



**DEPARTMENT OF TRANSPORTATION**

**National Highway Traffic Safety Administration**

**[Docket No. NHTSA-2016-0117; Notice 1]**

**General Motors, LLC, Receipt of Petition for Decision of  
Inconsequential Noncompliance**

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

**ACTION:** Receipt of petition.

**SUMMARY:** General Motors, LLC (GM), has determined that certain model year (MY) 2016-2017 Cadillac CT6 motor vehicles do not fully comply with Federal Motor Vehicle Safety Standard (FMVSS) No. 108, *Lamps, Reflective Devices, and Associated Equipment*. GM filed a noncompliance report dated October 26, 2016. GM also petitioned NHTSA on November 18, 2016, for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety.

**DATES:** The closing date for comments on the petition is **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Interested persons are invited to submit written data, views, and arguments on this petition. Comments must refer to the docket and notice number cited in the title of this notice and submitted by any of the following methods:

- Mail: Send comments by mail addressed to U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590.
- Hand Delivery: Deliver comments by hand to U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590. The Docket Section is open on weekdays from 10 am to 5 pm except Federal Holidays.
- Electronically: Submit comments electronically by logging onto the Federal Docket Management System (FDMS) website at <https://www.regulations.gov/>. Follow the online instructions for submitting comments.
- Comments may also be faxed to (202) 493-2251.

Comments must be written in the English language, and be no greater than 15 pages in length, although there is no limit to the length of necessary attachments to the comments. If comments are submitted in hard copy form, please ensure that two copies are provided. If you wish to receive confirmation that comments you have submitted by mail were received, please enclose a stamped, self-addressed postcard with the comments. Note that all comments received will be posted without change to

<https://www.regulations.gov>, including any personal information provided.

All comments and supporting materials received before the close of business on the closing date indicated above will be filed in the docket and will be considered. All comments and supporting materials received after the closing date will also be filed and will be considered to the fullest extent possible.

When the petition is granted or denied, notice of the decision will also be published in the Federal Register pursuant to the authority indicated at the end of this notice.

All comments, background documentation, and supporting materials submitted to the docket may be viewed by anyone at the address and times given above. The documents may also be viewed on the Internet at <https://www.regulations.gov> by following the online instructions for accessing the dockets. The docket ID number for this petition is shown in the heading of this notice.

DOT's complete Privacy Act Statement is available for review in a Federal Register notice published on April 11, 2000, (65 FR 19477-78).

**SUPPLEMENTARY INFORMATION:**

**I. Overview:** General Motors, LLC (GM), has determined that certain model year (MY) 2016-2017 Cadillac CT6 vehicles do not fully comply with paragraph S7.8.13 of Federal Motor Vehicle Safety Standard (FMVSS) No. 108, *Lamps, Reflective Devices, and*

*Associated Equipment*. GM filed a defect report dated October 26, 2016, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports*. GM also petitioned NHTSA on November 18, 2016, pursuant to 49 U.S.C. 30118(d) and 30120(h) and 49 CFR part 556, 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.

This notice of receipt of GM's petition is published under 49 U.S.C. 30118 and 30120 and does not represent any agency decision or other exercise of judgment concerning the merits of the petition.

**II. Vehicles Involved:** Approximately 12,475 MY 2016-2017 Cadillac CT6 vehicles manufactured between September 4, 2015, and October 18, 2016, are potentially involved.

**III. Noncompliance:** GM explains that the noncompliance is that the software in the subject vehicles' Park/Position lamp's electronic control unit (ECU) was programmed incorrectly, causing the ECU to misinterpret the signals from the vehicle's body control module (BCM). This results in higher than expected light output that may exceed the maximum values permitted in paragraph S7.8.13 of FMVSS No. 108. Specifically, the nine failed test points exceeded the maximum allowed value by 2.3% to

74.8%. Eight of the nine failed test points exceeded the maximum allowed value by 25%.

**IV. Rule Text:** Paragraph S7.8.13 of FMVSS No. 108 states:

S7.8.13 *Photometry*. Each parking lamp must be designed to conform to the photometry requirements of Table XIV, when tested according to the procedure of S14.2.1, as specified by this section...

Table XIV specifies various minimum and maximum photometric intensity requirements for parking lamps at specified test points.

**V. Summary of GM's Petition:** GM described the subject noncompliance and stated its belief that the noncompliance is inconsequential as it relates to motor vehicle safety.

In support of its petition, GM submitted the following reasoning:

- a) **The subject vehicles' parking lamp-headlamp combination does not exceed the maximum permitted glare values for headlamps specified in FMVSS No. 108:**

In its August 2014 denial of Mercedes-Benz USA's petition for too bright parking lamps, NHTSA indicated a concern that the parking lamps could cause glare to oncoming drivers. (79 FR 50733, at 50734)

Oncoming drivers to the subject vehicles will be exposed to the combined photometric output of the parking lamps and headlamps. This means, when considering glare

in real world application, the critical issue is not the photometric output value of the parking lamp alone but the performance of the parking lamp in conjunction with the headlamps. The most appropriate way to assess this combined effect is to measure the parking lamp-headlamp combination at the traditional headlamp glare points (points above the horizon in the photometric beam pattern that limit light output in the path of oncoming drivers) recognized by NHTSA in FMVSS No. 108 and SAE J1383.

