



DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA-2022-0100; Notice 1]

Ford Motor Company, Receipt of Petition for Decision of Inconsequential Noncompliance

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

ACTION: Receipt of petition.

SUMMARY: Ford Motor Company (Ford) has determined that certain model year (MY) 2018-2020 Ford F-150 motor vehicles do not fully comply with Federal Motor Vehicle Safety Standard (FMVSS) No. 108, *Lamps, Reflective Devices, and Associated Equipment*. Ford filed a noncompliance report dated September 8, 2022, and subsequently petitioned NHTSA (the “Agency”) on September 30, 2022, for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety. This document announces receipt of Ford’s petition.

DATES: Send comments on or before [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 may be submitted by any of the following methods:

- Mail: Send comments by mail addressed to the 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 the 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 for 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).

FOR FURTHER INFORMATION CONTACT: Leroy Angeles, General Engineer, NHTSA, Office of Vehicle Safety Compliance, (202) 366-5304.

SUPPLEMENTARY INFORMATION:

I. Overview: Ford determined that certain MY 2018-2020 Ford F-150 motor vehicles do not fully comply with paragraph S14.2.1.6 of FMVSS No. 108, *Lamps, Reflective Devices, And Associated Equipment* (49 CFR 571.108).

Ford filed a noncompliance report dated September 8, 2022, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports*. Ford petitioned NHTSA on September 30, 2022, 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*.

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

II. Vehicles Involved: Approximately 1,439,524 MY 2018-2020 Ford F-150 motor vehicles, manufactured between January 10, 2017, and October 22, 2020, were reported by the manufacturer.

III. Noncompliance: Ford explains that the subject vehicles are equipped with amber side marker lamps that do not comply with the photometry requirements of S14.2.1.6 of FMVSS No. 108. Specifically, they failed to meet the minimum photometric requirement of 0.62 candela at test point 10.0D and 32.0L. Specifically, the amber side marker lamps had a luminous intensity that was lower than the 0.62 candela minimum requirement.

IV. Rule Requirements: Paragraph S7.4.13.1, S7.4.13.2, and Table X of FMVSS No. 108 includes the requirements relevant to this petition. Each side marker lamp must be designed to conform to the photometry requirements of Table X, when tested according to the procedure of

S14.2.1 for the lamp color as specified by this section; and for each motor vehicle less than 30 feet in overall length, the minimum photometric intensity requirements for a side marker lamp may be met for all inboard test points at a distance of 15 feet from the vehicle and on a vertical plane that is perpendicular to the longitudinal axis of the vehicle and located midway between the front and rear side marker lamps.

V. Background Information: On June 17, 2022, Ford received a letter from NHTSA's Office of Vehicle Safety Compliance stating that Calcoast-ITL, a test lab contracted by NHTSA to conduct FMVSS No. 108 testing on service lamps, found that 3 of 4 front left hand (LH) MY 2018 Ford F-150 head lamps did not meet the FMVSS No. 108 minimum photometry requirement for amber side markers at one test point out of nine. Calcoast-ITL found that all four of the front right hand (RH) MY 2018 Ford F-150 head lamps met the regulatory requirements in FMVSS No. 108. Ford reports that after reviewing the supplier's lamp assembly certification data and production audit testing records, it was determined that the candela values consistently exceeded the minimum requirement. After further review, Ford discovered that the supplier produced lamps on a semi-automated "main line" and a non-automated "secondary" line. According to Ford's review, the semi-automated main line appeared to be compliant. However, Ford found that the non-automated secondary line was "susceptible to process variation." Furthermore, lamps from the main line were subjected to an end-of-line screening process that included regulatory compliance verification. This screening check was not included in the secondary line. Approximately 96 percent of the lamps were produced on the main line. Ford says that after October 7, 2020, all service parts were produced on the secondary line, as production of the main line ceased when vehicle production ended.

Ford says that further testing of the service parts produced on the secondary line indicated that 72 of 252 LH parts and 47 of 219 RH parts had test point values below the minimum requirement of 0.62 candela when using a rated bulb. Ford claims that all nonconforming data pertains to the parts that were produced on the supplier's secondary line. Ford estimates that

approximately 25 percent of the lamps from the secondary line fell below the 0.62 candela minimum requirement, which corresponds to less than one percent of the total vehicle population, approximately 14,935 vehicles.

