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Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations**Working Party on Lighting and Light-Signalling****Seventy-first session**

Geneva, 31 March–3 April 2014

Item 12(d) of the provisional agenda

Other Business – Any other business**Proposal for Supplement 17 to Regulation No. 50 (Motorcycle Lamp Components)****Submitted by the expert from the International Motorcycle Manufacturers Association***

The text reproduced below was prepared by the expert from the International Motorcycle Manufacturers Association (IMMA), introducing the possibility of interdependent lamps for dedicated motorcycle lamps. The proposal reflects recent amendments of Regulations Nos. 6 and 7, as well as matching the visibility angle requirements of Regulations Nos. 50 and 53. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

* 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.

I. Proposal

Content, amend to read:

"...

~~Annex 5: Colours of lamps: chromaticity co-ordinates~~

Annex 65: Photometric measurements for the rear-registration-plate illuminating device

..."

Paragraph 3.2.1., amend to read:

"3.2.1. Drawings, in triplicate, in sufficient detail to permit identification of the type of the device and showing **the following:**

- (a) In what geometrical position(s) the device may be mounted on the vehicle; the axis of observation to be taken is the axis of reference in the tests (horizontal angle $H = 0^\circ$, vertical angle $V = 0^\circ$); and the point to be taken as the centre of reference in the said tests;
- (b) **The geometrical conditions of installation of the device(s) that meet(s) the requirements of paragraph 7.;**
- (c) **In the case of an interdependent lamp system, the interdependent lamp or the combination of interdependent lamps that fulfil the requirements of paragraphs 6.7., 7.1. and of Annex 4 to this Regulation;**
- (d) **The position intended for the approval number and the additional symbols in relation to the circle of the approval mark."**

Paragraph 5.1., amend to read:

"5.1 If the two devices of a type of device which are submitted in pursuance of paragraph 3. above meet the requirements of this Regulation, approval shall be granted. **All the devices of an interdependent lamp system must be submitted for type approval by the same applicant."**

Insert a new paragraph 5.5.6., to read:

"**5.5.6. On devices with reduced light distribution in conformity to paragraph 2.3. in Annex 4 to this Regulation a vertical arrow starting from a horizontal segment and directed downwards."**

Insert a new paragraph 5.5.7., to read:

"**5.5.7. On interdependent lamps, which may be used as part of an interdependent lamp system, the additional symbol shall be marked as follows;**

- (a) **for a front position lamp "MAY"**
- (b) **for a rear position lamp "MRY"**
- (c) **for a stop lamp "MSY"**

Insert new paragraphs 6.6. to 6.7., to read:

- "6.6. Only front and rear position lamps and stop lamps may be constructed as an interdependent lamp system.**
- 6.7. An interdependent lamp system shall meet the requirements when all its interdependent lamps are operated together. However, if the interdependent lamp system providing the rear position lamp function is partly mounted on the fixed component and partly mounted on a movable component, the interdependent lamp(s) specified by the Applicant shall meet the outboard geometric visibility, colorimetric and photometric requirement, at all fixed positions of the movable component(s). In this case, the inboard geometric visibility requirement is deemed to be satisfied if this (these) interdependent lamp(s) still conform to the photometric values prescribed in the field of light distribution for the approval of the device, at all fixed positions of the moveable component(s)."**

Paragraphs 7.1. to 7.4.2., amend to read:

"In the reference axis, the intensity of the emitted light of each of the two devices shall be at least equal to the minimum values and not exceed the maximum values of the following table. In no direction, the maximum values indicated shall be exceeded.

