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Working Party on Lighting and Light-Signalling

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Geneva, 6 - 9 October 2009

Item 5(d) of the provisional agenda

COLLECTIVE AMENDMENTS

Regulations Nos. 19, 48, 98, 112 and 123

Proposal for draft 04 series of amendments to Regulation No. 19
(Front fog lamps)

Submitted by the expert from the Working Party "Brussels 1952" */

The text reproduced below was presented to the sixty-first session by the expert from the Working Party "Brussels 1952" (GTB) in order to change the basis for the photometric requirements from 12.0 V to 13.2 V. The text is based on informal document No. GRE-61-17, distributed during the sixty-first session of the Working Party on Lighting and Light-Signalling (GRE) (see report ECE/TRANS/WP.29/GRE/61, para. 26). It supersedes ECE/TRANS/WP.29/GRE/2009/25. The modifications to the existing text of Regulation No. 19 are marked in bold or strikethrough characters.

*/ 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

Paragraph 6.3.1.1., amend to read:

"6.3.1.1. During the testing of the front fog lamp the power supply for this filament lamp shall be regulated so as to obtain the reference luminous flux **at 13.2 V** as indicated in the relevant data sheet of Regulation No. 37."

Paragraph 6.3.1.2., amend to read:

"6.3.1.2. "During the testing of a front fog lamp where the filament lamp cannot be replaced, the voltage at the terminals of the front fog lamp shall be regulated at ~~12.0 V~~ **13.2 V**."

Paragraph 6.3.5., amend to read:

"6.3.5. The illumination (see Annex 4 paragraph 2.1) shall meet the following requirements:

Designated lines or zones	Vertical position */	Horizontal position */	Luminous intensity	To comply
Line 1	15° U to 60°U	0°	400 145 cd max	All line
Zone A	0° to 1.75°U	5° L to 5°R	62 85 cd min	Whole zone
Zone B	0° to 3.5°U	26°L to 26°R	400 570 cd max	Whole zone
Zone C	3.5°U to 15°U	26°L to 26°R	250 360 cd max	Whole zone
Zone D	1.75°D to 3.5°D	12°L to 12°R	1,250 1700 cd min 8,000 11500 cd max	At least one point on each vertical line
Zone E	1.75°D to 3.5°D	12°L to 22°L and 12°R to 22°R	600 810 cd min 8,000 11500 cd max	At least one point on each vertical line

*/ The co-ordinates are specified in degrees for an angular web with a vertical polar axis.

The ~~illumination~~ **luminous intensity** shall be measured in either white or selective yellow light as prescribed by the manufacturer for use of the front fog lamp in normal service.

Variations detrimental to satisfactory visibility in either of the Zones B and C are not permitted."

Paragraph 6.3.6., amend to read:

"6.3.6. In the light-distribution as specified in the table in paragraph 6.3.5., single narrow spots or stripes inside the area above 15° with not more than ~~160 cd~~ **230 cd** are allowed, if not extending beyond a conical angle of 2° aperture or a width of 1°. If multiple spots or stripes are present they shall be separated by a minimum angle of 10°."

Paragraph 6.4.1.1.1., amend to read:

"6.4.1.1.1. The front fog lamp shall comply with the requirements of paragraph 6.4.3. of this Regulation with at least one complete set of appropriate standard (etalon) lamps, which may be supplied by the manufacturer or applicant.

...

...

During the testing of the front fog lamp, the power supply to the filament lamp(s) shall be regulated so as to obtain the reference luminous flux **at 13.2 V** as indicated on the relevant data sheet of Regulation No. 37."

Paragraph 6.4.1.1.2., amend to read:

"6.4.1.1.2. In the case of a system that uses a light source control gear being part of the lamp, the voltage declared by the applicant shall be applied to the input terminals of that lamp. ~~The measured photometric value shall be multiplied by a factor of 0.7 prior to checking for compliance.~~"

Paragraph 6.4.1.1.3., amend to read:

"6.4.1.1.3. In the case of a system that uses a light source control gear not being part of the lamp the voltage declared by the applicant shall be applied to the input terminals of that light source control gear. The test laboratory shall require from the applicant the special light source control gear needed to supply the light source and the applicable functions. The identification of that light source control gear if applicable and/or the voltage applied including the tolerances shall be noted in the communication form in Annex 1 of this Regulation. ~~The measured photometric value shall be multiplied by a factor of 0.7 prior to checking for compliance.~~"

Paragraph 6.4.1.2., amend to read:

"6.4.1.2. In the case of a gas-discharge light source:

A standard light source shall be used as specified in Regulation No. 99, which has been aged during at least 15 cycles, in accordance with Annex 4, paragraph 4. of Regulation No. 99.

During testing of the front fog lamp the voltage at the terminals of the ballast shall be regulated to maintain **13.2 V** for a 12 V system, or at the vehicle voltage as specified by the applicant, with a tolerance of ± 0.1 V.

