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**Economic Commission for Europe**

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**World Forum for Harmonization of Vehicle Regulations**

Working Party on Lighting and Light-Signalling

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Item 5(f) of the provisional agenda

**Collective amendments - Regulations Nos. 23 and 48****Proposal for amendments to Regulation No. 23 (Reversing lamps)****Submitted by the expert from the International Organization of Motor Vehicle Manufacturers\***

The text reproduced below was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA) to introduce a new category "manoeuvring lamps" as a new 01 series of amendments. It is based on ECE/TRANS/WP.29/GRE/2011/29. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106, ECE/TRANS/2010/8, 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 0, the scope, amend to read:*

### "0. Scope

This Regulation applies to:

- (a) Reversing lamps for vehicles of categories M, N, O, and T<sup>1</sup>
- (b) **Manoeuvring lamps for vehicles of categories M and N**

*Insert a new paragraph 1.2., to read*

"1.2. **"Manoeuvring lamp" means a lamp used to provide supplementary illumination to the side of the vehicle to assist during slow manoeuvres;**"

*Paragraphs 1.2. to 1.4.(former), renumber as paragraphs 1.3. to 1.5. \**

*Paragraphs 2.2. to 2.2.1., amend to read:*

"2.2. For each type of reversing lamp **or manoeuvring lamp**, the application shall be accompanied by:

2.2.1. drawings, in triplicate, in sufficient detail to permit identification of the type of the reversing lamp **or a manoeuvring lamp** and showing in what geometrical position(s) the ...approval mark;

**In addition the mounting height and the orientation of the reference axis of the manoeuvring lamp(s) shall be indicated in the drawing in relation to the ground, the vertical and the longitudinal axis."**

*Paragraph 3., amend to read:*

### "3. Markings

The samples of a type of reversing lamp **or manoeuvring lamp** submitted for approval shall:"

*Paragraphs 4.1. to 4.3., amend to read:*

"4.1. If the two samples of a type of reversing lamp **or a manoeuvring lamp** meet the requirements of this Regulation, approval shall be granted.

4.2. An approval number shall be assigned to each type approved. The same Contracting Party shall not assign the same number to another type of reversing lamp **or manoeuvring lamp** covered by this Regulation. Notice of approval or of extension ... Annex 1 to this Regulation.

4.3. Every reversing lamp **or manoeuvring lamp** conforming to a type approved under this Regulation shall bear...in paragraphs 3.1., 3.2. and 3.3. or 3.5. respectively:"

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\* *Note by the secretariat:* Should not para. 1.3. be also amended to include the definition of type of manoeuvring lamps?

Paragraphs 4.3.2. to 4.3.4., amend to read:

"4.3.2. an additional symbol ...shown in Annex 2 to this Regulation.

**On devices meeting the requirements of this Regulation in respect of the manoeuvring lamps an additional symbol consisting of letters M and L, arranged as shown in Annex 2 to this Regulation.**

4.3.3. The first two digits ...symbols "AR or "ML"."

4.3.4. On **reversing** lamps of which..."

Paragraph 4.6., amend to read:

"4.6. The mark ...is mounted on the vehicle.

**In the case of a manoeuvring lamp:**

**A space large enough to accommodate the approval mark on the lens or on its protective housing, which shall be legible when the device has been mounted on the vehicle shall be provided. Other components of the device shall bear the name of the manufacturer and a means of identification. In case of limited space for the approval mark(s) it shall be placed on a part of the vehicle which is permanently connected to the manoeuvring lamp or on the vehicle data plate.**

**The space for the approval mark shall be shown on the drawings referred to paragraph 2.2. above or indicated in the application for approval."**

Paragraph 4.7., amend to read:

"4.7. Annex 2 gives...in which the letters A and R **or M and L** are mingled."

Insert a new paragraph 6.1., to read:

**"6.1. Intensity of the light specifications for reversing lamps"**

Paragraphs 6.1. to 6.5.(former), renumber as paragraphs 6.1.1. to 6.1.5.

