

TECHNICAL INSTRUCTIONS

FOR

SPECIAL SERVICE CAMPAIGN HOX

EV CONTROL ECU SOFTWARE UPDATE

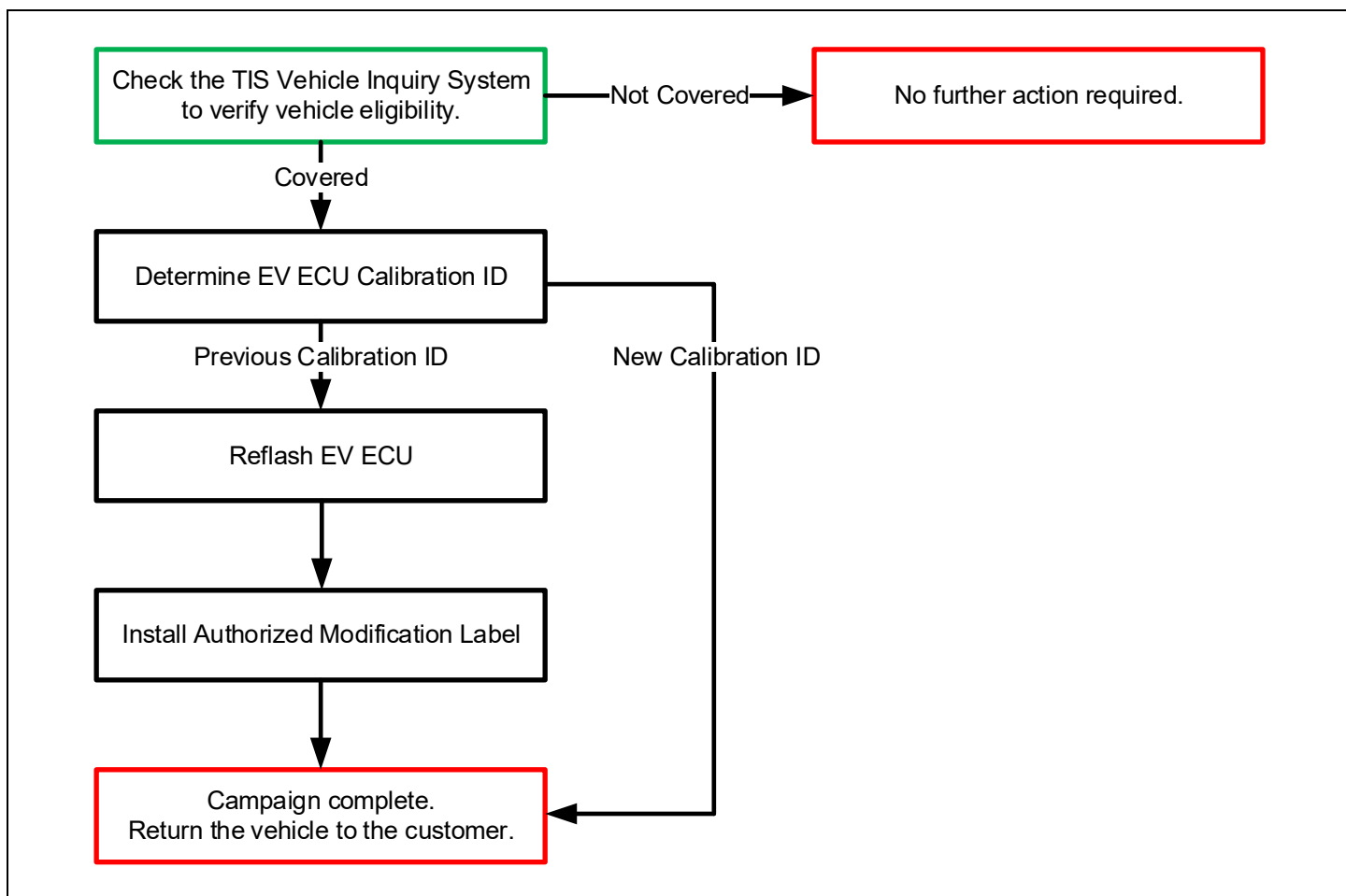
CERTAIN 2016-2017 MIRAI

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 (any specialty)
- Expert Technician (any specialty)
- Master Technician
- Master Diagnostic Technician

It is the dealership’s responsibility to select technicians with the above certification level or greater to perform this recall 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

- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Campaign, and that it has not already been completed prior to dealer shipment or by another dealer.
- TMS warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were completed by another dealer.

