TOYOTA Service Bulletin

Section : General Ref. No. : G-0002 Date : Jan.,2012 Page : 1 of 22

Area Application : Europe, General, G.C.C. Countries, Australia

Model Name : ALL MODELS

Model Code : ALL MODELS

Subject : REPROGRAMMING METHOD OF ECU

This Service Bulletin contains information regarding using Global TechStream which is an addition to the information on ECU reprogramming method with the Intelligent Tester II that has already been published (Europe: EG-6006, General, Australia: EG-8011).

This Service Bulletins explains in general the engine ECU reprogramming method by using Intelligent Tester II or Global TechStream. Should you have to reprogram an ECU for any modifications, please always refer to the specific instructions delivered together with the Calibration ID files.

Part No. Information :

New Part No.	New Part Name	Qty
NA	NA	NA

Production Effective :

VIN	Production Date
NA	NA



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PREPARATION

Vehicles with an ECU that uses FLASH MEMORY

NECESSARY PARTS AND TOOLS (FOR INTELLIGENT TESTER II)

Part Or Tool Name	Remark Or Function
Authorized Modification Label (Part No. 89685-20010)	After reprogramming, this label should be attached on the ECU cover. This certifies that this modification to ECU software was done according to the manufacturer's specification.
Calibration Data file	This contains the modified ECU program that is provided from TMC.
CUW (Later)	This software is used to download the CAL data from PC to Intelligent Tester II.
Intelligent Tester II (software version later)	Reprogramming of the ECU
Personal Computer	Download the modified software to the Intelligent Tester II
USB cable	Connect the PC and Intelligent Tester II
Standard tools	-

NECESSARY PARTS AND TOOLS (FOR Global TechStream)

Part Or Tool Name	Remark Or Function
Authorized Modification Label (Part No. 89685-20010)	After reprogramming, this label should be attached on the ECU cover. This certifies that this modification to ECU software was done according to the manufacturer's specification.
Calibration Data file	This contains the modified ECU program that is provided from TMC.
CUW (Later)	The Calibration Update Wizard (CUW) is included with the Global TechStream software.
Vehicle Interface Module or J2534 Device	Reprogramming of the ECU
Personal Computer	Operate the CUW with a personal computer.
USB cable	Connect the PC and Vehicle interface module.
Standard tools	-

OPERATION FLOW CHART

NOTICE:

The procedures 3, 6 and 10 are only for diesel engines, so skip these procedures for non diesel engines.

1 CHECK WHETHER OR NOT VEHICLE VIN IS IN AFFECTED VIN RANGE (ALWAYS REFER TO SPECIFIC MODIFICATION REQUEST)



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YES

> NO FURTHER ACTION IS NEEDED

NO

READ CATALYST RECORD IF VEHICLE IS EQUIPPED WITH DPNR OR DPF

NOTICE:

3

The catalyst thermal deterioration record should be saved before conducting the ECU reprogram. This will ensure that the correct records can be saved into a replacement ECU in case of a reprogramming failure. (Refer to the appropriate chapter in the vehicle repair manual for the detailed procedure).

4

REPROGRAM ECU FOR NEW CID



5

CHECK THAT REPROGRAMMING WAS SUCCESSFUL

NG GO TO STEP 9

ОК

6 REMOVE EFI FUSE FOR MORE THAN 1 MINUTE IN ORDER TO RESET ENGINE ECU

HINT:

Alternatively, the cable from the negative (-) battery terminal can be disconnected for more than 1 minute.

