

Part 573 Safety Recall Report

22V-285

Manufacturer Name : Toyota Motor Engineering & Manufacturing**Submission Date :** APR 28, 2022**NHTSA Recall No. :** 22V-285**Manufacturer Recall No. :** 22TA04**Manufacturer Information :****Population :**

Manufacturer Name : Toyota Motor Engineering & Manufacturing

Number of potentially involved : 18,101

Address : 6565 Headquarters Drive

Estimated percentage with defect : 100 %

Plano TX 75024

Company phone : 1-800-331-4331

Vehicle Information :

Vehicle 1 : 2022-2022 Toyota Tundra

Vehicle Type :

Body Style :

Power Train : NR

Descriptive Information : (1) Although the involved vehicles are within the above production period range, not all vehicles in this range were sold in the U.S. (2) The Parking Assist ECU is a component of the Panoramic View Monitor (PVM) system described below. (3) Only vehicles in the above production range which were equipped with the PVM system of a specific design and supplier are involved in this recall. Other Toyota vehicles, including 2022 model year Tundra vehicles with the base integrated backup camera, are not equipped with this system. 100% of the involved vehicles contain a Parking Assist ECU with the incorrect software programming described below. Whether the issue, in each case, will cause the rearview image to not be displayed to the driver during a backing event depends on whether the rearview camera signal exceeds the allowable voltage threshold during each ignition cycle as described below.

Production Dates : MAY 10, 2021 - APR 13, 2022

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Description of Noncompliance :

Description of the Noncompliance : The subject vehicles are equipped with a Panoramic View Monitor (PVM) system, which consists of multiple individual cameras located around the vehicle, including a rearview camera, and a parking assist ECU. The PVM system uses the parking assist ECU to activate the signals for each of these cameras, as needed, in order to display an image. Due to incorrect programming of the parking assist ECU software, in certain weather conditions (e.g., cold temperatures), one or more of the camera signals may exceed the allowable voltage threshold during system initialization at vehicle startup. If the rearview camera signal exceeds the allowable voltage threshold, the rearview camera signal will not be transmitted to the parking assist ECU and the rearview image will not display to the driver in the multimedia screen. As a result, the subject vehicles will not meet the requirements in FMVSS No. 111, paragraph S6.2(b) which may increase the risk of a crash during a backing event.

FMVSS 1 : 111 - Rear visibility

FMVSS 2 : NR

Description of the Safety Risk : If the rearview camera signal exceeds the allowable voltage threshold, the rearview camera signal will not be transmitted to the parking assist ECU and the rearview image will not display to the driver in the multimedia screen. As a result, the subject vehicles will not meet the requirements in FMVSS No. 111, paragraph S6.2(b) which may increase the risk of a crash during a backing event.

Description of the Cause : NR

Identification of Any Warning that can Occur : NR

Involved Components :

Component Name 1 : Parking Assist ECU

Component Description : COMPUTER, PARKING ASSIST

Component Part Number : 86792-0C051

Supplier Identification :**Component Manufacturer**

Name : Magna Electronics

Address : 2050 Auburn Road

Auburn Hills Michigan 48326

Country : United States

Chronology :

In late-January 2022, Toyota identified three reports from the field describing that there were intermittent instances during cold weather where PVM system-equipped Tundra vehicles did not display the rearview camera image when the vehicles were in reverse. Toyota observed the condition on a side view PVM camera by conducting in-vehicle cold weather testing and sought the further assistance of the PVM system supplier to better understand the reported behavior of the rearview camera. Based on a design review in late-January, Toyota and the PVM system supplier began to focus the investigation on the initialization sequence of the Parking Assist ECU and the PVM cameras. In the course of this testing, it was observed that the camera signal voltage was exceeding the allowable threshold, resulting in the Parking Assist ECU recognizing the camera as being in abnormal status, creating a loss of signal transmission. It was further found that any of the PVM cameras, including the rearview camera, could be subject to the condition. As a result, Toyota determined on April 26, 2022, it is possible that the involved vehicles could experience a condition in which a rearview image does not display to the driver during a backing event and as such, does not meet the requirements of FMVSS No. 111 S6.2(b).

Description of Remedy :

Description of Remedy Program : All known owners of the involved vehicles will be notified via first class mail to return their vehicles to a Toyota dealer. For all involved vehicles, the dealers will reprogram the Parking Assist ECU at no cost. As the owner notification letters will be mailed out well within the active period of the Toyota New Vehicle Limited Warranty ("Warranty"), all involved vehicle owners for this recall would have been provided a repair at no cost under Toyota's Warranty.

How Remedy Component Differs from Recalled Component : NR

Identify How/When Recall Condition was Corrected in Production : NR

Recall Schedule :

Description of Recall Schedule : Notifications to owners of the affected vehicles will occur by June 27, 2022. A copy of the draft owner notification letter(s) will be submitted as soon as available. Notifications to distributors/dealers will be sent by April 28, 2022. Copies of dealer communications will be submitted as they are issued.

Planned Dealer Notification Date : APR 28, 2022 - APR 28, 2022

Planned Owner Notification Date : MAY 30, 2022 - JUN 27, 2022

* NR - Not Reported