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Proposal for Supplement 7 to the 04 series of amendments to Regulation No. 19 (Front fog lamps)

Submitted by the expert from the International Automotive Lighting and Light Signalling Expert Group (GTB)*

The text reproduced below was prepared by the expert from GTB to amend the requirements for marking, colour measurement and ultraviolet (UV) testing of light emitting diode (LED) modules. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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GE.14-

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

Insert a new paragraph 3.5.3., to read:

"3.5.3. If the LED module(s) are non-replaceable, the markings for LED module(s) are not required."

Annex1, item 10.3., amend to read:

"10.3. LED module(s): yes/no² and for each LED module a statement whether it is replaceable or not: yes/no²"

Annex 5, paragraph 1.2.1.1., amend to read;

- "1.2.1.1. Test mixture
- 1.2.1.1.1. For front fog lamps with the outside lens in glass:

The mixture of water and a polluting agent to be applied to the front fog lamp shall be composed of:

- (a) 9 parts by weight of silica sand with a particle size of 0-100 μm;
- (b) 1 part by weight of vegetal carbon dust **produced from** (beech wood) with a particle size of 0-100 μm;
- (c) 0.2 part by weight of NaCMC,⁴, and
- (d) 5 parts by weight of sodium chloride (pure at 99 per cent);
- (**de**) an appropriate quantity of distilled water, with a conductivity of $S < 1 \,\mu S/m$.

The mixture must not be more than 14 days old.

1.2.1.1.2. For front fog lamp with outside lens in plastic material:

The mixture of water and polluting agent to be applied to the front fog lamp shall be composed of:

- (a) 9 parts by weight of silica sand with a particle size of 0-100 μm,
- (b) 1 part by weight of vegetal carbon dust **produced from** (beech wood) with a particle size of 0-100 μm,
- (c) 0.2 part by weight of NaCMC⁴,
- (d) 5 parts by weight of sodium chloride (pure at 99 per cent),
- (**de**) 13 parts by weight of distilled water with a conductivity of S < 1 μ S/m, and
- (ef) ± 1 part by weight of surfactant⁵.

The mixture must not be more than 14 days old."

Annex 12, paragraph 4.6., amend to read:

"4.6. UV-radiation

The UV-radiation of the a low-UV-type LED module or light-generator shall be such that:

.....

(For definitions of the other symbols see paragraph 4.5.1. above)

This value shall be calculated using intervals of one nanometre. The UV-radiation shall be weighted according to the values as indicated in the UV table below.

| λ | $S(\lambda)$ |
|-----|--------------|
| 250 | 0.430 |
| 255 | 0.520 |
| 260 | 0.650 |
| 265 | 0.810 |
| 270 | 1.000 |
| 275 | 0.960 |
| 280 | 0.880 |
| 285 | 0.770 |
| 290 | 0.640 |
| 295 | 0.540 |
| 300 | 0.300 |

| λ | $S(\lambda)$ |
|-----|--------------|
| 305 | 0.060 |
| 310 | 0.015 |
| 315 | 0.003 |
| 320 | 0.001 |
| 325 | 0.000 50 |
| 330 | 0.000 41 |
| 335 | 0.000 34 |
| 340 | 0.000 28 |
| 345 | 0.000 24 |
| 350 | 0.000 20 |
| | |

| λ | $S(\lambda)$ |
|-----|------------------------|
| 355 | 0.000 16 |
| 360 | 0.000 13 |
| 365 | 0.000 11 |
| 370 | 0.000 09 |
| 375 | 0.000 077 |
| 380 | 0.000 064 |
| 385 | 0.000 530 0.000 053 |
| 390 | 0.000 044 |
| 395 | 0.000 036 |
| 400 | 0.000 030 |
| | |

UV Table

Values according to other values should be interpolated."

Annex12, paragraph 4.7.2., amend to read:

"4.7.2. Colour

The colour of the light emitted, measured after 1 minute and measured after 30 minutes of operation photometric stability has been obtained, as described in paragraph 4.7.1.3. of this annex, shall be within the required colour boundaries in both instances."

II. Justification

New paragraph 3.5.3.

1. This amendment follows the approach based on ECE/TRANS/WP.29/GRE/2012/9, adopted at the sixty-seventh session of GRE which deletes the unnecessary markings for LED front fog lamps that have non-replaceable LED modules.

Amendment to Annex 1, paragraph 10.3.

2. Regulation No. 48 requires the communication sheet of component type approval to state if the LED module is non-replaceable.

Amendment to Annex 5

3. The UN regulations currently specify several test mixtures to simulate dirt during testing of lamps. As there is no reason to use different kinds of test mixtures it is proposed to amend the UN Regulations by introducing a uniform test mixture to be used for all the corresponding tests. In addition, to avoid misinterpretation the wording "beech wood" is replaced by "produced from beech wood".

Amendment to Annex12, paragraph 4.6.

4. This is a correction to the UV test table.

Amendment to Annex 12, paragraph 4.7.2.

5. This amendment aligns the colour measurement timing with that already established in Regulation No. 112.

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