NEXT

7

CONFIRM VEHICLE CONDITION AFTER REPROGRAMMING OF ECU



8

ATTACH ENGINE CONTROL COMPUTER NAME LABEL ON ECU

NEXT

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END
9 REPLACE ENGINE ECU
NEXT
10 INPUT INJECTOR COMPENSATION CODES AND TRANSFER CATALYST RECORD TO NEW ECU
NOTICE: If the injector compensation code is not correctly registered, it may cause malfunctions.
NEXT
11 USING INTELLIGENT TESTER II OR GLOBAL TECHSTREAM, CHECK IF ECU HAS ALREADY BEEN REPROGRAMMED FOR NEW CID
YES NO FURTHER ACTION IS NEEDED
NO
12 REPROGRAM ECU FOR NEW CID
NEVT
NEXT
13 CONFIRM VEHICLE CONDITION AFTER REPROGRAMMING OF ECU
NEYT
NEAT
14 ATTACH ENGINE CONTROL COMPUTER NAME LABEL ON ECU
NEXT
END
TOYOTA TOYOTA MOTOR CORPORATION TECHNICAL SERVICE DIV

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CAUTION

1. CAUTION FOR REPROGRAMMING

- (a) Do not disconnect the DLC3 cable from the vehicle while reprogramming the ECU.
- (b) Do not turn OFF the IG switch/Engine START push button while reprogramming the ECU.
- (c) Do not apply any electrical load to the vehicle while reprogramming the ECU (e.g. audio, room light, air conditioner, radiator fan, blower etc.). Fluctuation in the battery voltage is prohibited.
- (d) Do not push the brake pedal while reprogramming the ECU.
- (e) Firmly apply parking brake.
- (f) Make sure that the battery voltage is 12 V or more before starting to reprogram the ECU.
- (g) If the battery voltage is below or just 12 V, charge the battery. Do not keep charging the battery while reprogramming. (Disconnect the charger from the battery.)
- (h) If the ECU is mounted in the engine room, confirm the hood is open and ensure under hood temperatures do not exceed 70°C (158°F).

WORK PROCEDURE (FOR INTELLIGENT TESTER II)

HINT:

- This manual shows 2AD-FHV case.
- Current CID: 30551000
- New CID: 30551200

1. CHECK THE CURRENT ID OF THE ECU

(a) Confirm whether the current ID of the ECU needs updating or not.





INSTALL THE CUW SOFTWARE TO YOUR PC (a) Prepare the necessary files.

- (1) Download/Copy the following files to any folder on your PC.
 - (EG) CUWV6R1.exe NOTICE:
 - Do not use lower version 6.1
 - WinRTUSBDriver.exe
 - xxxxxxxx-ii.cuw
- (b) Install CUW software.
 - (1) Double click the "(EG)CUWV6R1.exe" icon shown in the illustration.
 - (2) Click "Next" when the "Welcome to the install Shield Wizard for Calibration Update Wizard" is displayed.



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(3) Click "Finish" when the "Install Shield Wizard Complete" message is displayed.

- (c) Install USB driver.
 - (1) Double-click on "WinRTUSBDriver.exe" shown in the illustration.

(2) Click "Next" when the "Welcome to the Install Shield Wizard for WinRTUSBDriver" is displayed.

(3) Click "Finish" when the "Install Shield Wizard Complete" message is displayed.

- Ν A142039 ٩
- 30551200-ii.. Ν A142038 ٤

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(EG)CUWV6...

1

WinRTUSBD...

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K Back Fit sh Cancel Ν A142040

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- 3. DOWNLOAD CALIBRATION DATA FROM PC TO INTELLIGENT TESTER II
 - (a) Connect PC and intelligent tester II with a USB cable.
 - (b) Turn on intelligent tester II.
 - (c) Download calibration data.
 - (1) Double-click on the "xxxxxxx-ii.cuw" file as shown in the illustration.
 NOTICE:
 The file name on the illustration is only an example.
 - (2) Click "Next".

(3) Select "Intelligent Tester II" and click "Next".