~~The measured luminous intensity values shall be multiplied by a factor of 0.7 prior to the check for compliance.~~

The objective luminous flux of the gas- discharge light source may differ from that specified in Regulation No. 99. In this case, the luminous intensity values shall be corrected accordingly."

Paragraph 6.4.1.3., amend to read:

"6.4.1.3. In the case of non-replaceable light sources:

All measurements on front fog lamps equipped with non-replaceable light sources shall be made at 6.3 V, 13.2 V or 28.0 V or at other vehicle voltage as specified by the applicant. The test laboratory may require from the applicant the special power supply needed to supply the light sources. The test voltages shall be applied to the input terminals of the lamp. ~~The measured luminous intensity values shall be multiplied by a factor of 0.7 prior to checking for compliance.~~"

Paragraph 6.4.3., amend to read:

"6.4.3. Photometric requirements:

When so adjusted, the front fog lamp shall meet the photometric requirements in the table below (refer also to Annex 4, paragraph 2.2. of this Regulation):

Designated lines or zones	Vertical position <u>*/</u> above h + below h -	Horizontal position <u>*/</u> left of v: - right of v: +	Luminous intensity (in cd)	To comply
Point 1, 2 <u>**/</u>	+ 60°	± 45°	60 85 max	All points
Point 3, 4 <u>**/</u>	+ 40°	± 30°		
Point 5, 6 <u>**/</u>	+ 30°	± 60°		
Point 7, 10 <u>**/</u>	+ 20°	± 40°		
Point 8, 9 <u>**/</u>	+ 20°	± 15°		
Line 1 <u>**/</u>	+ 8°	- 26° to + 26°	90 130 max	All line
Line 2 <u>**/</u>	+ 4°	- 26° to + 26°	105 150 max	All line
Line 3	+ 2°	- 26° to + 26°	170 245 max	All line
Line 4	+ 1°	- 26° to + 26°	250 360 max	All line
Line 5	0°	- 10° to + 10°	340 485 max	All line
Line 6	- 2.5°	- 10° to + 10°	2,000 2,700 min	All line
Line 7	- 6.0°	- 10° to + 10°	< 50 per cent of max. on line 6	All line
Line 8L and R <u>***/</u>	-1.5° to - 3.5°	- 22° and + 22°	800 1,100 min	One or more points
Line 9L and R <u>***/</u>	-1.5° to - 4.5°	- 35° and + 35°	320 450 min	One or more points
Zone D	- 1.5° to - 3.5 °	- 10° to + 10°	8,400 12,000 max	Whole zone
<u>*/</u>	The co-ordinates are specified in degrees for an angular web with a vertical polar axis.			
<u>**/</u>	See paragraph 6.4.3.4.			
<u>***/</u>	See paragraph 6.4.3.2.			

"

Paragraph 6.4.3.1., amend to read:

"6.4.3.1. The ~~illumination~~ **luminous intensity** shall be measured either with white light or coloured light as prescribed by the applicant for use of the fog lamp in normal service. Variations in homogeneity detrimental to satisfactory visibility in the zone above the line 5 from 10 degrees left to 10 degrees right are not permitted."

Paragraph 6.4.3.4., amend to read:

"6.4.3.4. In the light-distribution as specified in the table in paragraph 6.4.3., single narrow spots or stripes inside the area including the measuring points 1 to 10 and line 1 or inside the area of line 1 and line 2 with not more than ~~120 cd~~ **175 cd** are allowed, if not extending beyond a conical angle of 2° aperture or a width of 1°. If multiple spots or stripes are present they shall be separated by a minimum angle of 10°."

Paragraph 6.4.4.1., amend to read:

"6.4.4.1. In the case of front fog lamps equipped with gas-discharge light sources the luminous intensity shall exceed ~~800 cd~~ **1080 cd** in the measuring point at 0° horizontal and 2° D vertical, four seconds after activation of the fog lamp which has not been operated for 30 minutes or more."

Paragraph 14., amend to read:

"14. TRANSITIONAL PROVISIONS

14.1. In the case of Class B front fog lamps:

14.1.1. From the date of entry into force of the **04** series of amendments to this Regulation no Contracting Party applying it shall refuse to grant approvals under this Regulation as amended by the 02 or 03 series of amendments. **Existing approvals and extensions of these approvals remain valid indefinitely.**

14.1.2. As from 24 months after the date of entry into force of the 03 series of amendments, Contracting Parties applying this Regulation shall grant approvals only if Class B front fog lamps meet the requirements of this Regulation as amended by the 03 **or 04** series of amendments.

14.1.3. As from 36 months after the date of entry into force of the 03 series of amendments, Contracting Parties applying this Regulation shall grant approvals for a new type of front fog lamp only if front fog lamps meet the requirements of Class F3 of this Regulation as amended by to the 03 series of amendments.

