#### **TECHNICAL INSTRUCTIONS**

#### **FOR**

## **SAFETY (NONCOMPLIANCE) RECALL 22TA07**

Panoramic View Monitor System – Potential Failure to Display Rearview Image

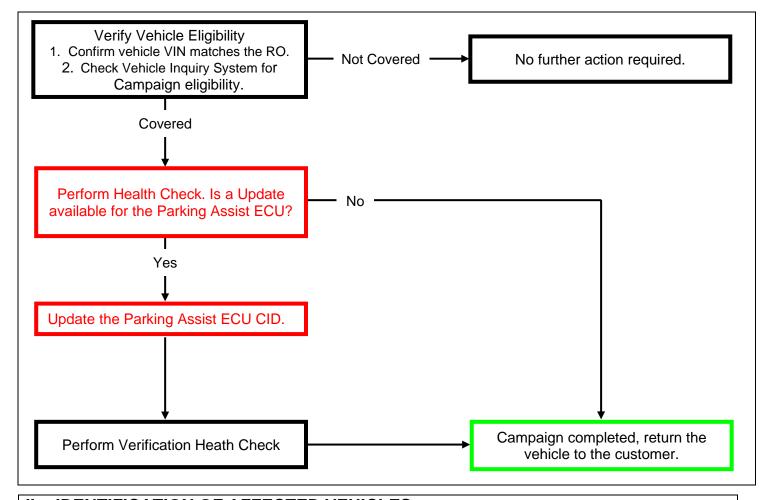
Certain 2022 Model Year Tundra + Tundra HV

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 <u>all of the following courses:</u>

-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.

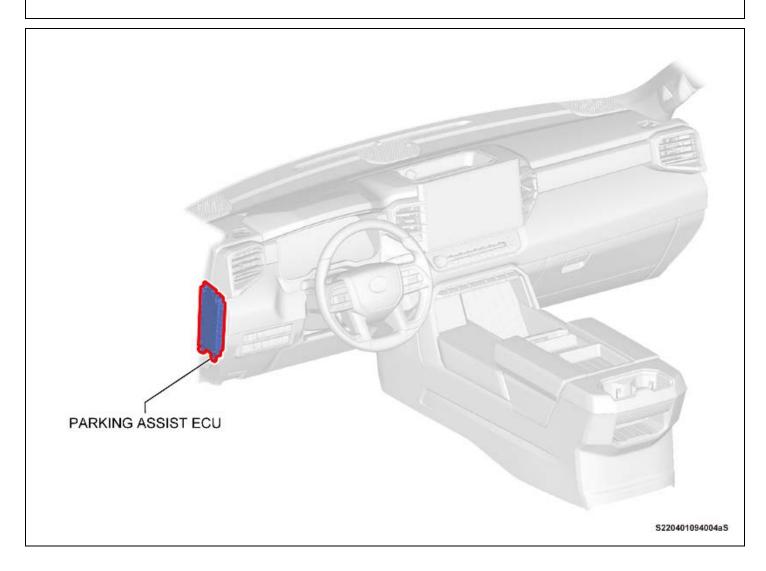
#### **III. PREPARATION**

## A. TOOLS, SUPPLIES & EQUIPMENT

- Techstream ADVi / Techstream 2.0 / Techstream Lite
- DCA-8000P Battery Diagnostic Tool

## IV. BACKGROUND

b. In the affected vehicles, a software programming issue can cause the front camera image of the Panoramic View Monitoring (PVM) system to display instead of the rear camera image when the vehicle is placed into reverse position. If the rear camera image does not display after the vehicle is placed into reverse position, the vehicle will not comply with certain U.S. safety requirements and may increase the risk of a crash during a backing event.



## 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.

#### **Notice:**

This Campaign covers only the Calibration ID update to the Circumference Monitoring Camera Control Module, as detailed in these instructions. It does not cover the diagnosis or replacement of any other issues on the vehicle.



