

February 21, 2024

DEFECT INFORMATION REPORT

1. Vehicle Manufacturer Name:

Toyota Motor Corporation ["TMC"]
1, Toyota-cho, Toyota-city, Aichi-pref., 471-8571, Japan

Toyota Motor Manufacturing, Texas, Inc. ["TMMTX"]
1 Lone Star Pass, San Antonio, TX 78264-3413

Affiliated U.S. Sales Company:

Toyota Motor North America, Inc. ["TMNA"]
6565 Headquarters Drive, Plano, TX 75024

Manufacturer of Transmission assembly:

AISIN CORPORATION
2-1 Asahi-machi, Kariya, Aichi 448-8650, Japan
Phone: +81-566-24-8441

Country of Origin: Japan

AISIN World Corp. of America Inc
15300 Centennial Drive Northville, MI 48168
Phone: +1-734-453-5551

Country of Origin: U.S.A

2. Identification of Involved Vehicles and Affected Components:

Based on production records, we have determined the involved vehicle population to be the vehicles listed in the table below.

Make/Car Line	Model Year	Manufacturer	Production Period
Toyota / Tundra	2022-2024	TMMTX	November 2, 2021 through December 22, 2023
Toyota / Tundra Hybrid			March 15, 2022 through December 21, 2023
Toyota / Sequoia Hybrid	2023-2024		August 31, 2022 through December 5, 2023
Lexus / LX600	2022-2024	TMC	July 30, 2021 through January 15, 2024

Applicability	Part Number	Part Name	Component Description
MY2022-2024 Toyota Tundra	35050-0C010 35050-0C011 35050-0C020 35050-0C021	TRANSMISSION ASSY, W/CPUTR L/TORQUE CONV	Transmission Assembly
MY2022-2024 Toyota Tundra Hybrid	35050-0C030 35050-0C040		
MY2023-2024 Sequoia Hybrid			
MY2022-2024 Lexus LX600	35050-60090 35050-60180 35050-60181		

- Note: (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) This issue only affects the vehicles equipped with a certain transmission assembly that uses brake clutch discs of a specific design.

3. Total Number of Vehicles Potentially Involved:

Tundra	:	192,351
Tundra Hybrid	:	49,763
Sequoia Hybrid	:	26,447
Lexus LX600	:	12,102
Total	:	280,663

4. Percentage of Vehicles Estimated to Actually Contain the Defect:

Toyota is unable to estimate the percentage of the involved vehicles to actually contain the defect described in Section 5. However, as the NHTSA manufacturer portal requires an integer value be entered, Toyota has entered the value “1” in response to this question in the portal. For the purpose of this report, “1” means “unknown”.

5. Description of Problem:

The transmission assembly in the subject vehicles uses a clutch piston to engage brake clutch discs to plates to transfer power from the engine to the wheels. There is a possibility that, due to an issue in the design of a certain brake clutch disc, when the transmission is shifted to the neutral position and pressure is removed from the clutch piston, the brake clutch discs will not immediately disengage from the plates, allowing some engine power to continue to transfer to the wheels. If this condition occurs when the vehicle is on a flat surface, and if the driver does not apply the service brake or the parking brake, it could allow a vehicle to inadvertently creep forward at a low speed (up to approximately 4 mph), which could increase the risk of a crash.

6. Chronology of Principal Events:

May 2023 – October 2023

In late May, Toyota received a field report alleging that a customer’s vehicle moved forward while the transmission was placed in neutral. An initial inspection was conducted by the dealer, during which the transmission was moved to neutral, the brake pedal was released, and the vehicle was observed to move forward under its own power on a flat surface. The dealer observed a top vehicle speed of 3 mph during this movement in neutral.

Toyota conducted an additional vehicle inspection to further evaluate the customer’s vehicle. Toyota completed a test drive and collected vehicle data (e.g., distance, speed, force, etc.) that

confirmed that the vehicle would begin slowly moving from a stop to approximately 3 mph while in the neutral shift position with no brakes applied. Toyota also confirmed that the service brakes and parking brakes were not impacted by the condition, and if the driver applied either of the brakes, the vehicle would stop moving.

In late June, Toyota began further testing to determine the actual torque being transmitted from the engine to the wheels during this neutral range movement. Simultaneously, Toyota performed testing on additional vehicles in order to quantify the actual rolling resistance torque which was found to be smaller than the torque being transferred from the engine to the wheels. The difference in the two torques was small but determined to be enough for limited movement to occur.

Following determination of the actual torque conditions, Toyota continued with the recovery and evaluation of parts from two vehicles with newly submitted field reports. Once the presence of neutral movement on the vehicles with the recovered parts was confirmed, Toyota performed bench testing on the recovered parts to identify how torque was being transferred from the engine to the wheels. During this bench testing, it was found that certain brake clutch discs were not immediately separating from plates after the transmission was shifted into the neutral position and some power could continue to be transferred from the engine to the wheels. The occurrences were intermittent, and it appeared that the brake clutch discs were overly flat, which could contribute to the delay in disc separation.

Toyota then made a change in the design of the brake clutch disc in order to change the level of flatness, however the verification testing of the design change failed.

November 2023 – February 2024

In early November, because the design change for disc flatness had failed, Toyota continued investigating the brake clutch disc mechanism. As a result of this investigation, a software change in the transmission control ECU was introduced at the manufacturing facility.

Following successful verification of transmission control ECU software changes, Toyota developed a testing plan to understand the customer usage scenarios along with any potential risks associated with those scenarios involving the condition. Before the testing plan was completed, Toyota received a field report that alleged movement of a vehicle in the neutral position while passing through a car wash.

February 15, 2024

Based on the results of the above investigation, Toyota decided to conduct a voluntary safety recall campaign.

As of February 13, 2024, based on a diligent review of records, Toyota's best engineering judgment is that there are 5 Toyota Field Technical Reports and 1 warranty claim that have been received from U.S. sources that relate or may relate to this condition and which were considered in the decision to submit this report.

7. Description of Corrective Repair Action:

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 transmission control ECU, free of charge.

Reimbursement Plan for pre-notification remedies

As the owner notification letters will be mailed out well within the active period of the Toyota or Lexus 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.

8. 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.

9. Distributor/Dealer Notification Schedule:

Notifications to distributors/dealers will be sent on February 21, 2024. Copies of dealer communications will be submitted as they are issued.

10. Manufacturer's Campaign Number:

Toyota Tundra / Tundra Hybrid / Sequoia Hybrid	24TA02
Lexus LX600	24LA02