Ford says that the subject noncompliance may be due to process variation causing tolerance stack-up issues on the lamp supplier's secondary line, resulting in the side marker bulbs being produced with an inner bezel distortion and/or an out-of-position bezel. Ford explains that, given the lack of screening procedures on the secondary line, these defects were not found during manufacturing.

VI. Summary of Ford's Petition: The following views and arguments presented in this section, "VI. Summary of Ford's Petition," are the views and arguments provided by Ford. They have not been evaluated by the Agency and do not reflect the views of the Agency. Ford describes the subject noncompliance and contends that the noncompliance is inconsequential as it relates to motor vehicle safety.

Ford says that when a side marker lamp is tested for compliance with FMVSS No. 108 requirements, only the side marker lamp in the combination headlamp is illuminated and measured. However, Ford explains that the side marker lamp does not automatically illuminate alone during normal vehicle operation. The parking lamp and the side marker lamp are both illuminated with the same amber color when the headlamps are activated. Further, the parking lamp is positioned such that it illuminates the same visual field as the side marker lamp.

To evaluate the effect of the addition of the parking lamp on the illumination of the side marker lamps, Ford measured the illumination of the subject lamps with only the side marker lamp illuminated and then with both lamps illuminated as they would be during regular vehicle operation. Ford determined that the side marker lamp illumination measured at greater values at several FMVSS No. 108 test points that complied with regulatory specifications. Ford says that, according to this data, the parking lamp increased the candela value at each test point by an average of 0.110 to 0.932.

In this evaluation, Ford considered only the lowest measured values for the increased parking lamp illumination at the various test points. The parking lamp's illumination produced an additional 0.125 candela at the test point 10D-32L. When the parking lamp was added to the side marker lamp, all measured values exceeded the 0.62 candela minimum requirement.

Ford conducted a statistical analysis to assess the potential values in a larger vehicle population in order to further evaluate the effects of increased illumination from the parking lamp. For this analysis, Ford used the candela values for 282 LH service lamps with only the side marker illuminated then applied the additional parking lamp illumination values previously described. Ford found that "the vast majority of vehicles would measure above the 0.62 candela regulatory standard." The lowest value Ford anticipates in a vehicle would be 0.55 candela (0.44 + 0.110) which represents the lowest candela value at test point LH 10D-32L, plus the minimum amount of additional illumination that could be measured with the parking lamp illuminated. Ford notes that this value, 0.55 candela, is lower than the required minimum of 0.62 candela by less than 25 percent.

Ford argues that there are two reports that are relevant to this petition. Ford says that these reports indicate that up to a 25 percent difference in a lamp's photometric output is imperceptible to the human eye. The first report, Driver Perception of Just Noticeable Differences of Automotive Signal Lamps¹, was published in September 1994. The University of Michigan Transportation Research Institute (UMTRI) conducted an additional study in February 1997 extending the 1994 study to low beam automotive headlamps.² Ford says that the studies found that the majority of drivers were unable to differentiate the light output between different sources when the difference in illumination was less than 25 percent. Ford contends that the 1994 study indicated that the findings were appropriate for consideration of inconsequentiality petitions involving a noncompliance with the photometry requirements of FMVSS No. 108.

¹ Driver Perception of Just Noticeable Differences of Automotive Signal Lamps, was published by Huey, Decker, and Lyons in September 1994 (DOT HS 808 209, September 1994)

² (UMTRI-97-4, February 1997)

Ford notes that it is not aware of any reports related to the subject noncompliance. Ford recognizes that a lack of reports is not dispositive but believes that it is illustrative of the field performance.³

Ford says that NHTSA has granted prior petitions concerning similar noncompliances. Ford believes that NHTSA's rationale for those decisions support the granting of its current petition.

