TECHNICAL INSTRUCTIONS

FOR

SAFETY (NONCOMPLIANCE) RECALL 22TA04

Panoramic View Monitor System – Potential Failure to Display Rearview Image
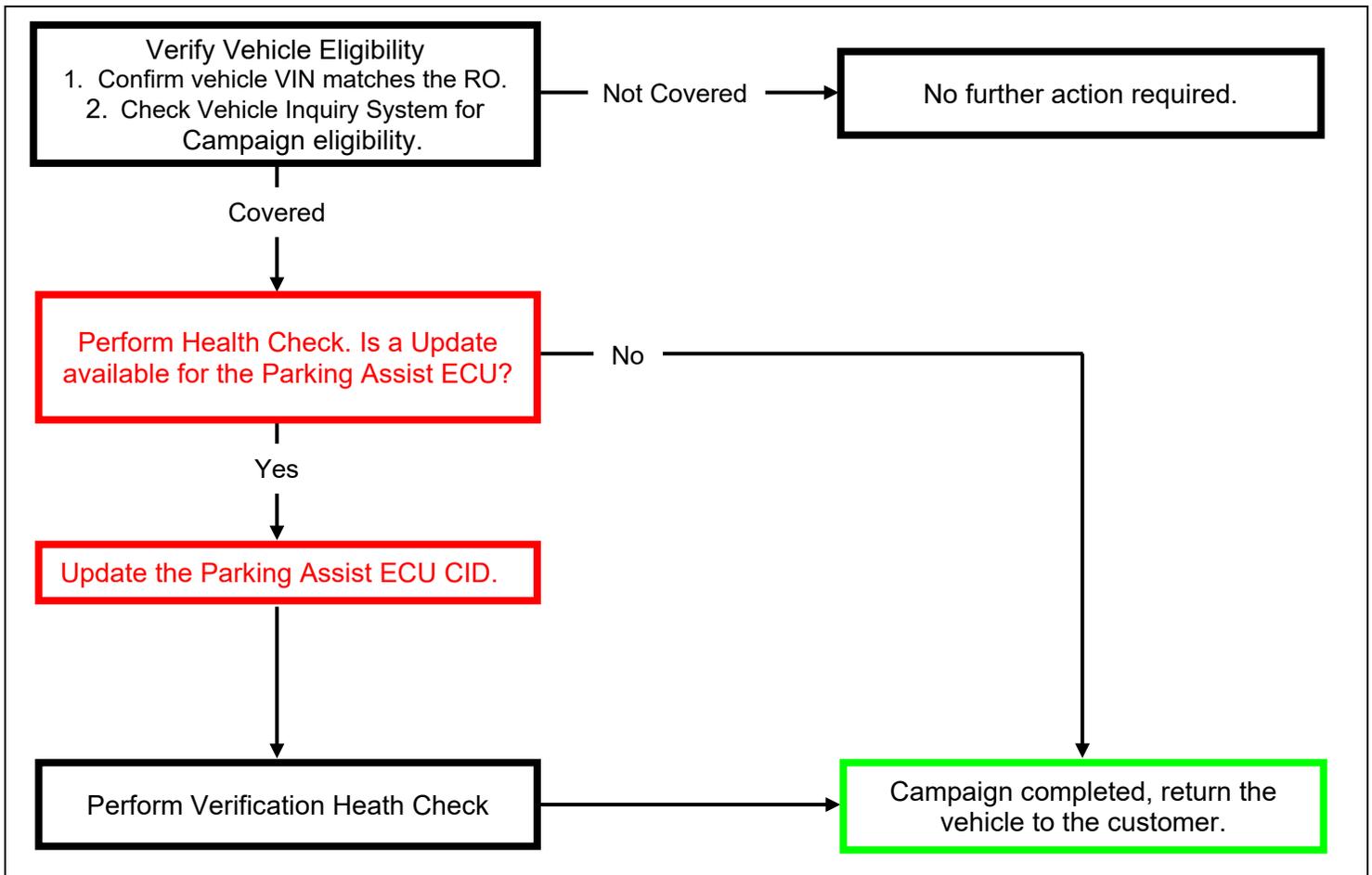
Certain 2022 Model Year Tundra

