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

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

June 29, 2017

### **DEFECT INFORMATION REPORT**

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

Toyota Motor Manufacturing, Kentucky, Inc. ["TMMK"] 1001 Cherry Blossom Way, Georgetown, KY 40324

Affiliated U.S. Sales Company

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

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

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 ES350	2017	ТММК	December 5, 2016 through March 7,2017

Applicability	Part Number	Part Name	Component Description			
Not applicable						

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 involves certain 2017MY Lexus ES350 vehicles produced at TMMK involving a specific team member who may have not properly tightened the right-side tie rod lock nut during the above production period. No other Toyota or Lexus vehicles sold in the U.S. are affected.

# <u>Total Number of Vehicles Potentially Involved</u>: 1,761

## Percentage of Vehicles Estimated to Actually Contain the Defect: Unknown

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

A lock nut, which secures the right-hand side tie rod assembly to the steering gear assembly in the involved vehicles, may not have been properly tightened during the assembly process. In this condition, the lock nut could loosen over time during normal vehicle operation. In some instances, the driver may experience noise or the vehicle can drift to the left or right while driving. In some cases, the tie rod could separate, which could result in a loss of steering control and an increased risk of a crash.

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

#### Early March – Mid June, 2017

On March 7, 2017, during a quality audit process at the vehicle manufacturing facility (TMMK), an auditor identified a low torque on the front-right tie rod lock nut. This prompted Toyota to inspect vehicles contained at the yard of the facility. This resulted in identifying other vehicles with the same condition. Toyota immediately updated the assembly process to add 100% torque confirmation as the investigation continued.

An investigation determined that the out-of-specification torque had been set by one specific new team member. This team member was transferred from another process on December 5, 2016 and inadvertently struck the right-hand side lower suspension arm with the "click" torque wrench, which could result in a false indication that the proper torque had been reached. All of the other team members were found to be using the torque wrench correctly. The Standard Work Instruction was updated to highlight proper torque wrench angle to avoid interference with the lower suspension arm.

Toyota continued its investigation efforts, including vehicle dynamic testing and theoretical analysis to understand the influence on vehicle control during the operation of the vehicle with a low torqued tie rod lock nut. It was determined that, although no abnormal effects on the vehicle control could be identified in the vehicle testing, if incorrectly tightened, the lock nut could loosen over time during normal vehicle operation. In some instances, the driver may

experience noise or the vehicle can drift to the left or right while driving. In some cases, the tie rod could separate from the steering gear assembly, which could result in a loss of steering control.

#### June 23, 2017

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

As of June 21, 2017 based on a diligent review of records, Toyota's best engineering judgement is that there are no Field Technical Reports or warranty claims 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. <u>Description of Corrective Repair Action:</u>

All known owners of the subject vehicles will be notified via first class mail to return their vehicles to a Lexus dealer. The dealers will confirm that the right-hand side tie rod lock nut is properly tightened. If the lock nut is loose, the dealer will replace the lock nut, the steering gear assembly, and the tie rod assembly with new ones at no cost to customers.

#### 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' Warranty.

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

Notifications to owners will begin by Mid July, 2017. A copy of the draft owner notification letter will be submitted as soon as available.

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

Notifications to distributors/dealers will be sent on June 29, 2017. Copies of dealer communications will be submitted as they are issued.

# 10. <u>Manufacturer's Campaign Number:</u>

#### HLC