When two samples of the subject vehicles' parking lamp-headlamp combinations were evaluated in the laboratory against recognized glare points, the output fell below, or within, the acceptable value of headlamp glare points specified in FMVSS No. 108.

It should be noted, that it is possible for a vehicle to incorporate parking lamps and headlamps whose outputs are near, or at the maximum allowed values while remaining compliant. For head lamps, that output would be at or near the maximum specified photometric values, and for parking lamps that output would be at or near 125 candela at all test points above the horizon. A parking lamp with this output value in close proximity to the headlamp at or near maximum output could create combined output with a glare value exceeding the maximum allowable

headlamp photometric glare values by 125 cd. And yet the combination would still be compliant, because the headlamp's glare measurement falls within the permitted values for the headlamp alone, and the parking lamp values correspond to the permitted values for parking lamps.

However, the parking lamp-headlamp combination in the subject vehicles are below the prescribed glare values for a compliant headlamp and well below the value of the theoretical combined parking lamp-headlamp output.

Consequently, GM believes the photometric output of the subject vehicles' parking lamps will not cause a glare that presents an unreasonable risk to the safety of oncoming drivers.

**b) The noncompliance has no impact on turn signal**

**performance:** NHTSA has also expressed concern that a parking lamp that exceeds maximum permitted photometric values could mask the turn signal and thereby impair the turn signal performance. (See 79 FR 50733, at 50735) However, the parking lamps in the subject vehicles are optically combined with the turn signals-- when the turn signal is activated, the parking lamp is extinguished on the side of the active turn signal. Consequently, the

parking lamp does not bear on and cannot impair the performance of an activated turn signal.

- c) **The noncompliance will be addressed in the subject vehicles with a service update bulletin:** GM will issue Service Update Bulletin 16078 to address the noncompliance condition in each of the subject vehicles at their next dealership visit or service appointment. Cadillac CT6 owners are provided, free of charge, Cadillac Premium Care Service for three years or 36,000 miles covering routine maintenance including: oil changes, tire rotation, air filter replacement and multi-point vehicle inspection. The subject vehicles will also invariably enter dealerships for other reasons. Therefore, GM expects that most of the subject vehicles will be corrected during their regular warranty period. The Service Update Bulletin will be issued to dealers once sufficient service parts become available.

GM 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.

In a letter dated February 13, 2017, subsequent to receipt of GM's petition, GM provided the following additional information pertaining to photometric testing of the subject parking lamps:

The photometric testing of the subject park function was conducted by HELLA KGaA Hueck & Co., the supplier of the lamp, at the Hella lab. The parking lamp and headlamp were mounted in design position relative to each other on a goniometer. The park function and the lower beam were energized simultaneously.<sup>1</sup> (In GM's letter, they provided a table evaluating the headlamp glare values in CT6 headlamp-parking lamp combinations.)

To verify that the results of the Hella testing correlate to on-vehicle performance, GM tested the CT6 parking lamps in GM's full vehicle dark room. In this test, GM mounted a photometer 10 meters from each headlamp on approximately the optical axis (the optical center of beam pattern, where the horizontal and vertical axes of the beam pattern cross). All other lamps were covered except the parking lamp on one side of the vehicle. The vehicle was started, and the parking lamps were energized. The lux output of the lamp was measured and then converted into candela. This process was repeated for the

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<sup>1</sup> To energize the park function on the Cadillac CT6, power and ground are required along with an input signal that duplicates the signal from the vehicle instructing the lamp to illuminate at the Park lamp intensity. This is a Pulse Width Modulation (PWM) signal with a certain frequency and duty cycle. In the Hella lab, that PWM signal was duplicated using a specially built signal generator consisting of a standard PWM Signal Generator and a 47 nF capacitor. The park lamp was energized, using the PWM simulator, to duplicate the subject condition photometry. To energize the lower beam function on the Cadillac CT6, only power and ground is required at its design voltage.

parking lamp on the other side of the vehicle. The values were similar and verified a correlation with the Hella lab data on the goniometer.

To view GM's petition and test data and analyses in its entirety you can visit <https://www.regulations.gov> by following the online instructions for accessing the dockets and by using the docket ID number for this petition shown in the heading of this notice.

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, any decision on this petition only applies to the subject vehicles that GM no longer controlled at the time it determined that the noncompliance existed. However, any decision on 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 GM 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)

**Jeffrey M. Giuseppe,**

Director,

Office of Vehicle Safety Compliance.

**Billing Code 4910-59-P**

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