

Part 573 Safety Recall Report

22V-501

Manufacturer Name : Toyota Motor Engineering & Manufacturing

Submission Date : JUL 13, 2022

NHTSA Recall No. : 22V-501

Manufacturer Recall No. : 22TA07



Manufacturer Information :

Manufacturer Name : Toyota Motor Engineering & Manufacturing

Address : 6565 Headquarters Drive

Plano TX 75024

Company phone : 1-800-331-4331

Population :

Number of potentially involved : 31,428

Estimated percentage with defect : 100 %

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.

Production Dates : NOV 03, 2021 - JUL 12, 2022

VIN Range 1 : Begin : NR

End : NR

Not sequential

Vehicle 2 : 2022-2022 Toyota Tundra Hybrid

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.

Production Dates : MAR 15, 2022 - JUL 08, 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 front view and 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 the corresponding image. One of the front camera signal activation criteria is based on sonar sensor inputs, and the rearview camera signal activation criteria is based on shifting the vehicle into reverse position. Due to incorrect programming of the parking assist ECU software, if the vehicle had previously used the front sonar sensors to detect an object and the front camera image was displayed, when the vehicle is next placed into reverse position, there may be sporadic instances where the rear camera signal activation criteria is ignored, and the front camera image appears on the multimedia display instead of the rear camera image. As a result, the subject vehicles will not meet the rear visibility 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 vehicle had previously used the front sonar sensors to detect an object and the front camera image was displayed, when the vehicle is next placed into reverse position, there may be sporadic instances where the rear camera signal activation criteria is ignored, and the front camera image appears on the multimedia display instead of the rear camera image. As a result, the subject vehicles will not meet the rear visibility 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 NR
that can Occur :

Involved Components :

Component Name 1 : Parking Assist ECU
Component Description : COMPUTER, PARKING ASSIST
Component Part Number : 86792-0C051

Component Name 2 : Parking Assist ECU
Component Description : COMPUTER, PARKING ASSIST
Component Part Number : 86792-0C052

Supplier Identification :

Component Manufacturer

Name : Magna Electronics
Address : 2050 Auburn Road
Auburn Hills Michigan 48326
Country : United States

Chronology :

In early May 2022, during a pre-production test for a different Toyota model, the PVM system supplier identified an occurrence of the front view camera image being displayed when the vehicle was in reverse position, but after the front camera had used the front sonar sensors to detect an object. Separately, Toyota then observed the issue on a Tundra vehicle by initiating front sonar sensor object detection and front view camera display while in drive, then shifting the vehicle to park and cycling the ignition to "off". Upon restarting the vehicle, after shifting into reverse, the front view camera image was displayed on the multimedia display instead of the rearview image. A design review was initiated in mid-May 2022. Through this process, the PVM system supplier found that the Parking Assist ECU software could allow queued "event flags", which are inputs to activate the various PVM camera signals, to be cleared prematurely. If one of the Parking Assist ECU queued event flags was reverse position, the Parking Assist ECU could clear the event flag, leading it to ignore the request to display the rearview camera image. As a result, Toyota determined on July 6, 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 August 17, 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 July 13, 2022. Copies of dealer communications will be submitted as they are issued.

Planned Dealer Notification Date : JUL 13, 2022 - JUL 13, 2022

Planned Owner Notification Date : JUL 27, 2022 - AUG 17, 2022

* NR - Not Reported