not display live data.
- Changes in vehicle condition will not update automatically.
- To update Health Check, click the Refresh button on the bottom of the Health Check screen.

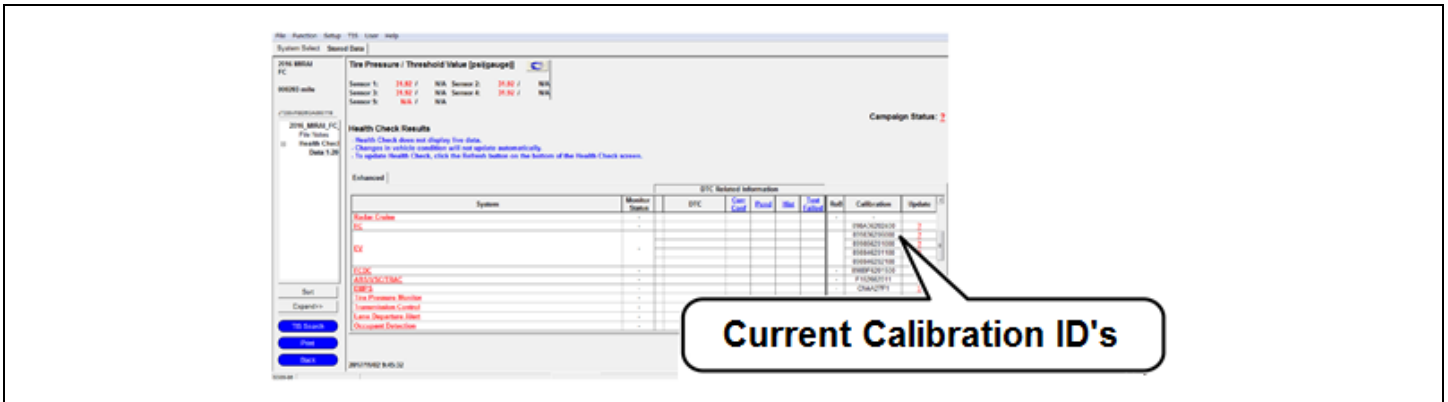
System	Monitor Status	DTC	Curr	Pend	Hist	Perm	Calibration	Update
Engine and ECT	Inc	P2820	X	X	X	X	302Y7000 50206000	No
Smart Key	-	U0142			X		-	No
Power Source Control	-	U0140			X		-	No
Cruise Control	-						-	
ABS/VSC/TRAC	-						F152612291	No
EMPS	-						8965B02052	No
Tire Pressure Monitor	-						-	
Occupant Detection	-						-	
Air Conditioner	-						8865002D0010	No
Combination Meter	-						838000ZX5003	No
Main Body	-						892210238003	No
D-Door Motor	-						-	
Sliding Roof	-						-	
SRS Airbag	-						8917F02244	No
Starting Control	-						-	

4/11/2014 8:53:25 AM

• If vehicle is out-of-warranty, DSPM authorization is required prior to proceeding with CVT assembly replacement. Refer to the Dealer Letter for further instructions.

2. DETERMINE CALIBRATION ID

- Identify the Calibration ID for the ECM in the Health Check Results.
- Referencing the table below, verify if the ECM has the updated Calibration.



Vehicle Specification				ECM Calibrations	
Model	MY	Engine	Shift Type	Current CID	New CID
COROLLA	2014	2ZR-FAE	Gate	302Y <u>6000</u>	302Y<u>6500</u>
				302Y <u>6100</u>	
				302Y <u>6200</u>	
				302Y <u>6300</u>	
				302Y <u>6400</u>	
		2ZR-FE	Gate	302W <u>8000</u>	302W<u>8500</u>
				302W <u>8100</u>	
				302W <u>8200</u>	
				302W <u>8300</u>	
				302W <u>8400</u>	
	2015 - 2016	2ZR-FAE	Gate	302Y <u>7000</u>	302Y<u>7500</u>
				302Y <u>7100</u>	
				302Y <u>7200</u>	
				302Y <u>7300</u>	
				302Y <u>7400</u>	
2015 - 2016	2ZR-FAE	Gate	302U <u>1000</u>	302U<u>1300</u>	
			302U <u>1100</u>		
	2ZR-FE	Gate	302U <u>1200</u>		
			30Z5 <u>8000</u>	30Z5<u>8300</u>	
30Z5 <u>8100</u>					

Vehicle Specification				ECM Calibrations	
Model	MY	Engine	Shift Type	Current CID	New CID
COROLLA	2015 - 2016	2ZR-FE	Gate	30Z58200	<u>30Z58300</u>
			Sequential	30Z59000	<u>30Z59300</u>
				30Z59100	
				30Z59200	
	2017	2ZR-FAE	Gate	30ZC1000	<u>30ZC1200</u>
				30ZC1100	
		2ZR-FE	Gate	30ZC2000	<u>30ZC2200</u>
				30ZC2100	
			Sequential	30ZC3000	<u>30ZC3200</u>
				30ZC3100	
iM	2016	2ZR-FAE	Sequential	30W01000	<u>30W01200</u>
				30W01100	
COROLLA iM	2017	2ZR-FAE	Sequential	30W03000	<u>30W03200</u>
				30W03100	



If the vehicle already has the updated calibration go to step 5 of the VII. ECM REFLASH PROCEDURE and perform the initialization procedure

VII. ECM REFLASH PROCEDURE

1. VEHICLE PREP

- a. Prior to vehicle shut down perform the following steps:
 - Vehicle in the IG on position.
 - Transaxle in the P range.
 - Parking brake engaged.
 - Turn off all electrical accessories (i.e. climate control, audio system, etc.)
- b. Headlight switch in the DRL OFF position.
- c. Turn off the vehicle.

2. CONNECT THE GR8

- a. Set the GR8 to Power Supply Mode to help maintain 13.5 volts during ECM reprogramming.



- A battery charger set to power supply mode **MUST** be used during reflash.
- ECU damage may occur if the correct battery charge setting is not used.

3. REFLASH THE ECM

- a. Click yes on the Health Check results screen or follow the links above to begin the reflash process.

NOTE:

- Reflash procedure takes about 15 minutes.
- In case reflash failed **EVEN ONCE**, replace the ECM. (Refer to TIS for instructions on 2ZR-FAE ENGINE CONTROL / ECM or 2ZR-FE ENGINE CONTROL / ECM)
After ECM replacement recheck the calibration ID and perform the reflash if it is **NOT** the new calibration ID.
- For general reprogramming procedures, refer to [T-SB-0134-16](#).
- Confirm the latest version of Techstream software is being used.



- If the Techstream does not have sufficient battery power the reflash will fail.
- Confirm the DLC3 cable is in good condition before attempting reflash.

4. ATTACH THE AUTHORIZED VEHICLE MODIFICATION LABEL

- a. Fill out the label.
- b. Affix the label to the under-side of the hood.



1	ECM P/N
2	New Calibration ID
3	Dealer Code
4	Date Completed
5	Campaign Code (XXX)

5. CONTINUOUSLY VARIABLE TRANSAXLE SYSTEM INITIALIZATION

Click the links below to access the CVT transaxle system initialization in the repair manual on TIS.

Corolla	2014-2015	2016-2017
Scion iM	2016	
Toyota iM	2017	

NOTE: You do not have to perform ATF Thermal Degradation Estimate Reset at this time

VIII. DRIVING INSPECTION

Ensure that the ECM calibration ID is the latest.

Make sure to understand the entire procedure before inspection.

Click the play button to watch a video on how to analyze the data you collected during your test drive

System Selection Menu

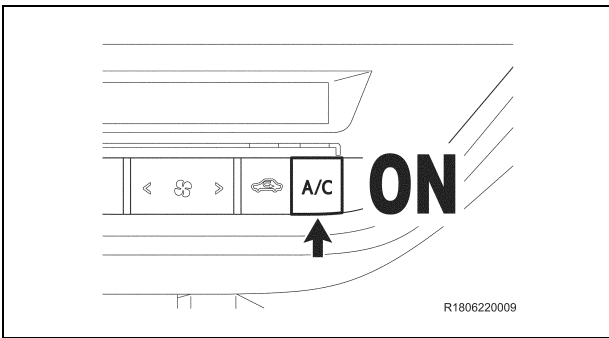
Select desired system and then press the arrow button to access the ECU.

System Yellow = ECU status unknown.
System White = ECU communication OK.
***System** White w/Asterisk = ECU not supported or not responding.
***System** Light Blue w/Asterisk = ECU communication OK in past times but not responding now.

All ECUs | Powertrain | Chassis | Body Electrical

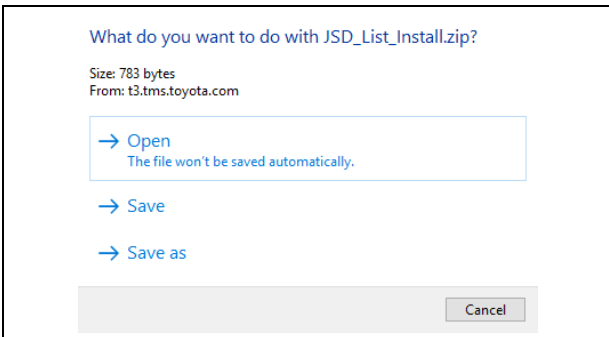
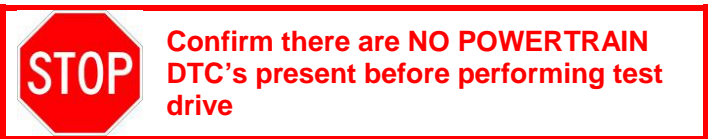
Engine and ECT	Cruise Control	ABS/VSC/TCS	MPS	PCS/LDA/RSA/LVN	Air Conditioner
Immobiliser	Theft Deterrent	SRS Airbag	Central Gateway	D-Door Motor	Combination Meter
Occupant Detection	Remote Engine Starter				

This video will go over how to setup the Techstream before the Test Drive

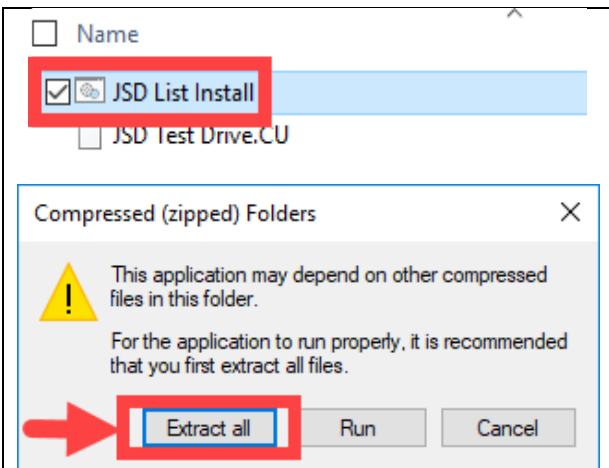


1. PREPARE FOR THE INSPECTION

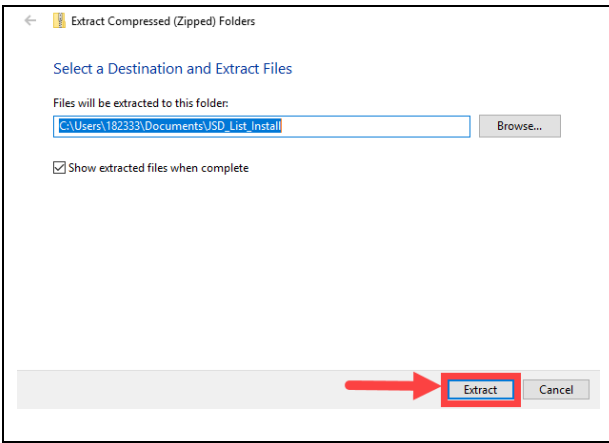
- Connect the Techstream to the DLC3
- Turn ON the A/C



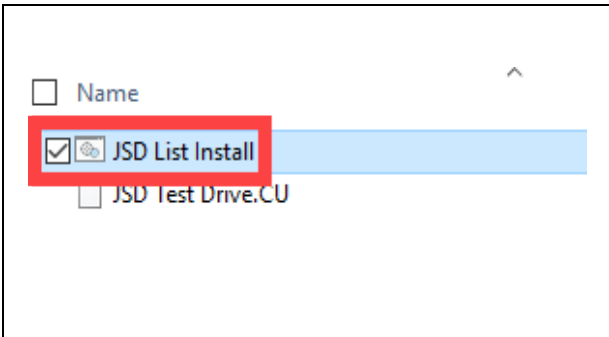
- [Click Here](#) to download the data zip file for JSD
- Select *Open*



