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**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations

Working Party on Lighting and Light-Signalling

Sixtieth session

Geneva, 1 - 3 October 2008

Item 5(f) of the provisional agenda

COLLECTIVE AMENDMENTS

Regulations Nos. 6, 7 and 48

Proposal for Supplement 3 to the 04 series of amendments to Regulation No. 48  
(Installation of lighting and light-signalling devices)

Submitted by the expert from France \*/

The text reproduced below was prepared by the expert from France proposing to align with the state-of-the-art realizations for the visibility angles requirements of the position lamps, end-outline marker lamps and direction indicator lamps. It supersedes ECE/TRANS/WP.29/GRE/2008/15, distributed during the fifty-ninth session of the Working Party on Lighting and Light-Signalling (GRE) (see report ECE/TRANS/WP.29/GRE/59, para. 34). The modifications to the current text of the Regulation are marked in bold characters.

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\*/ 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.

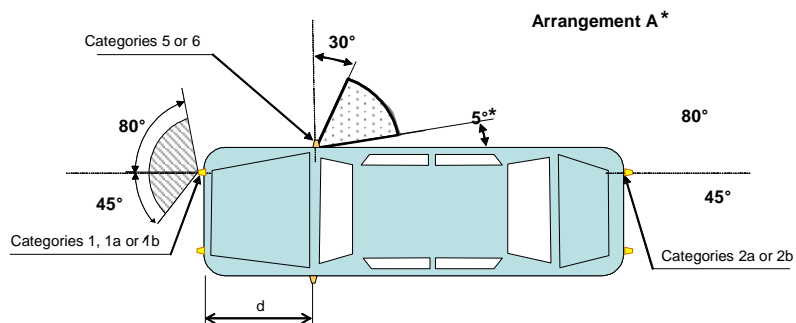
A. PROPOSAL

Paragraph 6.5.5.1., amend to read:

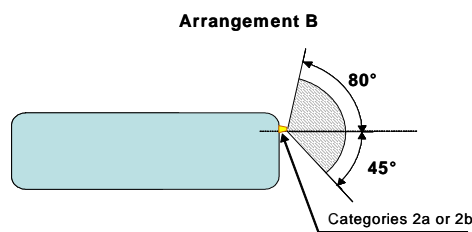
"6.5.5.1. Horizontal angles, (see figure below)

Vertical angles: 15° above and below the horizontal for direction-indicator lamps of categories 1, 1a, 1b, 2a, 2b and 5. The vertical angle below the horizontal may be reduced to 5° if the lamps are less than 750 mm above the ground; 30° above and 5° below the horizontal for direction-indicator lamps of category 6. The vertical angle above the horizontal may be reduced to 5° if the optional lamps are not less than 2,100 mm above the ground.

FIGURE (see paragraph 6. 5.)



**For M1 and N1 category vehicles, the value of 45° inward for the direction indicator lamps of categories 1, 1a or 1b, may be reduced to 20° under the HH line of this lamp.**



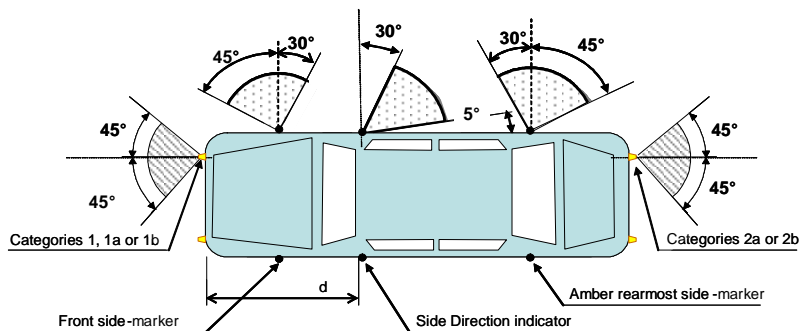
(\*) The value of 5° given for dead angle of visibility to the rear of the side-direction indicator is an upper limit.  $d \leq 1.80$  m( for M<sub>1</sub> and N<sub>1</sub> category vehicles  $d \leq 2.50$  m)."

Paragraph 6.5.5.2., amend to read:

"6.5.5.2. or, at the discretion of the manufacturer, for M<sub>1</sub> and N<sub>1</sub> 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, may be reduced to 20° under the HH line of this lamp.**

Vertical angles: 15° .....

(\*\*) The value of 5° given for dead angle of visibility to the rear of the side-direction indicator is an upper limit.  $d \leq 2.50$  m."

Paragraphs 6.9.5. to 6.9.5.2., amend to read:

"6.9.5. Geometric visibility

6.9.5.1. Horizontal angle for the two position lamps:

45 ° inwards and 80 ° outwards.

**For M<sub>1</sub> and N<sub>1</sub> category vehicles, the value of 45° inward may be reduced to 20° under the HH line of this lamp.**

In the case of trailers, ...

6.9.5.2. For M<sub>1</sub> and N<sub>1</sub> category vehicles, as an alternative to paragraph 6.9.5.1., at the discretion of the manufacturer or his duly accredited representative, and only if a front side-marker lamp is installed on the vehicle.

Horizontal angle: 45° outwards to 45° inwards.

**The value of 45° inward may be reduced to 20° under the HH line of this lamp.**

Vertical angle: 15°..."

B. JUSTIFICATION

The current visibility requirements of the front and rear direction indicators and position lamps were written in the early 1970s. They were easily fulfilled in those times because the shapes of the vehicles were simple and rather boxy. In recent years, fuel-efficient aerodynamics and pedestrian protection have led to more contoured shapes making the fulfilment of the 15° down and 45° inboard (15D-45 inboard) visibility requirement impossible to achieve. This proposal aims at eliminating this requirement.

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