14.1.4. Existing approvals for front fog lamps already granted under this Regulation before the date of entry into force of the 03 series of amendments shall remain valid. However, after the date of entry into force of the 03 series of amendments, Contracting Parties applying this Regulation may prohibit the fitting of front fog lamps equipped with filament lamps unless they satisfy the requirements of Regulation No. 37.

14.1.5. Contracting Parties applying this Regulation may prohibit the fitting of devices, which do not meet the requirements **of the 03 or 04 series** of this Regulation:

14.1.5.1. on vehicles for which type approval or individual approval is granted more than 24 months after the date of entry into force **of the 03 series of amendments.**

14.1.5.2. on vehicles first registered more than 60 months after the date of entry into force **of the 03 series of amendments**

14.1.6. As from 60 month after the date of entry into force of the 03 series of amendments, Contracting Parties applying this Regulation shall refuse to grant any extensions of approvals if the front fog lamps do not meet the requirements of Class F3 of this Regulation as amended by the 03 series of amendments.

14.1.6.1. Contracting Parties applying this Regulation shall continue to issue approvals for front fog lamps on the basis of the 03 series and the 02 series of amendments to this Regulation, provided that the fog lamps are intended as replacements for fitting to vehicles in use.

14.2. In the case of Class F3 front fog lamps:

14.2.1. From the date of entry into force of the 04 series of amendments to this Regulation, no Contracting Party applying it shall refuse to grant approvals, under this Regulation as amended by the 04 series of amendments. Existing approvals and extensions of these approvals remain valid indefinitely.

14.2.2. As from 60 months after the date of entry into force of the 04 series of amendments, Contracting Parties applying this Regulation shall grant approvals only if Class F3 front fog lamps meet the requirements of this Regulation as amended by the 04 series of amendments."

Annex 2,

Paragraph 2.2., amend to read:

"2.2. for the measured values in the table according to paragraph 6.4.3. of this Regulation the respective maximum deviations may be:

Designated lines or zones	Vertical position */ above h + below h -	Horizontal position */ left of v: - right of v: +	Luminous intensity candela		To comply
			Equivalent 20 per cent	Equivalent 30 per cent	
Point 1, 2 **/	+60°	± 45°	80 115 max	90 130 max	All points
Point 3, 4 **/	+40°	± 30°			
Point 5, 6 **/	+30°	± 60°			
Point 7,10 **/	+20°	± 40°			
Point 8, 9 **/	+20°	± 15°			
Line 1 **/	+ 8°	- 26° to + 26°	110 160 max	120 170 max	All line
Line 2 **/	+ 4°	- 26° to + 26°	130 180 max	140 195 max	All line
Line 3	+ 2°	- 26° to + 26°	205 295 max	220 320 max	All line
Line 4	+ 1°	- 26° to + 26°	300 435 max	325 470max	All line
Line 5	0°	- 10° to + 10°	410 585 max	445 630 max	All line
Line 6	- 2.5°	- 10° to + 10°	1,600 2,160 min	1,400 1,890min	All line
Line 8 L and R ***/	-1.5° to - 3.5°	- 22° and + 22°	640 880 min	560 770min	One or more points
Line 9 L and R ***/	-1.5° to - 4.5°	- 35° and + 35°	250 360 min	225 315 min	One or more points
Zone D	- 1.5° to - 3.5 °	- 10° to + 10°	10,000 14,400 max	10,900 15,600 max	Whole zone
*/	The co-ordinates are specified in degrees for an angular web with a vertical polar axis.				
**/	See paragraph 6.4.3.4. of this Regulation.				
***/	See paragraph 6.4.3.2. of this Regulation.				

Annex 5,

Insert new paragraph 1.1.2.5., to read:

"1.1.2.5. For a gas-discharge light source, the test voltage for the ballast is 13.2 ± 0.1 volts for 12 V network system, or otherwise specified in the application for approval."

B. JUSTIFICATION

At its fifty-seventh session, the Working Party on Lighting and Light-Signalling (GRE) accepted a proposal tabled by the expert from GTB (ECE/TRANS/WP.29/GRE/2006/36) to specify the reference luminous flux of Regulation No. 37 light sources at approximately 13.2 volts instead of 12 volts. Having introduced these changes into Regulation No. 37, it is now appropriate to amend the photometric requirements of Regulation No. 19 to this 13.2 V basis. These changes have the effect of aligning the type approval performance requirements with those actually achieved in operation on the vehicle.

These proposed amendments do not affect the validity of lamps type approved to earlier versions of this regulation. However, it is necessary to introduce transitional provisions to allow changes to be made to the procedures in the photometric laboratories to accommodate the revised photometric tables and measurement protocols. Due to the complex nature of the transitional provisions of Regulation 19, a summary in graphical form is included below for information only.

Summary of the Transitional Provisions in the above proposal to amend
 Paragraph 14 of Regulation 19.
 (Assumes that R19-04 will enter into force in July 2010)


