

TECHNICAL INSTRUCTIONS
FOR
SAFETY (NONCOMPLIANCE) RECALL 22TA03

Vehicle Stability Control System May Not Default to "On"

Certain 2020 – 2022 Model Year Highlander Hybrid
Certain 2021 – 2022 Model Year Mirai
Certain 2021 – 2022 Model Year Rav4 Prime
Certain 2022 Model Year Rav4 Hybrid
Certain 2021 – 2022 Sienna Hybrid
Certain 2021 – 2022 Venza Hybrid

Update 7/21/22

- **Added step in section VIII. to check for Fan Operation**

Update 04/21/22

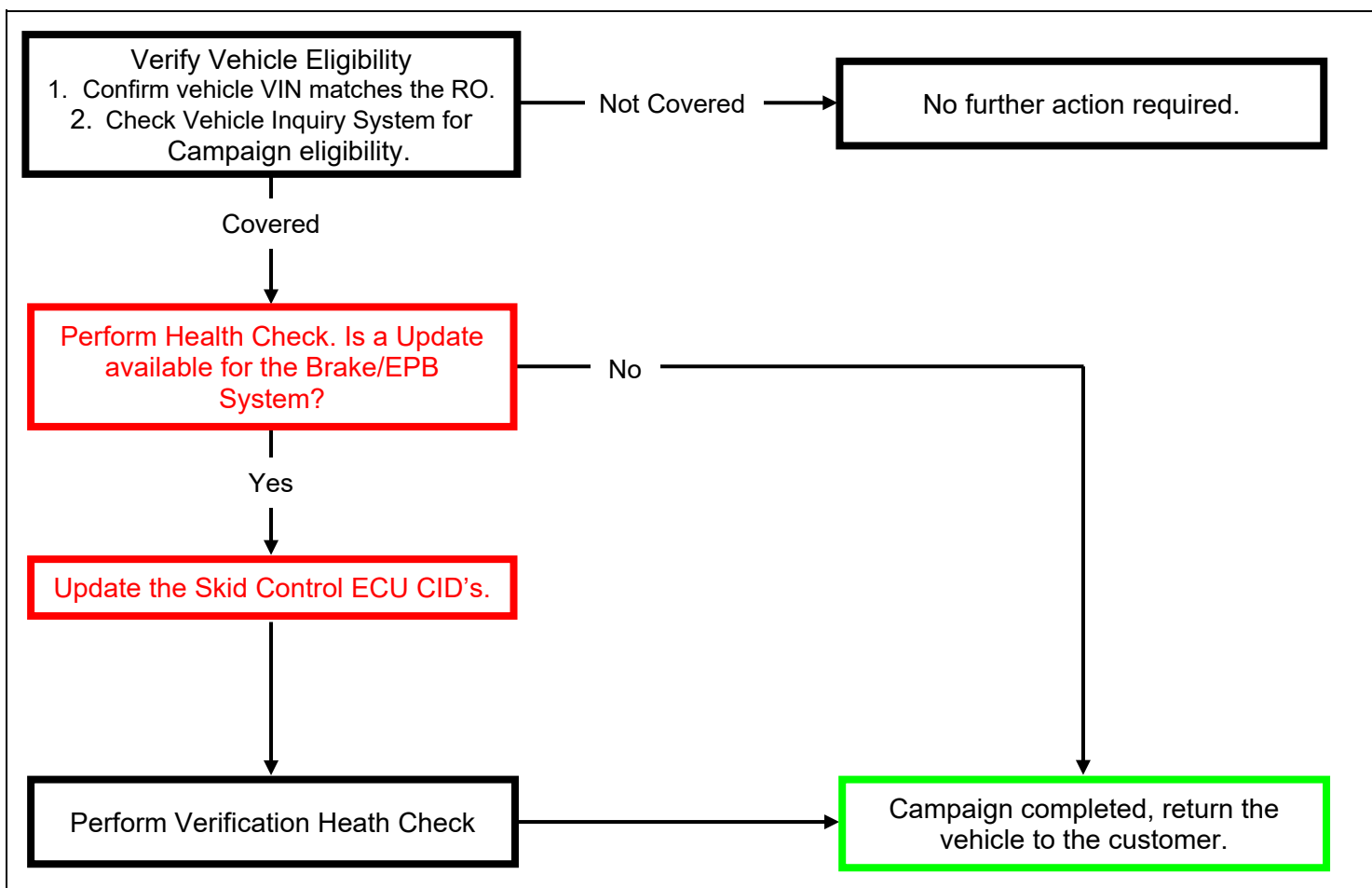
- **Added new target calibration ID for Highlander HV**