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

```
┌─────────────────────────────────┐                        ┌──────────────────────────────────┐
│       Verify Vehicle Eligibility │   Not Covered          │     No further action required.  │
│  1. Confirm vehicle VIN matches  │ ─────────────────────► │                                  │
│     the RO.                      │                        │                                  │
│  2. Check Vehicle Inquiry System │                        │                                  │
│     for Campaign eligibility.    │                        └──────────────────────────────────┘
└─────────────────────────────────┘
              │
           Covered
              │
              ▼
┌─────────────────────────────────┐                                                           │
│  Perform Health Check. Is a      │   No                                                      │
│  Update available for the        │ ──────────────────────────────────────────────────────────┐
│  Parking Assist ECU?             │                                                           │
└─────────────────────────────────┘                                                           │
              │                                                                                │
            Yes                                                                                │
              │                                                                                │
              ▼                                                                                │
┌─────────────────────────────────┐                                                           │
│  Update the Parking Assist ECU   │                                                           │
│  CID.                            │                                                           │
└─────────────────────────────────┘                                                           │
              │                                                                                ▼
              ▼                                                                    ┌──────────────────────────────────┐
┌─────────────────────────────────┐                                              │  Campaign completed, return the  │
│  Perform Verification Heath Check│ ─────────────────────────────────────────►  │  vehicle to the customer.        │
└─────────────────────────────────┘                                              └──────────────────────────────────┘
```

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
- T-SB-0107-20 – ECU Flash Reprogramming With Security Signature

IV. BACKGROUND

In the affected vehicles, a software programming issue can cause individual cameras in the Panoramic View Monitoring (PVM) system, including the backup camera, to not display an image. If the backup camera image does not display when the vehicle is in reverse, the vehicle will not comply with safety regulations in certain markets and may increase the risk of a crash.
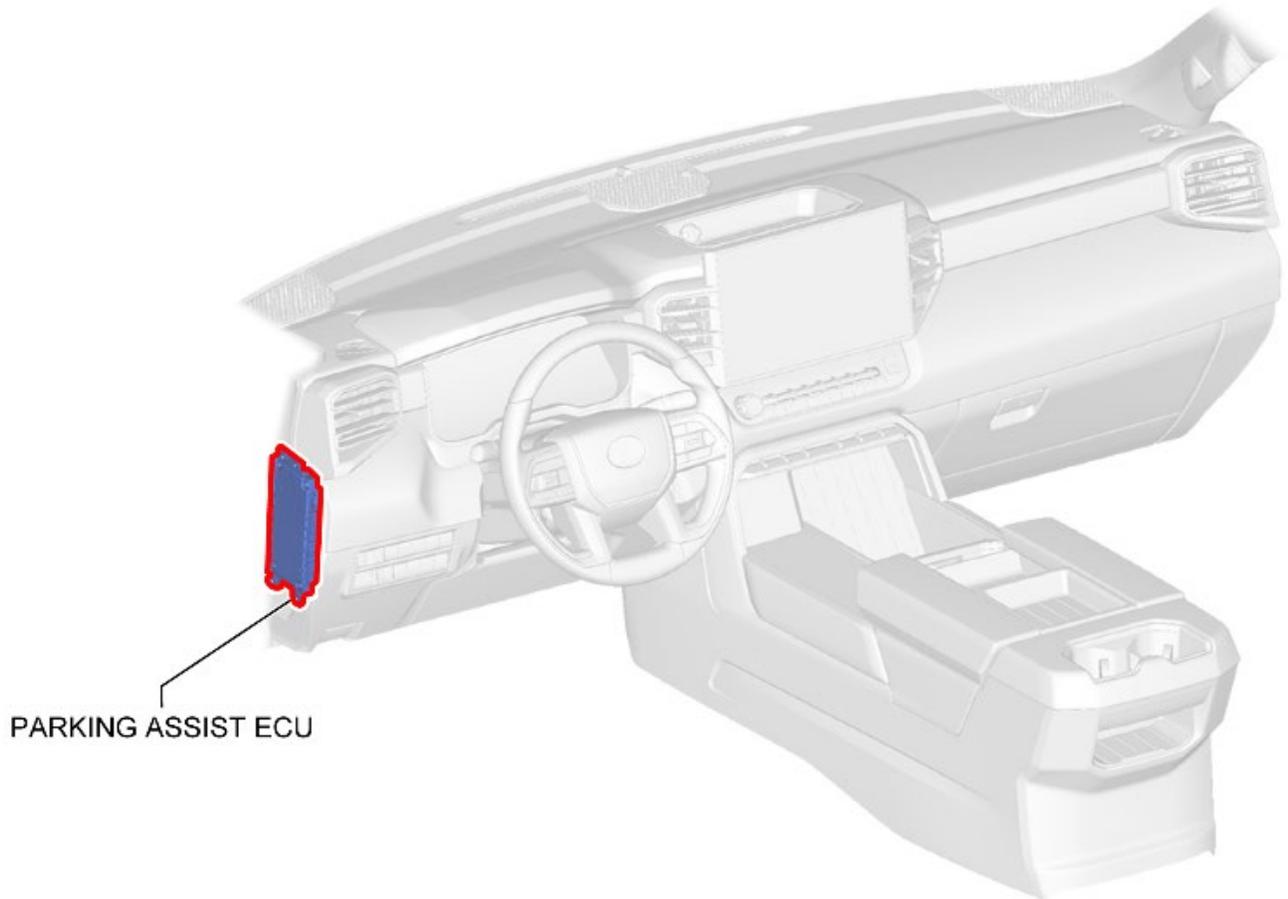
PARKING ASSIST ECU