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- (4) If all connections are confirmed and found OK, click "Next".
- Culteration Reporter Waters Program (the Tester to recover all traction to recover the tractin to recover the tractin to reco



		. .				-ox
The Calibration U	ibration file to the	nd this cali	f ibration to the	Tester.		
Issue Date	Model Name	Year	Eng Type	Cal ID-1	Cal ID-2	
Sep. 12, 2005	AVENSIS D-CAT	05	2AD-FHV	30551200		
	on the calibration and	d madel,	click "Send	I" to load it to the	Tester.	
After confirmi	ig the calibration and					

The Calibration Upo	late Wizard is about to se	and this cal	ibration to the	Tester.	
Issue Date	Model Name	Year	Eng Type	Cal ID-1	Cal ID-2
Sep. 12, 2005	AVENSIS D-CAT	05	2AD-FHV	30551200	
		_			

 (5) Confirm the vehicle model and calibration ID, then click "Next".
 Example for 2AD-FHV: Cal ID: 30551200

NOTICE:

If there is no sufficient space in the Internal Memory of the Intelligent Tester II, you will receive a warning message on the top of the screen. In such case, the "Send" button will not appear, but a "Delete". Select the file you want to remove from your intelligent Tester II, and push "Delete". Once the memory space is sufficient to download the software, the "Send" button will appear, and you can continue downloading.

(6) Click "Send".

- (7) Click "OK".
- (8) Turn OFF the Intelligent Tester II.
 NOTICE:
 With this operation, new software download from PC to Intelligent Tester II has been completed.

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Function	View	System	n Bar	Help
Utility				
ECU Repr	ogrammi	ing		
System :				×
Reprogram	ming Ite	m		
Current Ve	ehicle C	alibration	ID	
Reprogram	ming			
Calibration	File Ma	nager		
Item Inform	nation			
To review	and del	ete a calil	oration fi	le.
			1	
		En	iter	Exit
DTC	Data List	View	Active Test	Utility

- (d) Check download data.
 - (1) Turn ON the Intelligent Tester II.
 - (2) Push "Utility" button on the display.

(3) Push "ECU Reprogramming".

(4) Select "Calibration File Manager" and then push "Enter".



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(5) Select the correct file according to the vehicle type you should reprogram, and then push "Open". HINT:

Example for 2AD-FHV:

- Model Name: AVENSIS D-CAT
- L/O: 05
- Engine Type: 2AD-FHV
- Vehicle Type: ADT251
- Sub System: Engine and ECT

The illustration on the left is only to illustrate Calibration File Information screen. The actual screen depends on the software you are going to upload.

- (6) Confirm Calibration ID. Example for 2AD-FHV: Cal ID: 30551200
- (7) Turn OFF the Intelligent Tester II.

4. REPROGRAMMING THE ECU NOTICE:

Errors during the flash reprogramming process can permanently damage the ECU. Minimize the risks by following the steps mentioned below.

- Confirm battery voltage is between 12 and 14 V.
- If the battery voltage is below or just 12 V, charge the battery.

Do not keep charging the battery while reprogramming. (Disconnect the charger from the battery.)

- Turn off all electrical components (audio system, heater, defogger, power window, etc.).
- Do not apply any electrical load while reprogramming (fluctuation in battery voltage is prohibited).
- Close the vehicle doors.
- Do not perform any of the following actions while reprogramming: (Stop the procedure, operate the Ignition/Power switch.)
- Firmly apply the parking brake.
- If the engine ECU is mounted in the engine room, confirm the hood is open and ensure under hood temperatures do not exceed 70°C (158°F).
- (a) Disconnect cooling fan motor connector(s). HINT: This ensures the fan will not start while
- reprogramming.(b) Connect Intelligent Tester II to DLC3.
- (c) Turn on intelligent tester II.

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(d) Confirm current calibration ID in the engine ECU.(1) Push "Utility".



Function	View	System	n Bar	Help	
Utility					
Utility					
All Codes					
ECU Repro	ogrammir	ng			
Voltage me	eter				
DTC	Data List	View	Active Test	Utility	

(2) Select "ECU Reprogramming".



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(3) Select "Engine and ECT".

