TOYOTA

Toyota Motor North America, Inc.

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

April 13, 2022

DEFECT INFORMATION REPORT

1. Vehicle Manufacturer Name:

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

Affiliated U.S. Sales Company:

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

2. Identification of Involved Vehicles and Affected Components:

Based on production records, we have determined the involved vehicle population as in the table below.

Make/Car Line	Model Year	Manufacturer	Production Period
Lexus / NX250	2022	TMC	May 28, 2021 Through January 24, 2022
Lexus / NX350	2022	TMC	April 8, 2021 Through January 21, 2022
Lexus / NX350h	2022	TMC	April 8, 2021 Through January 26, 2022
Lexus / NX450h+	2022	TMC	April 7, 2021 Through January 21, 2022

Applicability	Part Number	Part Name	Component Description
2022MY Lexus NX250, NX350, NX350h, NX450h+	53701-78020	APRON SUB-ASSY, FR FENDER, RH	Body panels
	53702-78020	APRON SUB-ASSY, FR FENDER, LH	

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 manufactured with body panels that were welded by specific machines at a certain vehicle assembly plant during a certain production period. Other Toyota or Lexus vehicles sold in the U.S. are not manufactured at this plant or did not have body panels welded by these specific machines.

(3) None of the involved components were produced by a supplier.

3. Total Number of Vehicles Potentially Involved:

4,215

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

Toyota estimates that less than 1% of the involved vehicles contain missing spot-welds. 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 "less than 1%." Whether this issue, in each case, will actually lead to the increased risk of a crash described in Section 5 is dependent on (1) whether a potentially affected vehicle actually has missing spot-welds, and (2) whether the actual use of the vehicle involves the driving conditions and longer-term (time and mileage) use which can lead to cracks or damage of the body panels that might eventually cause a shock absorber to separate from its mounting area.

5. Description of Problem:

The subject vehicles are manufactured with body panels that are spot-welded to the left and right front shock absorber mounting areas. During the spot-welding of these panels, there is a possibility that certain spot-welds were missed. In this condition, cracks and breakage may occur on other spot-welds and/or on the body panels around the front shock absorber mounting areas. Under longer-term (time and mileage) use, this could eventually cause a front shock absorber to separate from the mounting area, resulting in a loss of vehicle driving stability, increasing the risk of a crash.

6. Chronology of Principal Events:

January 2022 –March 2022

In late January 2022, during a sampling inspection of a vehicle body at the NX vehicle assembly plant, Toyota found that some spot-welds on the body panels around the left front shock absorber mounting area were missing. Toyota began to investigate the welding machine and its process.

While reviewing the welding process settings, Toyota found there was a possibility that the welding machine for the left and right side of a vehicle body may not have recognized a work completion clear signal which should have been received from the process control board after the welding work was completed. If this occurs, the welding machines would remain in a "work completed" status and would not execute the next welding operation. Toyota updated the logic of the process control board to allow the welding machines to recognize the signal properly. In parallel, Toyota began an investigation to determine if other vehicle bodies may have the same condition. It was found that a small number of vehicle bodies at the plant had missing spot-welds at either the left or right front shock absorber mounting area.

Toyota conducted duplication testing on each of the welding machine to assess why the machines may not have recognized the signal from the process control board. The left and right machines failed to recognize the signal in 5 out of 9,242 tests. In addition, it was confirmed that, due to a variation in the signal (pulse signal) width, the pulse signal could be shorter than the recognition interval in the welding machine, causing the machine to occasionally not recognize the signal. This further confirmed the possibility that missing spot-welds had sporadically occurred.

In February 2022, Toyota began an investigation of the potential effects that missing spot-welds might have on vehicle performance. A CAE analysis was performed to simulate frontal collisions with missing spot-welds to evaluate the effects, if any, on vehicle crashworthiness. It was found that the load and deformation at the front of the vehicle cabin was smaller than in a properly welded vehicle; therefore, the missing spot-welds did not negatively affect the vehicle's crash performance.

Additionally, Toyota considered the effect of the missing welds on the vehicle driving stability. This was evaluated using further CAE analysis and full-vehicle drive testing. The drive testing was conducted using a new vehicle with missing spot-welds; it was found that there were no effects on vehicle driving stability. However, based on the CAE analysis, Toyota assessed that, over time, cracks and breakage could occur on other spot-welds and/or on the body panels around the front shock absorber mounting areas. Toyota believed, under longer-term use (time and mileage), this could eventually cause the front shock absorber mounting panel to separate from the mounting area, which could result in a loss of vehicle driving stability and increase the

risk of a crash.

April 7, 2022

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

As of April 6, 2022, based on a diligent review of records, Toyota's best engineering judgement is that there are 0 Toyota Field Technical Reports and 0 warranty claims 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 Lexus dealer. For all involved vehicles, the dealers will inspect for the presence of spot-welds around the front shock absorber mounting areas. For any vehicles where missing spot-welds are found, Toyota is developing the remedy for this condition and will notify the agency when the remedy is developed as required under 49 CFR Part 573.

Reimbursement Plan for pre-notification remedies

As the owner notification letters will be mailed out well within the active period of the Lexus New Vehicle Limited Warranty ("Warranty"), all involved vehicle owners for this recall would have been provided a repair at no cost under Lexus's Warranty.

8. Recall Schedule:

Notifications to owners of the affected vehicles will occur by June 12, 2022. 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 April 13, 2022. Copies of dealer communications will be submitted as they are issued.

10. Manufacturer's Campaign Number:

22LA02