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World Forum for Harmonization of Vehicle Regulations

Working Party on Lighting and Light-Signalling

Sixty-first session

Geneva, 30 March - 3 April 2009

Item 9(b) of the provisional agenda

REGULATION No. 53

(Installation of lighting and light-signalling devices for L₃ category of vehicles)

Proposal for draft amendments to Regulation No. 53

Proposal for Supplement 11 to the 01 series of amendments to Regulation No. 53

Submitted by the expert from Japan */

The text reproduced below was prepared by the expert from Japan in order to change the colour of the front position lamp from white to amber with the aim of improving the conspicuity of motorcycles. It is based on a document without a symbol (informal document No. GRE-60-22/Rev.1/Corr.1), distributed during the sixtieth session of the Working Party on Lighting and Light-Signalling (GRE) (see report ECE/TRANS/WP.29/GRE/60, para. 38). The modifications to the existing text of the Regulation are marked in bold or strikethrough characters.

*/ In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles. The present document is submitted in conformity with that mandate.

A. PROPOSAL

Paragraph 5.13., amend to read:

"5.13. Colours of the lights

The colours of the lights referred to in this Regulation shall be as follows:

.....

front position lamp: ~~white~~ **amber**

....."

Paragraph 6.3.7., amend to read:

"6.3.7. May not be "reciprocally incorporated" with any other lamp, **except amber front position lamp.**"

Paragraph 6.6.1., amend to read:

"6.6.1. Number

~~One or two~~"

Paragraph 6.6.7., amend to read:

"6.6.7. Other requirements

~~None.~~

When the front position lamp is reciprocally incorporated in the front direction indicator lamp, the position lamp, on the same side as the direction indicator lamp or on both sides, shall be switched off only when the direction indicator lamp is flashing."

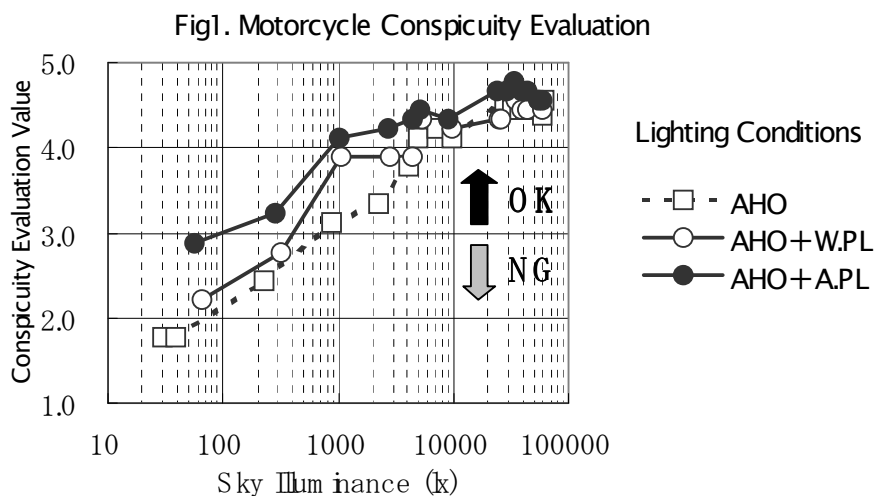
B. JUSTIFICATION

1. Change of colour of the front position lamp to amber

It is proposed to change the colour of the front position lamp from white to amber with the aim of improving the conspicuity of motorcycles.

The use of amber colour in front position lamps is allowed in Japan and the United States and it is considered beneficial in ensuring the conspicuity of motorcycles in relation to four-wheeled vehicles. In addition, no disadvantages have been found in relation to the use of amber front position lamp.

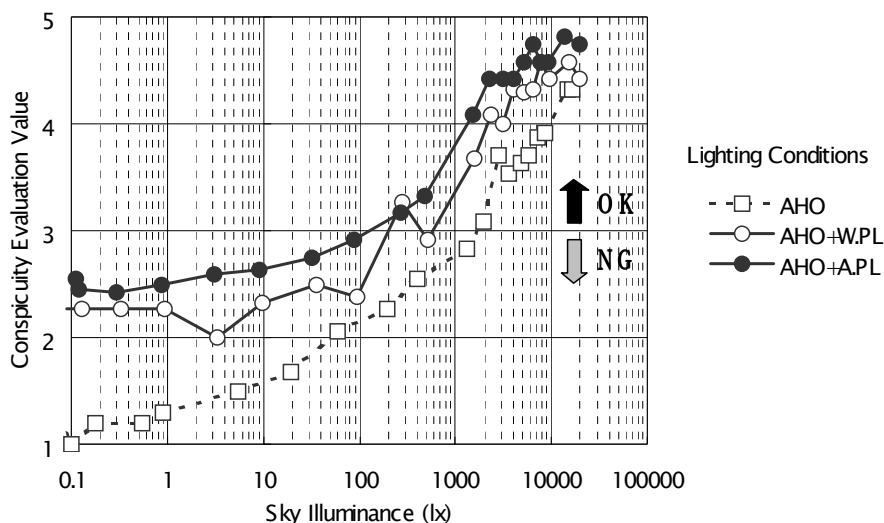
The results of the conspicuity evaluation for motorcycles followed by four-wheeled vehicles with daytime running lamps (DRL) on (Fig. 1) indicate higher motorcycle conspicuity evaluation values for the lighting condition of automatic headlamp on (AHO) with the addition of white position lamp rather than AHO only, and these values are even higher for AHO with the addition of amber position lamp. The effect of the amber position lamp on the improvement of conspicuity is especially prominent under conditions where sky luminance is low (about 5,000 lm or below) (for details, see "GRE-60-23").



Furthermore, in the case of night driving where four-wheeled vehicles use the passing beam instead of DRL when following motorcycles, the results of the conspicuity evaluation for those motorcycles (Fig. 2) also show higher conspicuity evaluation values for the lighting condition of AHO with the addition of white position lamp than AHO only, and these values are even higher for AHO with the addition of amber position lamp (for details, see "GRE-60-24").

It is also proposed to change the number of front position lamps from "one or two" to "two". This because even more improvement of the conspicuity of motorcycles can be achieved if the number of front position lamps is changed to two, in addition to their colour being changed to amber.

Fig. 2 Motorcycle Conspicuity Evaluation



2. Acceptance of the direction indicator lamp reciprocally incorporated with the amber front position lamp.

If the colour of the front position lamp is changed to amber, it will become possible for the direction indicator lamp and for the front position lamp to share a lens, enabling manufacturers to reduce lamp installation space and to benefit users by offering inexpensive lamps. To achieve this, it is proposed that the reciprocal incorporation of the indicator lamp with other lamps, which is currently prohibited, be allowed only for the amber front position lamp. The use of this reciprocally-incorporated lamp is allowed in Japan and the United States, where it has produced no major safety problems or disadvantages.

In addition, considering the conspicuity of direction indicator lamps, it is proposed that, when a direction indicator lamp is activated, the front position lamp be switched off on the side of the flashing indicator or on both sides.