	Minimum luminous intensity in cd	Maximum luminous intensity in cd
7.1. Rear position lamps	4	12 17
7.2. Front position lamps	4	60 140
7.2.1. Front position lamps incorporated in a headlamp	4	10 40
7.3. Stop-lamps	40	185 260
7.4. Direction indicators	-	-
7.4.1. of the category 11 (see Annex 1)	90	700 1 000
7.4.1.1. of the category 11a (see Annex 1)	175	700 1 000
7.4.1.2. of the category 11b (see Annex 1)	250	800 1 200
7.4.1.3. of the category 11c (see Annex 1)	400	860 1 200
7.4.2. of the category 12 (see Annex 1)	50	350 500

Paragraph 7.5.1., amend to read:

- "7.5.1. In the case of a single lamp containing more than one light source:
- (a) **except for a direction indicator lamp**, the lamp shall comply with the minimum intensity required **in the table of standard light distribution in space as shown in Annex 4** when any one light source has failed;
 - ~~(b) when all light sources are illuminated, the maximum intensity for an assembly of two lamps is given by multiplying by 1.4 the value prescribed for a single lamp in paragraphs 7.1. to 7.4.;~~
 - ~~(c)~~**(b)** all light sources which are connected in series are considered to be one light source"

Paragraph 7.11 to 7.11.2., shall be deleted.

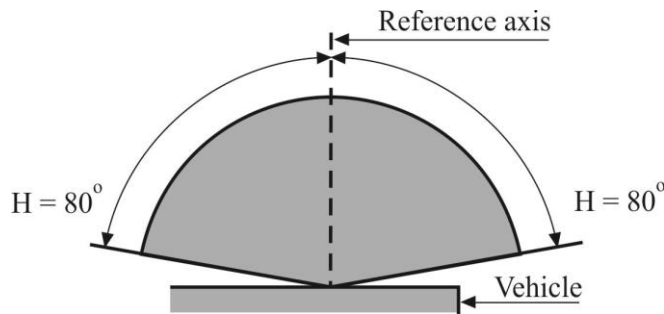
Annex 1,

Paragraph 1., amend to read:

- "1. Front position lamps

$$V = +15^\circ / -10^\circ$$

However, in the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground, the angle of 10° below the horizontal may be reduced to 5°.



Front position lamps (for a pair of lamps)

$$V = +15^\circ / -10^\circ$$

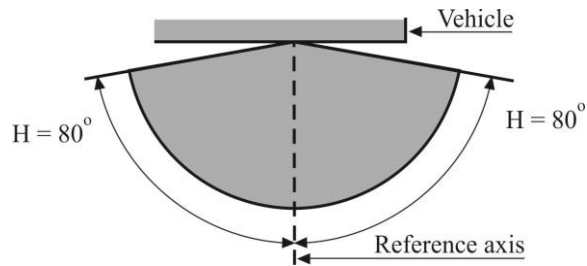
However, in the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground, the angle of 10° below the horizontal may be reduced to 5°.

Paragraph 2., amend to read:

- "2. Rear position lamps

$$V = +15^\circ / -10^\circ$$

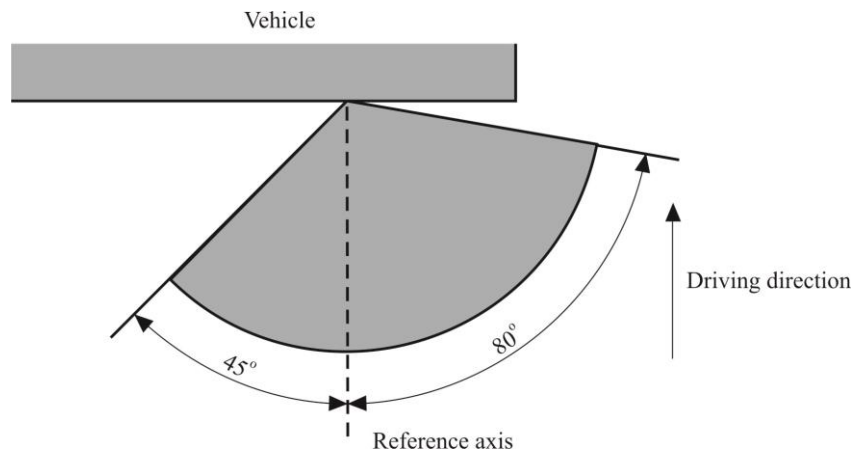
However, in the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground, the angle of 10° below the horizontal may be reduced to 5°.



