

September 14, 2016

## DEFECT INFORMATION REPORT

1. Vehicle Manufacturer Name:

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

Affiliated U.S. Sales Company:

Toyota Motor Sales, USA, Inc. ["TMS"]  
19001 South Western Avenue, Torrance, CA 90501

Manufacturer of the Front Passenger Air Bag Assembly: [Tier 1]

Toyoda Gosei Co., LTD  
1 Haruhinagahata Kiyosu-shi, Aichi-Pref., 452-8564, Japan  
Telephone: +81-52-400-1055  
Country of Origin: Japan

Manufacturer of the Front Passenger Air Bag Inflator: [Tier 2]

ARC Qing Hua (Xi'an) Automotive Co., LTD  
NO.1 Tian Hong Street, Baqiao District, Xi'an 710025, China  
Telephone: +86-29-6282-5218  
Country of Origin: China

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
Toyota / Prius	2016	TMC	November 30, 2015 through June 14, 2016

Applicability	Part Number	Part Name	Component Description
MY2016 Toyota Prius	73960-47100	Air Bag Assembly, Instrument Panel Passenger w/o door	Front Passenger Air Bag Assembly
	73980-47050	Inflator Assembly Instrument Panel Air Bag Passenger	Front Passenger Air Bag Inflator

- (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) Toyota received the serial number of the front passenger air bags from the supplier containing potentially affected inflators produced in China and identified the 7,589 Prius vehicles specifically involved in this recall based on vehicle production records.
- (3) MY2016 Lexus RX350/450h vehicles sold in the U.S. utilize a front passenger air bag inflator of the same specification as the affected vehicles; however, those inflators were produced at a different inflator manufacturing facility in Mexico, which does not contain the same potential for mis-assembly and/or improper welding as described in the chronology below.
- (4) No other Toyota or Lexus vehicles sold in the U.S. contain inflators of the same specification and that were produced within the production period containing the manufacturing issues as described in the chronology below.

3. Total Number of Vehicles Potentially Involved:

7,589

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

Unknown

5. Description of Problem:

The subject vehicles are equipped with a “hybrid” type front passenger air bag inflator which contains compressed gas and propellant in the same combustion chamber. The burst disk in some inflators may have been improperly welded and/or misassembled. If this occurs, the disk membrane could burst only from the stored pressure of compressed gas in the inflator, allowing the gas to escape without a deployment command. This could result in the partial inflation of the front passenger air bag. This has been observed when the vehicle is parked and unoccupied for a period of time. An airbag that inflates in this manner can, under some circumstances, increase the risk of injury and the possibility of a crash.

6. Chronology of Principal Events:

June, 2016 - Early September, 2016

In mid-June 2016, Toyota received a field technical report from the U.S. market indicating spontaneous partial inflation of the front passenger air bag in a 2016 Prius. The vehicle was parked and unoccupied in a dealer's parking lot. Toyota inspected the vehicle and found that the front passenger air bag had partially inflated without a deployment command; there were no associated stored SRS trouble codes. The front passenger air bag module, including the inflator, was recovered for further investigation with the supplier. During the disassembly of the recovered inflator, it was found that the burst disk holder assembly was improperly assembled to the inflator, having been welded upside down.

Subsequent to this first reported case, Toyota received four additional field technical reports, between mid-June and mid-July, from the U.S. market indicating spontaneous partial inflation of the front passenger air bag in parked and unoccupied vehicles. The investigation of recovered inflators from these additional four cases revealed that the burst disk holder assemblies had been welded in a proper orientation, but the diameter of the weld joining the burst disk to its holder was smaller than specification and the weld was off-center.

Toyota and the supplier undertook a series of investigations of the production process history and duplication testing to determine the cause of these incidents. Ultimately it was determined that the incidents were the result of two separate causes.

For the first case involving the welding of the burst disk holder assembly in an upside down orientation, a review of the production history found that a similar instance of mis-assembly occurred in the process on March 12, 2016, where the burst disk holder may have been inadvertently turned over prior to being set in the welding jig. A change was made to the process on March 16, 2016, in which the height of the jig feed holder was adjusted to prevent mis-orientation of the disk holder. Through recreation testing, it was confirmed that the burst strength of the disk on most of the purposefully mis-assembled inflators was reduced below the pressure of the compressed gas in the inflator; this would result in the disk membrane bursting after the compressed gas is filled in manufacturing. It was also confirmed that, in those cases where a mis-assembled disk holder does not burst in the process, the affected inflators could be identified by utilizing data for the weld electrode stroke, which is measured and recorded during the welding process for every disk.

For the four cases involving off-center welding of the burst disk, a review of the production process history and sampling inspection records found that, between November 12, 2015 and November 14, 2015, some burst disks may have been welded to their holders with an inappropriate jig and weld diameter that was used for another manufacturer's product. If the burst disk is welded in this condition, there is a possibility that the diameter of the weld of the disk to the disk holder could be smaller than specification, and the weld could be significantly off-center. In this condition, the burst strength of the disk could be reduced, causing the disk membrane to burst only from the stored pressure of compressed gas in the inflator. This may result in spontaneous partial inflation of the front passenger air bag.

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

As of September 5, based on a diligent review of records, Toyota's best engineering judgment is that there are five Toyota Field Technical Reports and five warranty claims for these vehicles that have been received from U.S. sources that 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 involved vehicles will be notified by first class mail to return their vehicles to a Toyota dealer. Toyota dealers will replace the front passenger air bag assembly with a new one at no cost.

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 ("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 November 13, 2016. A copy of the draft owner notification letter will be submitted as soon as available.

9. Distributor/Dealer Notification Schedule:

Notifications to distributors/dealers were sent on September 13, 2016. Copies of dealer communications will be submitted as they are issued.

10. Manufacturer's Campaign Number:

G0W