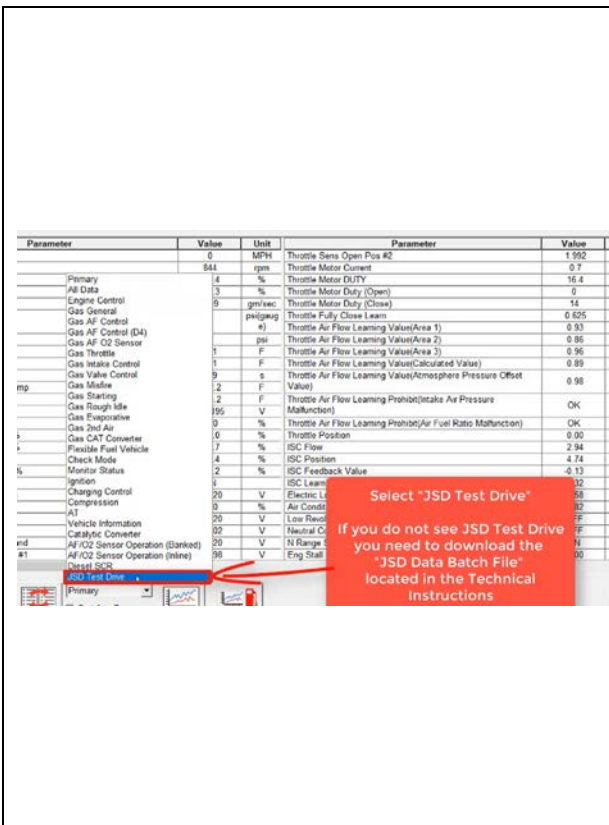
- Double-click *JSD List Install* to install the data file
- Select *Extract all*.



g. Select *Extract* again



- h. A new folder will appear after you select *Extract*. Double-click *JSD List Install* to install the data file
- i. A pop up window will appear. Once the pop up window goes away the download is complete



STOP You must download the JSD data file before proceeding to ensure the correct data PIDs are selected before the test drive

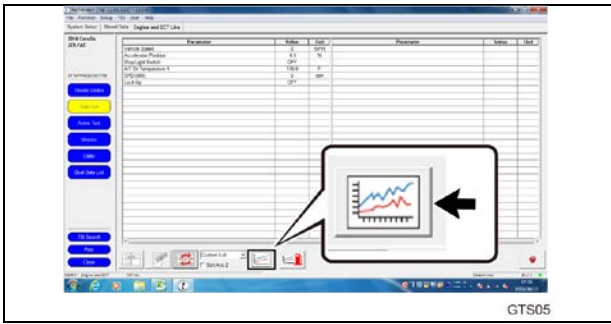
- j. After downloading the data file for JSD, Select Engine and ECT ECU and go to the data list.
- k. Click on the drop-down menu located on the bottom of the screen and select "*JSD Test Drive*"

NOTE: The "JSD Test Drive" selection will only appear on the drop-down menu after downloading the data file

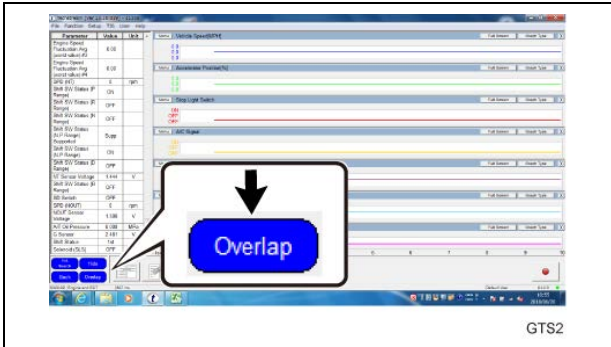
l. After selecting JSD confirm the following data PIDs are shown

- (1) Vehicle Speed
- (2) Accelerator Position
- (3) Stop light Switch
- (4) A/T Oil Temperature 1
- (5) SPD (NIN)
- (6) Lock Up

STOP Make sure to select ONLY the 6 items above. *DO NOT* display other items as the sampling time becomes longer.



m. Click the "Graph" button to represent the data in charts.



n. Double click on the PID's listed to the left to make the graphs display

o. Click the "Overlap" button.

NOTE:

Display the charts overlapped.

p. Warm up the transmission until the A/T Oil Temperature reaches 40°C (104°F).

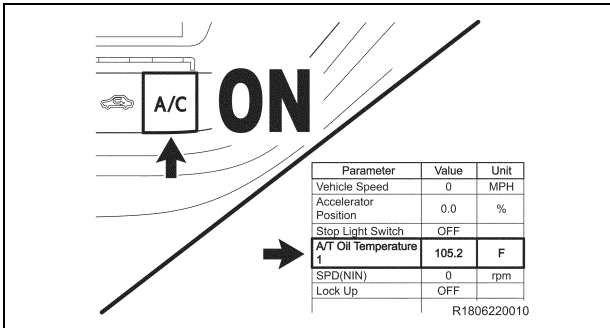
2. PERFORM DRIVING INSPECTION



Always Safety First During Inspection

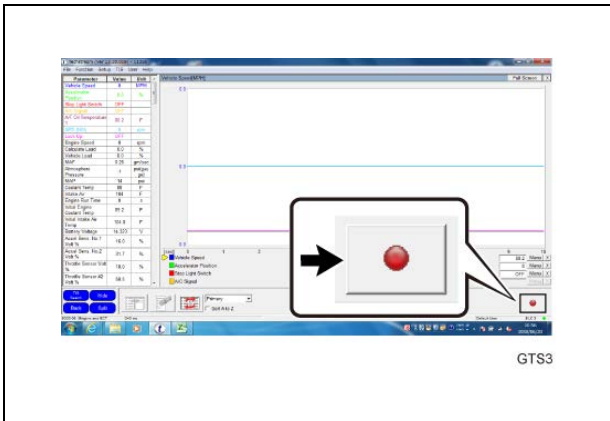


- Secure cables using tape so that they **DO NOT** contact pedals, shift lever or steering wheel.
- Never operate Techstream while driving. Be sure to stop the vehicle at a safe place to operate.
- Always comply with the traffic laws such as speed limits of the inspection location.
- Always keep enough distance from surrounding vehicles.
- If any warning light comes on during driving, stop inspecting and stop the vehicle at a safe place.
- When vehicle distances or speed limits cannot be ensured, stop inspecting and restart.



a. Reconfirm that the A/T Oil Temperature is higher than 104°F (40°C) and the A/C is ON.

b. Confirm that no powertrain DTC displayed.



c. Move and stop the vehicle to a place where the inspection can be performed.

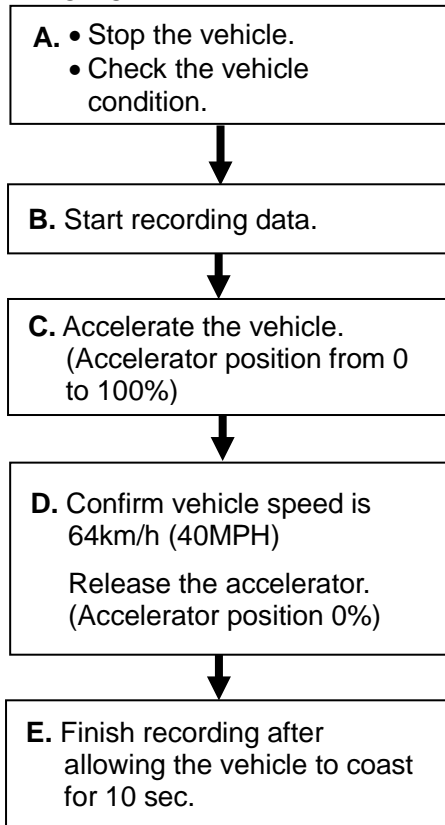
d. Confirm that the vehicle is at a stop and vehicle speed is 0MPH (0Km/h).

e. Click the "Record" button to start recording of data.



Make sure to click on the button with the vehicle stopped.

< FLOWCHART >



- Confirm A/C ON.
- Confirm 0km/h (0MPH).
- A/T Oil Temperature is higher than 40°C (104°F).
- Confirm that the Techstream displays the required data items.

(1) Vehicle Speed	(4) A/T Oil Temperature 1
(2) Accelerator Position	(5) SPD (NIN)
(3) Stop light Switch	(6) Lock Up

- Accelerate the vehicle to 40MPH (64km/h) with the accelerator position 100%.

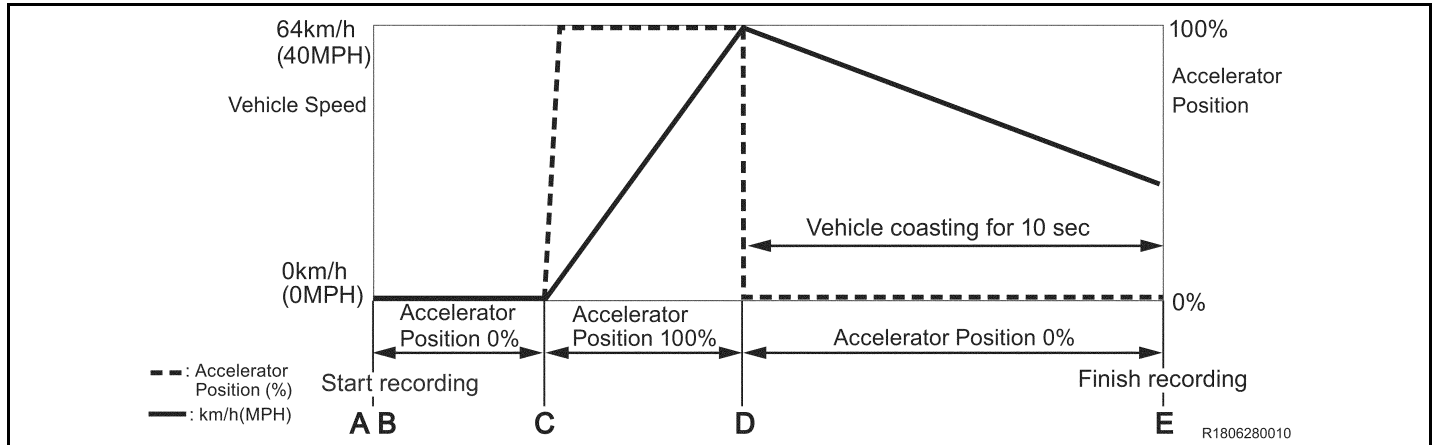
- Release the accelerator after reaching 40MPH (64km/h).
Allowable Range:
 35~45MPH (+/-5MPH)
 56~72km/h (+/-8 km/h)

Requirements :
No brake or accelerator pedal operation within the 10 seconds of the coast period.

NOTICE:
If safety cannot be ensured due to surrounding conditions, stop inspecting and prioritize safety.

It is recommended to repeat the procedure 3 times.

If the requirements are not satisfied, redo the inspection.



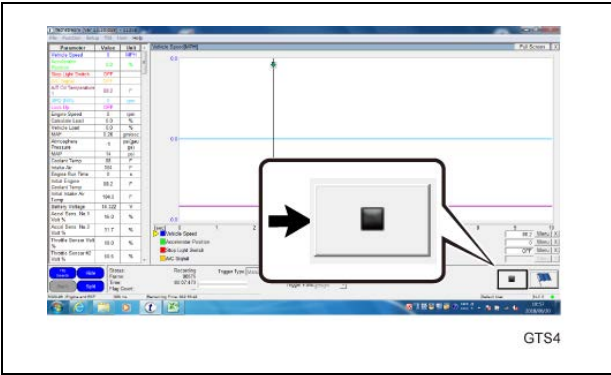
f. With the vehicle stopped, fully depress the accelerator pedal (wide open throttle) so that the accelerator position becomes 100 % and accelerate the vehicle to 40MPH (64 km/h),

g. Once you achieve 40MPH fully release the accelerator pedal (foot off gas pedal) and allow the vehicle to coast for more than 10 seconds.

Repeat the procedure from step 2. (a) if the inspection is interrupted by any of the following situations.



- The accelerator pedal or brake pedal has been operated within 10 seconds after releasing the accelerator pedal.
- The accelerator position could not be changed from 0 to 100% (you were unable to go wide open throttle)
- The vehicle speed is more than +/-5MPH (+/-8km/h) out of the allowable range.

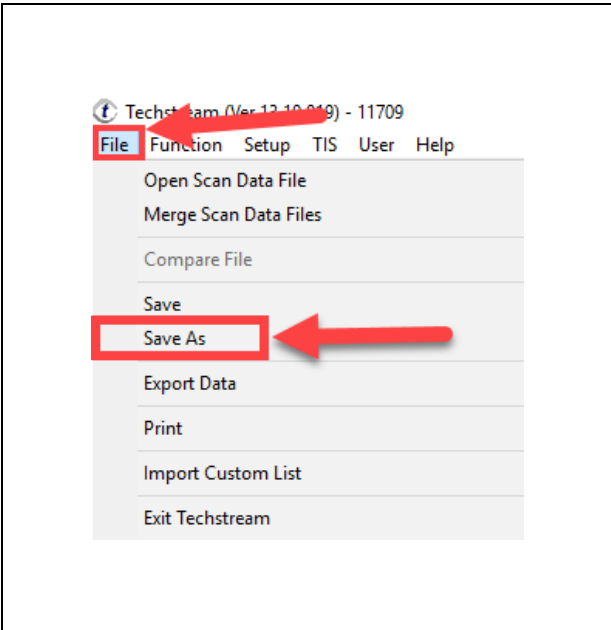


h. Move the vehicle to a safe place and click on the "Stop" and save the data.

Make sure to click on the button with the vehicle stopped.

i. It is recommended to perform the inspection in this manner 3 times in total. (Repeat the procedure from step 2. (a) two more times.)

