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National Highway Traffic Safety Administration,
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RE : Docket No. NHTSA-2022-0013; Fed. Reg. Vol. 87, No.35, February 22, 2022

Federal Motor Vehicle Safety Standards

FINAL RULE - ADAPTIVE DRIVING BEAM HEADLIGHTING SYSTEMS

Deputy Administrator Dr. Steven Cliff; National Highway Traffic Safety Administration,

We, Stanley Electric Co., Ltd., is one of the major manufacturer specializing in the design and manufacture of automotive lamps.

We would like to thank NHTSA for introducing new headlamp safety standards. We also appreciate the opportunity to comment on Docket No. NHTSA-2022-0013. Regarding Docket No. NHTSA-2022-0013, we have verified it as a lamp manufacturer and would like to make the following comments.

1. Test conditions

We believe that it is almost impossible to reproduce the same conditions as the actual vehicle test in the laboratory to conduct the photometric test for the lamp. In the future, when an ADB using micro LEDs or such like that, the test method specified in the final rule is expected to require testing of nearly infinite combinations of the areas of reduced intensity.

Therefore, we propose that the verification of ADB is confirmed through the actual vehicle test and, in the laboratory test, only the compliance with the lower beam with the area of reduced intensity fully turned off and the compliance with the upper beam with the area of unreduced intensity fully turned on should be confirmed as same as non-ADB headlamp.

2. Transition zone

In the final rule, the transition zone is 1 degree. We have confirmed whether ADB developed by us, which has a relatively small number of segments could meet the requirements of the final rule. As a result, we found that it was difficult to meet the requirements set out in the final rule when the transition zone is 1 degree.

As a result of our internal verification of the specific number of degrees, we agree that 4 degrees proposed by SAE is an appropriate for transition zone.

3. Actual vehicle test at right curve

The maximum required illuminance value is 3.1 lx at a distance of 15 ~ 30 m from the oncoming car in an actual vehicle test at the right curve. However, this requirement is likely not met at the 0.5U -1R to 3R (2700 cd MAX) in laboratory testing even with lower beam alone (without ADB or upper beam).

Accordingly, we propose to accept the lower beam relative luminous intensity requirement (ADB glare value shall not exceed 125% of the measured lower beam value) specified in SAE J3069 as an alternative requirement.

4. Application to Motorcycles

We believe that NHTSA's response to Harley Davidson and Table I-c in the final rule allow ADB to be installed in motorcycles. However, the final rule does not specify specific requirements for the installation of ADB on motorcycles.

In S 9.4.6.1.4 regarding laboratory test, compliance with Table XVIII and Table XIX applicable to headlamp for automobiles is required, but Table XX normally used for headlamp for motorcycles is not specified.

Accordingly, we would like to confirm the following two points.

- 1) Is our understanding correct that the application of ADB to motorcycles is possible?
- 2) If yes for 1), is it possible to apply Table XX to verify the area of reduced intensity and unreduced intensity for ADB for motorcycles in laboratory test?

5. Horizontal aiming

We understand that it is possible for an individual ADB, which is not integrated with the lower beam, to have a horizontal aiming mechanism, but for this, a VHAD is required. We also understand that the detailed requirements for lower beam VHAD set forth in S10.18.8.1.2.1 through S10.18.8.1.2.4 do not apply to such ADB cases.

Therefore, in the case of headlamps in which ADB is integrated with a lower beam, the requirements of the VHAD applicable to the lower beam apply to it. Therefore, we understand that horizontal aiming is basically prohibited and, if provided, a VHAD conforming to S 10.18.8.1.2.1 through S 10.18.8.1.2.4 must be installed. Is our understanding correct?

We greatly appreciate NHTSA's consideration of the above five comments raised by Stanley.

Sincerely yours,

Stanley Electric Co., Ltd.



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