# Toyota Motor Engineering \& Manufacturing North America, Inc. 

Vehicle Safety \& Compliance Liaison Office
Mail Code: S-104
19001 South Western Avenue
Torrance, CA 90501

November 7, 2012

Ms. Nancy Lummen Lewis
Associate Administrator for Enforcement
National Highway Traffic Safety Administration
Attn: Recall Management Division (NVS-215)
1200 New Jersey Ave, SE
Washington, D.C. 20590
Re: Certain Toyota Scion iQ Vehicles Occupant Classification System Part 573, Defect Information Report

Dear Ms. Lewis:
In accordance with the requirements of the National Traffic and Motor Vehicle Safety Act of 1966 and 49 CFR Part 573, on behalf of Toyota Motor Corporation ["TMC"], we hereby submit the attached Defect Information Report concerning a voluntary safety recall of certain Toyota Scion iQ vehicles to address an issue with the Occupant Classification System ["OCS"].

Should you have any questions about this report, please contact me at (310) 468-8551.

Sincerely,


Vinnie Venugopal General Manager
Toyota Motor Engineering \& Manufacturing North America, Inc.

Enclosures
Part 573, Defect Information Report

## 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 Seat Adjuster Assembly:
Toyota Boshoku Corporation
1-1 Toyoda-cho, Kariya-shi, Aichi 448-8651 Japan
Telephone: +81-566-23-6611
Country of Origin: Japan

## 2. Identification of Affected Vehicles:

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

| Make/ Car Line | Model Year | Manufacturer | VIN |  | Production Period |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | VDS | VIS |  |
| Toyota/ Scion iQ | $\begin{gathered} 2012 \\ 2013 \end{gathered}$ | TMC | JJXB0 | CJ008869 - DJ023727 | $\begin{gathered} \text { July 31, } 2011 \\ \text { through } \\ \text { October } 12,2012 \end{gathered}$ |

Note: Although the involved vehicles are within the above VIN range, not all vehicles in this range were sold in the U.S.
No other Toyota or Lexus vehicles use the same seat adjuster assembly as the subject vehicles.

## 3. Total Number of Vehicles Potentially Affected:

11,153

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

100\%

## 5. Description of Problem:

In the front passenger seat adjuster assembly of the subject vehicles, the weight sensor for the Occupant Classification System (OCS) is located in a recessed seat rail mounting structure. Under some circumstances, there is a possibility that the Flexible Printed Circuit (FPC) cable located on the sensor could come into contact with the rear floor mat strap or other object placed near the seat rail and become damaged when sliding the passenger seat forward or backward. If the FPC cable is damaged, this could cause the airbag warning light to illuminate and certain front passenger air bags to become deactivated. In some cases the OCS could incorrectly judge occupant type, causing various passenger air bags and the seat belt pretensioner to be improperly activated. Deactivated or improperly activated air bags could increase the risk of injury to an occupant in the event of a crash.

## 6. Chronology of Principal Events:

March 2012 - July 2012
Toyota received a field report indicating an illumination of the front passenger air bag light. The front passenger seat adjuster assembly of the subject vehicle was recovered and sent to the seat adjuster manufacturer for further analysis. The supplier's investigation confirmed that the FPC cable located at the OCS weight sensor was cut. The cause of the damage was not known. Toyota received two additional field reports indicating an illumination of the air bag warning light (one of which came from the Canadian market) and one reporting an illumination of the passenger airbag "OFF" indicator. Toyota also received a dealer contact indicating full-time activation of the front passenger air bag despite the absence of an occupant in the passenger seat. An examination made by Toyota and the seat adjuster manufacturer of these seat assemblies confirmed damage to the FPC cable; however, the cause of this damage could not be determined.

The manufacturing process at the seat adjuster manufacturer and the installation process at the vehicle assembly plant were examined to determine if the damage was caused by either of these processes. After concluding that the manufacturing and installation processes were not the cause of the damage, Toyota suspected that the damage was being caused by external factors and continued its investigation.

Toyota was able to duplicate the damage to the FPC cable by lodging the rear floor mat strap or a thin, rigid piece of material, such as a plastic file folder, in between the recessed seat rail and the floor, while sliding the passenger seat back and forth along the rail. Toyota concluded that the OCS weight sensor cover, which protects the sensor and FPC cable, was not sufficient to offer protection against objects making contact with the cable. In addition, it was confirmed that, if one of three circuits located on the outside of the FPC cable is damaged, the air bag warning light illuminates, leading to the front passenger air bag, knee air bag, and seat cushion air bag becoming deactivated. If two or more circuits, including the center circuit, are damaged, the OCS could incorrectly judge occupant type, leading to various passenger seat air bags and the seat belt pretensioner becoming activated.

## October 31, 2012

Toyota decided to conduct a voluntary safety recall campaign to ensure sufficient protection of the FPC cable in the front passenger seat rail.

## 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 dealer for inspection and installation of protective covers on the weight sensors. If any FPC cable is found to be damaged, a new seat adjuster assembly containing sensors with protective covers will be installed.

## Reimbursement Plan for pre-notification remedies

As the owner notification letter 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 repair at no cost under the Toyota Warranty.

## 8. Recall Schedule:

Notifications to the owners will be sent starting in early December, 2012 and be completed by early January, 2013. A draft of the owner notification will be submitted as soon as it is available.

## 9. Distributor/Dealer Notification Schedule:

Toyota's notifications to distributors/dealers will be sent in late November, 2012. Copies of dealer communications will be submitted as they are issued.