Function	View	Syster	n Bar	Help
Utility				. ~
Reprogram	ming			
System :	Engin	e and EC	т	•
Reprogram	HV E	CU		
Current Ve	ECT E	ECU		
Calibration	File Info	ormation		
Item Inform	ation			
		E	nter	Exit
DTC	Data List	View	Active Test	Utility

Eurotion	Viow	Svotor	n Po	r Holp			
Function	view	Systen	пра	r neip			
Utility							
Reprogramming							
System :	Engin	ie and EC	Т				
Reprogram	ming Ite	em		12			
Current Ve	ehicle C	alibratior	ı ID				
Calibration	File Info	ormation					
Item Inforr	nation						
To confirr vehicle.	n the cu	irrent Calil	pration	ID of the			
		E	nter	Exit			
DTC	Data	View	Active	Utility			
DIC	LISI		1000				

Function	View	Syster	n Bar	Help
Utility				
Current	Vehic l e C	alibration	ID	
	Check the	e initial co n press No	nditions, ext.	
- т - т	he DLC3 he ignitio	3 cable is on switch	connecte is ON.	d.
		Next		Cancel
DTC	Data List	View	Active Test	Utility

- (4) Select "Current Vehicle Calibration ID" and push "Enter".
- (5) Insert the key to the ignition switch and turn "IG ON".NOTICE:

Do not start the engine.

(6) Push "Next".

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Function	View	Syster	n Bar	Help	
Utility					
Current V	/ehicle Ca	alibration	ID		
	Ca	ibration	D		
30551000)				
				-1	
				Exit	
	Data		Active		
DTC	List	View	Test	Utility	





 (7) Confirm if the calibration ID displayed on the screen is equivalent to the old Calibration ID number of the vehicle that you are going to reprogram.
 Example for 2AD-FHV

Calibration ID: 30551000 HINT:

- All other calibration IDs (except the one above) do not need to be considered.
- If other calibration ID is displayed instead of the old Calibration ID of the vehicle that you are going to reprogram, do not reprogram.
- (8) Push "Exit".
- (e) Reprogram ECU.(1) Select "Reprogramming" and push "Enter".

(2) Push "Next".



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Function	View	Syster	n Bar	Help
Utility				
Reprogra	mming			
- The bat - The ign - All elect	theck the then tery volta ition swite	e initial co n press No nge is ove ch is OFF essories	nditions, ext. r 11.4V. are OFF.	
- The hoo - The par - All imm in the E - Auto reg	id is oper king brak obiliser k CU. gistration	ned. ke is set. ey codes mode is	are regis closed.	tered
DTC	Data List	View	Active Test	Utility

Function View System Bar Help
Utility 🖉
Reprogramming
Select a Calibration File to update the ECU, then press Next.
Calibration File Information
Model Name : AVENSIS D-CAT
Engine Type : 2AD-FHV Vehicle Type : ADT251 Sub System : Engine and ECT
Cancel DTC Data View Active Utility

Function View System Bar Help
Utility 📕
Reprogramming
Select a new Calibration ID to update, then press Next. Hint: All calibration Ids must be updated
New Calibration ID Update
Calibration ID I 30551200 NO
< Back Next > Cancel
DTC Data View Active Utility

(3) Follow all the instructions indicated on the display.

HINT: Example:

- Ignition switch OFF.
- All electrical accessories are OFF.
- Others
- (4) Push "Next".

(5) Select the calibration file to update (vehicle model that you are going to reprogram) and push "Next".
 Example
 AVENSIS '05 (2AD-FHV)

- (6) Select "Calibration ID" and push "Next". HINT:
 - Example for 2AD-FHV
 New Calibration ID: 30551200
 - When the reprogramming is completed, "YES" will be indicated in "Update" column.