YOU WILL BE REQUIRED TO RETAIN ALL SAVED FILES FOR 90 DAYS FROM THE REPAIR DATE. DO NOT DELETE ANY FILES THAT ARE NOT OLDER THAN 90 DAYS



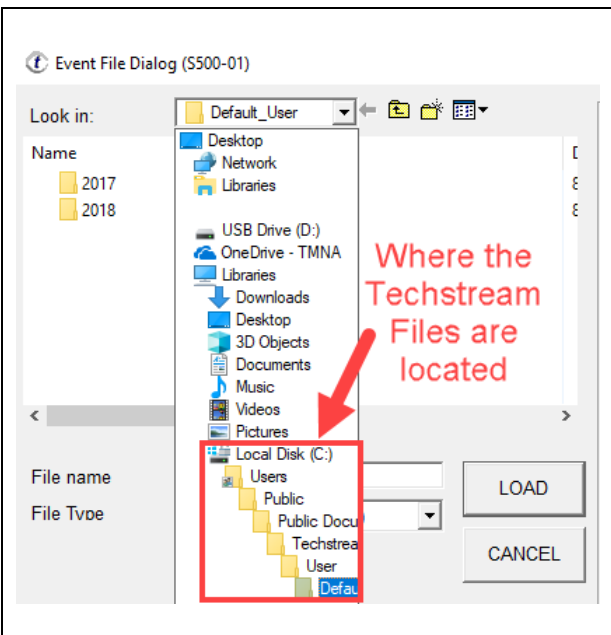
3. SAVE THE TECHSTREAM FILE

- a. To save the file click *File* then click *Save As* to save the file to your computer
- b. Use the default file name when saving the file to your computer. If you accidentally delete the default name then save the file with the VIN in the name

NOTE: Work with the other technicians in the dealership to help organize the techstream files

You will need to save every successful Techstream file for potential review or data recovery from Toyota. You must retain each file for 90 days from the repair date.

DO NOT DELETE any Techstream file before 90 days that is created after a successful test drive.



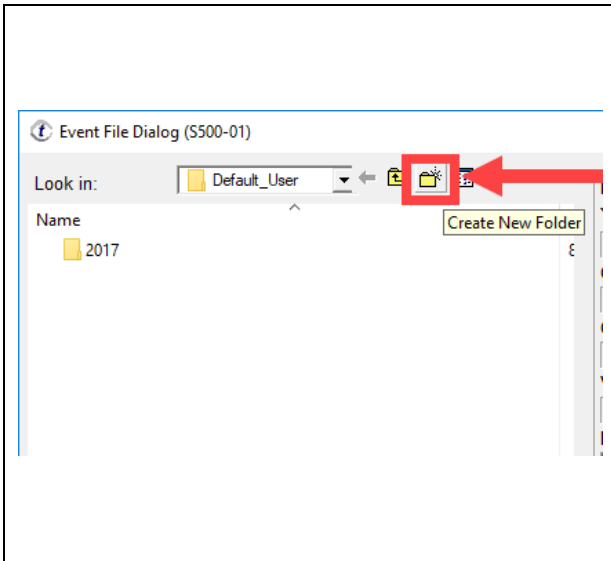
4. WHERE TO SAVE THE TECHSTREAM FILES (RECOMMENDED PROCEDURE)

NOTE: This step is recommended to help organize the files to make them more manageable

- a. First you need to locate where the files are saved. Techstream defaults the save path to the following location.

- Local Disk (C:)
- Users
- Public
- Public Documents
- Techstream
- User
- Default

- b. Go to the *Default* file



- c. Once in the *Default* folder, create a new folder and name it the year
- d. Once you create a folder for the year, open that file and create another folder for the current month. (example: *July*)
- e. Save all the Techstream files in the month they were recorded. So, if you record a file in July, save it in the July folder

NOTE: This will allow you to keep track of the files and help to know when you can delete the files that are older than 90days

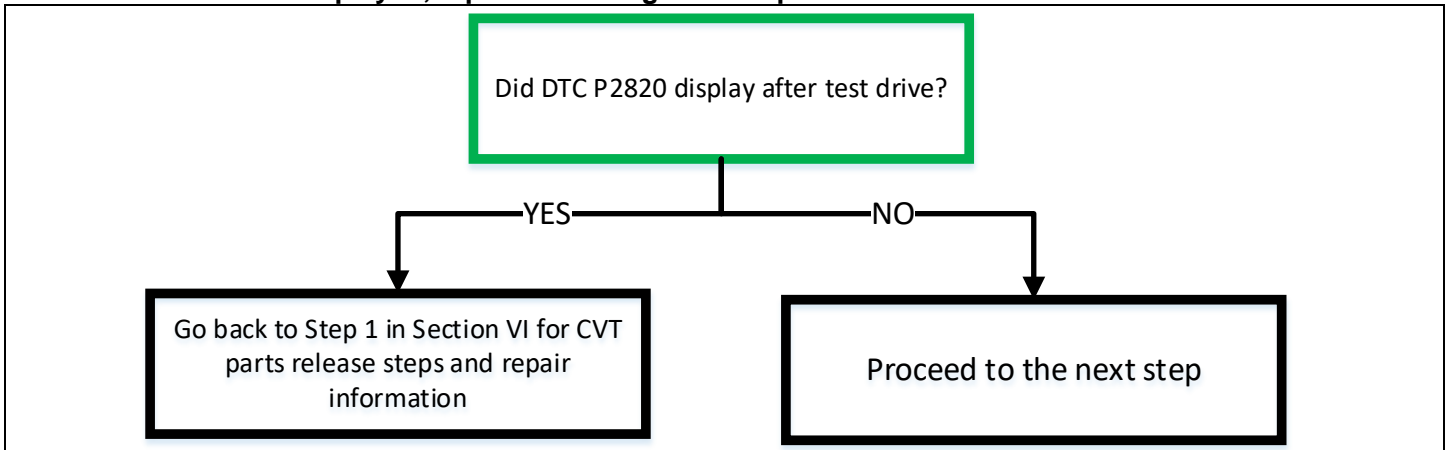


5. PERFORM HEALTH CHECK

- a) Check for DTCs.
 - (1) Check whether or not DTC P2820 is displayed.

NOTE:

If other DTCs are displayed, repair according to the repair manual.

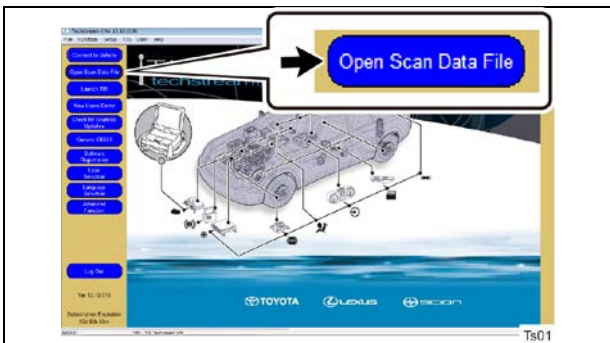


6. ANALYZE THE DRIVING DATA (Only when DTC P2820 is not displayed at Health check)

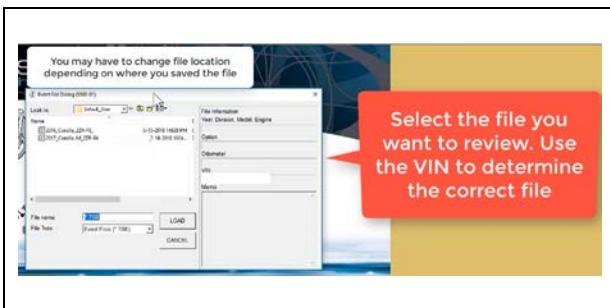
Click the play button to watch a video on how to analyze the data you collected during your test drive



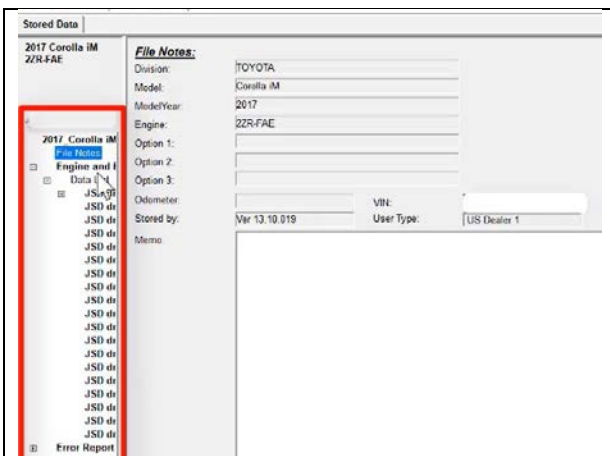
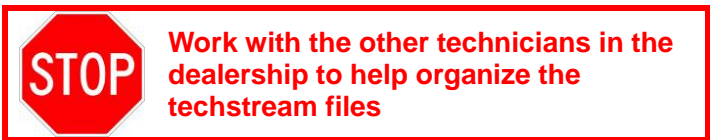
This video will go over how to review the scan data collected after the test drive



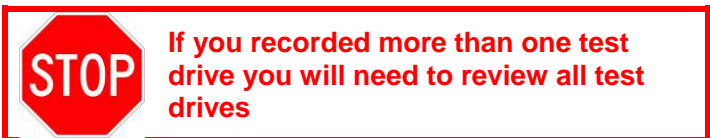
a. Select Open Scan Data File.

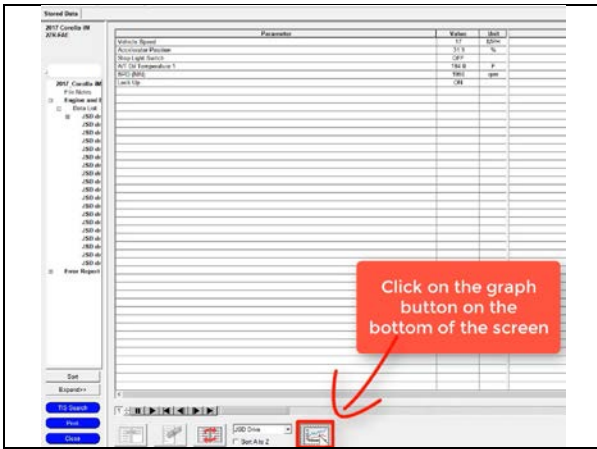


b. Select the file to review. Use the VIN to locate the correct file



c. Select Engine and ECT / Data List / Data to display the saved data.





d. Click on the "Graph" button on the bottom of the screen

Inspection Requirements :

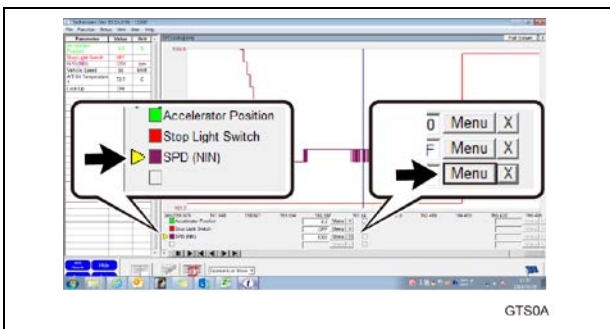
- A/T Oil Temperature is higher than 40°C (104°F).
- A/C is ON.
- The accelerator position went from 0 % to 100 % (Wide Open Throttle) and after reaching 40MPH (64km/h), you removed your foot from the accelerator pedal and accelerator position is 0%.
- Vehicle speed is 40MPH (64km/h) , allowable range: +/-5MPH (+/-8km/h).
- Neither the accelerator or brake pedal has been operated within 10 seconds after releasing the accelerator pedal.
- Stop light Switch remained OFF until the end of the test
- Lock Up ON when accelerating and at the start of the coast.

NOTE: If you decide to record 3 test drives they do not have to be recorded in the same file.

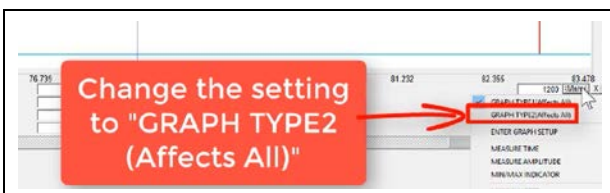


- e. Locate and zoom into the test drive area.
- (1) Click and hold the mouse and drag it over the test drive area.

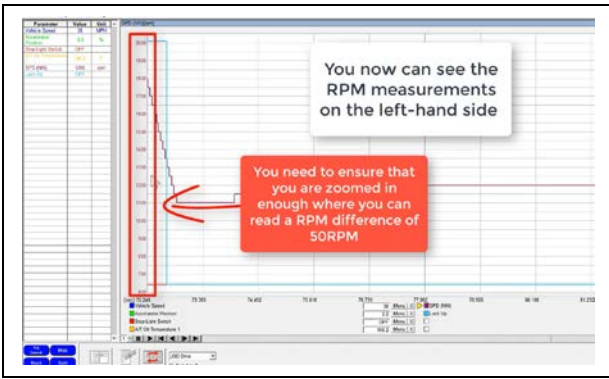
NOTE: To easily locate the test drive inspection area, look for where you went Wide Open Throttle



- f. Set up the graph display.
- (1) Click on SPD (NIN) to select a graph.
 - (2) Click on the "Menu" button of SPD.