Rear position lamps (for a pair of lamps)

$$V = +15^\circ / -10^\circ$$

However, in the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground, the angle of 10° below the horizontal may be reduced to 5°.



However, in the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground, the inward angle of 45° may be reduced to 20° under the H plane."

Paragraph 3., amend to read:

"3. Direction indicators of categories 11, 11a, 11b, 11c and 12

$$V = \pm 15^\circ$$

However, in the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground, the angle of 15° below the horizontal may be reduced to 5°.

Minimum horizontal angles of light distribution in space:

Categories 11, 11a, 11b and 11c: direction indicators for the front of the vehicle;

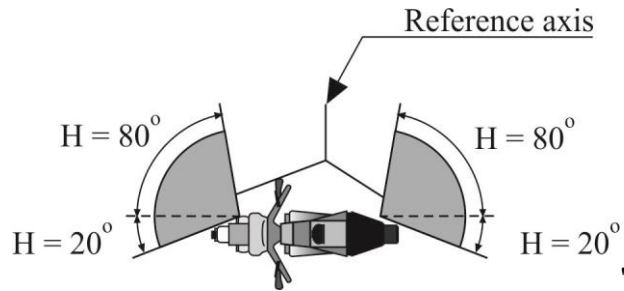
Category 11: for use at a distance not less than 75 mm from the passing beam headlamp;

Category 11a: for use at a distance not less than 40 mm from the passing beam headlamp;

Category 11b: for use at a distance not less than 20 mm from the passing beam headlamp;

Category 11c:

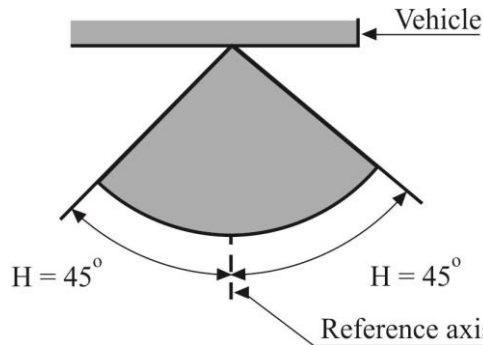
for use at a distance less than 20 mm from the passing beam headlamp.



Paragraph 4., amend to read:

"4. Stop lamps
 $V = +15^\circ/-10^\circ$

However, in the case where a device is intended to be installed with its H plane at a mounting height less than 750 mm above the ground, the angle of 15° below the horizontal may be reduced to 5° .



However, in the case of a pair of lamps, the inboard geometric visibility requirement is deemed to be satisfied if the lamps conform to the photometric values prescribed in the field of light distribution for the approval of the device.

Annex 2,

Item 9., amend to read:

9. Concise description: ^{3/}

Electronic light source control gear/variable intensity ...

Only for limited mounting height of equal to or less than 750mm above the ground (yes/no):

Function(s) produced by an interdependent lamp forming part of an interdependent lamp system:

Front position lamp (yes/ no):

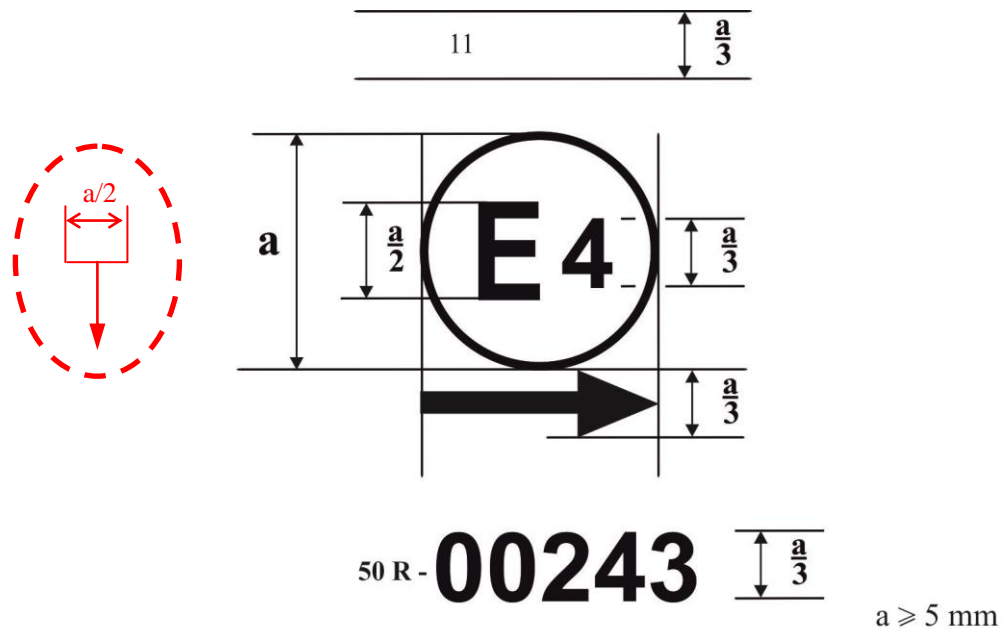
Rear position lamp (yes/ no):