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Function	View	Syster	n Bar	Help
Utility				Ŧ
Reprogran	nming			
Select the	Current 3 same Ca	Calibrat 0551000 dibration	ion ID ID in the	following
Calibr	ation ID	rrent IDS	, then pre	ess Next.
3055100	0			
3055110	0			
	< Back	Next	>	ancel
DTC	Data List	View	Active Test	Utility

Function View	v System	Bar	Help			
Utility						
Reprogramming						
Turn the then pre	ignition swite ss Next to pr	ch ON, oceed.				
Notice : Do not d an electric after	o anything th cal load to the r pressing Ne	at woul e vehicl xt.	d cause e			
	¥	<u>}</u>				
< Back	Next >		ancel			
DTC Data List	View A	ctive Test	Utility			
· · · · ·	п			_		
	\checkmark					
[Function	View	Syster	m Bar	Help	1
	Utility					
	Reprogram	ning				-
	NC	W REF	ROGRA	MMIMG		
	Time :		00 : 12	2:34		
			_	A		
	DTC L	aia .ist	View	Test	Utility	
Ν			-			A142064

(7) Select "Calibration ID" and push "Next". Example for 2AD-FHV Current Calibration ID: 30551000

(8) Turn ignition switch ON, but do NOT start the engine. After IG ON, push "Next".



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(9) If the error message shown in the illustration on the left is displayed, charge the battery and perform reprogramming again.

(10) After completing reprogramming, turn the ignition switch OFF.(11) Push "Next".

- (f) Reconfirm calibration ID in engine ECU.
 - (1) Select "Current Vehicle Calibration ID".
 - (2) Push "Enter".
 - (3) Turn the ignition switch ON.
 - (4) Push "Next".



1

Active

Test

< Back Next >

View

Data

List

DTC

Ν

Cancel

Utility

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Error Reprogramming



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Functior	n View	Syster	n Bar	Help
Utility				
Current	Vehicle C	alibration	ID	
	Ca	libration	D	
3055120	00			
				-1
				Exit
DTC	Data List	View	Active Test	Utility



- (5) Confirm if the new Calibration ID appears on the tester screen.
 HINT: Example for 2AD-FHV New Calibration ID: 30551200
- (6) Push "Exit".
- (g) Clear DTC. NOTICE:

After reprogramming the ECU, certain DTCs might be stored. These should be cleared.

- (1) Check that the transmission is in Neutral (or in case of automatic transmission in P).
- (2) Turn on the Intelligent Tester II.
- (3) Turn ignition switch ON.
- (4) Check for DTCs by Intelligent Tester II.
- (5) Confirm all "History" systems show "OK" status, then push "Exit". If not, push "Clear All".
- (h) Connect the removed fan motor connector(s).

WORK PROCEDURE (FOR Global TechStream) NOTICE:

Errors during the flash reprogramming process can permanently damage the ECU. Minimize the risks by following the steps mentioned below.

- Confirm battery voltage is between 12 and 14 V.
- If the battery voltage is below or just 12 V, charge the battery.
 Do not keep charging the battery while reprogramming. (Disconnect the charger from the battery.)
- Turn off all electrical components (audio system, heater, defogger, power window, etc.).
- Do not apply any electrical load while reprogramming (fluctuation in battery voltage is prohibited).
- Close the vehicle doors.
- Do not perform any of the following actions while reprogramming: (Stop the procedure, operate the Ignition/Power switch.)
- Firmly apply the parking brake.
- If the ECU is mounted in the engine room, confirm the hood is open and ensure under hood temperatures do not exceed 70°C (158°F).



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Model Code	UCF	w.
Vehicle Spec	3UZFE	-
Option:	w/ Smart Key	•
	Radar Cruise	-
		~
Optional Informati	on:	
VIN:	JTHBN36F855027303	
Memo:		×



System Select Stored Data Cal Update			_				
LS400 UCF Calibration	Calibration Update Check List						
/1/06/06/0690027300	System	Calibration ID	-				
- Copy							
F Check All			-				
Close			41				

1. CHECK THE CURRENT ID OF THE ECU

- (a) Connect the Vehicle Interface Module (hereafter referred to as VIM) or the J2534 device to the personal computer (hereafter referred to as PC) used for diagnostics.
- (b) Connect the VIM or the J2534 device to the DLC3.
- (c) Turn the ignition ON. **NOTICE:**
 - Make sure that the engine is OFF.
 - Make sure that the READY is OFF (for hybrid vehicles).
- (d) Click the "Connect to Vehicle" button.
- (e) Select the applicable option and click the "Next" button.

