



Economic and Social Council

Distr.: General
23 July 2010

Original: English
English and French only

Economic Commission for Europe

Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations

Working Party on Lighting and Light-Signalling

Sixty-fourth session

Geneva, 4–7 October 2010

Item 5(f) of the provisional agenda

Collective amendments – Regulations No. 6, 7 and 48

Proposal for Supplement 7 to the 04 series of amendments to Regulation No. 48 (Installation of lighting and light-signalling devices)

Submitted by the experts from the Working Party “Brussels 1952”*

The text reproduced below was prepared by the expert from the Working Party “Brussels 1952” (GTB) in order to introduce, into Regulation No. 48, revised requirements concerning the in-board geometric visibility angles of devices mounted on the rear of the vehicle. The modifications to the existing text of the Regulation, including Supplement 6 to the 04 series, are marked in bold for new or strikethrough for deleted 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 the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Paragraph 6.5.5.1., amend to read:

“6.5.5.1. Horizontal angles, (see figure below)

For M_1 and N_1 category vehicles, the value of 45° inward for the direction indicator lamps of categories 1, 1a or 1b **and 2a or 2b**, whose lower edge of the apparent surface is less than 750 mm above the ground, may be reduced to 20° under the horizontal plane containing the reference axis of this lamp.

.....”

Paragraph 6.5.5.2., amend to read:

“6.5.5.2. or, at the discretion of the manufacturer, for M_1 and N_1 category vehicles (**):

Front and rear direction-indicator lamps, as well as side-marker lamps

Horizontal angles see figure below:

The value of 45° inward for the direction indicator lamps of categories 1, 1a or 1b **and 2a or 2b**, whose lower edge of the apparent surface is less than 750 mm above the ground, may be reduced to 20° under the horizontal plane containing the reference axis of this lamp.

Vertical angles: 15° ...”

Paragraph 6.7.5., amend to read:

“6.7.5. Geometric visibility

Horizontal angle:

For S1 or S2 categories devices: 45° to the left and to the right of the longitudinal axis of the vehicle;

For M_1 and N_1 category vehicles where the lower edge of the apparent surface of the lamps is less than 750 mm above the ground, the value of 45° inward may be reduced to 20° under the horizontal plane containing the reference axis of this lamp.

For S3 or S4 categories devices: ...”

Paragraphs 6.10.5. to 6.10.5.2., amend to read:

“6.10.5. *Geometric visibility*

6.10.5.1. Horizontal angle: 45° inwards and 80° outwards.

For M_1 and N_1 category vehicles where the lower edge of the apparent surface of the lamps is less than 750 mm above the ground, the value of 45° inward may be reduced to 20° under the horizontal plane containing the reference axis of this lamp.

Vertical angle: 15°

6.10.5.2. For M_1 and N_1 category vehicles, as an alternative to paragraph 6.10.5.1., at the discretion of the manufacturer or his duly accredited representative, and only if a rear side-marker lamp is installed on the vehicle.

Horizontal angle: 45° outwards to 45° inwards.

Where the lower edge of the apparent surface of the lamps is less than 750 mm above the ground, the value of 45° inward may be reduced to 20° under the horizontal plane containing the reference axis of this lamp.

Vertical angle: 15°.....”

II. Justification

1. At the fifty-eight session of the Working Party on Lighting and Light-Signalling (GRE), the expert from France introduced proposals to reduce the inboard geometric visibility requirements on direction indicator lamps and position lamps mounted on the front of M₁ and N₁ category vehicles. Taking into account the proposals from the experts from India, the Netherlands and the United Kingdom of Great Britain and Northern Ireland, GRE adopted the final collective amendment for Regulations Nos. 6, 7 and 48 at its sixtieth session.
 2. Although priority was given to the lamps on the front of the vehicle, there is a similar problem to achieve the inboard geometric visibility requirements at the rear of the vehicle where styling trends based on better aerodynamics lead to contoured shapes making the fulfilment of the 15 down and 45 inward (15D-45 inward) visibility requirement impossible. In view of this, the GTB Signal lighting Working Group has carefully considered the safety implications of extending the reduction of the inboard visibility requirements when the stop lamp, direction indicator and position lamps are mounted below 750 mm. The conclusion is that the same safety principles that were debated in GRE for the front mounted devices will also apply to rear mounted lamps with the condition that the angles are only reduced below the horizontal plane.
 3. No modification is proposed for the visibility angles of the end-outline marker lamps.
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