



## DEPARTMENT OF TRANSPORTATION

### National Highway Traffic Safety Administration

[Docket No. NHTSA-2019-0064; Notice 2]

### Toyota Motor North America, Inc., Grant of Petition for Decision of Inconsequential Noncompliance

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

**ACTION:** Grant of petition.

**SUMMARY:** Toyota Motor North America, Inc., (Toyota) has determined that certain model year (MY) 2013–2019 Lexus motor vehicles do not fully comply with Federal Motor Vehicle Safety Standard (FMVSS) No. 108, *Lamps, Reflective Devices, and Associated Equipment*.

Toyota filed a noncompliance report dated May 30, 2019. Toyota subsequently petitioned NHTSA on June 21, 2019, for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety. This document announces the grant of Toyota’s petition.

**FOR FURTHER INFORMATION CONTACT:** Leroy Angeles, Office of Vehicle Safety Compliance, the National Highway Traffic Safety Administration (NHTSA), telephone (202) 366-5304, facsimile (202) 366-3081.

### SUPPLEMENTARY INFORMATION:

#### I. Overview:

Toyota has determined that certain MY 2013–2019 Lexus motor vehicles, do not fully comply with paragraph S8.1.11 and Table XVI-a of FMVSS No. 108, *Lamps, Reflective Devices, and Associated Equipment* (49 CFR 571.108). Toyota filed a noncompliance report for the motor vehicles dated May 30, 2019, pursuant to 49 CFR part 573, *Defect and Noncompliance*

*Responsibility and Reports.* Toyota subsequently petitioned NHTSA on June 21, 2019, for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety, pursuant to 49 U.S.C. 30118(d) and 30120(h) and 49 CFR part 556, *Exemption for Inconsequential Defect or Noncompliance*.

Notice of receipt of Toyota's petition was published with a 30-day public comment period, on November 7, 2019, in the **Federal Register** (84 FR 60143). No comments were received. To view the petition and all supporting documents log onto the Federal Docket Management System (FDMS) website at <https://www.regulations.gov/>. Then follow the online search instructions to locate docket number "NHTSA-2019-0064."

## **II. Vehicles Involved:**

Approximately 502,034 of the following MY 2013–2019 Lexus motor vehicles, manufactured between July 19, 2011, and May 21, 2019, are potentially involved:

- MY 2013–2018 Lexus ES350
- MY 2013–2018 Lexus ES300h
- MY 2013–2019 Lexus GS200t/300/350
- MY 2013–2018 Lexus GS450h
- MY 2016–2019 Lexus GS-F

## **III. Noncompliance:**

Toyota explains that the noncompliance is that the subject vehicles are equipped with rear reflectors that do not meet the minimum photometry requirements specified in paragraph S8.1.11 and Table XVI-a of FMVSS No. 108. Specifically, the reflex reflector in the subject vehicles may contain a photometry value 18 percent below the required minimum.

#### **IV. Rule Requirements:**

Paragraph S8.1.11 and Table XVI-a of FMVSS No. 108 includes the requirements relevant to this petition. Each reflex reflector must be designed to conform to the photometry requirements of Table XVI-a, when tested according to the procedure in paragraph S14.2.3 of FMVSS No. 108, for the reflex reflector.

#### **V. Summary of Toyota's Petition:**

The following views and arguments presented in this section, V. Summary of Toyota's petition, are the views and arguments provided by Toyota. They do not reflect the views of the Agency.

Toyota described the subject noncompliance and stated that the noncompliance is inconsequential as it relates to motor vehicle safety. Toyota submitted the following views and arguments in support of the petition:

- 1. The extent of the noncompliance for the subject reflex reflectors is such that the human eye is unable to differentiate the reflected light of noncompliant reflectors from the reflected light of those that are compliant.**

The technical cause of the noncompliance is related to the annealing process at the end of a day when reflectors were left in the oven as the oven cooled down. An assessment was made of the maximum deviation from the standard that could result from this circumstance. Based on the 60 piece parts study using the worst-case annealing process, Toyota calculated at 4.2 standard deviations from the mean that no part would deviate below 8.1 percent from the FMVSS standard. Considering the tolerance interval calculation method, the worst possible deviation from the standard would be -18 percent.

The NHTSA sponsored study “Driver Perception of Just Noticeable Differences of Automotive Signal Lamp Intensities” (DOT HS 808 209, September 1994) and The University of Michigan Transportation Research Institute (UMTRI) “Just Noticeable Differences for Low-Beam Headlamp Intensities.” (UMTRI-97-4, February 1997) found that a change in luminous intensity of 25 percent or less is not noticeable by most drivers. The agency noted in 1990 when it granted an inconsequentiality petition filed by Hella, Inc., “a reduction of approximately 25 percent in luminous intensity is required before the human eye can detect the difference between two lamps.” *See* 55 FR 37601, 37602. In the Subaru petition, the Agency stated that the same considerations can be applied to reflectors as to lamps.