Insert new paragraphs 6.2. to 6.2.3., to read:

**6.2. Intensity of the light specifications for manoeuvring lamps**

**6.2.1. The intensity shall be not greater than 1000 candelas in the angular field when installed in any mounting position specified by the applicant**

**6.2.2. To the side:**

**The device must be so designed that no light is emitted directly towards the side, the front or the rear of the vehicle. This could be determined either:**

- (a) **during the type approval procedure of that device, corresponding to conditions in paragraph 6.2.3. equivalent to the installation on the vehicle (see paragraph 6.26.9. of Regulation No. 48). No parts of the apparent surface of these lamps shall be observable, if viewed by an observer moving within a Zone in a transverse plane 1m to 3m above the ground and situated 10 m from the vehicle; or**
- (b) **during the type approval procedure of that device, corresponding to paragraph 6.26.9. of Regulation No. 48.**

**In any of these cases above, the relevant information shall be noticed in the communication document in Annex 1, paragraph 9.**

**6.2.3. The test procedure in the laboratory shall be such:**

- (a) **The measurement distance shall be in minimum 10 m;**
- (b) **The vertical angle  $\varphi_{\min}$  (in degree) for the lower observer position is:  $\varphi_{\min} = \arctan ((1\text{-mounting height})/10)$ ; with the mounting height in m**
- (c) **The vertical angle  $\varphi_{\max}$  (in degree) for the upper observer position is:  $\varphi_{\min} = \varphi_{\max} + 11,3$ .**
- (d) **The horizontal angle for the observer is  $\pm 90^\circ$  to a line which cuts the reference axis and is perpendicular to the vertical longitudinal plain of the vehicle."**

*Paragraph 8., amend to read:*

## **"8. Colour of light emitted**

**In the case of reversing lamps** the colour of the light emitted inside the field of the light distribution grid defined at paragraph 2. of Annex 3 shall be white.

**In the case of manoeuvring lamps the colour of the light emitted inside the field of the whole light distribution shall be white.**

To check these colorimetric characteristics, the test procedure described in paragraph 7. of this Regulation shall be applied. Outside this field no sharp variation of colour shall be observed.

However, for lamps..."

*Paragraph 10.1., amend to read:*

"10.1. The approval granted in respect of a type of reversing lamp **or manoeuvring lamps** pursuant to this Regulation may be withdrawn if the foregoing requirements are not complied with or if the reversing lamp **or manoeuvring lamps** bearing the mark referred to in paragraphs 4.3.1. and 4.3.2. does not conform to the type approved."

*Paragraph 11., amend to read:*

## **"11. Production definitely discontinued**

If the holder of the approval completely ceases to manufacture a type of reversing lamp **or manoeuvring lamps** approved in accordance with this Regulation, ...."

Annex 1, amend to read:

**"Annex 1**

**Communication**

...

of a type of reversing lamp pursuant to Regulation No. 23

Approval No...

Extension No.

**of a type of manoeuvring lamp pursuant to Regulation No. 23**

**Approval No...**

**Extension No. ...**

1. Trade name or mark of the device: .....

...

9. Concise description

...

Geometrical conditions of installation and relating variations; if any: .....

**for a type of manoeuvring lamp pursuant to Regulation No. 23 paragraph 6.2.2.**

**Maximum mounting height:....."**

10. ...

11. Comments

**In the case of a reversing lamp**, this device shall be installed on a vehicle only as part of a pair of devices: yes/no<sup>2</sup> .....

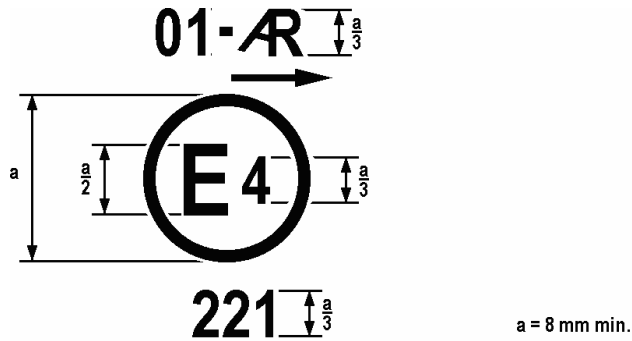
..."