- (3) Select "GRAPH TYPE2 (Affects All)"



- g. You can now inspect the difference in RPM using the scale to the left.
- h. Check and make sure you have selected the SPD (NIN) PID on the bottom of the screen so the scale on the left is correct

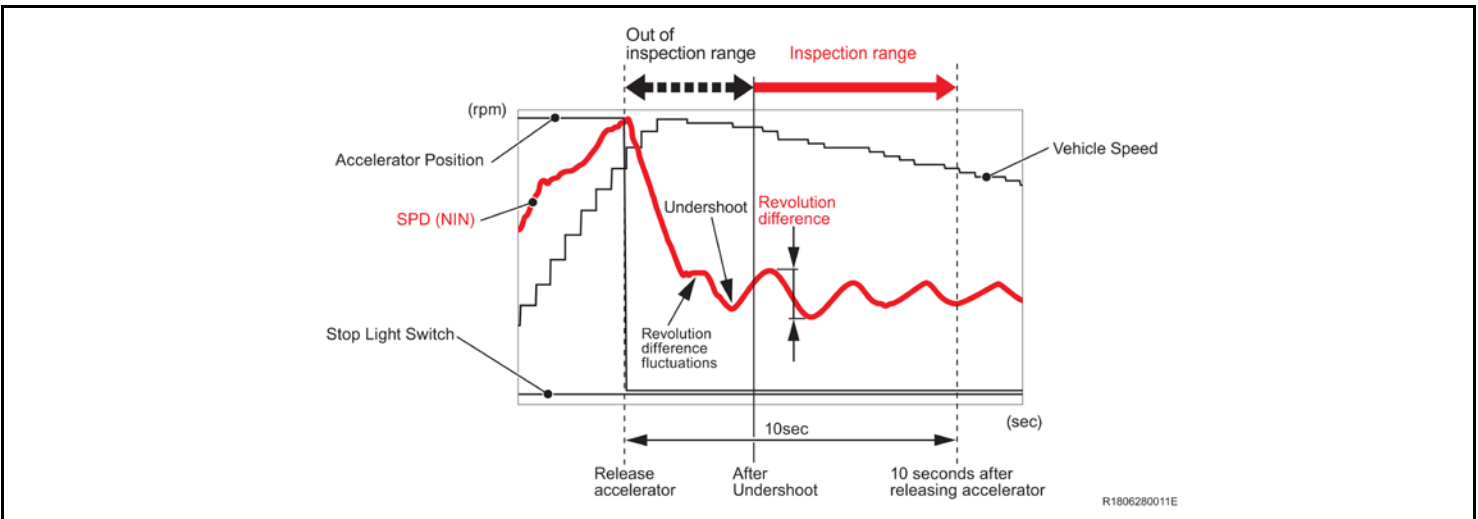
Standard Good Value : The RPM difference is less than 250 rpm in the inspection range.



- **DO NOT** inspect the first big drop (undershoot) or anything before it when measuring the RPM

NOTE:

- Confirm that a scale of SPD (NIN) represents 50 rpm.
- The recorded time of the data can be checked at (sec) on the graph.



Judgment	Check Result	To do
OK	RPM difference is less than 250 rpm. 	CAMPAIGN COMPLETE Return the vehicle to the customer
NG	RPM difference is greater than or equal to 250 rpm even at one place. 	Valve body assembly replacement is required. Go to next page and follow the instructions on how to release the parts for valve body replacement

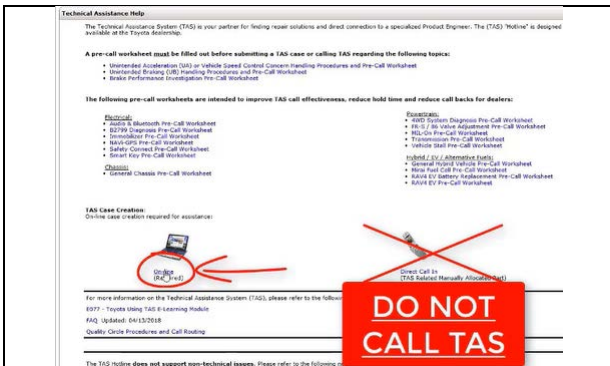
IX. SUBMIT TECHSTREAM DATA TO TAS

(Only follow these steps if the valve body failed the driving inspection)

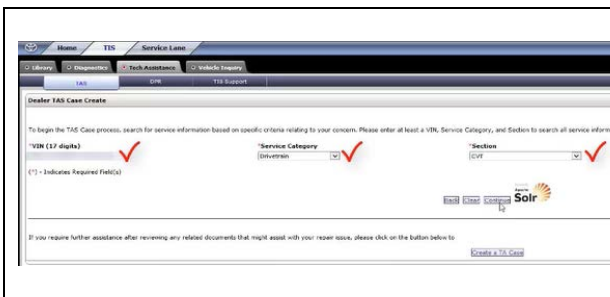
Click the play button to watch a video on how to create a TAS case for JSD



- (1) Open TIS
- (2) From the TIS tab, go to the *Tech Assistance* page



- (3) Once on the Tech Assistance Page scroll down and click the “*On-line*” link.




- (4) Enter the following information on the *Dealer TAS Case Create* page.
 - (a) Enter the VIN
 - (b) Service Category = **Drivetrain**
 - (c) Section = **CVT**
- (5) Once you have filled out the selection above click *Continue* followed by the *Create a TA Case* button

- (6) Fill out the following information
- Dealer Phone (optional)
 - Direct Contact Phone
 - Repair Date
 - Repair Order Number
 - Customer Last Name
 - Odometer
 - Service Category = **Drivetrain**
 - Section = **CVT**
 - Sub-Component = **Unknown**
 - Symptom Code = **Gap/Poor Fit/Loose/Tolerance**

- (7) For Condition Description you must include the following information
- Title (**JSD Valve Body Request - Valve Body Failed Test**)
 - Dealer Code (**XXXXX**)
 - Valve Body Part Number (**XXXXX-XXXXX**)
 - Gasket Kit Part Number (**XXXXX-XXXXX**)
 - Parts Order Reference Number (**XXXXXX**)
- (The Private Distributors such as GST and SET may not require a Part Order Reference Number)

NOTE: If you judge the valve body to be NO GOOD then you should place the order for the valve body parts prior to creating the TAS case and obtain the Parts Order Reference Number

- (8) Select the Techstream File to attach to the TAS case



- You must attach the correct Techstream file to the TAS case
- If you do not attach a techstream file TAS will NOT APPROVE THE PARTS RELEASE
- Work with other service technicians to create a method to organize techstream files so you can easily access the correct files

- (9) Once you fill out all the information and attach the Techstream file go to the bottom of the page and click *Confirm Case Information*

- (10) Confirm all information is correct and that the Techstream file has been attached.
- (11) Click *Create Case* on the bottom of the page to create the TAS case



- (12) Confirm all information is correct and that the Techstream file has been attached.
- (13) Click *Create Case* on the bottom of the page to create the TAS case

X. CHECK FOR TAS APPROVAL



- (1) Go to the home page on TIS
- (2) Click *Refresh* in the Inbox section
- (3) Click on the TAS case to open it

- (4) Scroll down to the *Condition Description* of the message to see if TAS has approved the valve body parts request

Once your TAS case is approved the parts will be released and shipped to your dealership through the normal parts distribution

In the Condition Description section look for TAS agent comments to see if the parts request was approved or declined. If you do not see any TAS agent comments in this section then TAS has not reviewed your case yet.

- (5) Once TAS approves your parts release request the parts will be shipped to the dealer through the normal parts distribution.

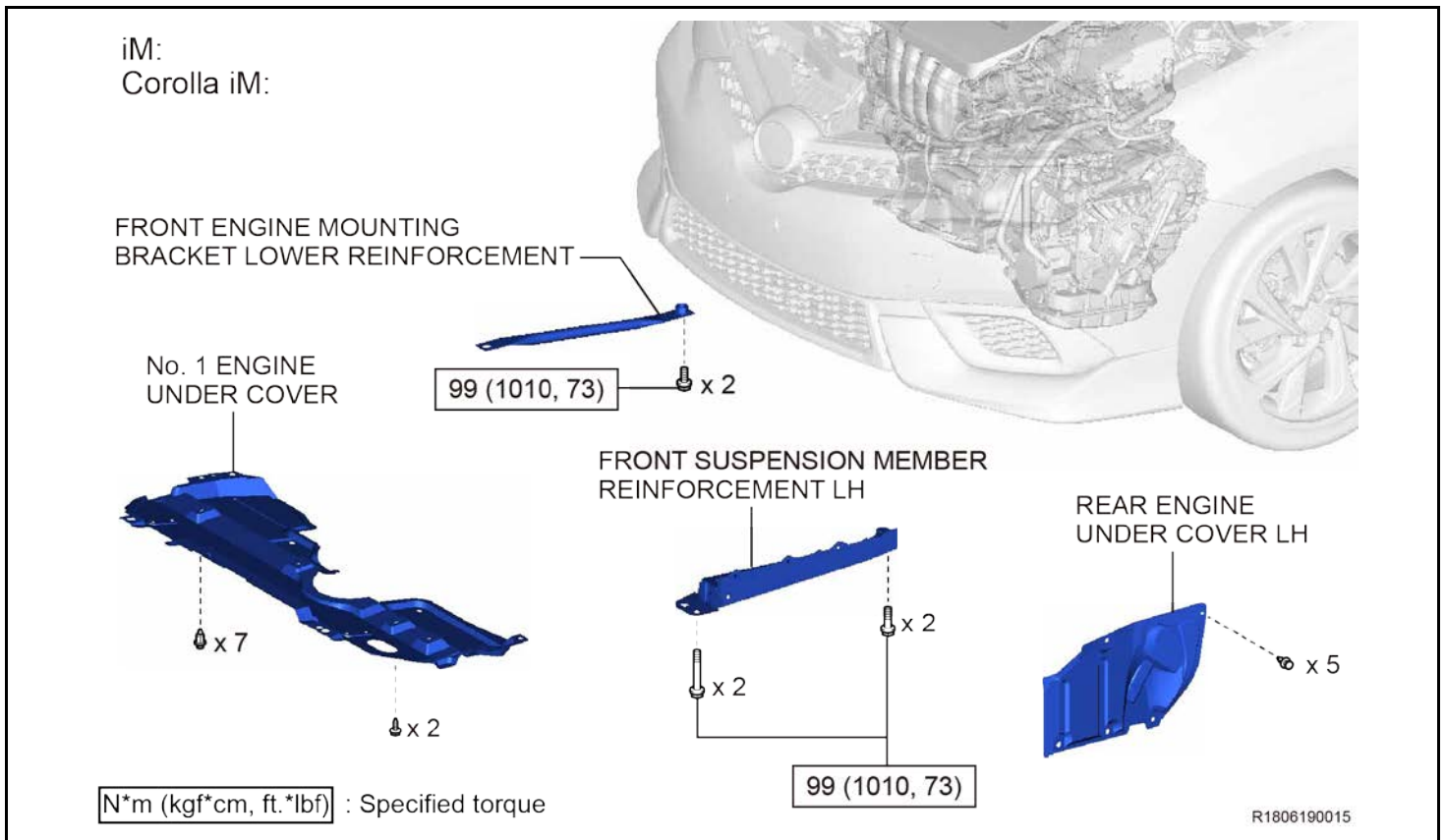
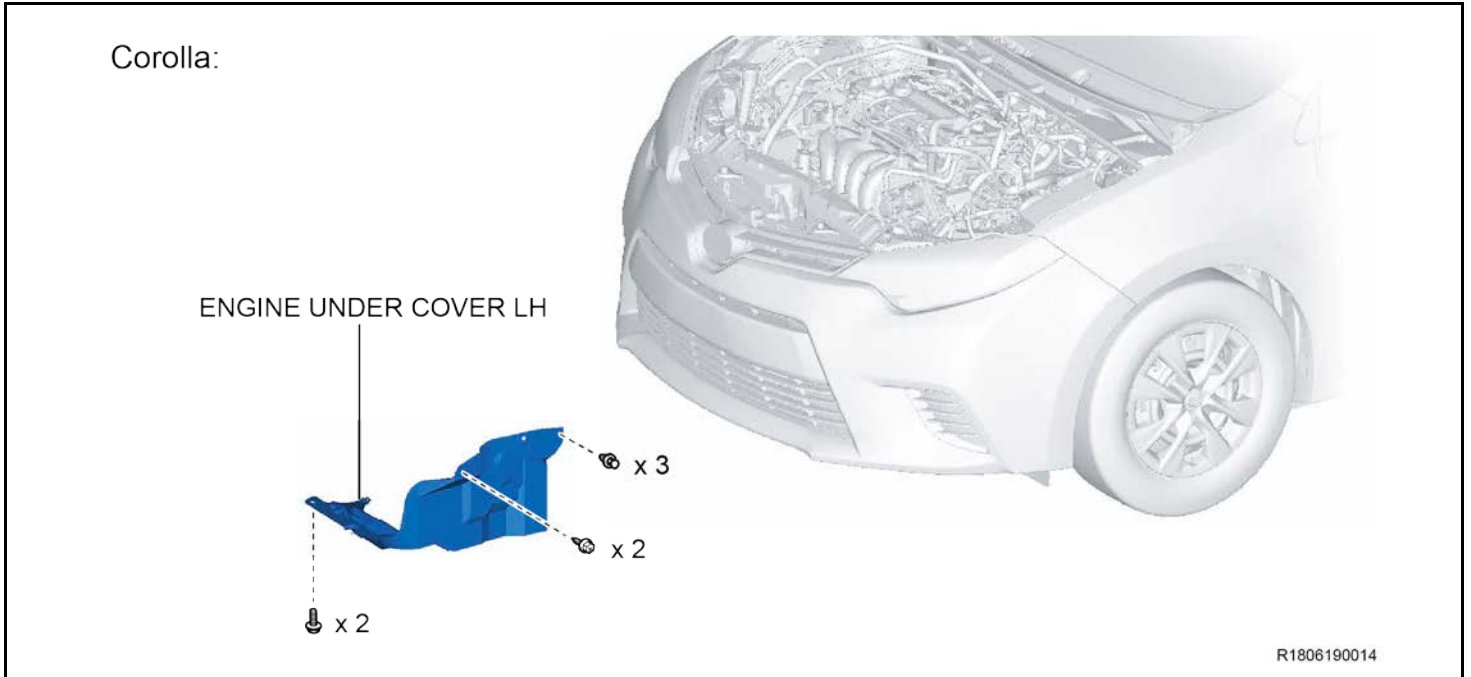
XI. REMOVE THE TRANSMISSION VALVE BODY ASSEMBLY

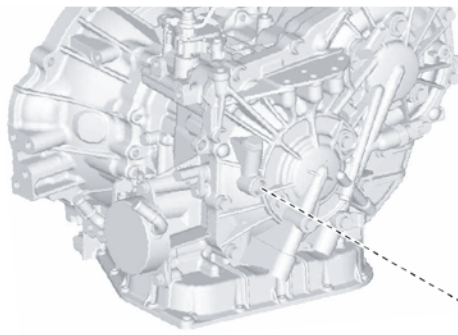
(ONLY PROCEED IF TAS APPROVED VALVE BODY REPLACEMENT. DO NOT CONTINUE UNTIL YOU HAVE APPROVAL FROM TAS)

NOTE:

DO NOT open the package of the **NEW** transmission valve body assembly until just before replacement.

