

Part 573 Safety Recall Report

24V-124

Manufacturer Name : Toyota Motor Engineering & Manufacturing

Submission Date : FEB 21, 2024

NHTSA Recall No. : 24V-124

Manufacturer Recall No. : 24TA01 / 24LA01



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 : 18,616

Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2023-2023 Toyota Mirai

Vehicle Type :

Body Style :

Power Train : NR

Descriptive Information : Although the involved vehicles are within the above production period range, not all vehicles in this range were sold in the U.S.

This issue only affects the vehicles listed above which are equipped with the Parking Assist ECU containing the specific software logic from the specific supplier. 100% of the involved vehicles contain a Parking Assist ECU with the improper software programming described in Section 5 below. Whether this issue, in each case, will cause the rearview image not to be displayed within two seconds of the start of the backing event depends on whether the camera initialization process fails.

Production Dates : DEC 05, 2022 - OCT 03, 2023

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Vehicle 2 : 2023-2024 Lexus ES250

Vehicle Type :

Body Style :

Power Train : NR

Descriptive Information : Although the involved vehicles are within the above production period range, not all vehicles in this range were sold in the U.S.

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Production Dates : OCT 12, 2022 -DEC 01, 2023

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Vehicle 3 : 2023-2024 Lexus ES300h

Vehicle Type :

Body Style :

Power Train : NR

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Production Dates : APR 15, 2022 -JAN 25, 2024

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Vehicle 4 : 2023-2024 Lexus ES350

Vehicle Type :

Body Style :

Power Train : NR

Descriptive Information : Although the involved vehicles are within the above production period range, not all vehicles in this range were sold in the U.S.

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Production Dates : SEP 14, 2022 -JAN 26, 2024

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Vehicle 5 : 2024-2024 Lexus LC500

Vehicle Type :

Body Style :

Power Train : NR

Descriptive Information : Although the involved vehicles are within the above production period range, not all vehicles in this range were sold in the U.S.

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Production Dates : MAY 15, 2023 -NOV 10, 2023

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Vehicle 6 : 2024-2024 Lexus LC500h

Vehicle Type :

Body Style :

Power Train : NR

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Production Dates : MAY 24, 2023 -OCT 30, 2023

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Vehicle 7 : 2023-2023 Lexus LS500

Vehicle Type :

Body Style :

Power Train : NR

Descriptive Information : Although the involved vehicles are within the above production period range, not all vehicles in this range were sold in the U.S.

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Production Dates : OCT 17, 2022 -OCT 26, 2023

VIN Range 1 : Begin :

NR

End : NR

☐ Not sequential

Vehicle 8 : 2023-2023 Lexus LS500h
Vehicle Type :
Body Style :
Power Train : NR

Descriptive Information : Although the involved vehicles are within the above production period range, not all vehicles in this range were sold in the U.S.
This issue only affects the vehicles listed above which are equipped with the Parking Assist ECU containing the specific software logic from the specific supplier. 100% of the involved vehicles contain a Parking Assist ECU with the improper software programming described in Section 5 below. Whether this issue, in each case, will cause the rearview image not to be displayed within two seconds of the start of the backing event depends on whether the camera initialization process fails.

Production Dates : MAY 30, 2023 -MAY 30, 2023
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 signal for each of these cameras, as needed, in order to display the corresponding image. Due to improper programming of the Parking Assist ECU software, if a camera initialization process failure occurs, the PVM system may not display a rearview image within two seconds of the start of the backing event if the driver shifts into reverse within approximately four seconds after ignition is switched on. As a result, the subject vehicles fail to comply with the requirements of FMVSS No. 111, paragraph S5.5.3, 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 : Due to improper programming of the Parking Assist ECU software, if a camera initialization process failure occurs, the PVM system may not display a rearview image within two seconds of the start of the backing event if the driver shifts into reverse within approximately four seconds after ignition is switched on. As a result, the subject vehicles fail to comply with the requirements of FMVSS No. 111, paragraph S5.5.3, 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 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-62120

Component Name 2 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-33440

Component Name 3 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-33441

Component Name 4 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-33460

Component Name 5 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-33461

Component Name 6 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-33441

Component Name 7 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-33461

Component Name 8 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-11020

Component Name 9 : Computer, Parking Assist

Component Description : Parking Assist ECU

Component Part Number : 86792-50440

Supplier Identification :

Component Manufacturer

Name : DENSO CORPORATION

Address : 1-1, Showa-cho
Kariya-city, Aichi-pref Foreign States 448-8661

Country : Japan

Chronology :

In February 2023, Toyota and the Parking Assist ECU supplier began a design review of all PVM systems in parallel with an investigation of an issue involving the rearview monitor on a certain vehicle model sold in Japan. Based on the review, it appeared that if there is a large amount of data being processed at vehicle startup, the camera initialization process could fail at vehicle startup on certain PVM systems. Beginning in September 2023, Toyota and the supplier specifically investigated the initialization sequence of the Parking Assist ECU and identified that when large amounts of data are processed at vehicle startup, the camera initialization process may conflict with the image drawing process, and the image drawing process would be prioritized, causing the camera initialization process to fail. Toyota and the supplier began replication testing focusing on the sequence.

In early February 2024, Toyota was able to replicate the issue. Toyota's analysis also found that if the initialization process failure occurred and the driver shifts into reverse within four seconds after the ignition is switched on, it would take more than two seconds after the start of the backing event to display the rearview image.

On February 15, 2024, Toyota determined that it is possible that the involved vehicles could experience a condition in which a rearview image does not display to the driver within two seconds of the start of a backing event and as such, does not meet the requirements of FMVSS No. 111 S5.5.3 and decided to conduct a recall.

Description of Remedy :

Description of Remedy Program :	All known owners of the subject vehicles will be notified to return their vehicles to a Toyota or Lexus dealer. The dealers will update the software of the Parking Assist ECU, free of charge. As the owner notification letters will be mailed out within the active period of the Toyota or Lexus New Vehicle Limited Warranty (“Warranty”) and 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 April 21, 2024. A copy of the draft owner notification will be submitted as soon as it is available. Notifications to distributors/dealers will be sent on February 21, 2024. Copies of dealer communications will be submitted as they are issued.
Planned Dealer Notification Date :	FEB 21, 2024 - FEB 21, 2024
Planned Owner Notification Date :	APR 07, 2024 - APR 21, 2024

* NR - Not Reported