III. PREPARATION

1. 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

2. TOOLS, SUPPLIES & EQUIPMENT

- Standard Hand Tools
- Techstream 2.0 / TIS Techstream / Techstream Lite
- GR8 Battery Diagnostic Station
- T-SB-0134-16

IV. BACKGROUND

The subject vehicles are voluntarily equipped with an event data recorder (EDR). The EDR only collects, stores, and allows retrieval of vehicle event data, including crash events. It **DOES NOT** control the operation of the vehicle or any crash safety systems. Due to a software error, the EDR data for "Accelerator Pedal, % Full" will show a constant value of "0," and will not record another accelerator open position at the time an event is recorded. No other system uses this software output data.

V. DETERMINE ECU CALIBRATION ID



1. CHECK FOR DTC'S

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

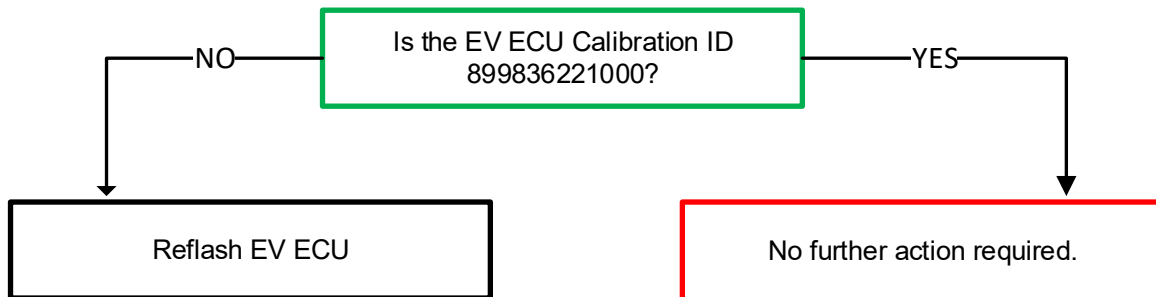
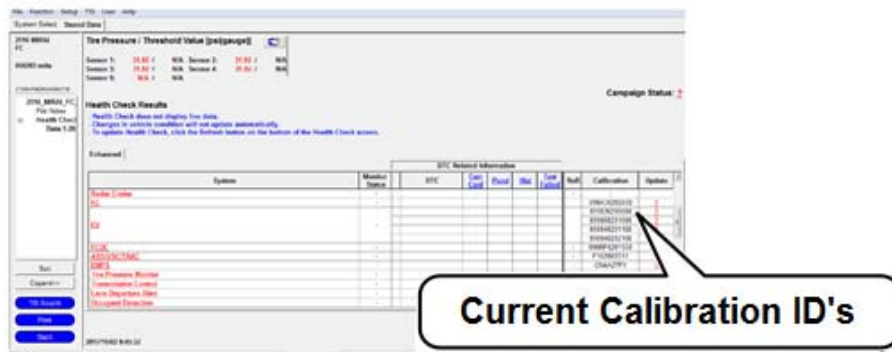


If any DTC's are found that indicate a safety risk at performing this repair, do not proceed until they have been resolved.

Note: This Service Campaign covers only the ECU reflash, as detailed in these instructions. It does not cover the diagnosis or replacement of any other parts on the vehicle.

2. DETERMINE CALIBRATION ID

- Determine the Calibration ID for the EV ECU in the Health Check Results.



If the ECM has already been calibrated with the new Calibration ID (899836221000), the campaign is already complete. No further action is required.

VI. ECM REFLASH PROCEDURE

1. CONNECT THE GR8

- Connect the GR8 Battery Diagnostic Station to the battery of the vehicle. Select the Power Supply Mode to help maintain 13.5 volts during ECM reprogramming.

Note: The power supply must be connected directly to the battery, and NOT the remote jump post under the hood.

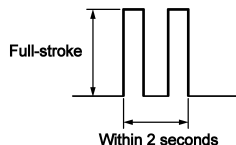
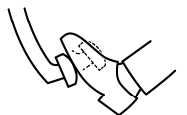


A power supply **MUST** be used during reprogramming. ECU damage will occur if the battery voltage is not properly maintained during the reflash procedure.



The Techstream's battery voltage must also be maintained during the reflash procedure. If necessary, plug the Techstream into a 120v outlet during this procedure. ECU damage will occur if the Techstream shuts off during the reflash procedure.

