

December 13, 2018

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

Manufacturer of Front Passenger Seat Belt:

TOKAI RIKA CO., LTD.
3-260 Toyota, Oguchi-cho, Niwa-gun, Aichi-pref. 480-0195, Japan
Telephone: +81-587-95-5211

Country of Origin: Japan

2. Identification of Involved Vehicles:

Make/Car Line	Model Year	Manufacturer	Production Period
Toyota / Land Cruiser	2008-2019	TMC	June 5, 2007 through December 5, 2018
Lexus / LX			July 12, 2007 through December 5, 2018

Applicability	Part Number	Part Name	Component Description
MY2008-MY2019 Toyota Land Cruiser, Lexus LX	73210-60670	Belt Assembly, Outside RH	Front Passenger Seat Belt
	73210-60680		
	73210-60671		
	73210-60681		
	73210-60650		
	73210-60850		
	73210-60651		
	73210-60851		
	73210-60860		
	73210-60861		

- NOTE: (1) Although the involved vehicles are within the above production period, not all vehicles in this range were sold in the U.S.
- (2) Other Toyota or Lexus vehicles sold in the U.S. use a different seat belt tension sensor design or are not equipped with a seat belt tension sensor.

3. Total Number of Vehicles Potentially Involved:

Toyota Land Cruiser : 33,853
Lexus LX : 55,887
Total : 89,740

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

Unknown. Toyota is unable to provide an estimate of the percentage of vehicles to actually contain the defect. Whether the issue in each case will lead to damage of the seat belt tension sensor wire harness and subsequently lead to a deactivation of the Supplement Restraint System, creating an unreasonable risk to safety, depends on the operating environment and the operation frequency of the front passenger seat belt.

5. Description of Problem:

The subject vehicles are equipped with a front passenger occupant classification system which includes a seat belt tension sensor to help distinguish between child restraint systems and other occupants who may be in that seating position. There is a possibility that a localized portion of the belt tension sensor wire harness could experience excessive bending stress during normal seat belt usage and, over time, break the wires where they enter the sensor housing. This can cause an open circuit in the tension sensor, leading to the illumination of the airbag warning light and the passenger airbag "OFF" indicator. In addition, the front passenger airbag, knee airbag, and passenger seat-mounted side airbag may become deactivated. If these airbags are deactivated, there is an increased risk of injury to the occupant in the event of a crash.

6. Chronology of Principal Events:

August 2012

In August 2012, Toyota received a dealer report for a 2011MY Lexus LX570, indicating the airbag warning light would illuminate intermittently when the front passenger seat is occupied. The report indicated that a specific DTC (B1773) was present. However, the cause of the failure was unknown. The front passenger seat belt was replaced, but the part was not recovered for investigation. Toyota began to monitor the issue.

April 2014 – August 2016

In April 2014, Toyota received a report from a dealer where the customer noticed the SRS warning light would come on while driving and the light would not go off until the vehicle was stopped and restarted. The report notes that the vehicle was evaluated, but the dealer could not duplicate the customer's concern. The seat belt assembly was replaced to address the customer's concern.

From October 2014 through the end of August 2016, Toyota received additional dealer reports and a Toyota field report, indicating the SRS warning light was on and, in some cases, the front passenger airbag "OFF" light was on when a front passenger was present. Toyota attempted to recover parts related to some of these reports but could not.

September 2016 – September 2018

Toyota received additional field reports and dealer reports alleging a similar phenomenon as the vehicles in the previous reports. Three parts were recovered and sent to the supplier for inspection. A visual inspection of the connector wires in these cases showed a white discoloration that is common evidence of excessive wire harness manipulation. The units were tested to confirm voltage output and the units did not meet the specification. The technician inspecting one of the units manipulated the sensor wires and identified that there was a change in the voltage from the previous zero reading. Further, X-ray investigation was conducted, and it identified a similar broken wire on all of the returned units. The supplier's report stated that the sensor wire harness experienced abnormal stress, causing the wires to break, and speculated that the stress was caused by excessive manipulation of the wire harness during component installation.

Toyota also conducted cycle testing of a new part to determine whether the movement of the belt tension sensor could cause the bending stress resulting in the wires breaking. The testing revealed that repeated cycling could cause the sensor wires to break. However, additional analysis was needed to determine what level of durability is appropriate for the wire harness connecting to this sensor.

Between August 2017 and August 2018, Toyota received two additional field reports and one dealer report. One of the field reports alleged illumination of passenger airbag “OFF” indicator. The other two reports alleged illumination of the SRS warning light. For the August, 2018 report, Toyota was able to inspect the vehicle and identify DTC B1773 was present. The front passenger seat belt assembly was replaced. The part was recovered and sent to the supplier for investigation.

On September 28, 2018, Toyota was contacted by NHTSA’s Office of Defects Investigation regarding two VOQs alleging concerns with seat belt sensors in 2011 and 2013 Lexus LX570 vehicles. One of the allegations stated that the Supplemental Restraint System (SRS) warning light was illuminated. Toyota had previously inspected this vehicle and confirmed DTC B1773 was present, as described in the aforementioned August 2018 inspection. The other VOQ alleged that the airbag off lamp was inappropriately illuminated. Toyota did not have the opportunity to inspect this vehicle. In addition, the agency inquired about four field reports referencing DTC B1773.

October 2018 – Early December 2018

Toyota investigated the specific DTCs B1773 and B1776 (the DTCs which may result from broken wires in this wire harness) and examined the effect of the identified faults on the functionality of the SRS. In parallel, Toyota recovered additional parts from the field for evaluation. Toyota conducted X-ray analysis for these parts and also observed broken wires within the insulation of the wire harnesses.

Toyota determined that the front passenger airbag, knee airbag, and the passenger seat-mounted side airbag may become deactivated if either of the aforementioned DTCs are present. In addition, Toyota studied the design of belt tension sensors on other vehicles and observed that the belt tension sensors in the subject vehicles had wiring of a different design, which causes higher stress on the wire harness during seat belt usage. Toyota also investigated durability specifications for other components, as well as predicted vehicle usage, to determine what level of durability is appropriate for this part.

Based on this analysis, it was determined that the durability of this part was not sufficient, and there is a possibility that a localized portion of the belt tension sensor wire harness could become damaged over time due to a design of the sensor wire harness that allowed for higher levels of bending stress to occur during normal seat belt usage. Repeated stress from this bending can eventually break the wires in the harness where the wires enter the sensor housing, causing an open circuit in the tension sensor, leading to potential deactivation of the front passenger airbag, knee airbag, and the passenger seat-mounted side airbag.

December 7, 2018

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

As of December 4, 2018, based on a diligent review of records, Toyota's best engineering judgment is that there are 4 Toyota Field Technical Reports (including 2 unconfirmed Field Technical Reports) and 279 warranty claims (including 271 unverified claims) that have been received from U.S. sources that relate to the deactivation of the airbags investigated in this chronology and which were considered in the decision to submit this report.

7. Description of Corrective Repair Action:

Toyota is developing the remedy for this condition and will notify the agency of the remedy as required under 49 CFR Part 573 after the remedy is developed.

Reimbursement Plan for pre-notification remedies

The owner letter will instruct vehicle owners who have paid to have this condition remedied prior to this campaign to seek reimbursement pursuant to Toyota's General Reimbursement Plan.

8. Recall Schedule:

Notifications to owners will be sent by February 11, 2019. 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 December 13, 2018. Copies of dealer communications will be submitted as they are issued.

10. Manufacturer's Campaign Number:

	Interim	Remedy
Lexus :	J2L	JLL
Toyota :	J15	J05