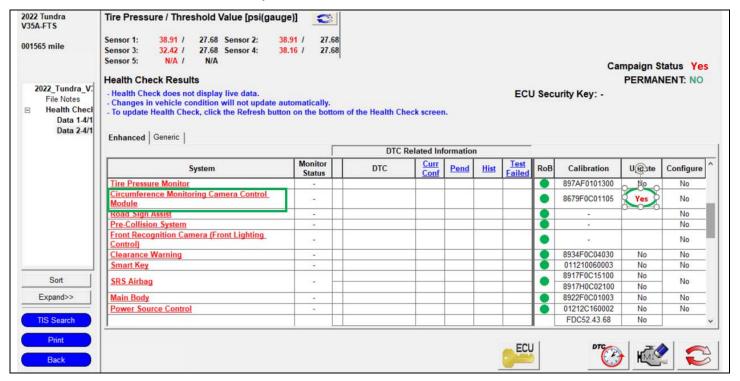
#### **Notice:**

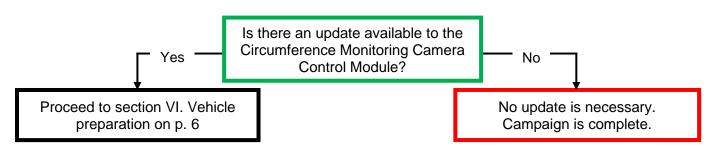
Before completing Health Check, "Send Vehicle Information" window may be displayed. If displayed, then click "Yes" to send the vehicle information.

• 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

- a. Locate the <u>Update</u> column for the <u>Circumference Monitoring Camera Control Module</u> in the <u>Stored Data</u> tab for this vehicle.
- b. Determine the status of an available update for the Circumference Monitoring Camera Control Module; indicated by a YES or NO.





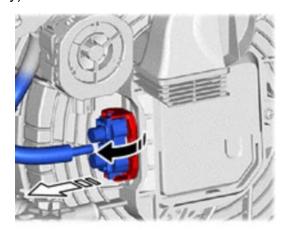
#### **VI. VEHICLE PREPERATION**

The CID Update Procedure is detailed in <u>T-SB-0107-20 ECU Flash Reprogramming With Security Signature</u> Please reference this Bulletin for more detailed procedures and information.

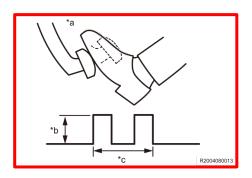
#### 1. VEHICLE PREPARATION

- a. Confirm the following conditions:
  - Vehicle in the IG position (engine off).
  - Transmission 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.
  - \*\* Climate Control system must be fully OFF to prevent electric AC condenser blower motor fan from starting
  - \*\* Disconnect the wire harness connection from the blower fan located on the front, left hand side of the radiator. (hybrid model only)





• Pressurize the Hydro-booster (for hybrid model)



Depress the brake pedal to full stroke, two times within two seconds before reprogramming. This will prevent the brake booster pump from starting during reprograming which could result in a voltage drop. Do not depress the brake pedal again until reprograming is completed to prevent voltage drop.

#### 2. 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.

c. Note for Hybrid vehicles, the battery is located inside the cab, under the rear seat, on the driver's side.

#### 3. 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.

This update takes 35 minutes to complete once it is started in CUW.

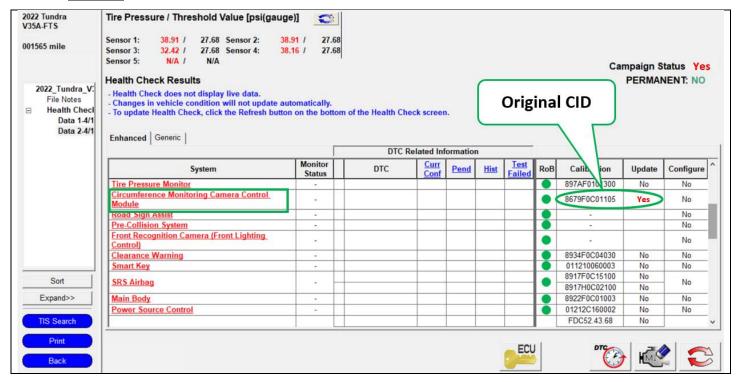


The Techstream's battery voltage MUST be maintained during the update procedure. If necessary, plug the Techstream into a 120v outlet during this procedure.

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

#### VII. UPDATE CALIBRATION

- 1. UPDATE THE CID FOR THE CIRCUMFERENCE MONITORING CAMERA CONTROL MODULE
  - a. Identify the vehicles Original CID for the <u>Circumference Monitoring Camera Control</u> <u>Module</u> on the Stored Data tab.



- b. Locate the vehicles Original CID in the chart below.
- c. Select the corresponding **NEW CID link** to load the update.

