

**TECHNICAL INSTRUCTIONS**

**FOR**

**SPECIAL SERVICE CAMPAIGN 23TC02**

**BRAKE ECU REPROGRAM**

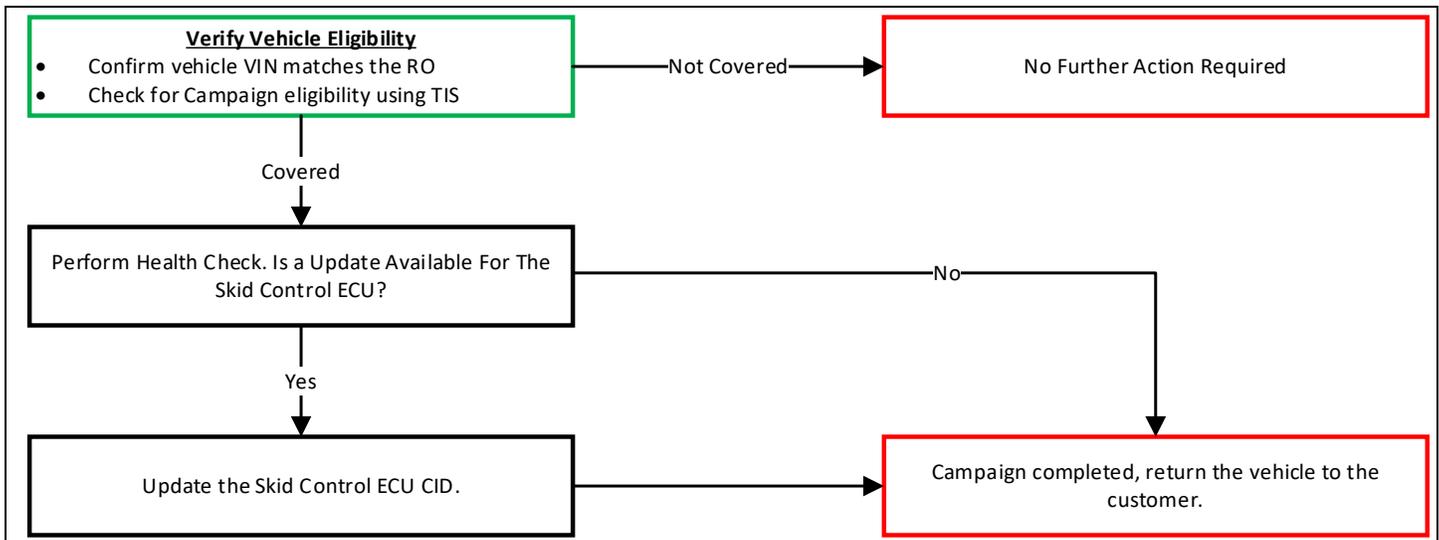
**CERTAIN 2023 MODEL YEAR COROLLA HV**

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 repair are required to complete the following course:

- TIC206A – Electrical Repair 1

It is the dealership’s responsibility to select technicians that have completed the above courses to perform this repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.

## I. OPERATION FLOW CHART



## II. IDENTIFICATION OF AFFECTED VEHICLES

### 1. CHECK VEHICLE FOR CAMPAIGN ELIGIBILITY

- Compare the vehicles VIN to the VIN listed on the Repair Order to ensure they match.
- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Campaign, and that it has not already been completed.

Note: TMNA warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were previously completed, even by another dealer.

