TOYOTA

Toyota Motor North America, Inc.

Vehicle Safety & Compliance
Liaison Office
Mail Stop: W4-2D
6565 Headquarters Drive
Plano, TX 75024

April 26, 2022

AMENDED NONCOMPLIANCE INFORMATION REPORT
(22V-239)

1. Vehicle Manufacturer Name:

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

Toyota Motor Manufacturing, Indiana, ["TMMI"]
4000 Tulip Tree Drive, Princeton, IN 47670-4000

Toyota Motor Manufacturing, Kentucky, ["TMMK"]
1001 Cherry Blossom Way, Georgetown, KY, 40324

Toyota Motor Manufacturing Canada, ["TMMC"]
1055 Fountain Street North, Cambridge, Ontario, Canada N3H 5K2

Affiliated U.S. Sales Company

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

Manufacturer of the brake actuator assembly

ADVICS CO.,LTD.

2-1 Showa-machi,Kariya,Aichi,448-8688,Japan

Phone: +81-566-56-5900

ADVICS Manufacturing Ohio.

1650 Kingsview Dr. Lebanon, Ohio 45036, U.S.A.
Phone: +1-513-932-78782.

2. Identification of Involved Vehicles:

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 HIGHLANDER Hybrid	2020-2022	TMMI	October 8, 2019 through April 6, 2022
Toyota SIENNA	2021-2022	TMMI	March 3, 2020 through April 7,2022
Toyota RAV4 Hybrid	2022	TMMK/TMMC/ TMC	September 1, 2021 through April 5, 2022
Toyota RAV4 PRIME	2021-2022	TMC	November 25, 2019 through March 31, 2022
Toyota VENZA	2021-2022	TMC	March 5, 2020 through April 1, 2022
LEXUS LX 600	2022	TMC	July 30, 2021 through April 2, 2022
LEXUS NX 350h	2022	TMC/TMMC	April 8, 2021 through April 4, 2022
LEXUS NX 450h+	2022	TMC	April 7, 2021 through March 31, 2022
Toyota MIRAI	2021-2022	TMC	May 22, 2020 through April 1,2022
LEXUS LS 500h	2021-2022	TMC	October 19, 2020 through March 30, 2022

Applicability	Part Number	Part Name	Component Description
Toyota HIGHLANDER Hybrid	44510-48090	ACTUATOR ASSY, BRAKE	Brake Actuator Assembly
Toyota SIENNA	44510-08070		
Toyota RAV4 Hybrid	44510-42210		
Toyota RAV4 PRIME	44510-42191		
Toyota VENZA	44510-48111		
LEXUS LX 600	44510-60230		
LEXUS NX 350h LEXUS NX 450h+	44510-78050		
Toyota MIRAI	44540-62011 44540-62031	ACTUATOR ASSY, VSC	
LEXUS LS 500h	44540-50231		

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) The Skid Control ECU described below is a sub-component of the Brake Actuator Assembly.

(3) This issue involves only vehicles in the above production range which have a Skid Control ECU with a specific software logic.

3. Total Number of Vehicles Involved:

Toyota HIGHLANDER Hybrid	: 129,573
Toyota SIENNA	: 140,884
Toyota RAV4 Hybrid	: 47,600
Toyota RAV4 PRIME	: 38,412
Toyota VENZA	: 91,139
LEXUS LX 600	: 1,261
LEXUS NX 350h	: 4,035
LEXUS NX 450h+	: 1,231
Toyota MIRAI	: 3,926
LEXUS LS 500h	: 49
Total	: 458,110

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

100% of the involved vehicles contain a Skid Control ECU with the incorrect software logic described in Section 5 below. Whether the issue, in each case, will cause the Vehicle Stability Control system not to return to the default setting at the next ignition cycle depends on whether the driver follows the particular set of operating inputs exactly as described in Section 5 below.

5. Description of Noncompliance:

The subject vehicles are equipped with a Vehicle Stability Control (VSC) system that is operated by a Skid Control ECU with a specific software logic. Due to an incorrect programming of the Skid Control ECU software, after a particular set of operating inputs where the driver manually turns off the VSC by the VSC in-vehicle control and the ignition is turned off and then turned back on while the brake pedal is continuously depressed, the VSC will not return to the default ON setting at the next ignition cycle. In this specific scenario, the VSC will not meet the requirements of FMVSS 126, paragraph S5.4.1. Unless these precise operating inputs are followed, VSC operation will automatically return to the default VSC ON setting at any subsequent ignition cycle. If the VSC does not default to VSC ON, a warning light will illuminate, indicating to the driver that the VSC is not activated. If the VSC does not return to the default ON setting because the precise operating inputs were carried out and the driver also does not recognize the warning light to manually reactivate the VSC system, then operating the vehicle with an inoperative VSC system could increase the risk of a crash in certain driving conditions.

6. Test Results and Other Information:

During the evaluation process of a vehicle under development, on February 8, 2022, a Toyota team member observed that the VSC system did not automatically return to the default setting (VSC ON) at the next ignition cycle after the VSC had been turned off using the in-vehicle control. Based on this observation, Toyota proceeded to review the software logic of the Skid Control ECU which controls the VSC system. A review of the software logic found that "Brake Pedal OFF" had been added to the list of parameters required for the VSC to return to the default "ON" setting after the VSC had been manually deactivated. In the vehicle under development, it was found that by introducing the Brake Pedal OFF parameter, depressing the brake pedal through the end of one ignition cycle and into the start of the next ignition cycle caused the VSC not to return to the default setting at the subsequent ignition cycle if the driver had manually turned off the VSC using the in-vehicle control. Further investigation confirmed that similar software logic which included the Brake Pedal OFF parameter was used for the Skid Control ECU in certain production vehicles. Based on this information, on April 7, 2022, Toyota determined that the vehicles with a Skid Control ECU which contains this specific software logic do not meet the requirements of FMVSS No.126, paragraph S5.4.1. because the VSC does not default to VSC ON at the start of each ignition cycle if the specific operating inputs are followed.

7. Description of Corrective Repair Action:

All known owners of the subject vehicles will be notified by first class mail to return their vehicles to a Toyota or Lexus dealer. The dealers will update the software of the Skid 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 New Vehicle Limited 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 begin by June 12, 2022. A copy of the draft owner notification letter(s) will be submitted as soon as available.

9. Distributor/Dealer Notification Schedule:

Notifications to distributors/dealers will be sent on April 13, 2022. Copies of dealer communications will be submitted as they are issued.

10. Manufacturer's Campaign Number:

[Interim] Toyota: 22TB03
Lexus: 22LB01

[Remedy] Toyota: 22TA03
Lexus: 22LA01