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

Vehicle Safety & Compliance Liaison Office Mail Stop: W4-2D 6565 Headquarters Drive Plano, TX 75024

February 22, 2018

# **DEFECT INFORMATION REPORT**

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

Toyota Motor Manufacturing Indiana, Inc. ["TMMI"] 4000 Tulip Tree Drive, Princeton, IN 47670-4000

Affiliated U.S. Sales Company:

Toyota Motor North America, Inc. ["TMNA"] 6565 Headquarters Drive, Plano, TX 75024

Manufacturer of Alloy Wheel

Superior Industries International, Inc. 1901 Borick Drive Fayetteville, AR 72701 Phone: +1-479-443-7870

Country of Origin: USA

### 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
Toyota / Sienna	2018	TMMI	January 5, 2018 through January 15, 2018

Applicability	Part Number	Part Name	Component Description
MY2018 Toyota Sienna	42611-08060	Wheel, Disc	Alloy Wheel

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) Only vehicles equipped with certain 10-spoke alloy wheels produced during a specific period at a specific supplier facility may be affected. Other vehicles are not affected.

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

55

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

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 alloy wheel, creating an unreasonable risk to safety, depends on each vehicle's operating conditions.

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

The involved vehicles were equipped with certain alloy wheels produced at one supplier plant and may not have been allowed the correct cooling time due to the incorrect input of the cooling parameters during the casting process. As a result, some micro-porosity may develop in the wheels. If the wheels sustain impact(s) under certain driving conditions, the wheels can develop cracks in the spokes. This could ultimately result in the separation of the wheels from the hub assembly and could lead to a loss of vehicle control, increasing the risk of a crash.

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

### Mid-January 2018 - Early-February, 2018

In mid-January, 2018 Toyota received notification from a supplier that, during certification of a new wheel mold for a 10 spoke alloy wheel, the wheels that were cast from the new mold developed cracks in the spokes and failed a Toyota-specified wheel impact test.

The supplier had investigated the possible cause of the failure. Toyota was told that an examination (cut check) was performed and micro-porosity was found in the newly cast wheels. The supplier initially suspected the new mold was the possible cause of the cracked spokes and decided to test wheels produced from other previously certified molds. The wheels produced from the previously certified molds also failed the wheel impact testing. The additional wheels were also examined, and again micro-porosity was found. The supplier hypothesized that micro-porosity was related to the cooling of the wheels during the casting process. The supplier investigated their production process and confirmed that the cooling parameters for the wheels were input incorrectly. The supplier corrected the parameters and confirmed that new wheels produced with the correct cooling of the wheels, micro-porosity could develop within the wheels, which could cause cracks to develop in the spokes under certain test conditions. In addition, the supplier confirmed that the most recent parameter change in the casting control system affecting the cooling process was done in December 2017 when production of the the 10 spoke alloy wheel was started at this particular supplier plant.

All of the suspect wheels produced with the incorrect cooling parameters were contained, and Toyota inspected vehicles in its holding yard to locate suspect wheels and replace them with new, unaffected ones. However, it was later determined that a small number of vehicles with potentially affected wheels had been sold.

Toyota concluded that, if a vehicle equipped with the involved wheels sustain impact(s) under certain driving conditions, the wheels can develop cracks in the spokes. This could ultimately result in the separation of the wheels from the hub assembly and could lead to a loss of vehicle control, increasing the risk of a crash.

### February 16, 2018

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

As of February 9, 2018 based on a diligent review of records, Toyota's best engineering judgment is that there are no Toyota Field Report and no 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 directly via telephone to return their vehicles to a Toyota dealer. The dealers will determine the production location of the subject vehicle's wheels and, if necessary, replace the alloy wheel(s) with a new one(s).

### Reimbursement Plan for pre-notification remedies

As the owners will be contacted well within the active period of the Toyota New Vehicle Limited 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>:

Notifications to owners of Toyota models via telephone will occur within the week of February 26, 2018. Any owner which cannot be reached by phone will be contacted via first class mail by April 20, 2018.

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

Notifications to distributors/dealers will be sent on February 22, 2018. Copies of dealer communications will be submitted as they are issued.

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