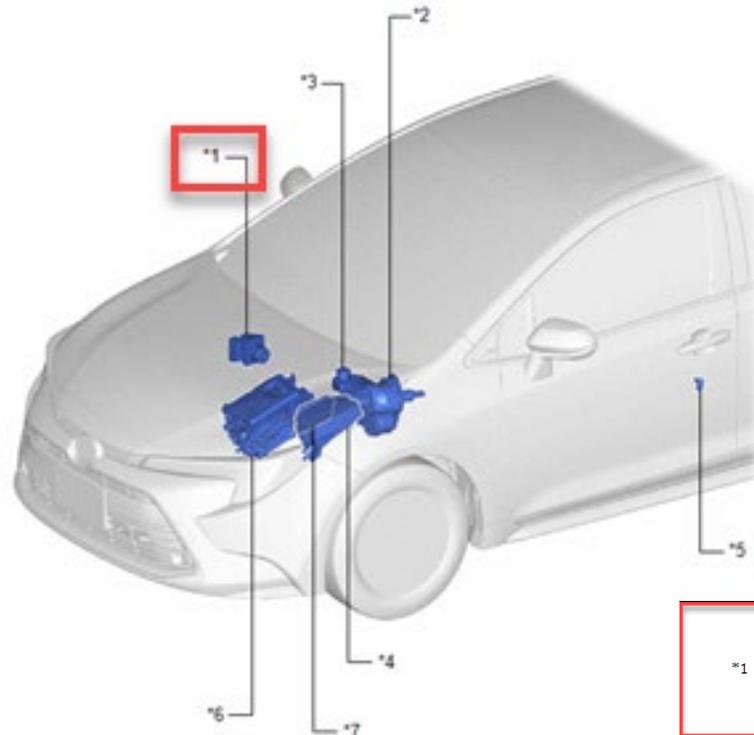
## III. PREPARATION

### A. TOOLS & EQUIPMENT

• Techstream or GTS	• Standard Hand Tools	• DCA-8000 Battery Diagnostic Station
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## IV. BACKGROUND

Due to certain programming in the brake ECU, under certain conditions, DTC U0100 is stored and cannot be cleared even though a technician attempts to clear it. This condition does not affect the vehicle operation.



"1	BRAKE ACTUATOR ASSEMBLY - SKID CONTROL ECU
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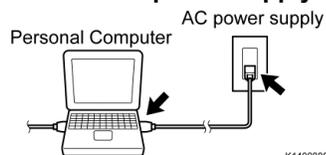
## V. SAFETY PRECAUTIONS

**Critical**

CRITICAL INFORMATION - READ THOROUGHLY

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

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



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### 1. STABILIZE THE POWER TO THE PERSONAL COMPUTER SIDE

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

#### NOTICE:

The ECU could be damaged if the battery voltage of the personal computer drops while reprogramming.

**Turn off the screen saver and power saving mode.**



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

#### NOTICE:

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

**DO NOT** block the ventilation opening.



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

**NOTICE:**

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 reprogramming signals could be stopped, resulting in the damage of the ECU.

**VI. BRAKE ECU CALIBRATION ID VERIFICATION**



**1. CHECK FOR DTC'S**

- a) Using a Techstream, perform a Health Check to check for any Diagnostic Trouble Codes.

**NOTICE:**

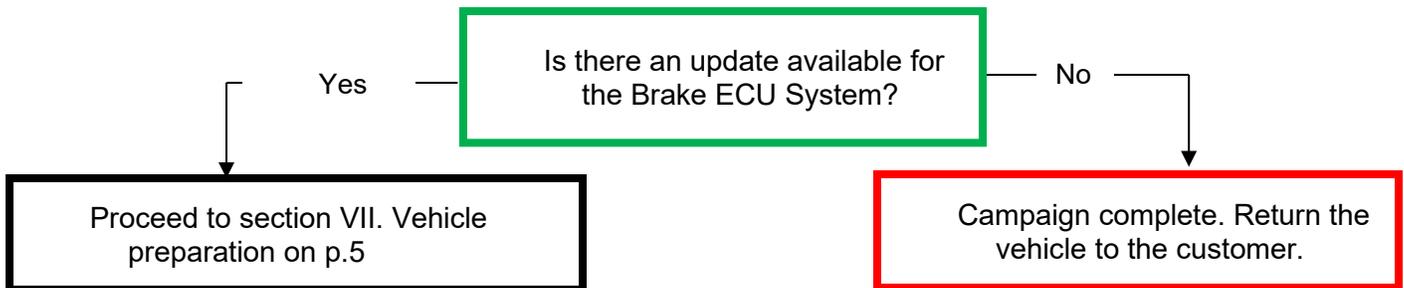
This Campaign covers only the software update to the Brake ECU, as detailed in these instructions. It does not cover the diagnosis or replacement of any other systems on the vehicle.



**2. CONFIRM THE BRAKE ECU CALIBRATION ID**

- a. Confirm the current calibration ID in the brake ECU.