Stop lamp (yes/ no)":

Annex 3, amend to read:

"Annex 3

Examples of arrangement of the approval mark
(see paragraph 5.3. of this Regulation)



A device bearing the approval mark shown above is a direction indicator of the category 11 approved in the Netherlands (E4) under the number 00243. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. 50 in its original form.

For a direction indicator, the arrow indicates that the luminous distribution is a symmetrical in a horizontal plane and that the photometric values required are satisfied up to an angle of 80° to the right, the device seen in the opposite sense of the light emitted.

The vertical arrow starting from a horizontal segment and directed downwards indicates a permissible mounting height of equal to or less than 750 mm from the ground for this device.

Light source modules

MD E3 17325

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."

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

Interdependent lamps

12 MRY MSY



R50-00113

Marking of an interdependent lamp comprising part of an interdependent lamp system providing:

A rear direction indicator lamp (category 12) approved in accordance with the requirements of Regulation No. 50,

A rear position lamp (MRY) approved as an interdependent lamp forming part of an interdependent lamp system in accordance with the requirements of Regulation No. 50,

A stop-lamp (MSY) approved as an interdependent lamp forming part of an interdependent lamp system in accordance with the requirements of Regulation No. 50

Annex 4,

Insert a new paragraph 2.3., to read:

"2.3. However, in the case where a device is intended to be installed at a mounting height of equal to or less than 750 mm above the ground, the photometric intensity is verified only up to an angle of 5 degrees downwards."

MRY MSY



R50-00113

Marking of an interdependent lamp comprising part of an interdependent lamp system providing:

A rear position lamp (MRY) approved as an interdependent lamp forming part of an interdependent lamp system in accordance with the requirements of Regulation No. 50,

A stop-lamp (MSY) approved as an interdependent lamp forming part of an interdependent lamp system in accordance with the requirements of Regulation No. 50

II. Justification

1. The rear trunk lid that is commonly used for four-wheeled vehicles may be adopted for future scooter type motorcycles to secure the storage space for helmet, etc. and improve the appearance marketability. In such case, a negative impact on sales is expected due to motorcycle design constraints because of the regulatory requirements for the lamp system.

2. Meanwhile, interdependent lamp system is approved by the UN Regulations Nos.7 and 48 and it is already on the market. This provides increased design freedom and balances the modern appearance and functionality that makes it easier to load/unload the cargo.

3. L category is also included in the scope of the UN Regulation No.7, and the UN-certified stop lamp, front position lamp, and rear position lamp can be applied to motorcycles as well. Therefore, interdependent lamp system should also be approved for motorcycles.

4. This proposal is to increase the design freedom of motorcycle lamp system and improve the vehicle functionality without jeopardizing the safety of road users.
 5. Also, the amendment reflects the recent amendments of the Supplement 2 to the 06 series of amendments to Regulation No. 48, where measurement of 750mm height is changed to be taken at the H-plane, with some editorial corrections to current UN Regulation No. 53 text.
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