



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/TRANS/WP.29/GRE/2008/17  
18 January 2008

Original: ENGLISH  
ENGLISH AND FRENCH ONLY

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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

Fifty-ninth session

Geneva, 31 March - 4 April 2008

Item 5(g) of the provisional agenda

COLLECTIVE AMENDMENTS

Regulations Nos. 6, 7 and 48

Proposal for Supplement 15 to the 02 series of amendments Regulation No. 7  
(Front and rear position (side) lamps, stop lamps and end-outline marker lamps)

Submitted by the expert from France \*/

The text reproduced below was prepared by the expert from France proposing to align on the state-of-the art realizations for the visibility angles requirements of the direction indicators. It supersedes ECE/TRANS/WP.29/GRE/2007/66, distributed during the fifty-eighth session of the Working Party on Lighting and Light-Signalling (GRE) (see report ECE/TRANS/WP.29/GRE/58, para. 32). 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

The title of the Regulation, amend to read:

"UNIFORM PROVISIONS CONCERNING THE APPROVAL OF FRONT AND **REAR POSITION LAMPS**, STOP-LAMPS AND END-OUTLINE MARKER LAMPS FOR POWER-DRIVEN VEHICLES AND THEIR TRAILERS"

Paragraph 6.2.4.1., amend to read:

"6.2.4.1. Throughout the fields defined in the diagrams in annex 1, the luminous intensity of the light emitted must be not less than 0.05 cd for front and rear **position lamps** and end-outline marker lamps, not less than 0.3 cd for stop-lamps;"

Annex 1, amend to read:

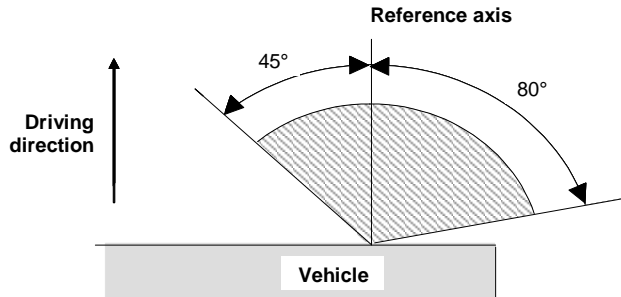
"Annex 1

FRONT AND REAR **POSITION LAMPS**, END-OUTLINE .....

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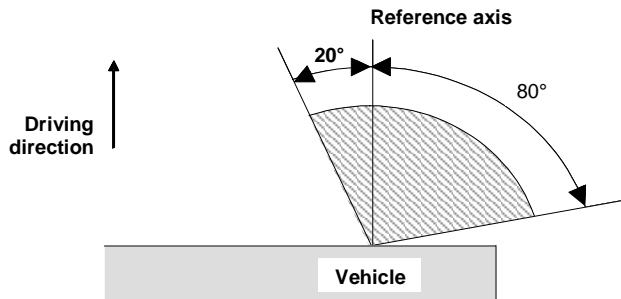
(b) for category S3 or S4 stop lamp for which they are 10° above and 5° below the horizontal;

Front position lamps on and above the H plane.  
End-outline marker lamps



Front position lamps under the H plane

H plane: "horizontal plane going through the reference centre of the lamp"



Rear position lamps.  
end- outline marker lamps

....."

**B. JUSTIFICATION**

The current visibility requirements 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 impossible the fulfillment of the 15° down and 45° inboard (15D-45inboard) visibility requirement of the front position lamp. This proposal tends to eliminate this requirement;

- (a) Reducing the interior visibility angle from 45° to 20° under the H plane has no impact on the distance of visibility of the vehicle observed by pedestrians or other road users along its longitudinal median plan;
- (b) In the case of a vehicle with 1400 mm between the reference axis of the front position lamps, this angular reduction, as seen by an observer squatting down on the median longitudinal plan of the vehicle, leads to a minimal change of the visibility distance of just 1.22 m:

With the current visibility angle, the lamp is visible at  $D_1 = 1,400 \times 0.5 \cotg 45^\circ = 700$   
 With the proposed visibility angle, the lamp is visible at  $D_2 = 1,400 \times 0.5 \cotg 20^\circ = 1,923$   
 The “danger” distance is increased by a modest  
 $D_2 - D_1 = 1,400 \times 0.5 (\cotg 20^\circ - \cotg 45^\circ) = 1,223 \text{ mm}$