Ford says that NHTSA granted a petition submitted by Nissan North America, Inc. (Nissan),⁴ that involved vehicles with side marker lamps in combination head lamps that did not meet the photometric intensity requirements as required by paragraph S7.4.13.1 of FMVSS No. 108. Ford explains that Nissan's petition presented two main arguments: (1) NHTSA should consider the parking lamp photometry along with the side marker lamp because both lamps are always illuminated, and (2) the condition that caused the noncompliance could not be seen by the human eye. In this case, Ford says that NHTSA agreed with Nissan's second argument but rejected the first. Ford says that NHTSA disagreed with Nissan's first argument because Nissan's parking lamp illumination was white and the side marker lamp was amber which would cause a passing motorist to have difficulty determining what part of the vehicle is approaching. Ford contends that this reasoning does not apply to the subject noncompliance because both Ford's parking lamp and side marker lamp are amber. Thus, according to Ford, a passing motorist would not encounter the same difficulty in determining which part of the vehicle is approaching.

Ford says it also reviewed petitions involving a noncompliance with the side reflex reflector and not the side marker lamp. While the petitions do not concern the side marker lamp, Ford believes that NHTSA's rationale in those decisions can be informative. Ford explains that

³ See *North America Subaru, Inc., Denial of Petition for Decision of Inconsequential Noncompliance*; 87 Fed. Reg. 48764, August 10, 2022.

⁴ *Nissan North America, Inc., Grant of Petition for Determination of Inconsequential Noncompliance*; 85 FR 39678 (July 1, 2020).

the side reflex reflectors reflect other light and do not illuminate. Ford says that NHTSA has consistently found that a 25 percent change in luminosity is imperceptible to the human eye. Specifically, Ford refers to NHTSA’s decision on a petition submitted by Subaru of America (Subaru)⁵ that involved failures of luminous intensity on the side reflex reflector and a Hella petition. In that case, Ford explains that the noncompliant lamps were all less than 20 percent of the minimum values. NHTSA granted Subaru’s petition and applied the reasoning that the human eye cannot detect a 25 percent change in luminosity.

Ford also cites NHTSA’s decision on a petition from Toyota Motor North America (Toyota)⁶ in which vehicles were equipped with rear reflex reflectors that did not meet the minimum requirements specified in FMVSS No. 108. Ford says Toyota believed that noncompliance was inconsequential because a change of luminous intensity of 18 percent is imperceptible to the human eye. NHTSA concurred, relying on its own assessment and past precedent stated in the 1991 Hella and Subaru grants of inconsequentiality.

Next, Ford says that NHTSA’s rationale in denying a petition submitted by FCA US LLC (FCA)⁷ supports its belief that the subject noncompliance should be deemed inconsequential. Ford explains that FCA’s petition concerned side reflex reflectors that did not meet the minimum photometry requirements at the observation angle of 0.2 degrees. In that petition, FCA’s reflex reflectors were 68.6 percent below the required value. Ford says that the subject side marker lamps “maintained much closer margins to the standard.”

Finally, Ford refers to a Subaru petition that NHTSA denied in 2022 that involved side reflex reflectors that did not comply with FMVSS No. 108 photometry requirements.⁸ In that

⁵ *Subaru of America, Grant of Petition for Determination of Inconsequential Noncompliance*; 56 FR 59971, (November 26, 1991).

⁶ *Toyota Motor North America, Inc., Grant of Petition for Decision of Inconsequential Noncompliance*; 85 FR 39679 (July 1, 2020).

⁷ *FCA US, LLC, Denial of Petition for Decision of Inconsequential Noncompliance*; 87 FR 57649 (September 15, 2022).

⁸ Ford did not provide the Federal Register citation but it appears that this refers to *North America Subaru, Inc., Denial of Petition for Decision of Inconsequential Noncompliance*; 87 FR 48764 (August 10, 2022)

case, Ford says NHTSA stated that its thinking on the deviation threshold of 25 percent evolved, and that it no longer believes that threshold applies to side reflex reflectors because the photometry criteria for side reflex reflectors are measured in mcd/lux, whereas other lamps are measured in candela. Ford contends that this new thinking should not apply to the subject noncompliance because side marker lamps produce their own illumination and are therefore measured in candela.

Ford concludes by stating its belief that the subject noncompliance is inconsequential as it relates to motor vehicle safety and 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.

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 Ford no longer controlled at the time it determined that the noncompliance existed. However, any decision on this petition does not relieve vehicles 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 Ford 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)

Otto G. Matheke, III,

Director, Office of Vehicle Safety Compliance.