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ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Construction of Vehicles

DRAFT SUPPLEMENT 1 TO REGULATION No. 104

(Retro-reflective markings for heavy and long vehicles and their trailers)

Note: The text reproduced below was adopted by the Administrative Committee (AC.1) of the amended 1958 Agreement at its eleventh session, following the recommendation by the Working Party at its one-hundred-and-seventeenth session. It is based on document TRANS/WP.29/1999/11, not amended (TRANS/WP.29/663, para. 123).

Paragraph 5.4.3.3., correct to read (French only).

Insert a new paragraph 5.4.3.4., to read:

"5.4.3.4. "D/E" for materials for distinctive markings or graphics as base or background in printing process for fully coloured logos and markings of class "E" in use which fulfil the requirements of class "D" materials."

Paragraph 7.2., amend to read:

"7.2. Advertising, consisting of retro-reflective logos, distinctive markings or letters/characters has to be decent.

It may consist of marking materials of class "D" if the total retro-reflective area is less than 2 m²; if the total retro-reflective area is at least 2 m² class "E" shall be used. 2/"

Insert a new paragraph 7.2.3., to read:

"7.2.3. White retro-reflective marking materials intended as base or background in printing processes for fully coloured logos and markings of class "E" in use, without unprinted blank areas, may fulfil the requirements in annex 7, table 2, for class "D" materials and must be marked as class "D/E"."

Annex 6,

Paragraph 1, amend to read:

"1. Retro-reflective marking materials (class C) shall be white, yellow or red. Retro-reflective distinctive markings and/or graphics (classes D and E) may be of any colour."

Paragraph 2., table 1, add a new row, to read:

Table 1
Chromaticity Co-ordinates

Colour	1	2	3	4	Luminance factor â [1]
.....
x [1] red	0.690	0.595	0.560	0.650	≥ 0.03
y [1]	0.310	0.315	0.350	0.350	

Paragraph 3., table 2, add a new row to read:

Table 2
Chromaticity Co-ordinates

Colour	1	2	3	4
.....			
x [1] red	0.720	0.735	0.665	0.643
y [1]	0.258	0.265	0.335	0.335

Annex 7,

Paragraph 1., amend to read:

".... R' in candelas per m² per lux (cd.m⁻².lux⁻¹) of the retro-reflective areas in new condition shall be at least as indicated in table 1 for yellow and white materials and at least as indicated in table 2 for red materials."

Insert a new table 2, to read:

"

TABLE 2 Minimum values for the Coefficient of Retro-reflection R' [cd.m ⁻² .lux ⁻¹]					
Observation angle $\hat{\alpha}$ [°]	Entrance angle $\hat{\alpha}$ [°]				
$\hat{\alpha} = 0.33^\circ (20')$	$\hat{\alpha}_1$	0	0	0	0
	$\hat{\alpha}_2$	5	20	30	40
<u>Colour</u>					
red		120	60	30	10

Annex 9,

Insert new paragraphs 1.1.1. and 1.1.2., to read,

"1.1.1. Those installed on the rear of vehicles may be red in colour.

1.1.2. Those installed on the sides of vehicles shall be white or yellow in colour."

Insert new paragraph 1.5., to read:

"1.5. the distance between the retro-reflective marking materials fitted to the rear of a vehicle and each obligatory stop lamp should be greater than 200 mm."

Insert new paragraphs 2.1.1 and 2.1.2, to read,

"2.1.1. Contour markings installed on the rear of vehicles may be red in colour.

2.1.2. Contour markings installed on the sides of vehicles shall be white or yellow in colour."

Insert new paragraph 2.4., to read:

"2.4. The distance between the retro-reflective marking materials fitted to the rear of a vehicle and each obligatory stop lamp should be greater than 200 mm."

Paragraph 3.2.4., correct to read (French only).