Brake ECU Calibrations		
Model	Current Calibration ID	<b>New</b> Calibration ID
Corolla HV	F152612D1300	<b>F152612D1400</b>

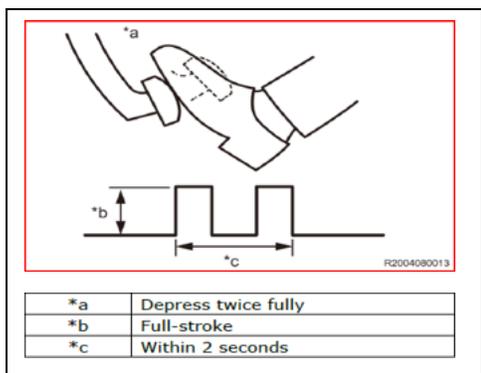


## VII. VEHICLE PREPERATION

### 1. VEHICLE PREPARATION

a. Confirm the following conditions:

- Vehicle in the IG position (engine off).
- Transaxle in Park.
- Parking brake engaged.
- Turn off all electrical accessories (i.e. climate control, audio system, etc.)
- Headlight switch in the DRL OFF position.
- Windshield wiper switch in the OFF position.



### 1. PRESSURIZE HYDRO-BOOSTER

- Apply the parking brake while IG ON and at the P position.
- Depress the brake pedal twice fully within 2 seconds, then release the pedal.

Notice: Pressurize the hydro-booster to the maximum before reprogramming, as the battery voltage decreases if the oil pressure of the hydro-booster lowers and the pump rotates during reprogramming.

### 3. CONNECT THE 12V BATTERY TO A POWER SUPPLY (DCA-8000)

- Connect the DCA-8000 or other type of a power supply (not a battery charger) to the 12 V battery.
- Tap the Reflash icon from the Main Menu screen of the DCA-8000.

**A power supply MUST be used during reprogramming. Please ensure DCA-8000 is connected and set to power supply mode. Voltage MUST be set to 13.5V.**



**Power supply must be connected directly to the 12v battery terminals and NOT the remote jump posts under the hood (if equipped).**

**ECU damage will occur if the battery voltage is not properly maintained during this re-flash procedure.**

### 4. VERIFY TECHSTREAM SETUP

- Verify that the Techstream meets the following conditions:
  - The latest version of software is loaded.
  - The Techstream battery is fully charged. If not, connect the Techstream to a 120 V source.
  - The DLCIII cable is in good condition.



**The Techstream's battery voltage must also be maintained during the re-flash procedure. If necessary, plug the Techstream into a 120v outlet during this procedure.**

**If the Techstream communication with the vehicle fails during the re-flash procedure, the Hybrid Vehicle Control ECU will be damaged.**

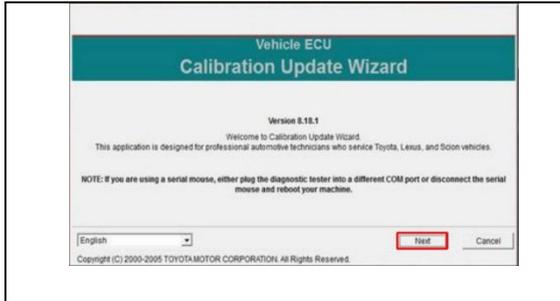
## VIII. UPDATE CALIBRATION

### 1. REFLASH THE BRAKE ECU

- a. Click yes on the health check results screen, or follow the link on the table above to begin the reflash process.

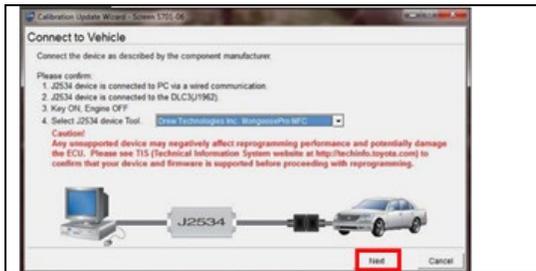
#### NOTICE:

Reflash failure should be extremely rare and can be avoided by following all instructions and reprogramming best practices.



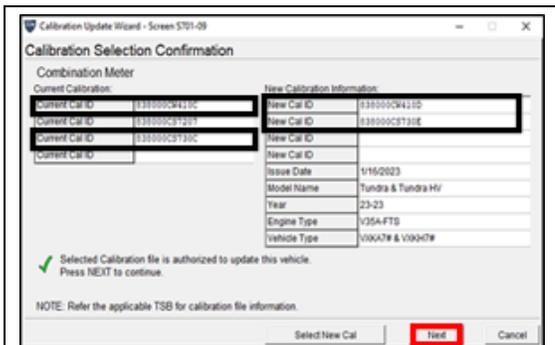
### 2. LAUNCH CALIBRATION WIZARD

Select "Next"