To verify that a deviation of -18 percent is not detectable to the human eye, Toyota and the supplier conducted evaluations of the reflected light from the noncompliant part that was produced in the 60-piece study and another reflector that was approximately 20 percent higher in reflectivity. The reflectors were mounted in a dark tunnel and set up to simulate the FMVSS No. 108 test setup at 0.2 degrees. Ten panelists were instructed to stand at a specific location 100 feet from the reflectors at a height approximating at a 0.2-degree angle to the reflectors. They were asked if the reflector brightness was the same or different. After the ten panelists completed the survey, the same panelists were asked to repeat the activity; they were unaware that the parts and setup had not been changed. This survey activity was then repeated using two parts of equal reflectivity. In these surveys, none of the panelists were able to identify the noncompliant part or correctly identify differences in reflectivity.

In addition, Toyota installed the same two parts that were checked in the dark tunnel on a MY 2018 Lexus ES350. Using the headlamps from another vehicle that was aligned 100 feet behind the ES, Toyota members visually observed the reflectivity between the two parts at night and were unable to distinguish a difference between the two reflectors. They looked the same.

**2. There are no known complaints related to the noncompliance.**

Toyota conducted a search of consumer complaints, field reports, dealer reports, Vehicle Owner Questionnaires (VOQs), and legal claims for the subject vehicles and found no report alleging that the rear reflectors could not be seen or were not bright enough. This search is current as of May 29, 2019.

**3. In similar situations, NHTSA has granted petitions for inconsequential noncompliance relating to the subject requirement of FMVSS No. 108.**

NHTSA has previously granted at least two similar petitions for inconsequential noncompliance, one for a tail lamp and one for a side reflex reflector assembly. A brief summary of the decisions is provided below:

- Hella, 55 FR 37601, (September 12, 1990)

In the petition, Hella argued that industry experience and supporting studies have established that the human eye in the vast majority of cases cannot detect a change in luminescence unless it is more than a 25 percent increase or decrease. NHTSA stated that a reduction of approximately 25 percent in luminous intensity is required before the human eye can detect the difference between two lamps. Of the noncompliant lamps tested, the greatest disparity reported between a compliant lamp and a noncompliant lamp was 3.6 cd, which is a 20 percent higher

luminous intensity than compliant lamps. According to the SAE Recommended Practice J576, this differential cannot be detected by the human eye. For this reason, the Hella petition was granted.

- Subaru, 56 FR 59971, (November 26, 1991)

Subaru submitted a petition for inconsequential noncompliance in 1991 concerning the failures of luminous intensity on the side reflex reflector. NHTSA considered the petitioner's statement that observers could not differentiate between the reflected light of complying and noncomplying reflectors at distances of 30m, 60m, and 100m. As the agency noted in 1990 when it granted an inconsequentiality petition filed by Hella, Inc., "a reduction of approximately 25 percent in luminous intensity is required before the human eye can detect the difference between two lamps." *See* 55 FR 37601, 37602. The agency applied the same considerations to reflectors as to lamps. The luminous transmittance failures of the Subaru reflectors were all less than 20 percent of the minimum values specified by the standard, and, therefore, they were undetectable by the naked eye. For this reason, the petition was granted.

Toyota concluded by expressing the belief that the subject noncompliance is inconsequential as it relates to motor vehicle safety, and that its petition to be exempted from providing notification of the noncompliance, as required by 49 U.S.C. 30118, and a remedy for the noncompliance, as required by 49 U.S.C. 30120, should be granted.

#### **VI. NHTSA's Analysis:**

Reflex reflectors make a vehicle conspicuous to drivers of other vehicles at night and at other times when there is reduced ambient light including dawn and dusk. The advance warning

provided by the rear reflex reflectors has the potential to enable drivers to avoid a collision when approaching from the rear.

Due to a production error, the reflex reflectors in the subject vehicles may be at most 18% below the required minimum. This error has been fixed in production, and Toyota has not had any complaints or reports of incidents due to this noncompliance. Toyota has cited multiple prior petitions where the Agency granted a petition for decision of inconsequential noncompliance regarding noncompliant photometric intensity. NHTSA concurs, particularly in the cases of the Hella (55 FR 37601) and Subaru (56 FR 59971) petitions, where the imperceptible difference in illumination makes this noncompliance inconsequential to motor vehicle safety.

#### **VII. NHTSA's Decision:**

In consideration of the foregoing, NHTSA finds that Toyota has met its burden of persuasion that the subject FMVSS No. 108 noncompliance of the affected reflex reflectors is inconsequential to motor vehicle safety. Accordingly, Toyota's petition is hereby granted and Toyota is consequently exempted from the obligation of providing notification of, and a free remedy for, that noncompliance under 49 U.S.C. 30118 and 30120.

NHTSA notes that the statutory provisions (49 U.S.C. 30118(d) and 30120(h)) that permit manufacturers to file petitions for a determination of inconsequentiality allow NHTSA to exempt manufacturers only from the duties found in sections 30118 and 30120, respectively, to notify owners, purchasers, and dealers of a defect or noncompliance and to remedy the defect or noncompliance. Therefore, this decision only applies to the subject vehicles that Toyota no longer controlled at the time it determined that the noncompliance existed. However, the granting of this petition does not relieve vehicle distributors and dealers of the prohibitions on

the sale, offer for sale, or introduction or delivery for introduction into interstate commerce of the noncompliant vehicles under their control after Toyota notified them that the subject noncompliance existed.

(Authority: 49 U.S.C. 30118, 30120; delegations of authority at 49 CFR 1.95 and 501.8)

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