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this special service campaign 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 special service campaign repair are required to currently have completed all of the following courses:

-T623 Electrical Circuit Diagnosis

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

- 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

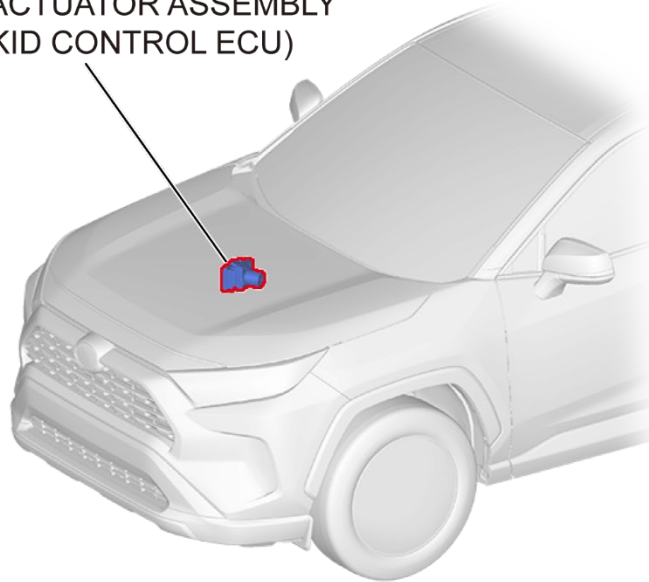
A. TOOLS, SUPPLIES & EQUIPMENT

- Standard Hand Tools
- Techstream ADVi / Techstream 2.0 / Techstream Lite
- DCA-8000P Battery Diagnostic Tool
- T-SB-0107-20
- T-SB-0134-16

IV. BACKGROUND

A software error can cause the Vehicle Stability Control system (VSC) not to default to “ON” the next time the car is started under certain circumstances. This can result in noncompliance with a federal safety requirement. Operating the vehicle with VSC deactivated could increase the risk of a crash in certain driving conditions.

BRAKE ACTUATOR ASSEMBLY
(No. 2 SKID CONTROL ECU)



R2204040007

Note: The illustration is an example of RAV4 Hybrid.

V. DETERMINE STATUS OF CURRENT CALIBRATION



1. CHECK FOR DTC'S

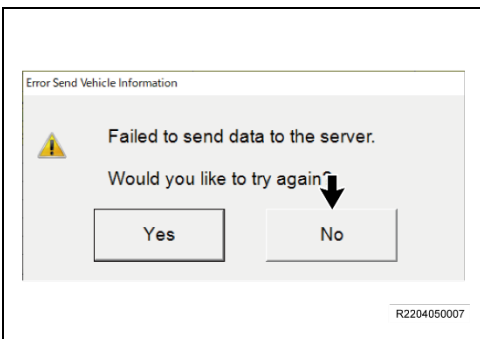
- a. Using a Techstream, perform a Health Check to check for any Diagnostic Trouble Codes.



- For MIRAI w/ advanced drive, make sure to use a VIM which supports Ethernet communication.
- For MIRAI w/o Advanced drive, a VIM which does not support Ethernet communication can be used. Even if "Please connect the Ethernet communication supported cable." is displayed Click "Next" and proceed with the work.

Notice:

This Campaign covers only the Calibration ID update to the Brake/EPB system, as detailed in these instructions. It does not cover the diagnosis or replacement of any other issues on the vehicle.



Notice:

Before completing Health Check, "Send Vehicle Information" window may be displayed. If displayed, then click "Yes" to send the vehicle information.

- *If "Failed to send data to the server" is displayed, click "No" to close the window and proceed to the next step.*

2. CHECK CURRENT CALIBRATION

- Locate the **Update** column for the **Brake/EPB** System in the **Stored Data** tab for this vehicle.
- Determine the status of an available update for the Brake/EPB System; indicated by a YES or NO.