Annex 2, amend to read:

"Annex 2

Examples of arrangements of approval marks

Figure 1  
 Marking for single lamps  
 Model A



The device bearing the approval mark shown above is a reversing lamp approved in the Netherlands (E4) pursuant to Regulation No. 23 under approval number 221. The approval number indicates that the approval was granted in accordance with the requirements of Regulation No. 23 ~~in its original form or as amended by Supplements 1 and/or 2, as the case may be~~ by the [01] series of amendments. The arrow indicates the side on which the required photometric specifications are met up to an angle of 45° H.

Note: The approval .... symbols.

Figure 2  
 ...  
 Model B

	3333 ⓔ4	IA 02	$\frac{2a}{01}$ →	R 01 →
		F 00	AR 01	S2 01

Model C

		IA 2a R 02 01 01 F AR S2 00 01 01 3333	
		E <sub>4</sub>	

Model D

IA 2a R 02 01 01 F AR S2 00 01 01  3333 E <sub>4</sub> →			

Note: The three examples ...

...


A rear fog lamp (F) approved in accordance with Regulation No. 38 in its original form;

A reversing lamp (AR) approved in accordance with Regulation No. 23 as amended by the [01] series of amendments.

A stop lamp with two levels of illumination (S2) approved in accordance with the 02 series of amendments to Regulation No. 7.

Model E

Marking of independent lamps

**F 2a AR R S1**  
**00 01 01 02 02**  


The above example corresponds to the marking of a lens intended to be used in different types of lamps. The approval marks indicate that the device was approved in Spain (E9) under approval number 1432 and comprises:

...

Figure 3

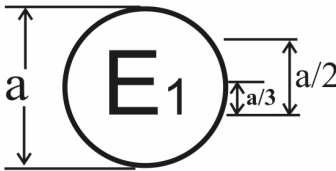
...

The light source module bearing the identification code shown above has been approved together with a lamp approved in Italy (E3) under approval number 17325.

Figure 4

Marking for an manoeuvring lamps

**ML**  $\overline{\downarrow} a/3$



**012440**  $\overline{\downarrow} a/3$        $a = 5 \text{ mm min}$

The device bearing the approval mark shown above is a manoeuvring lamp approved in Germany (E1) pursuant to Regulation No. 23 under approval number 2440.

The approval number indicates that the approval was granted in accordance with the requirements of Regulation No. 23 in its original form as amended by the [01] series of amendments.

**Note:** The approval number and additional symbol shall be placed close to the circle and either above or below the letter "E" or to the left or right of that letter. The digits of the approval number and of the production serial number shall be on the same side of the letter "E" and face the same direction. The use of Roman numerals as approval numbers should be avoided so as to prevent any confusion with other symbols."

Annex 3

Paragraph 1. amend to read:

"1. Measurement methods **general**"



*Paragraph 2, amend to read:*

- "2. **For reversing lamps the** measuring Points expressed in degrees of angle with the axis of reference and values of the minimum intensities of the light emitted"

## **II. Justification**

1. In view of the definition of exterior courtesy lamps (ECL) in Regulation No. 48 and of the revised provisions for these devices, it is not considered necessary to require their type approval, also considering the actual variety of design of these devices. The amendments to Regulation No. 23 should be restricted to manoeuvring lamps as herewith proposed.
  2. The proposal introduces manoeuvring lamps, a new category of approved lamp used to aid manoeuvring at low speeds.
  3. Manufacturers of trucks and buses have indicated their interest in installing manoeuvring lamps on such vehicles. The scope has therefore been adjusted to cover all vehicles of categories M and N.
  4. The provisions concerning luminous intensity have been drafted to define an upper glare control zone effectively above 1 metre from the ground at a distance of 10 metres from the lamp where the intensity is restricted to [1cd] maximum, and a lower functional zone where the intensity is restricted to [1000cd] maximum. The zones are defined by angle to enable component testing. Location of the glare control zone depends on the mounting height to be declared by the applicant.
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