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### Economic Commission for Europe

#### Inland Transport Committee

#### World Forum for Harmonization of Vehicle Regulations

##### 164<sup>th</sup> session

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Item 4.6.8 of the provisional agenda

**1958 Agreement – Consideration of draft amendments  
to existing Regulations submitted by GRE**

### **Proposal for Supplement 9 to the 01 series of amendments to Regulation No. 70 (Rear marking plates for heavy and long vehicles)**

#### **Submitted by the Working Party on Lighting and Light-Signalling\***

The text reproduced below was adopted by the Working Party on Lighting and Light-Signalling (GRE) at its seventy-first session (ECE/TRANS/WP.29/GRE/71, para. 61). It is based on ECE/TRANS/WP.29/GRE/2013/64/Rev.1, not amended. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration.

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\* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, 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.

*Paragraph 2.1.3.*, add at the end:

"2.1.3. ...  
Class 5: Rear marking plates for motor vehicles or trailers with red and white retro-reflective alternative stripes."

*Annex 5,*

*Paragraph 2.*, add at the end:

"2. ...  
For mounting of Class 5 devices on non-articulated vehicles, the retro-reflective material shall be made with alternate, oblique stripes of white and red colour."

*Paragraph 3.2.*, add at the end:

"3.2. ...  
Class 5 devices shall incorporate a minimum of 9 standard areas as described in para. 3.4. below on large vehicles with available mounting space, but may be reduced to a minimum of 4 standard areas on vehicles with limited mounting space."

*Paragraph 3.4.*, add at the end:

"3.4. ...  
Class 5 retro-reflective materials shall consist of red and white diagonal stripes each 100 mm wide sloping outwards and downwards at 45°. The basic standard area is a square of 141 mm in length subdivided diagonally into a white half and red half, which represents one standard area.  
Prescribed shapes, patterns and dimensional features of Class 5 devices are illustrated in figure 3 of Annex 12 to this Regulation."

*Paragraph 3.5.*, amend to read:

"3.5. Rear marking plates or Class 5 devices supplied in sets shall form matching pairs."

*Annex 6,*

*Paragraph 2.*, amend the title to read:

"2. Yellow, red or white retro-reflective material"

*Paragraph 2.1.1.*, amend to read:

"2.1.1. Luminance factor for:  
(a) Yellow colour shall be  $\geq 0.16$ .  
(b) Red colour shall be  $\geq 0.03$ .  
(c) White colour shall be  $\geq 0.25$ ."

*Annex 7,*

*Paragraph 1.1.*, insert a new table 3 after table 2 and amend to read:

"When illuminated with a CIE Standard Illuminant A and measured as recommended by CIE TC 2.3 (CIE Publication No. 54, 1982), the coefficient of retro-reflection R' in candelas per square metre per lux of the yellow, white

or red retro-reflective area in new condition shall be at least as indicated in tables 1, 2 or 3, according to the class. Devices of class 1 and class 2 shall fulfil the values in table 1, devices of class 3 and class 4 those in table 2, devices of class 5 those in table 3.

...

Table 3  
Coefficient of retro-reflection R' [cd.m<sup>-2</sup>.lx<sup>-1</sup>]

Observation angle $\alpha$ [°]	Entrance angle $\beta$ [°]				
	20'	$\beta_1$	0°	0°	0°
$\beta_2$		5°	30°	40°	60°
Coefficient R' [cd.m <sup>-2</sup> .lx <sup>-1</sup> ]	Colour: White	450	200	90	16
	Red	120	30	10	2

Paragraph 1.3., table 3, renumber as table 4 and amend to read:

"Table 4  
Luminance factor  $\beta$

Colour	Luminance factor $\beta$
Red	$\geq 0.03$
Yellow	$\geq 0.16$
White	$\geq 0.25$

Annex 12, after figure 2, insert a new title and new figures 3a and 3b to read:

"Rear marking plates (Class 5)

Figure 3a

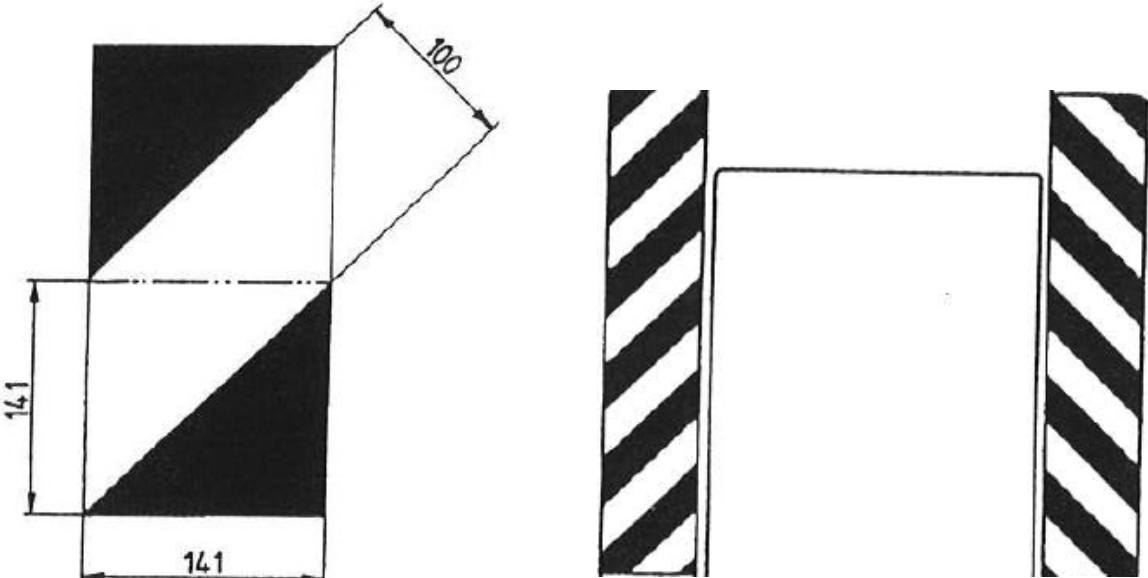
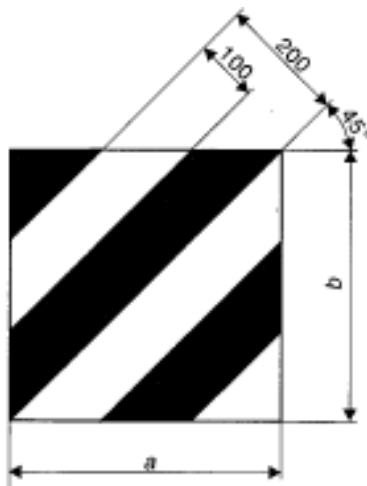


Figure 3b.  
**Example for a plate design**



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*Annex 15,*

*Paragraph 2.,* amend to read:

"2. Scope

The main purpose of these guidelines is to establish requirements for installation, arrangement, position and geometric visibility of rear marking plates on heavy and long vehicles as well as on special utility vehicles and trailers. It increases the visibility and permits an easy identification of these vehicles."

*Paragraph 2.1.,* amend to read:

"2.1. Heavy motor vehicles

The installation of rear marking plates for heavy motor vehicles according to the provisions of this annex is required for vehicles of categories N<sub>2</sub> with a maximum mass exceeding 7.5 tonnes and N<sub>3</sub> with the exception of tractors for semi-trailers, and for articulated buses of classes II and III. The rear marking plates may also be installed on special utility vehicles of categories other than above."

*Paragraph 4.,* add subparagraph (c) to read:

"4. Arrangement

...

(c) For special utility vehicles or trailers:

Class 5 - red and white retro-reflective alternative stripes."