System Select: **Stored Data**

2020 Highlander HV
A25A-FXS
003964 mile
5TDGARAH9LS000004

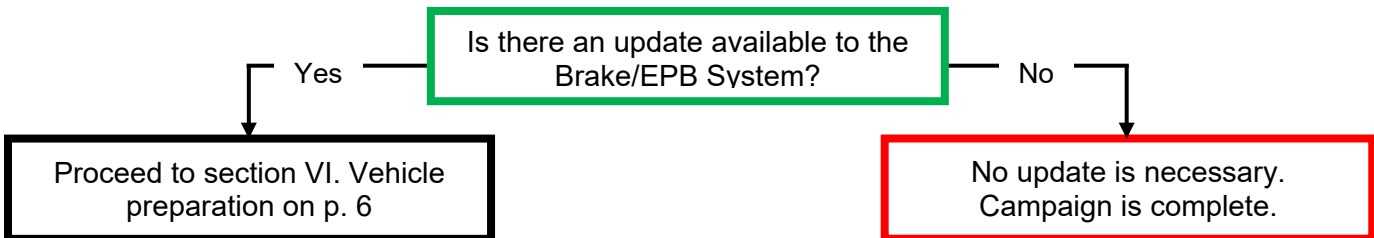
Tire Pressure / Threshold Value [psi(gauge)]
Sensor 1: 35.66 / 27.68 Sensor 2: 35.66 / 27.68
Sensor 3: 35.91 / 27.68 Sensor 4: 35.66 / 27.68
Sensor 5: 56.36 / 27.68

Health Check Results
- Health Check does not display live data.
- Changes in vehicle condition will not update automa
- To update Health Check, click the Refresh button or

Enhanced | Generic

Campaign Status: **YES**
PERMANENT: **NO**
ECU Security Key: -

System	RoB	Calibration	Update	Configure
Front Recognition Camera	●	8646F0E02100	No	No
Brake/EPB	●	8646G2601200	No	No
Brake Booster	●	F15264872500	Yes	No
Road Sign Assist	●	F152A4801100	No	No
Telematics	●	-	No	No
	●	FDC23.48.10	No	No
	●	FDC23.58.10	No	No
	●	132.0.4500	No	No
	●	898844832110	No	R2204050004



VI. VEHICLE PREPERATION

The CID Update Procedure is detailed in [T-SB-0134-16](#) and [T-SB-0107-20 ECU Flash Reprogramming With Security Signature](#). Please reference these Bulletins for more detailed procedures and information.

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.

2. PRESSURIZE HYDRO-BOOSTER

- a. Depress the brake pedal fully 2 times within 2 seconds.
- b. Release brake pedal
- c. Wait 10 seconds

NOTICE:

You may hear the hydro-boost pump run for a few seconds when completing these steps. The procedure will prevent the pump from running during the re-flash procedure.

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

- a. Connect the DCA-8000 or other type of a power supply (not a battery charger) to the 12v battery.
- b. 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.**

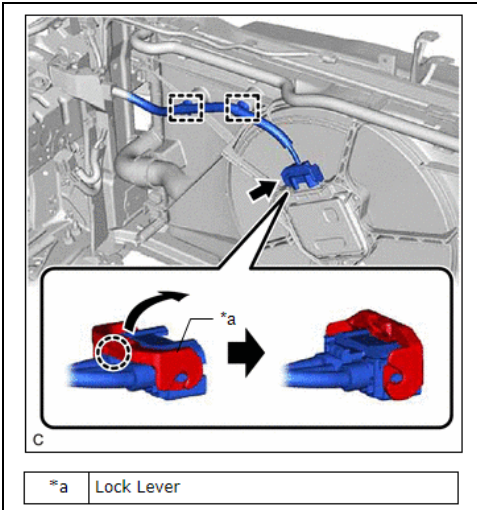
4. VERIFY TECHSTREAM SETUP

- a. 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 120v source.
 - The DLCIII cable is in good condition.



The Techstream's battery voltage MUST be maintained during the update procedure. If necessary, plug the Techstream into a 120v outlet during this procedure.

*****If the Techstream's communication with the vehicle fails during the update procedure, the ECU will be damaged.**



5. DISCONNECT COOLING FAN

- a. Disconnect the electrical connector from the cooling fan ECU on the radiator fan shroud.



If the cooling fans run during the Calibration update procedure, the battery voltage will be inconsistent and could cause damage to the control module(s).

VII. UPDATE CALIBRATION

1. UPDATE THE CID'S FOR THE BRAKE/EPB SYSTEM

- Identify the vehicles Original CID for the **Brake/EPB** System on the Stored Data tab.