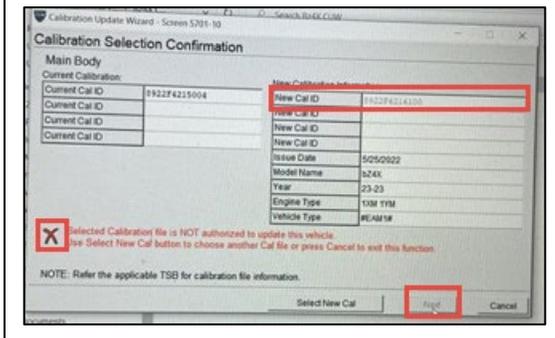
### 3. SELECT A DEVICE TOOL

Select "Next"



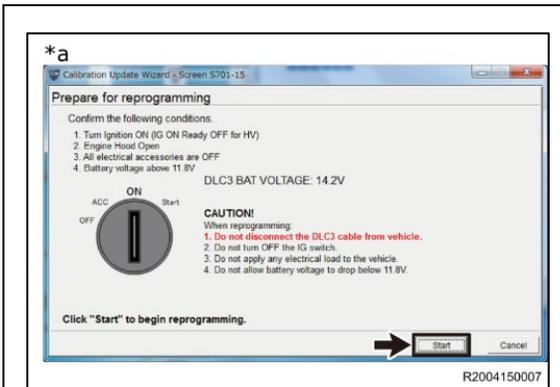
### 4. CONFIRM THAT "NEW CAL ID" IS CORRECT, AND THEN CLICK ON "NEXT".

**Note:** If the incorrect CAL ID file is selected it is not possible to move onto the re calibration.





5. TURN THE IGNITION OFF, THEN CLICK “NEXT”



6. FOLLOW THE ON-SCREEN INSTRUCTIONS AND CONFIRM THE FOLLOWING, THEN CLICK “NEXT”

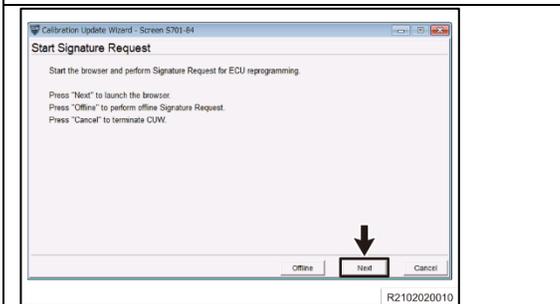
PC is connected to VIM.

Ignition is ON and engine is OFF

Hood is open.

All accessories are OFF

Battery voltage is above 11.8V



7. PERFORM SECURITY SIGNATURE TO THE SERVER THEN HIT “NEXT”

a. Follow the instructions on screen

**Hint:** The reprogramming will not begin without the security signature.



8. LOGIN TO TIS

a. Input TIS login credentials and select “Login”

**Note:** This step requires internet.



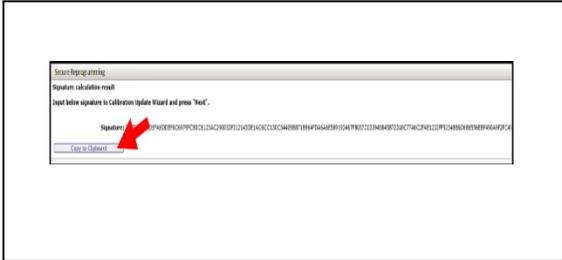
9. PERFORM SECURITY SIGNATURE TO THE SERVER

a. Input TIS login credentials and select “Login”.



## 10. PERFORM SECURITY SIGNATURE TO THE SERVER

a. Select "Send"

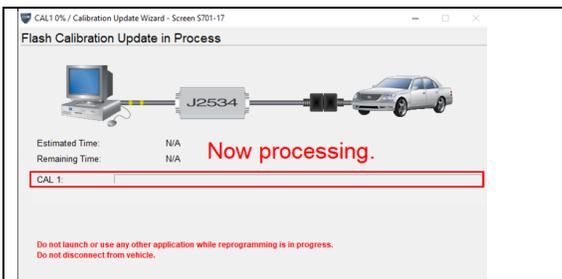


## 11. COPY SIGNATURE FROM TIS

b. Select "Copy to Clipboard"



