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Ref. No.: GR20-001

Docket Management Facility
U.S. Department of Transportation
1200 New Jersey Avenue, SE
West Building, Ground Floor, Room W12-140
Washington, DC 20590-0001

Re: Docket NHTSA-2018-0090

FMVSS No. 108, "Lamps, Reflective Devices, and Associated Equipment" re: October 12, 2018 NPRM to permit Adaptive Driving Beam (ADB) headlighting systems

Introduction

North American Subaru, Inc. ("Subaru"), on behalf of SUBARU CORPORATION and Subaru of America, Inc., would like to thank the National Highway Traffic Safety Administration for its October 12, 2018 proposal to amend FMVSS 108 so as to permit manufacturers the option of equipping vehicles with adaptive driving beam systems. During the official comment period, our input was incorporated into the letter submitted on December 11, 2018 by the Association of Global Automakers¹. More recently, Subaru has had the opportunity to carry out a more comprehensive review of the agency's regulatory proposal. Based on that review, we have assembled a number of additional recommendations and clarification requests which we believe the agency should consider prior to proceeding to a final rule. Please see below.

Recommendations/Requests for Clarification

Section 9.4.1.6.2

NHTSA's Proposed Regulatory Text: *The system must notify the driver of a malfunction. If the ADB system detects a fault, it must disable the ADB system and the lighting system shall work in manual mode until the fault is corrected.*

If a mechanical portion of the ADB system (e.g., rotary light shield mechanism) fails, the fault will not be able to be corrected because the mechanism will be unable to function mechanically. Thus, we recommend this section be amended to clarify that the ADB disablement requirement is only applicable for non-mechanical failures.

We recommend S.9.4.1.6.2 be revised to read as follows:

The system must notify the driver of a malfunction. If the ADB system detects a non-mechanical fault in the ADB system, it must disable the ADB system and the lighting system shall work in manual mode until the fault is corrected.

¹ See NHTSA-2018-0090-0182.

NHTSA should also clarify this point in S.9.4.1.3 which addresses fail safe operation. Global Automakers had recommended that S.9.4.1.3 be amended to read as follows:

Fail safe operation. A failure of the automatic control portion of the device should fail safe to the high beam and must not result in the loss of manual operation of both upper and lower beams.

This section could be revised to read as follows:

Fail safe operation. A failure of the non-mechanic automatic control portion of the device should fail safe to the high beam and must not result in the loss of manual operation of both upper and lower beams.

Section 9.4.1.6.8

NHTSA's Proposed Regulatory Text: *When the ADB system is activated, the lower beam may be provided by any combination of headlamps or light sources, provided there is a parking lamp. If parking lamps meeting the requirements of this standard are not installed, the ADB system may be provided using any combination of headlamps but must include the outermost installed headlamps to show the overall width of the vehicle.*

This provision seems to imply that a vehicle without parking lamps might somehow be permitted by the rule. Please clarify. In such a case, does this section simply mean a vehicle must illuminate the outermost lamps when the ADB system is active?

Section 14.9.3.12.3.2.3

NHTSA's Proposed Regulatory Text: *Vertical position. The photometer shall be positioned between the bottom of the windshield and the top of the windshield subject to the lower and upper bounds specified in Table XXI.*

This provision should be revised to be more specific about the position in which the photometer should be located. We recommend the inclusion of information (e.g., location of the photometer from the ground surface, location of the photometer in relationship to the vehicle, etc.) that will help regulated entities assess compliance with the requirement.

Section 14.9.3.12.3.3

NHTSA's Proposed Regulatory Text: *Placement of photometers to measure glare to preceding vehicles. Photometers may be positioned at any location on the driver's side outside rearview mirror and/or the passenger's side outside rearview mirror, and/or outside the vehicle, directly outside the rear window, horizontally and vertically centered with respect to the inside rearview mirror.*

For rearview mirror and rear window, the distances between the test vehicle and the photometer, and between the photometer and the driver's side vary. Would it not be better to specify the illuminance criteria separately?

Section 14.9.3.12.8

NHTSA's Proposed Regulatory Text: *Compliance Criteria. The maximum illuminance, as calculated according to S14.9.3.12.8.1, shall not exceed the applicable maximum illuminance values in Table XIX-d.*

We request NHTSA explain the how the illuminance criteria were determined. What research formed the basis for the criteria in Table XIX-d?

Section 14.9.3.12.7.5

NHTSA's Proposed Regulatory Text: *All vehicles shall be driven within the lane and will not change lanes during the data collection portion of the test.*

NHTSA should correct the spelling error ("portion" should be "portion").

Closing

Subaru appreciates the opportunity to provide the agency with our additional input concerning the amendments proposed in the Notice of Proposed Rulemaking published Oct. 12, 2018.

If you have any questions, please do not hesitate to contact me at (443) 430-3619.

Sincerely,

John Frooshani

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Vehicle Regulatory Manager
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