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

Vehicle Safety & Compliance Liaison Office 19001 South Western Avenue Torrance, CA 90501

February 5, 2015

# **DEFECT INFORMATION REPORT**

#### 1. <u>Vehicle Manufacturer Name</u>:

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 Intermediate Shaft

JTEKT CORPORATION 1–1 Kotobuki-cho, Toyota-city, Aichi 471–0834 Japan Telephone: +81-565-28-2219

Country of Origin: Japan

# 2. <u>Identification of Involved Vehicles</u>:

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

Make/	Model	Manufac-	VIN		Production
Car Line	Year	turer	VDS	VIS	Period
Toyota/ FJ Cruiser	2014	TMC	ZU4BF BU4BF	EK013459 – EK013461 EK176339 – EK176778	August 7, 2013 through August 20, 2013

- Note: (1) Although the involved vehicles are within the above VIN range, not all vehicles in this range were sold in the U.S.
  - (2) No other Toyota or Lexus vehicles use the affected steering intermediate shaft as the subject vehicles.

## 3. <u>Total Number of Vehicles Potentially Involved:</u>

116

## 4. <u>Percentage of Vehicles Estimated to Actually Contain the Defect:</u>

Unknown

## 5. <u>Description of Problem</u>:

The steering system contains an intermediate shaft, which connects the steering wheel to the steering gear box. A joint in the intermediate shaft consists of a sleeve, stopper plate and shaft which are welded together. Due to improperly maintained welding equipment on a particular production day at the supplier, the intermediate shaft in the involved vehicles could have received an inadequate weld at the joint. If the vehicle is continuously operated in this condition, the welding on the joint portion could separate, resulting in loss of steering control and increasing the risk of a crash.

## 6. <u>Chronology of Principal Events</u>:

## Late September 2014 – Late January 2015

A dealership in Japan reported to Toyota the loss of steering control in an FJ Cruiser. Toyota conducted an investigation on the returned intermediate shaft assembly and confirmed that the stopper plate, which is one of the components welded on the intermediate shaft, was detached from the shaft. Further investigation of the part revealed that the welding dimension at the stopper plate side was out of specification.

Toyota and the supplier reviewed the production process history related to the intermediate shaft, focusing around the day the returned part was produced. The supplier production process records indicated that, on the morning of August 6, 2013, which is the day the failed part was

produced, the scheduled replacement of the welding tip was done by a worker who was not trained or authorized to perform this maintenance. In the afternoon of that same day, an authorized worker replaced the welding tip on this same equipment.

Toyota conducted replication testing which focused on whether an operational error could have occurred during the replacement of the welding tip on the morning of August 6, 2013. It was found that, if the welding tip is not installed with the specified tightening torque and continues to be used for welding in this condition, the welding tip could gradually loosen, causing the welding wire to become out of the target position. Welding done with a welding wire that is out of the target position duplicated the weld condition observed in the failed part. Supplier process records from other production periods did not reveal any concerns that could potentially result in an out-of-specification welding condition.

Toyota also recovered intermediate shafts from in-use vehicles from other production periods to attempt to determine whether this condition might exist for vehicles in other production periods. The inspection of recovered intermediate shafts found no shafts from a number of different production periods that exhibited a similar condition as the affected part produced on August 6, 2013. Toyota concluded that the shafts produced on other days do not have a welding concern.

#### January 30, 2015

Toyota decided to conduct a voluntary safety recall campaign to replace the steering intermediate shaft on vehicles which could contain shafts produced on August 6, 2013.

As of January 28, 2015, no Toyota field reports or warranty claims have been received.

## 7. <u>Description of Corrective Repair Action:</u>

All known owners of the subject vehicles will be notified by first class mail to return their vehicles to a Toyota dealer to have the intermediate shaft replaced with a new one.

#### 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. <u>Recall Schedule</u>:

Toyota anticipates the owner notification will begin in early March 2015. Copies of the owner notification letter will be submitted as soon as it is available.

# 9. <u>Distributor/Dealer Notification Schedule</u>:

Toyota's notification to distributors/dealers will be sent on February 5, 2015. Copies of the dealer communications will be submitted as they are issued.