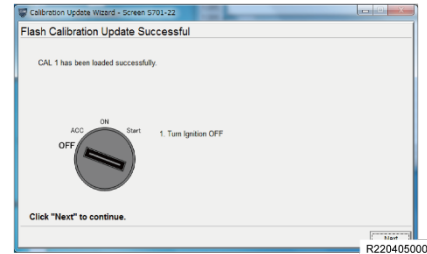
System	RoB	Calibration	Update	Configure
Front Recognition Camera	●	8646F E02100	No	No
Brake/EPB	●	F15264872500	Yes	No
Brake Booster	●	F152A4801100	No	No
Road Sign Assist	●	-	No	No
Telematics	●	FDC23 48.10	No	No
		FDC23 58.10	No	No
		132.0.4500	No	No
		898844832110	No	R2204050005

- Locate the vehicles **Original CID** in the chart below.
- Select the corresponding **NEW CID link** to load the update.
- Follow the on-screen instructions to complete the Calibration Update procedure.

◀ CRITICAL MESSAGE ▶

Wait for 5 minutes with IG OFF

MIRAI ONLY

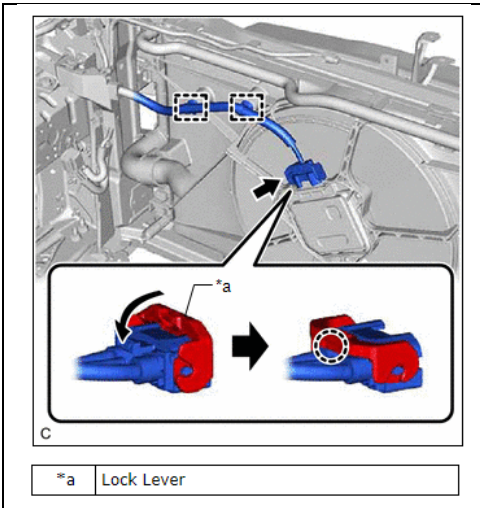


After "Flash Calibration Update Successful" is displayed, turn the IG off and keep with IG OFF for 5 minutes.

The CID Update Procedure is detailed in [T-SB-0134-16](#) and [T-SB-0107-20 ECU Flash Reprogramming With Security Signature](#). Please reference the chart below to determine which Bulletin to follow for more detailed procedures and information.

Model	Current Calibration ID	NEW Calibration ID	Applicable T-SB
VENZA HV	F152648A9300	F152648A9400	T-SB-0107-20
	F152648A9200	F152648J2000	
RAV4 HV	F15264283100	F15264283200	T-SB-0134-16
RAV4 PRIME	F15264284000	F15264284100	T-SB-0107-20
	F15264228400	F15264228500	
	F15264228300		
HIGHLANDER HV	F15264872300	F152648J4000	T-SB-0134-16
	F15264872400		
	F15264872500		
MIRAI	F15266204200	F15266204500	T-SB-0107-20
	F15266204300		
	F15266204400		
	F15266203200	F15266203500	
	F15266203300		
	F15266203400		
SIENNA HV	F15260815000	F15260815100	T-SB-0107-20
	F15264505000		
	F15264501300		

VIII. COMPLETE REPAIR

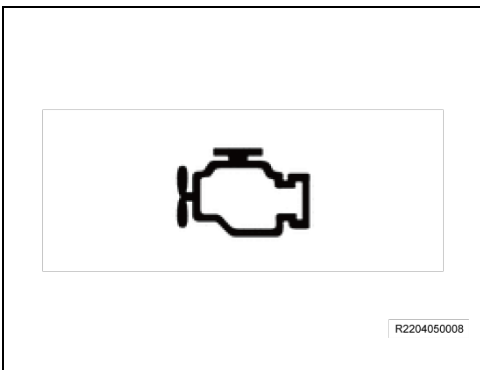


1. CONNECT COOLING FAN

- Connect the electrical connector to the cooling fan motor on the radiator fan shroud.

2. CHECK THE OPERATION OF THE ELECTRIC FAN

- READY ON the vehicle.
- Turn the air conditioner ON to check if the electric fan operates.



3. CONFIRMATION OF MIL OFF

- Activate the hybrid system and confirm that the Malfunction Indicator Lamp (MIL) in the combination meter assembly is not illuminated.

