

April 8, 2020

## DEFECT INFORMATION REPORT

1. Vehicle Manufacturer Name:

Toyota Motor Corporation [“TMC”]  
1, Toyota-cho, Toyota-city, Aichi-pref., 471-8571, Japan

Affiliated U.S. Sales Company:

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

Manufacturer of Rear Hatch Wire Harness:

YAZAKI Corporation  
17th Floor, Mita-Kokusai Bldg., 4-28 Mita 1-chome, Minato-ku, Tokyo, 108-8333 Japan  
Phone: +81-3-3455-8811

Country of Origin: Japan

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 / Corolla Hatchback	2020	TMC	December 5, 2019 through December 17, 2019

Applicability	Part Number	Part Name	Component Description
MY2020 Toyota Corolla Hatchback	82185-12841	Wire, Back Door, No. 2	Rear hatch Wire Harness

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 affects vehicles equipped with a wire harness located in the rear hatch that was inspected with specific equipment that was used at an assembly plant during a particular production period. Other Toyota or Lexus vehicles sold in the U.S. were not inspected with this equipment.

3. Total Number of Vehicles Potentially Involved:

960

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

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 oxidation of the terminal for the backup lamps in the rear hatch wire harness, causing the backup lamps to become inoperative, depends on the amount of increased terminal contact gap and operating conditions in each vehicle.

5. Description of Problem:

The subject vehicles are equipped with a rear hatch that contains a wire harness and connectors for electrical components installed in the rear hatch. Damaged equipment was used during the production process to inspect the conductivity of the wire harness and the installed electrical components through a specific connector. This may have caused the contact gaps of this connector to increase, resulting in lower contact pressure inside the connector at specific terminals. In this condition, an oxide layer may develop on the surface of those terminals due to vehicle vibration and exposure to air over time, resulting in increased electrical resistance. If there is a sufficient increase in electrical resistance on one of these terminals, the backup lamps may become inoperative. If backup lamps do not illuminate when the vehicle is operated in reverse, there can be an increased risk of a crash.

6. Chronology of Principal Events:

December 2019

In mid-December 2019, during the backup lamp activation inspection process at a Toyota vehicle assembly plant, four vehicles were found to have an inoperative backup lamps. Toyota investigated these vehicles and determined that an increased contact gap existed in a rear hatch wire harness connector. Toyota hypothesized that the increased contact gap caused a poor connection on the terminal in the connector used for backup lamps and caused the backup lamps to be inoperative. Toyota started investigating the manufacturing process to identify the cause of the increased contact gap. At this time, Toyota believed that inoperative backup lamps caused by this increased contact gap would be detected by the backup lamp activation inspection during production and would not be introduced to the field.

Toyota investigated its production records and identified that, during a daily start-up check from early December 2019, the connector housing of the equipment used to inspect the conductivity of the rear hatch wire harness and the installed electrical components was identified as being damaged. At that time, the damage to the inspection equipment did not appear to affect the conductivity inspection. Subsequent investigation of the equipment identified that some of the male pins inside a connector of the inspection equipment (such as those that connect to the terminals in the connector used for the backup lamps, rear hatch wiper/washer, and the rear hatch courtesy switch) were bent. Through further investigation, Toyota determined that connecting the damaged connector of inspection equipment to the connector on the rear hatch wire harness involved in the conductivity inspection could cause increased contact gaps inside that rear hatch wire harness connector. As a result, Toyota stopped using this damaged inspection equipment. Additionally, Toyota reviewed the production records and determined that the damaged condition on the concerned connector was not observed in the daily start-up checks prior to early December 2019.

Toyota contained vehicles that were within the vehicle assembly plant on a date in mid-December and removed the rear hatch wire harnesses. Toyota investigated the contact pressure inside those connectors on those wire harnesses. The contact pressure at some of the terminals in the connector was lower, however, the backup lamps of each of these vehicles remained operative. Based on the contact pressures observed on these vehicles, Toyota determined that some vehicles that were not contained at the plant may have been equipped with a damaged connector on the rear hatch wire harness. However, whether that damaged connector could cause the backup lamps to become inoperable was unknown since these vehicles passed the backup lamp activation inspection during production.

## January 2020 – End of March 2020

In mid-January, Toyota conducted a part recovery activity and duplication testing to further understand the range of contact gap variation and its effect on the operation of the backup lamps. Toyota recovered parts from vehicles produced before the damaged condition on the concerned connector was observed in the daily start-up checks and found no abnormalities in the contact gap of the rear hatch wire harness connectors on those vehicles. Separately, Toyota also began duplication testing by connecting the damaged connector of the inspection equipment to rear hatch wire harnesses of this type. This testing found that the contact gap of some terminals, which are used for back up lamps, rear hatch wiper/washer and the rear hatch courtesy switch, became larger than specification.

In order to understand the effect of the aforementioned larger contact gap on vehicles in the field, Toyota began (in mid-February) a vibration durability test, which simulates normal use conditions. In late March, the test results showed that an oxide layer had developed on the surface of the terminals with a larger contact gap caused by the damaged inspection equipment. The oxide layer created increased electrical resistance at these terminals (i.e., the terminals for the backup lamps, the rear hatch wiper and washer, and the rear hatch courtesy switch).

Toyota analyzed the level of increased electrical resistance observed as a result of this test and analyzed whether it would be sufficient to create an open circuit that could cause the connected components (the backup lamps, the rear hatch wiper and washer, and the rear hatch courtesy switch) to become inoperative. Based on the analysis of this test result, Toyota believes that the level of electrical resistance created under these conditions would be sufficient to create an open circuit on the terminal connected to the backup lamps. Further, Toyota believes that the level of electrical resistance that can be created under these conditions is unlikely to be sufficient to create an open circuit on the terminals connected to the other systems.

## April 2, 2020

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

As of March 30, 2020 based on a diligent review of records, Toyota's best engineering judgment is that there are no Toyota Field Technical Reports and warranty claims that have been received from U.S. sources that relate or may 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 subject vehicles will be notified by first class mail to return their vehicles to a Toyota dealer. The dealer will replace the rear hatch wire harness 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. Recall Schedule:

Notifications to owners of the affected vehicles will occur by early June 2020. A copy of the draft owner notification will be submitted as soon as it is available.

9. Distributor/Dealer Notification Schedule:

Notifications to distributors/dealers will be sent by April 9, 2020. Copies of dealer communications will be submitted as they are issued.

10. Manufacturer’s Campaign Number:

[Interim / Remedy] 20TB07 / 20TA07