(f) Click the "ECU Reprogramming" button.

- (g) Select available ECU(s) from the Calibration Update Check List.
- (h) Click the arrow button (bottom right of screen).

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- (i) Confirm whether the current calibration ID of the ECU needs updating or not. HINT: The calibration displayed on the screen is the current calibration ID. Compare this with the Service Bulletin to determine whether or not it needs to be updated.
- (j) Click the "Close" button.
- (k) Click the "Main Menu" button to return to the main menu.

2. MAKE THE NECESSARY PREPARATIONS FOR REPROGRAMMING

- (a) Make sure that the battery installed in the vehicle is sufficiently recharged.
- (b) Follow the "Service Bulletin" as displayed for each vehicle for detailed instructions about things like removing connectors.
- (c) Connect the DC plug of the AC adapter to the PC used for diagnostics.
- (d) Connect the AC cable to the AC adapter and insert the AC plug into the AC socket.
- (e) Confirm the DTCs.
 - NOTICE:

It is possible that DTCs will be recorded while reprogramming.

Please check the DTCs before reprogramming. If DTCs are found, please write them down.

33704500.cuw	33705500.cuw	33708500.cuw	
			A255670

3. REPROGRAMMING THE ECU

(a) Double-click the applicable ECU calibration data.



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 Vehicle ECU

 Optimization Update William

 Caliboration Update William

 Merce Bar

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 Merce Bar Calibration Gate William

 Other State Calibration Context Context and State websites

 Note The Merce Calibration Context Context and State websites

 Other State Calibration Context Context and State websites

 Other State Calibration Context Context and State websites

 Comparison
 Cancel

 Comparison
 Cancel

 Comparison
 Cancel



Calibration Update Wizard - Screen S701-09

Calibration Selection Confirmation

Selected Calibration file i Press NEXT to continue.

ENG & ECT

(b) When the Calibration Update Wizard finishes starting up, click the "Next" button.

 (c) Select "J2534 device" and click the "Next" button.
 NOTICE: Make sure that the ignition is ON.

(d) Make sure that the current calibration ID and the new calibration ID are both correct.If they are correct, click the "Next" button.

- Calcherone More Water + Street 2

 Debicle Preparation

 1. Turn Ignition OFF

 Off
 </
- (e) Turn the ignition OFF and click the "Next" button.
 NOTICE:
 Clicking "Next" will activate the progress bar.
 Do not turn the ignition ON while the progress bar is moving.



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- Turn the ignition ON and click the "Start" button. (f) NOTICE:
 - Make sure that the engine is OFF.
 - Make sure that READY is OFF (for hybrid vehicles).
- (g) The screen on the left will be displayed while the program is automatically reprogrammed. The estimated reprogramming time is the time it takes to reprogram one program. HINT:

When reprogramming multiple programs, carry out operations according to the instructions on the screen.

(h) When all of the programs have been successfully reprogrammed, turn the ignition OFF and click the "Next" button. NOTICE:

Clicking "Next" will activate the progress bar. Do not turn the ignition ON while the progress bar is moving.

- Turn the ignition ON and click the "Next" button. (i) NOTICE:
 - Make sure that the engine is OFF. •
 - Make sure that READY is OFF (for hybrid vehicles).



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Disease to all	ssful !			
Please turn IG off.				
Please confirm that ca	ibration ID has been update	d as outlined in the specific S	ervice Bulletin.	
Current Call D-1	30801000	After Update:	anenenon	_
Current Cal ID-2	50801000	Current Cal ID-2	50805000	
Current Cal ID-3		Current Cal ID-3		
NOTE: Some DTCs may I Clear all DTCs aft	rave been set during the re er restoring the vehicle.	programming process.		4

(j) After the reprogramming is completed, make sure that the post-reprogramming calibration ID is correct, and then click the "Finish" button.(k) Clear the DTCs.