Depress twice fully.



K1400470004e

2. PRESSURIZE THE HYDRO-BOOSTER

- Turn the IG ON
- Verify the shifter is in PARK
- Apply the parking brake
- Fully depress the brake pedal twice within 2 seconds, then fully release the pedal.

Note: During this operation, you will hear the brake pump in the engine compartment operating.



DO NOT depress the brake pedal during the following steps. This would cause the pump to prime again, and could lower the voltage below the acceptable threshold; causing permanent damage to the ECU.

3. REFLASH THE ECM

- Click YES on the Health Check results screen under the Update column. This will open the Service Bulletin containing the Calibration file(s).
- Follow the Reprogramming Procedure detailed in [T-SB-0134-16](#).

NOTE: Confirm the latest version of Techstream software is being used.

4. CLEAR DTC'S

- Perform a Health Check on the vehicle.
- Clear the DTC's that will have set during the reprogramming procedure.

Note: The system will normally set the following DTC's during reprogramming:

- P1D01-450 FCDC control module requested MIL illumination
- U1162-450 Lost communication with hydrogen filling system
- U0100 Lost communication with EV ECU
- U0101 Lost communication with TCM
- U0293 Lost communication with hybrid vehicle control system

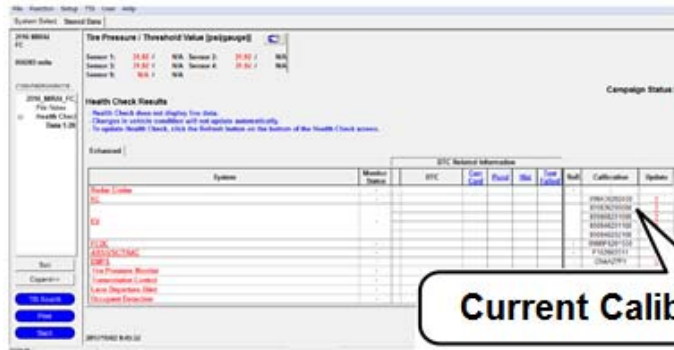


These DTC's listed above will normally set during the reprogramming process. This is normal, and does not indicate a malfunction. Once cleared, they should not return.

5. CHECK CALIBRATION ID

- Perform another Health Check on the vehicle.
- Confirm that no DTC's are present.
- CHECK the Calibration ID of the EV ECU in the Health Check Results.

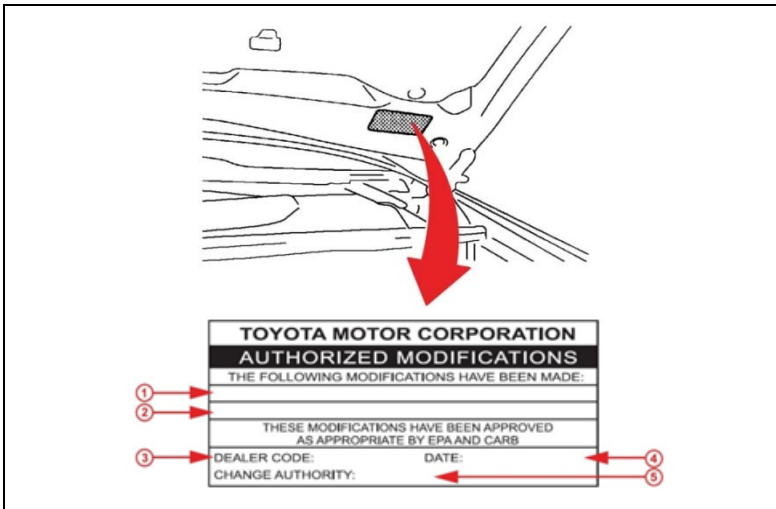
Normal: 899836221000



Current Calibration ID's

6. ATTACH THE AUTHORIZED VEHICLE MODIFICATION LABEL

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



1	ECM P/N (89981-62060)
2	New Calibration ID (899836221000)
3	Dealer Code
4	Date Completed
5	Campaign Code (H0X)

◀ VERIFY REPAIR QUALITY ▶

- Confirm the ECM Calibration has been updated successfully
- Confirm that no DTC's are present
- Confirm *that an* Authorized Modification Label has been installed

If you have any questions regarding this LSC, please contact your regional representative

VII. APPENDIX

A. 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.***

B. CAMPAIGN DESIGNATION DECORDER