# The CID Update Procedure is detailed in <u>T-SB-0107-20 ECU Flash Reprogramming With Security Signature.</u>

Model	Current Calibration ID	<b>NEW</b> Calibration ID
Tundra	8679F0C01201 8679F0C01105 8679F0C01104	8679F0C01301

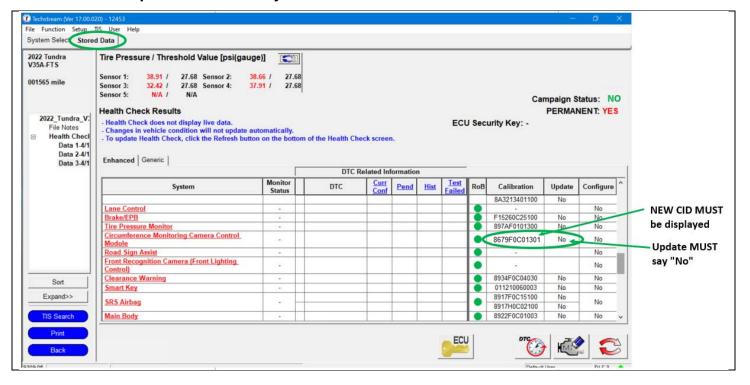
## VIII. COMPLETE REPAIR

#### 1. CONFIRM CID UPDATE



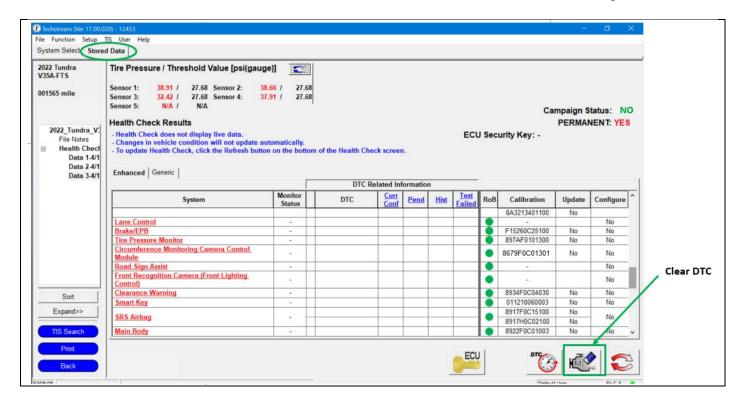
#### **CONFIRM CID UPDATE**

- a. Re-connect the cooling blower fan wire harness connection
- b. Using a Techstream, perform a Health Check to check for updated CID.
- a. On the Stored Data tab, confirm the following for the **Circumference Monitoring Camera Control Module**:
  - The Calibration number has the "New CID" number.
  - The "Update" column says "No".



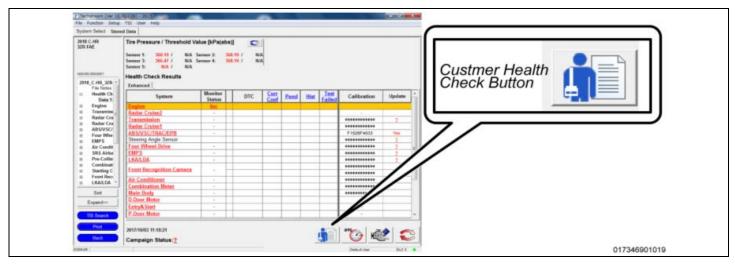
#### 2. CLEAR DTC's

a. On the Stored Data tab, use the clear DTC feature to remove DTC's set during recalibration.



#### 3. 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).



- 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
- 2. Disconnect the Techstream.

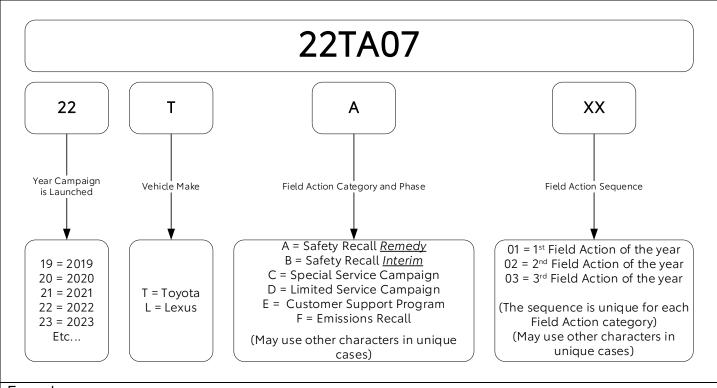
## ■ VERIFY REPAIR QUALITY ▶

- Confirm the system Calibration has been updated successfully.
- Confirm there are no new 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**



#### Examples:

19TA01 = Launched in 2019, Toyota, Safety Recall Remedy Phase, 1st Safety Recall Launched in 2019 20TC02 = Launched in 2020, Special Service Campaign, 2nd Special Service Campaign Launched in 2020 21TE05 = Launched in 2021, Customer Support Program, 5th Customer Support Program Launched in 2021