COMPONENTS



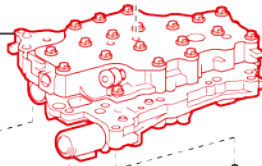


● GASKET

REFILL PLUG
49 (500, 36)

● TRANSAXLE CASE GASKET

● TRANSMISSION VALVE
BODY ASSEMBLY



10.8 (110, 8)

x 4

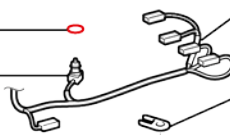
x 2

x 7

10.8 (110, 8)

● O-RING

OIL TEMPERATURE SENSOR

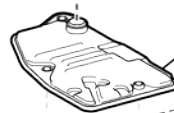


TRANSMISSION HARNESS

OIL TEMPERATURE SENSOR CLAMP

10.8 (110, 8)

● O-RING



OIL STRAINER

10.8 (110, 8)

x 2

10.8 (110, 8)

● TRANSAXLE OIL
PAN (CVT) GASKET



TRANSAXLE OIL (CVT)
PAN SUBASSEMBLY

No. 1 TRANSMISSION
OIL FILLER TUBE

1.7 (17, 15 in.*lbf)



x 16

7.8 (80, 69 in.*lbf)

OVERFLOW PLUG

40 (408, 30)



● GASKET

● : Replacement part

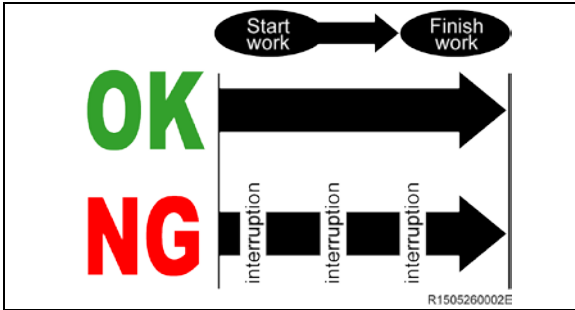
[N*m (kgf*cm, ft.*lbf)] : Specified torque

R180608001E



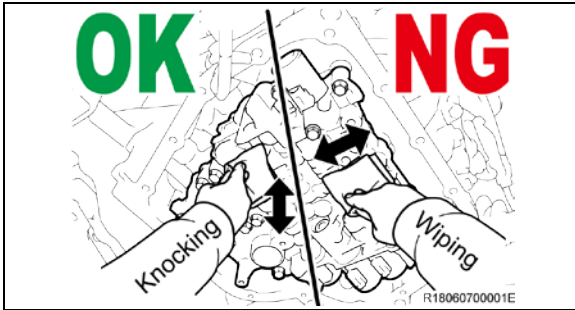
STOP

Intrusion of fine foreign materials or dust into the transmission may cause a malfunction that results in a state unable to travel. Sufficiently clean the work area, tools, and equipment to be used before starting work operation. Take care not to allow air blowing to be performed around the work area.



STOP

Perform work operation quickly without interruption so as not to allow intrusion of foreign materials or dust into the transmission.



STOP

Clean off oil off before disassembling, knock the area to be cleaned with a lint free cloth to absorb oil. **DO NOT** perform a wiping action, or the lint free cloth may be caught by burrs and lint may be generated.



STOP

- Perform cleaning completely before starting disassembly.
- **DO NOT** perform cleaning after starting disassembly in principle, or intrusion of foreign materials may be caused.

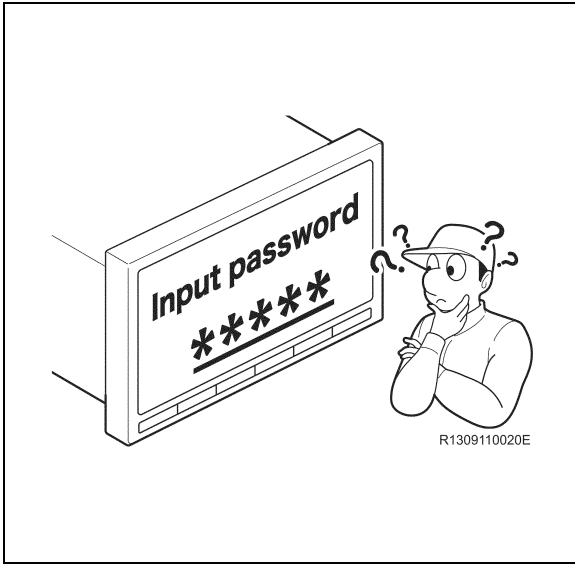


STOP

- **DO NOT** use shop cloths, paper towels, and/or work gloves for disassembly, or foreign materials such as lint may be generated.
- **DO NOT** perform air blow, or foreign materials and dust may be thrown up.

1. RECORD CUSTOMER SETTINGS

- When the battery cable is disconnected, the settings for the audio, air conditioning etc., may be reset. Therefore, make a note of the settings before disconnecting the cable from the negative (-) battery terminal.

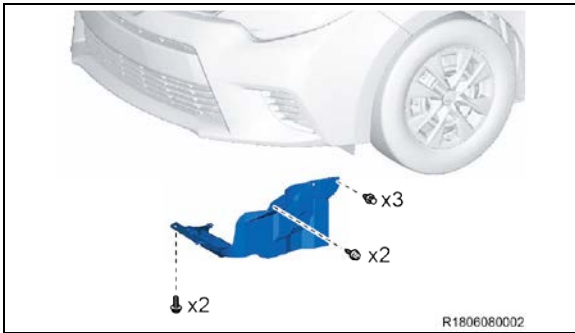


2. **TAKE MEASURES AGAINST SECURITY OF NAVIGATION SYSTEM**
 - a) In some cases, a user password is set for restart of the system after disconnection of the power supply. Obtain confirmation from the customer in advance regarding conditions of the system at the time of returning the vehicle to the customer.

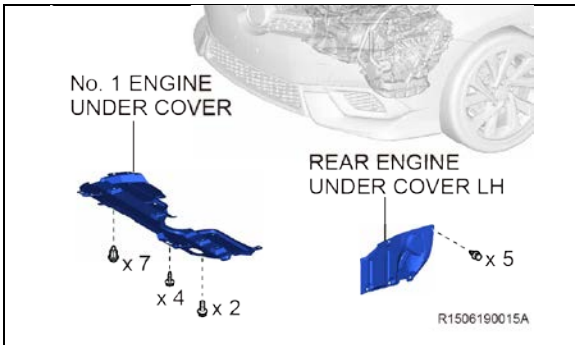
3. **DISCONNECT THE BATTERY TERMINAL**

NOTE:

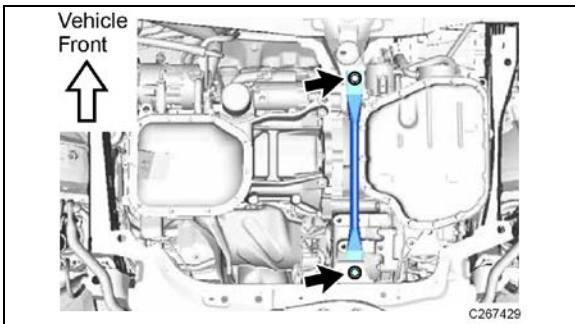
 - Disconnect the negative (-) battery terminal cable to prevent sparks.
 - For models with a HDD navigation system, wait at least 6 minutes before disconnecting the battery. It takes approximately 6 minutes for the system to save information and settings after the engine switch is turned off.



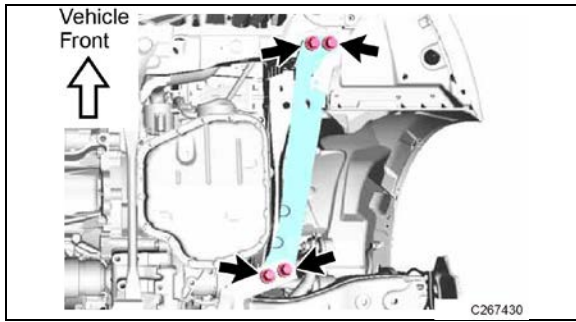
4. **LIFT THE VEHICLE**
5. **REMOVE THE ENGINE UNDER COVER LH (for Corolla)**
 - a) Remove the 2 bolts, 2 screws, 3 clips and engine under cover LH.



6. **REMOVE THE No.1 ENGINE UNDER COVER LH (for iM)**
 - a) Remove the 2 bolts, 4 screws, 7 clips and No. 1 engine under cover.
7. **REMOVE THE REAR ENGINE UNDER COVER LH (for iM)**
 - a) Remove the 5 clips and rear engine under cover LH.



8. **REMOVE THE FRONT ENGINE MOUNTING BRACKET LOWER REINFORCEMENT (for iM)**
 - a) Remove the 2 bolts and front engine mounting bracket lower reinforcement.

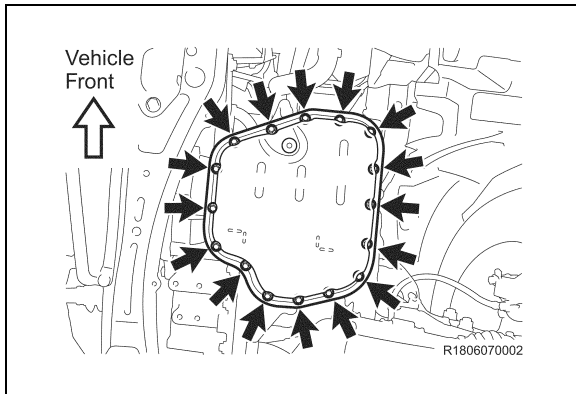


9. REMOVE THE FRONT SUSPENSION MEMBER REINFORCEMENT LH (for iM)

- a) Remove the 4 bolts and front suspension member reinforcement LH.

10. DRAIN THE CVT FLUID

[Click here to access the CVT fluid replacement in the repair manual on TIS.](#)



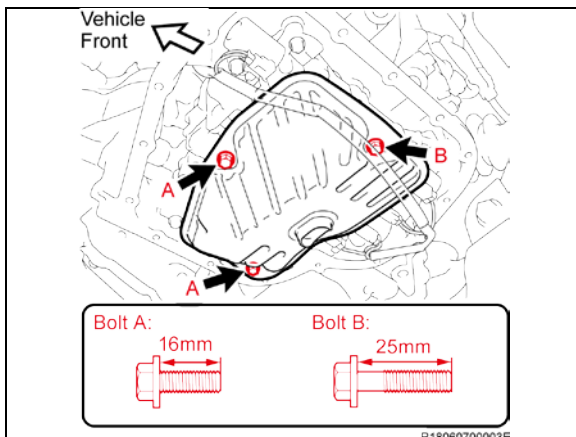
11. REMOVE THE TRANSAXLE OIL (CVT) PAN SUB-ASSEMBLY

- a) Remove the 16 bolts, transaxle oil (CVT) pan sub-assembly and transaxle oil pan (CVT) gasket from the continuously variable transaxle assembly.

NOTE:

Some fluid will remain in the transaxle oil (CVT) pan sub-assembly. Remove all the bolts, and carefully remove the transaxle oil (CVT) pan sub-assembly.

- b) Remove the Transaxle Oil (CVT) Pan Gasket from the transaxle oil pan sub-assembly.