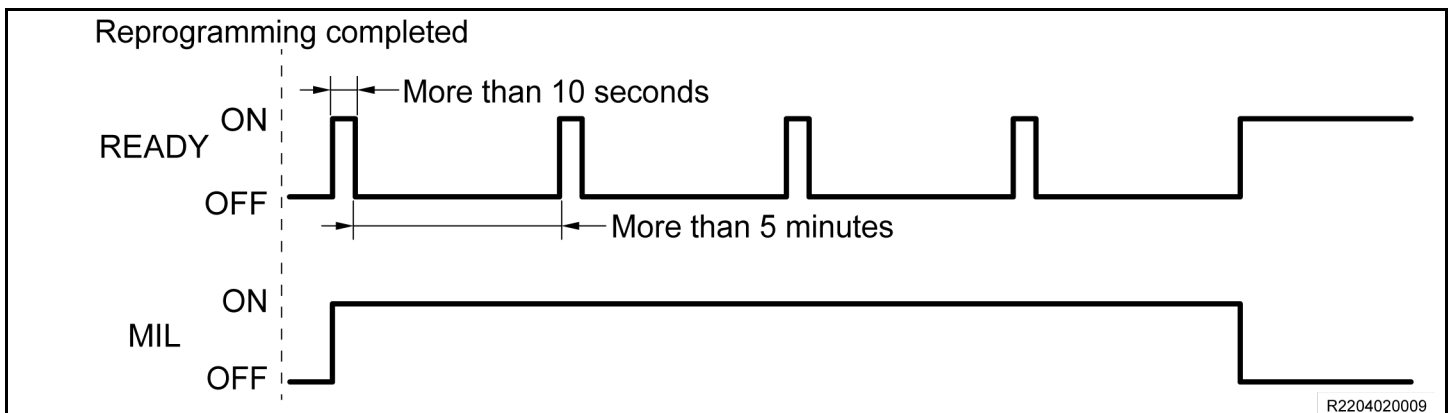
NOTICE:

If MIL is off, it is unnecessary to perform the next step.

- It is necessary that 4 Ready OFF/ON cycles be performed to turn off the MIL. Follow the steps below.

- The interval from Ready OFF to Ready ON should need more than 5 minutes, and from Ready ON to Ready OFF should need more than 10 seconds.
- After performing the step above, confirm the MIL is off.

- DO NOT depress the brake pedal or open/close the driver-side door during the 5 minutes with Ready OFF. Ensure operation is performed after the 5 minutes have passed.**
- If the brake pedal is depressed or driver-side door is opened/closed during the 5 minutes with Ready OFF, start the cycle to turn off the MIL from the beginning.**





4. PERFORM VERIFICATION HEALTH CHECK

- a. Using a Techstream, perform a Health Check.
- b. Clear DTC's that may have set during the re-flash procedure.
- c. Re-run the Health Check to confirm that no DTC's reappear.



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

5. CONFIRM CID UPDATE

- a. On the Stored Data tab, confirm the following for the **Brake/EPB** Systems:
 - The Calibration number has the “New CID” number.
 - The “Update” column says “No”.

System	Test Failed	RoB	Calibration	Update	Configure
Front Recognition Camera		●	8646F0E02100	No	No
Brake/EPB		●	F152648J4000	No	No
Brake Booster		●	F152A4801100	No	No
Road Sign Assist		●	-	No	No
Telematics		●	FDC23.48.10	No	No
			FDC23.58.10	No	No
			132.0.4500	No	No
			898844832110	No	No

6. PRINT CUSTOMER HEALTH CHECK REPORT

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

System	Monitor Status	DTC	Clear Conf	Pass	Hint	Test Failed	Calibration	Update
Engine	Yes							
Radiator Coolant2	-							
Transmission	-							
Radiator Coolant	-							
ABS/ESC	-							
Four Wheel	-							
EMPS	-							
Air Condit	-							
SRS Airbag	-							
Pre-Collision	-							
Combustion	-							
Steering C	-							
Front Susp	-							
LKA/LDA	-							
Front Recognition Camera	-							
Air Conditioner	-							
Combustion Meter	-							
Steering Body	-							
D-Door Motor	-							
Entry&Start	-							
P-Door Motor	-							

- b. Log in to TIS.
- c. Input Vehicle Mileage and Repair Order number.
- d. Check the “Performed” campaign button for the applicable campaigns.
- e. Select the Report button.
- f. Confirm Customer Health Check Report information is correct.
- g. Print Customer Health Check Report from TIS.
- h. Sign and provide to the customer.

IX. REASSEMBLY

1. REMOVE THE POWER SUPPLY FROM THE BATTERY

◀ VERIFY REPAIR QUALITY ▶

- Confirm the cooling fans are re-connected.
- Confirm the system Calibration has been updated successfully.
- Confirm there are no DTC’s after the Calibration update.

A. PARTS DISPOSAL

In accordance with Federal law, 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.***

Campaign Designation / Phase Decoder