S220401094004aS

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.
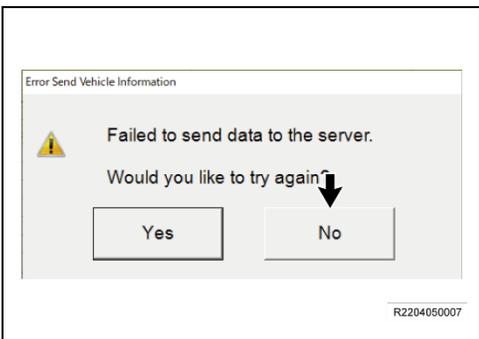
Notice:
Before completing Health Check, "Send Vehicle Information" window may be displayed. If displayed, then click "Yes" to send the vehicle information.
- *If "Failed to send data to the server" is displayed, click "No" to close the window and proceed to the next step.*

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2. CHECK CURRENT CALIBRATION

a. Locate the **Update** column for the **Circumference Monitoring Camera Control Module** in the **Stored Data** 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.


```
Is there an update available to the
Circumference Monitoring Camera
Control Module?
```

Yes ──────►

No ──────►

Proceed to section VI. Vehicle preparation on p. 6

No update is necessary. Campaign is complete.

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.

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.

> **Critical**
>
> **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.**

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.

> **Critical**
>
> **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 **Circumference Monitoring Camera Control Module** 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 T-SB-0107-20 ECU Flash Reprogramming With Security Signature.

Model	Current Calibration ID	*NEW* Calibration ID
Tundra	**8679F0C01105**	**8679F0C01201**

VIII.   COMPLETE REPAIR

1.   CONFIRM CID UPDATE

CONFIRM CID UPDATE
a. 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.