12. REMOVE THE OIL STRAINER

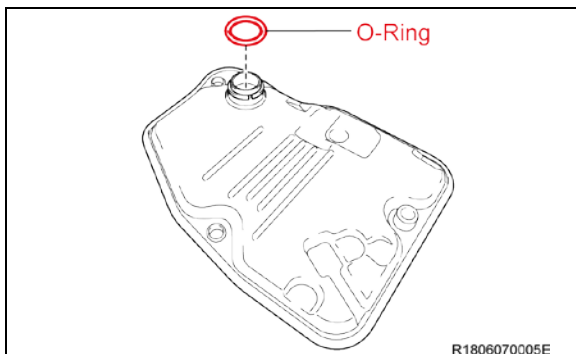
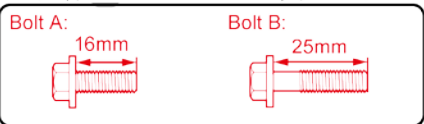
- a) Unscrew 3 bolts and remove the oil strainer from the transmission valve body assembly.

Bolt A: (2) 16mm in length

Bolt B: (1) 25mm in length

NOTE:

Additional fluid will flow out when removing the oil strainer.

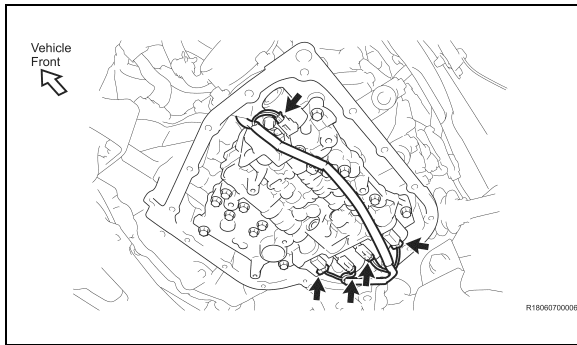


- b) Remove the O-ring from the oil strainer.



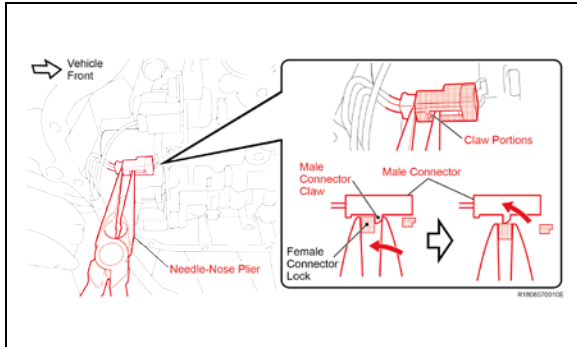
Take care to ensure there is no contamination on the oil strainer.

- c) Break the removed O-ring and store it in a replacement part box etc.

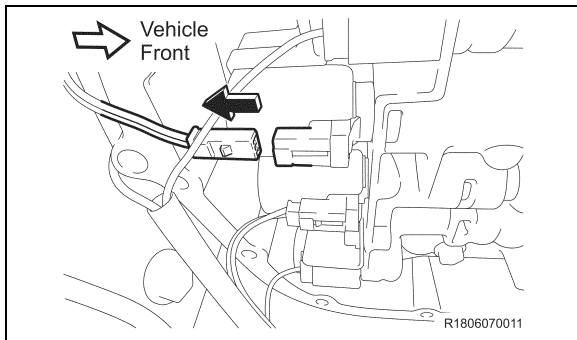


13. REMOVE THE TRANSMISSION HARNESS

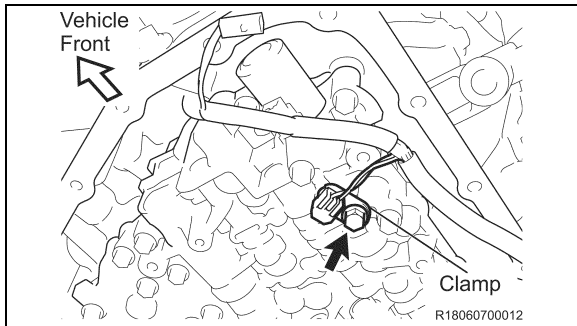
- a) Disconnect 5 connectors of transmission harness from the transmission valve body assembly.



- b) To remove the connector, apply the needle-nose plier end to the male connector tab.
 c) Gently hold the needle-nose plier and then push the male connector tab out.



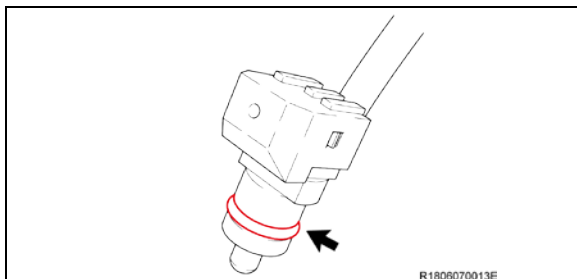
- d) Pull out the male connector.



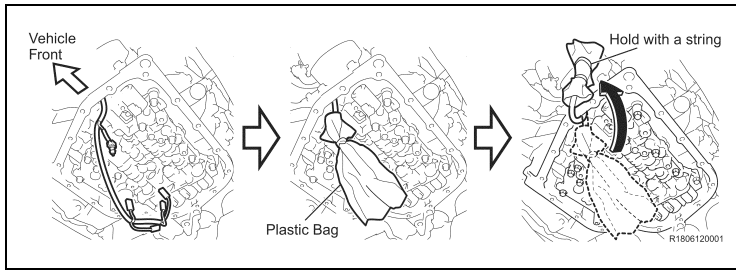
- e) Remove the bolt and oil temperature sensor clamp.
 f) Remove the oil temperature sensor.

NOTE:

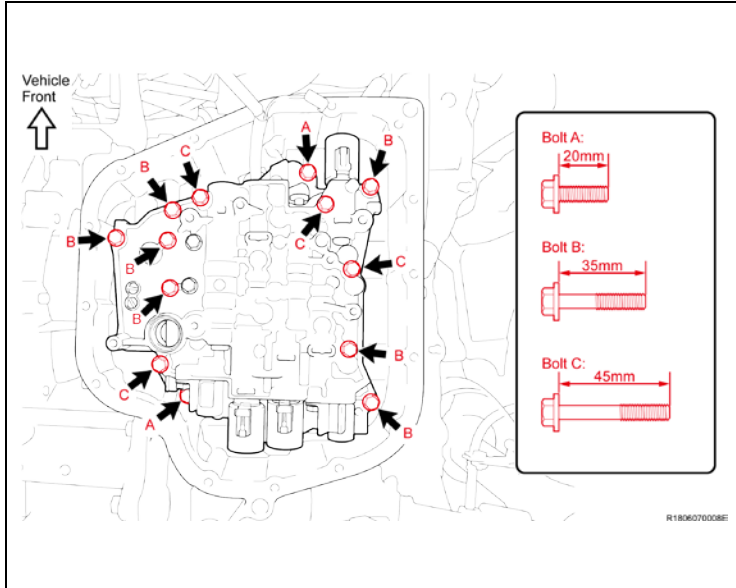
Additional fluid will flow out when removing the oil temperature sensor.



- g) Remove the O-ring from the oil temperature sensor.
 h) Break the removed O-ring and store it in a replacement part box etc.



- i) Cover the disconnected connectors with a plastic bag and tape in order to prevent intrusion of foreign matters.
- j) Raise the wires and connectors and hold them with a string.



14. REMOVE THE TRANSMISSION VALVE BODY ASSEMBLY

- a) Unscrew the 13 bolts and remove the transmission valve body assembly from the transmission case.

Bolt A: (2) 20mm in length

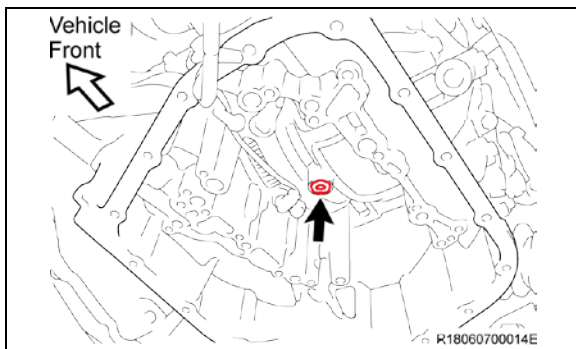
Bolt B: (7) 35mm in length

Bolt C: (4) 45mm in length

NOTE:

- The fluid may flow out for a few minutes after removing the transmission valve body assembly.
- The transmission valve body assembly weighs approximately 4.6kg.

- b) Put a mark on the removed transmission valve body assembly and store them in a replacement parts box etc.



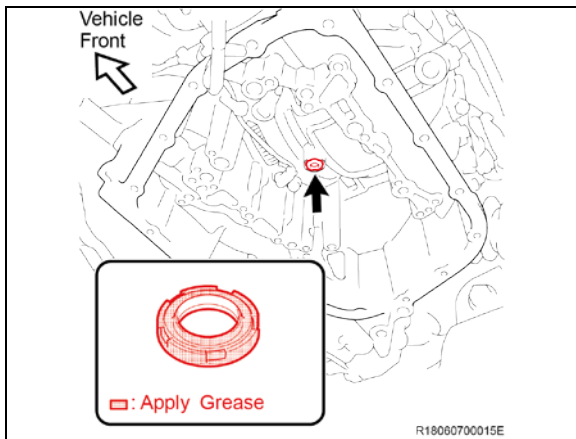
- c) Remove transaxle case gasket from the transmission case.



As soon as removal of the transmission assembly is complete, install the transmission valve body assembly without ANY interruption to avoid contamination.

- d) Break the removed gasket and store it in a replacement part box etc.

XII. INSTALL THE TRANSMISSION VALVE BODY ASSEMBLY



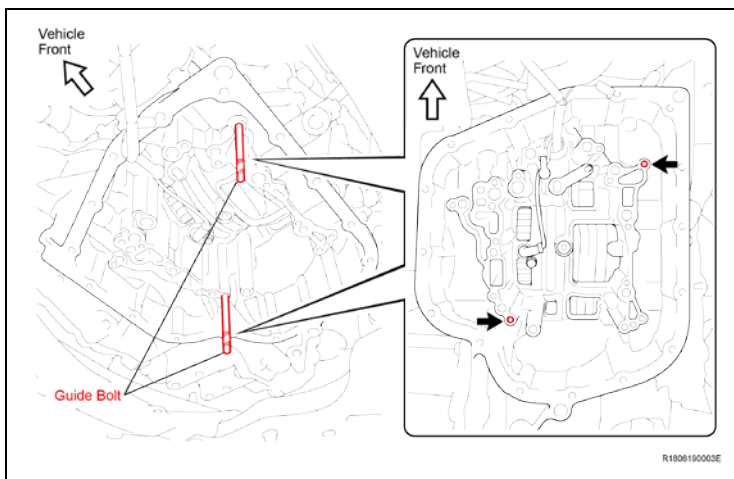
1. **INSTALL THE TRANSMISSION VALVE BODY ASSEMBLY**
 - a) Apply a small amount of Toyota genuine MP grease No.2 or equivalent to the **NEW** transaxle case gasket.
2. Install the gasket to the transmission case.

STOP

To prevent the transaxle case gasket from falling off, ensure that it is properly installed to the transmission case.

NOTE:

Transaxle case gasket is non-directional.



3. Install the 2 guide bolts at the positions shown in the illustration.

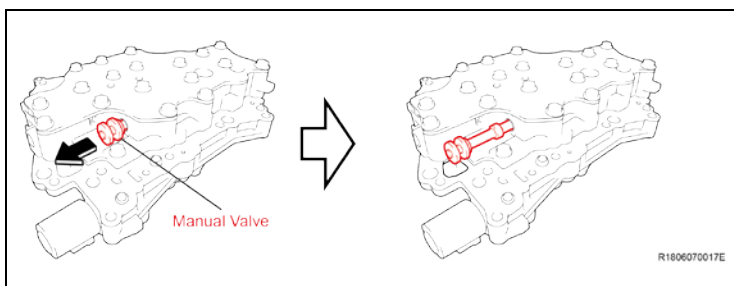
STOP

Make sure to use the guide bolts, since the valve body may slide and cause the transaxle case gasket to fall off.

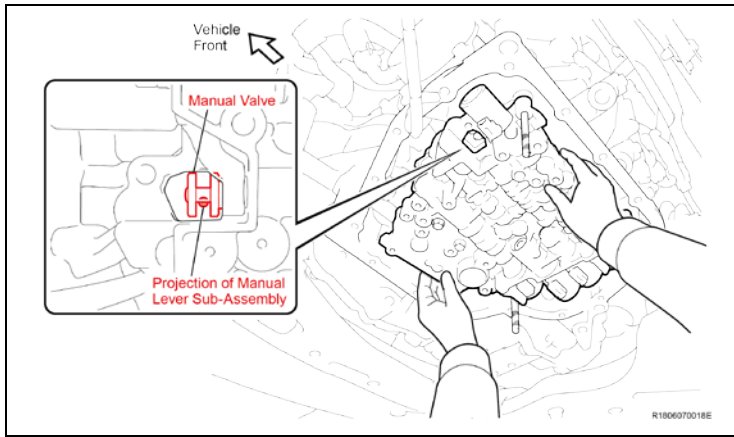


STOP

- When installing the **NEW** transmission valve body assembly, fit it into the transmission case carefully as to **NOT** damage the top of the sub strainers that are positioned at the back of the transmission valve body assembly.
- When installing the **NEW** transmission valve body assembly, hold the transmission valve body assembly horizontally to prevent the manual valve from falling off.