## 12. PASTE SIGNATURE INTO TECHSTREAM, THEN SELECT "NEXT"



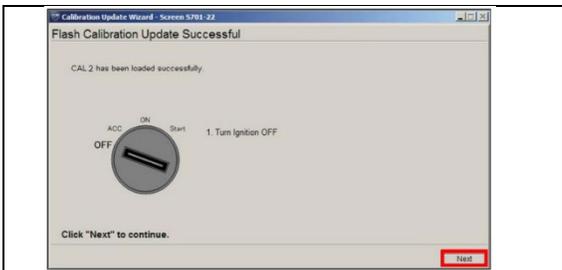
## 13. RECALIBRATION WILL NOW BEGIN

**Do Not** disturb the vehicle during flash reprogramming.

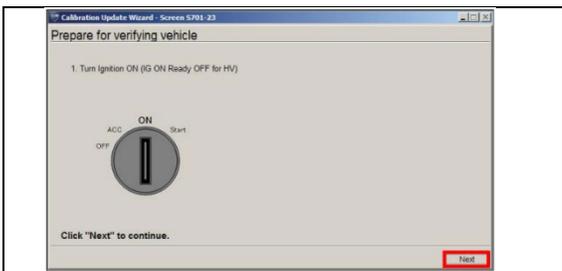


#### 14. RECALIBRATION FINISHED

a. The following Screens will appear at the end of the reflash.

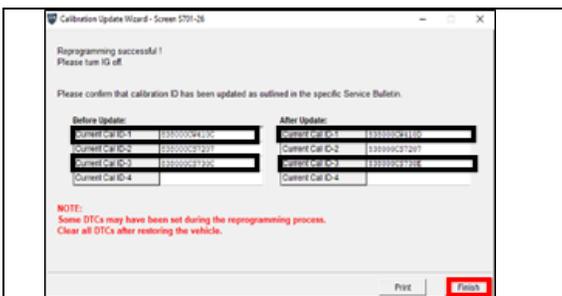


15. TURN THE IGNITION OFF FOR A MINIMUM OF 10 SECONDS, THEN CLICK “NEXT”



16. TURN THE IGNITION TO THE ON POSITION, THEN CLICK “NEXT”

**Notice for Hybrid Models:** DO NOT turn the IG ON with the brake pedal depressed.



17. CONFIRM CALIBRATIONS WERE SUCCESSFULLY UPDATED THEN CLICK “FINISH”



- 18. PERFORM VERIFICATION HEALTH CHECK**
- Using a Techstream, perform a Health Check
  - Clear DTC's that may have set during the re-flash procedure.
  - Re-run the Health Check to confirm that no DTC's reappear.

**Critical** THIS VERIFICATION HEALTH CHECK IS **NECESSARY** to update the results and CID's to the National database.

**19. COMPLETE HEALTH CHECK AND CONFIRM CID UPDATE**

- On the Stored Data tab, confirm the following for the Combination Meter System:
  - The calibration number has the **"New CID"** number.
  - The Update column lists **"No"**

**20. PRINT CUSTOMER HEALTH CHECK REPORT**

- From the Stored Data tab, select the Customer Health Check Report button (TIS will launch when button is pressed).

System	Monitor Status	DTC	Ctrl Conf	Pend	Hint	Test Failed	Calibration	Update
Engine	Inc							
Radar Cruise2	-						*****	2
Transmission	-						*****	2
Radar Crs	-						*****	2
Radar Crs	-						*****	2
ABS/ESC	-						*****	2
Four Wheel	-						*****	2
EMPS	-						*****	2
Steering Angle Sensor	-						*****	2
SRS Airbag	-						*****	2
Pre-Collision	-						*****	2
Combinao	-						*****	2
Starting C	-						*****	2
Front Rep	-						*****	2
LKALDA	-						*****	2
Event Recognition Camera	-						*****	2
Air Conditioner	-						*****	2
Combination Meter	-						*****	2
Main Body	-						*****	2
O Door Motor	-						*****	2
Entry&Start	-						*****	2
P Door Motor	-						*****	2

**Customer Health Check Button**

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- Log in to TIS.
- Input Vehicle Mileage and Repair Order number.
- Check the "Performed" campaign button for campaign 22TD05.
- Select the Report button.



## Diagnostic Report

### Vehicle Information

Mileage: 7787

Repair Order: 77888

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

XXX:  Performed  Not Performed

[Report](#)

- e) Confirm Customer Health Check Report information is correct.
- f) Print Customer Health Check Report from TIS.
- g) Sign and provide to the customer.

### ◀ VERIFY REPAIR QUALITY ▶

- Confirm the Brake ECU Calibration has been updated successfully to the NEW CID.
- Confirm there are no DTC's after the Calibration update.
- If you have any questions regarding this Campaign, please contact your regional representative

## VIII. APPENDIX

### A. CAMPAIGN DESIGNATION DECORDER