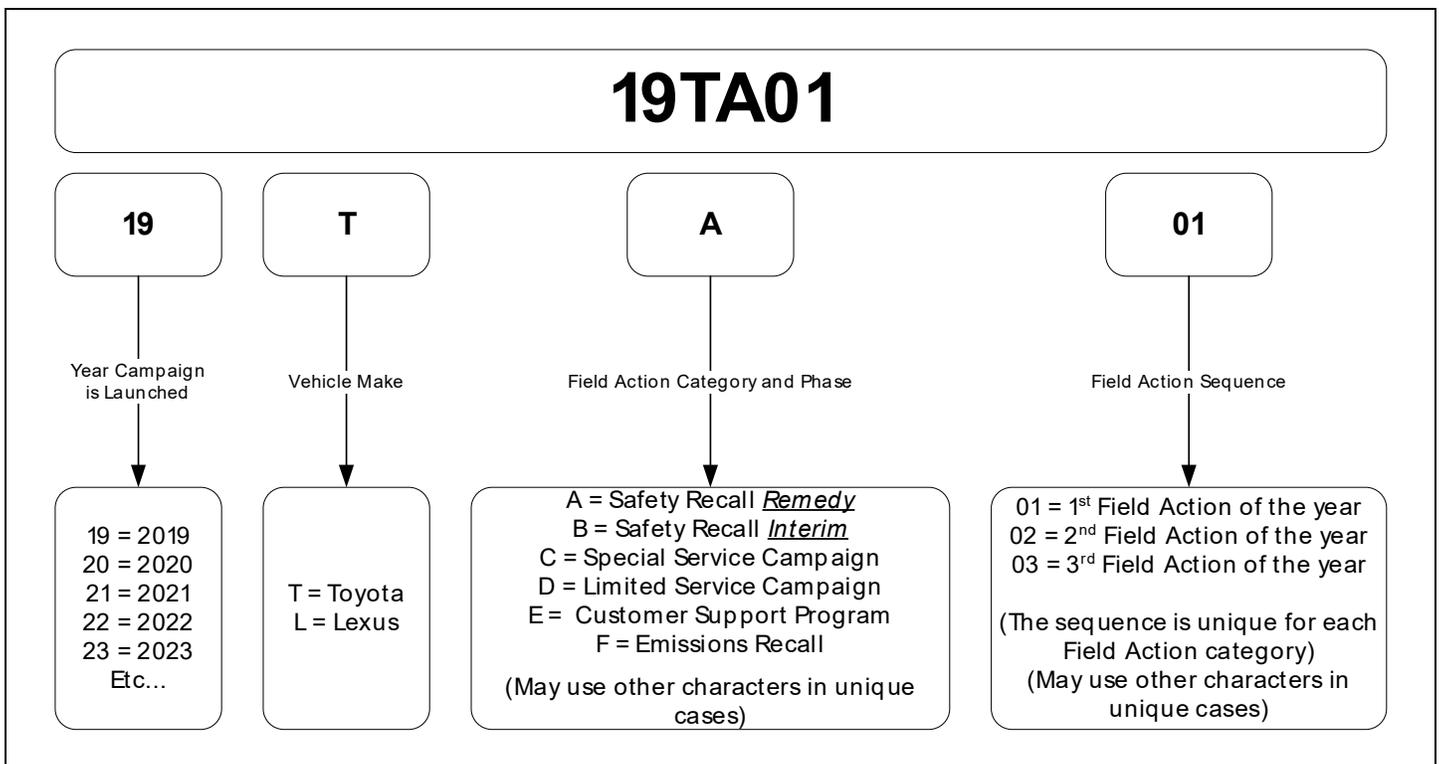| IX. REASSEMBLY |
|---|

1. REMOVE THE POWER SUPPLY FROM THE BATTERY

◄ 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

19TA01

19	T	A	01
Year Campaign is Launched	Vehicle Make	Field Action Category and Phase	Field Action Sequence
19 = 2019 20 = 2020 21 = 2021 22 = 2022 23 = 2023 Etc...	T = Toyota L = Lexus	A = Safety Recall *Remedy* B = Safety Recall *Interim* C = Special Service Campaign D = Limited Service Campaign E = Customer Support Program F = Emissions Recall (May use other characters in unique cases)	01 = 1st Field Action of the year 02 = 2nd Field Action of the year 03 = 3rd Field Action of the year (The sequence is unique for each Field Action category) (May use other characters in unique cases)

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