- a) Pull out the manual valve as shown in the illustration.



4. Match the position of the holes of the **NEW** transmission valve body assembly to the guide bolts and hold the valve body assembly in place.
5. Ensure that the projection of the manual valve lever sub-assembly and the groove of the manual valve are matching as shown.

NOTE:

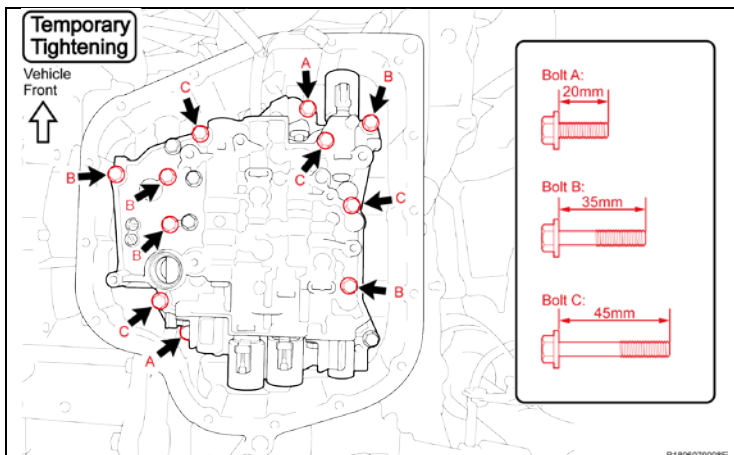
If the projection is not matching the groove, relocate the manual valve.



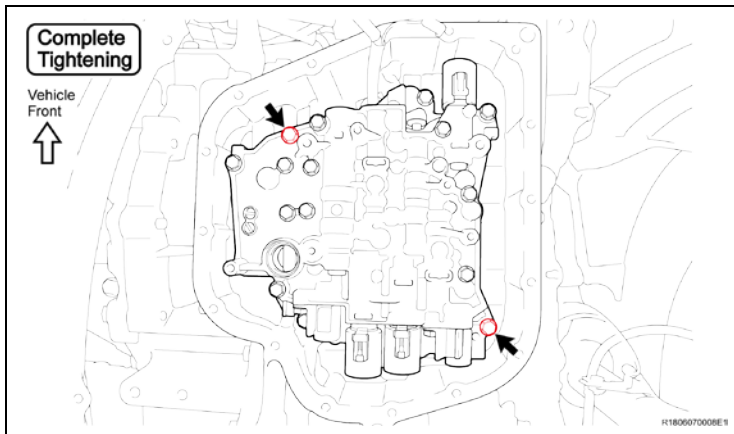
6. Push to install the **NEW** transmission valve body assembly to the transmission case and hold it in place.
7. Holding the transmission valve body assembly, install the 2 bolts (35 mm in length) to position B.

STOP Make sure to start torquing from the 2 bolts shown in the illustration, since they will be the installation position standard.

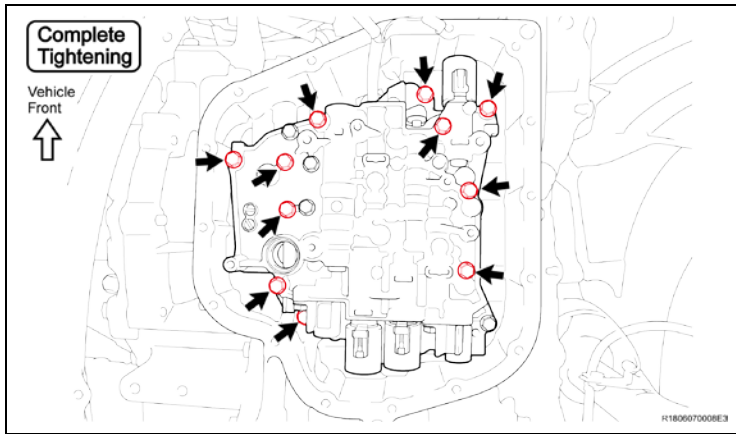
8. Temporarily tighten the bolts manually until they sit properly on the transmission valve body assembly.



9. Remove the 2 guide bolts.
 10. Temporarily tighten the remaining 11 bolts manually until they sit properly.
- Bolt A: (2) 20mm in length**
Bolt B: (5) 35mm in length
Bolt C: (4) 45mm in length

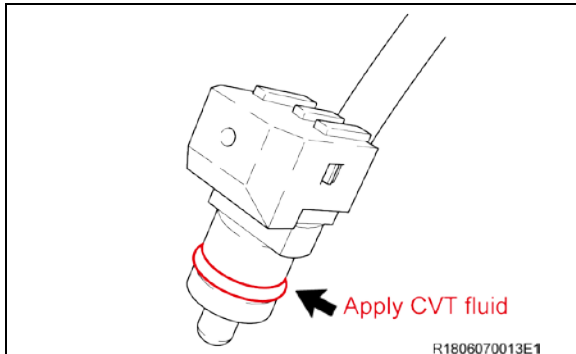


11. Tighten the 2 bolts.
Torque: 10.8 N*m (110 kgf*cm, 8 ft.*lbf)
12. Every time one of the bolts is complete-tightened, clean the bolt head and put a yellow paint mark



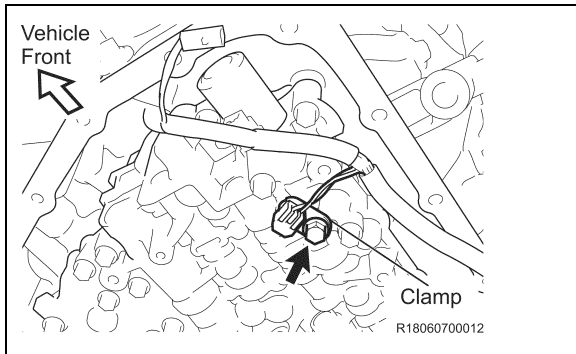
13. Tighten the other 11 bolts evenly.
Torque: 10.8 N*m (110 kgf*cm, 8 ft.*lbf)

14. Every time one of the bolts is complete-tightened, clean the bolt head and put a yellow paint mark.



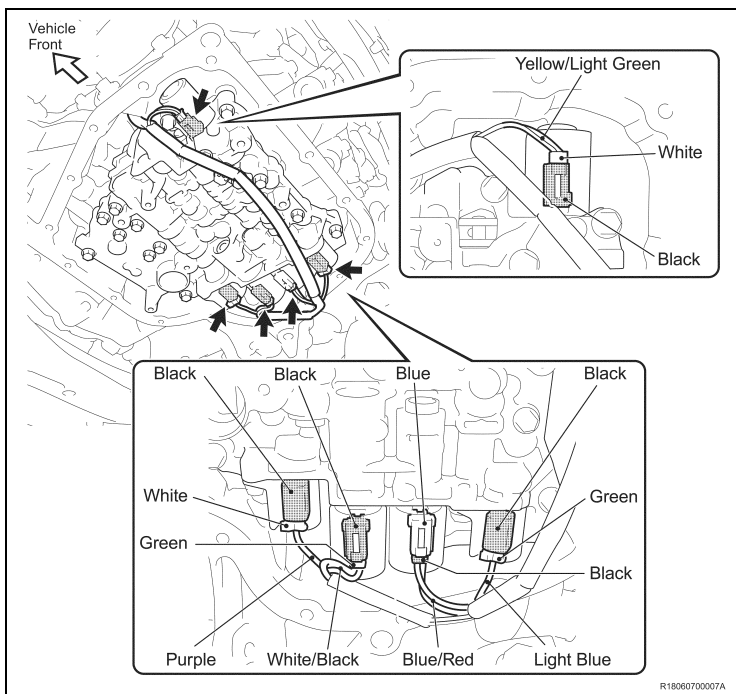
15. REINSTALL THE TRANSMISSION HARNESS

a) Apply Toyota genuine CVT fluid to **NEW** O-ring and fit it to the oil temperature sensor.



16. Reinstall the oil temperature sensor.

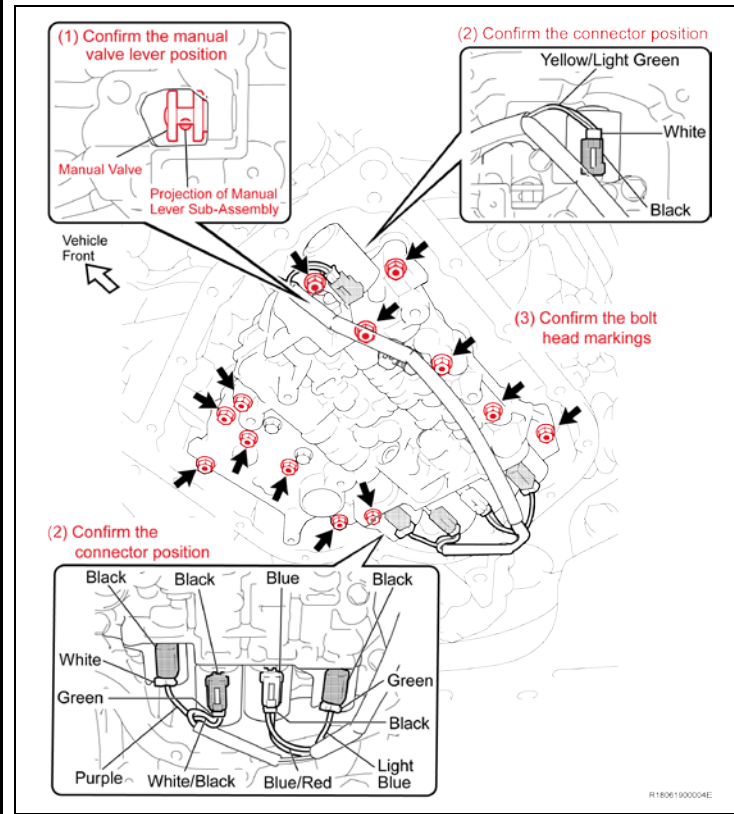
17. Reinstall the oil temperature sensor clamp with the bolt.
Torque: 10.8 N*m (110 kgf*cm, 8 ft.*lbf)



18. Reconnect the 5 connectors and install the transmission harness to the transmission valve.

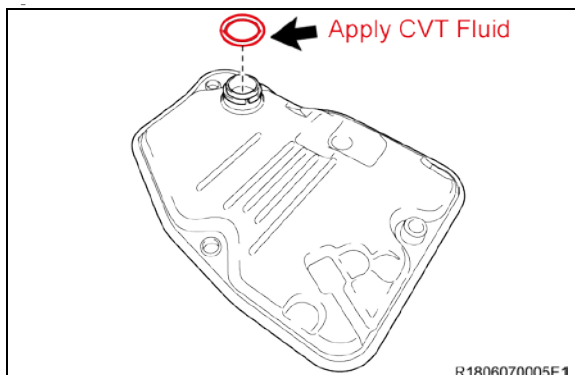
STOP
Make sure to install the connector to the position shown in the illustration. If the installation position is mistaken, the CVT assembly may malfunction or need to be replaced.

INTERMEDIATE INSPECTION



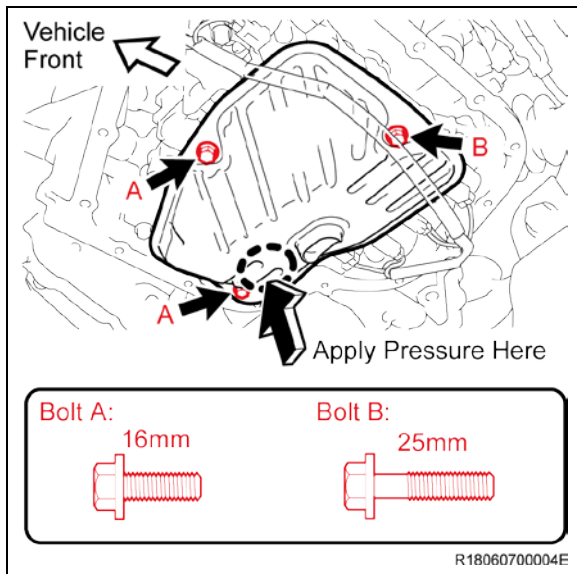
19. INTERMEDIATE INSPECTION

- a) Perform the intermediate inspection to ensure the following 3 points.
- (1) The projection of the manual valve lever sub-assembly is properly matched to the groove of the manual valve.
 1. The connector is installed at the proper position.
 2. Each of the 13 bolt head has the yellow paint mark as a sign of complete-tightening.



20. REINSTALL THE OIL STRAINER

- a) Apply Toyota genuine CVT fluid to the **NEW** O-ring and then fit it into the oil strainer.



21. Tighten the 3 bolts evenly, temporarily reinstall the oil strainer to the transmission valve body assembly.

Bolt A: (2) 16mm in length
Bolt B: (1) 25mm in length



- When installing the oil strainer to the transmission valve body assembly, prevent the O-ring from being caught and apply pressure to the area below the A bolt at the 12 o'clock position as shown while keeping the strainer level.
- Prevent the transmission wiring from being caught between the transmission valve body assembly and the oil strainer.

22. Tighten the 3 bolts.

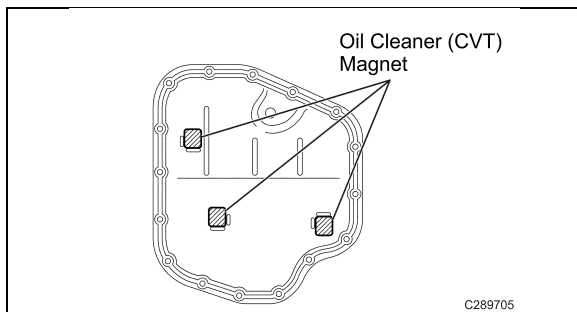
Torque: 10.8 N*m (110 kgf*cm, 8 ft.*lbf)

23. REINSTALL THE TRANSAXLE OIL (CVT) PAN SUB-ASSEMBLY

- a) Remove the 3 oil cleaner (CVT) magnets from the transaxle oil (CVT) pan sub-assembly.

24. Clean off any metal particles adhered to the 3 oil cleaner (CVT) magnets.

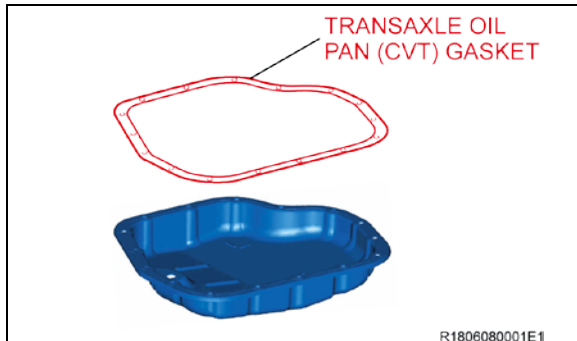
25. Clean the transaxle oil (CVT) pan sub-assembly and remove any metal particles, sludge, etc.



26. Install the **NEW** transaxle oil pan (CVT) gasket.



Clean the mating surfaces of the transaxle oil (CVT) pan sub-assembly and the transmission case with wipes to remove grease, moisture and/or dirt (DO NOT use brake cleaner).



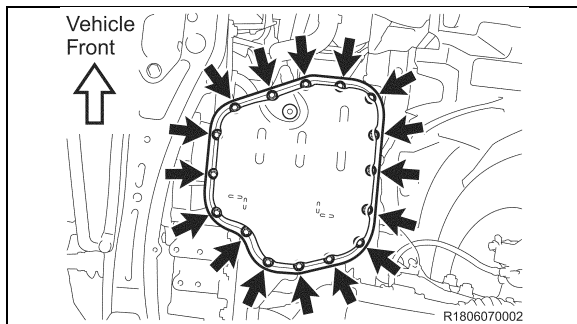
27. Tighten the 16 bolts evenly, and temporarily reinstall the transaxle oil (CVT) pan sub-assembly to the transmission case.



Prevent the transmission wiring from being caught between the transmission case and transaxle oil (CVT) pan sub-assembly by pushing wiring to the center of transaxle.

28. Tighten the 16 bolts.

Torque: 7.8 N*m (80 kgf*cm, 69 in.*lbf)



29. RECONNECT THE BATTERY TERMINAL

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

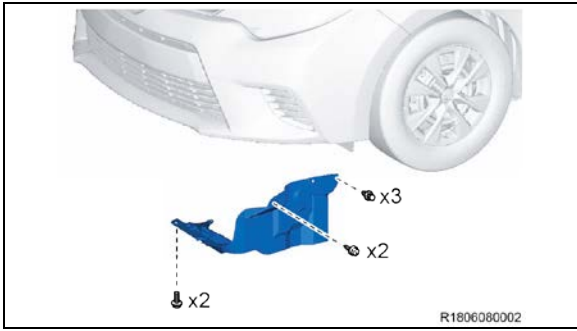
30. REFILL THE CVT FLUID

[Click here to access the CVT fluid replacement in the repair manual on TIS.](#)

- (a) Add fluid to the refill hole using the correct amount of fluid.

Reference Capacity:

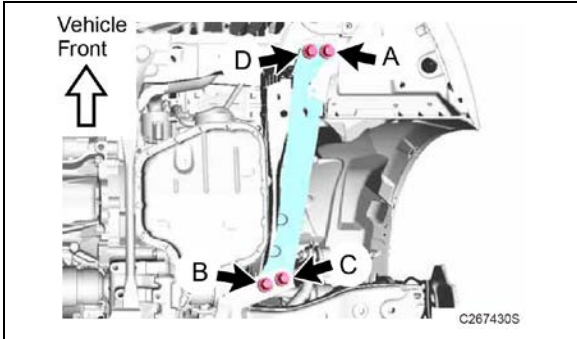
3.5 liters (3.7 US qts, 3.1 Imp. qts.)



31. CHECK FOR FLUID LEAKS

32. REINSTALL THE ENGINE UNDER COVER LH (for Corolla)

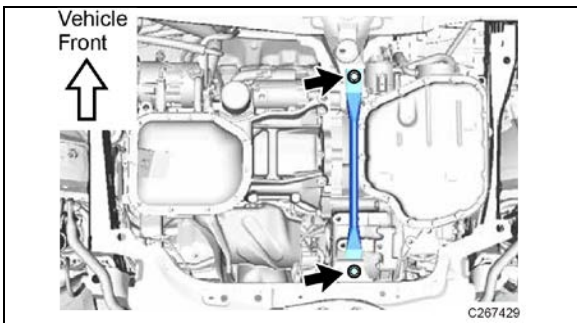
- a) Reinstall the engine under cover LH with the 2 bolts, 2 screws and 3 clips.



33. REINSTALL THE FRONT SUSPENSION MEMBER REINFORCEMENT LH (for iM)

- a) Reinstall the front suspension member reinforcement LH to the front cross member sub-assembly and front suspension crossmember sub-assembly with the 4 bolts.

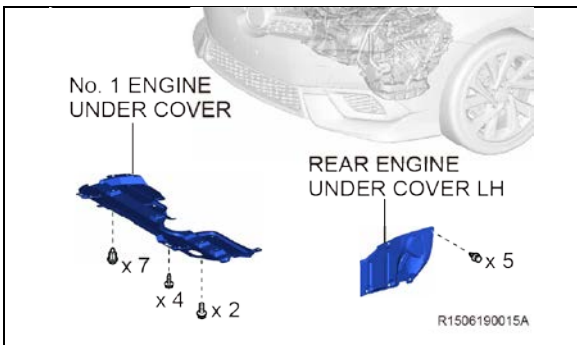
Torque: 99 N*m (1010 kgf*cm, 73 ft.*lbf)



34. REINSTALL THE FRONT ENGINE MOUNTING BRACKET LOWER REINFORCEMENT (for iM)

- a) Reinstall the front engine mounting bracket lower reinforcement to the front cross member sub-assembly and front suspension crossmember sub-assembly with the 2 bolts.

Torque: 99 N*m (1010 kgf*cm, 73 ft.*lbf)



35. REINSTALL THE REAR ENGINE UNDER COVER LH (for iM)

- a) Reinstall the rear engine under cover LH with the 5 clips.

36. REINSTALL THE No.1 ENGINE UNDER COVER LH (for iM)

- a) Reinstall the No. 1 engine under cover with the 2 bolts, 4 screws and 7 clips.

37. CHECK AND CLEAR DTCs

- a) Clear the Diagnostic Trouble Codes.

38. Using Techstream perform a Health Check and confirm no current DTCs are present.

39. CONTINUOUSLY VARIABLE TRANSAXLE SYSTEM INITIALIZATION

Corolla	2014-2015	2016-2017
Scion iM	2016	
Toyota iM	2017	

NOTE: ATF Thermal Degradation Estimate Reset must be performed on 2017 models at this time

40. TEST DRIVE

- a) Test drive the vehicle to confirm proper vehicle operation.

41. PERFORM SETTING AFTER CONNECTION OF THE BATTERY TERMINAL

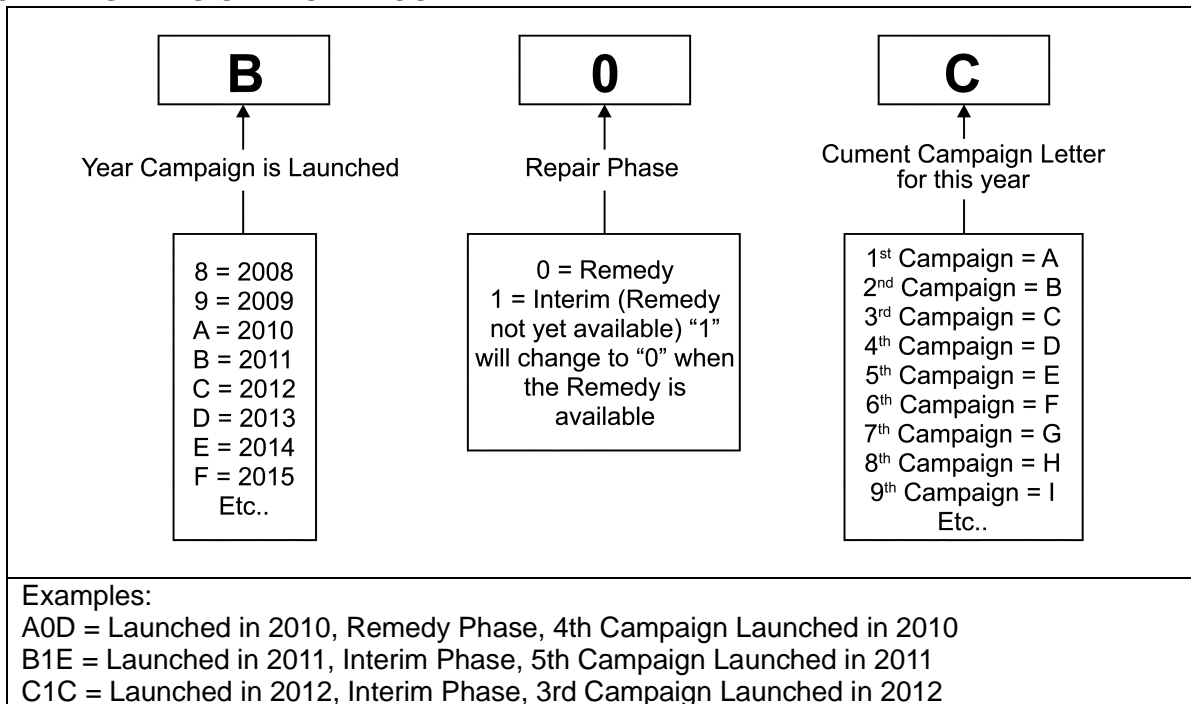
- a) After connecting the terminal, perform setting of systems.
 - (1) Restore the data recorded in disconnection of the battery terminal.
 - 1. Memorize steering angle neutral point.
 - 2. Servo motor initialization (for Corolla)
 - 3. Operate back door lock (for iM).

◀ VERIFY REPAIR QUALITY ▶

- Confirm the ECM Calibration has been updated successfully
 - Confirm that you have performed and saved the SLP Valve drive pattern file
 - Confirm you have performed all initializations
 - Confirm that an Authorized Modification Label has been installed
- If you have any questions regarding this SSC, please contact your regional representative

XIII. APPENDIX

A. CAMPAIGN DESIGNATION DECODER



B. RECALL PARTS DISPOSAL

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.**


C. UPDATE MONGOOSE MFC VIM (This update only applies to all Techstream 2.0 and Techstream Lite with a Blue Cable)



1. DOWNLOAD UPDATE FOR MONGOOSE MFC VIM

- a. Go onto TIS and under the TIS tab select Diagnostics, followed by the Scantool tab
- b. Scroll down to the Techstream Lite section (this applies to both Techstream lite with a blue cable and all Techstream 2.0)
- c. Below bullet point 1, select “*MongoosePro MFC VIM (Bluse Case or updated Clear Case)*”
- d. Select either the 32-bit or 64-bit software (based on your system settings) to download the update

NOTE: This update applies to all Techstream 2.0



Techstream Lite Getting Started
After you obtain a PC that meets the [minimum network and hardware requirements](#), follow these easy steps to get your Techstream Lite configured quickly. For detailed instructions refer to the [Techstream Lite Installation Instructions](#).

1. Install Mongoose MFC VIM Software (Select the link below for the Mongoose MFC VIM being updated)
[Mongoose MFC VIM \(Clear Case\)](#) Updates a MFC VIM to a Pro MFC VIM
Important: If you have a Mongoose MFC VIM (Clear Case) that has already been updated to Pro firmware, use MongoosePro MFC VIM (blue case) firmware.
[MongoosePro MFC VIM \(Blue Case or updated Clear Case\)](#) ← 1
[Techstream 2.0 uses MongoosePro MFC VIM \(Blue Case\)](#)
- Install MongoosePro MFC VIM Software
[32-bit MongoosePro MFC Software Installer v1.2.10](#) ← 2
[64-bit MongoosePro MFC Software Installer v1.2.10](#)

MongoosePro MFC2 VIM (Green Case)

2. Install full version of Techstream Software [Techstream V13.10.019 Full Software Installer](#)
3. [Register Techstream Software](#)
4. Set Techstream VIM Selection to MongoosePro MFC
5. Label your Mongoose MFC VIM as MongoosePro MFC (if you have performed the update)