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Item 5(h) of the provisional agenda

**Collective amendments—Regulations Nos. 4, 6, 7,
23, 38, 50, 77, 87, 91 and 119**

Proposal for Supplement 16 to Regulation No. 4 (Illumination of rear-registration plates)

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

The text reproduced below was prepared by the expert from the Working Party "Brussels 1952" (GTB) to introduce into the Regulation provisions for replaceable light-emitting diode (LED) light sources. 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 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 1.3., amend to read:

"1.3. "Rear registration plate lamps of different types" means...

...

- (b) the characteristics of the optical system, (levels of intensity, light distribution angles, category of ~~filament lamp~~ **light source**, light source module, etc.);"

Paragraph 1.4., amend to read:

"1.4. References made ... for type approval.

References made in this Regulation to standard (étalon) LED light source(s) and to Regulation No. XXX shall refer to Regulation No. XXX and its series of amendments in force at the time of application for type approval."

Paragraph 2, amend to read:

"2. Application for approval

...

- (b) a brief technical description stating in particular, with the exception of lamps with non-replaceable light sources:
 - (i) the category or categories ... approval.; and/or
 - (ii) **the category or categories of LED light source(s) prescribed; this LED light source category shall be one of those contained in Regulation No. XXX and its series of amendments in force at the time of application for type approval.; and/or**
 - (iii) the light source module specific identification code;²
- (c) ..."

Paragraph 3.4., amend to read:

"3.4. with the exception of lamps with non-replaceable light sources it must bear a clearly legible and indelible marking indicating:

- (a) the category or categories of ~~filament lamp(s)~~ **light source(s)** prescribed; and/or
- (b) the light source module specific identification code."

Paragraph 5.2., amend to read

"5.2. All measurements shall be made with the standard ~~filament lamp~~ **uncoloured or coloured light source** of the category prescribed by the manufacturer, ~~the supply voltage being so regulated as to produce the reference luminous flux.~~ **supplied with the voltage:**

- (a) **in the case of filament lamp(s), that is necessary to produce the reference luminous flux required for that category of filament lamp;**
- (b) **in the case of LED light source(s) of 6.75 V, 13.5 V or 28.0 V; the luminous flux value produced shall be corrected. The correction factor is the ratio between the objective luminous flux and the value of the luminous flux found at the voltage applied.**

All measurements on the devices with non-replaceable light sources shall be made at 6.75 V, 13.5 V or 28.0 V respectively."

Paragraphs 5.6. to 5.6.3., amend to read:

- "5.6. In the case of replaceable ~~filament lamp(s)~~ **light source(s)**:
- 5.6.1. Any category or categories of ~~filament lamp(s)~~ **light source(s)** approved according to Regulation No. 37 **and/or Regulation No. XXX** may be used, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval **or in Regulation No. XXX and its series of amendments in force at the time of application for type approval.**
- 5.6.2. The design of the device shall be such that the ~~filament lamp~~ **light source** can **not** be fixed in **any** other position but the correct one.
- 5.6.3. The ~~filament lamp~~ **light source** holder shall conform to the characteristics given in IEC Publication 60061. The holder data sheet relevant to the category of ~~filament lamp~~ **light source** used, applies."

Annex 2, item 9., amend to read:

- "9. Concise description: ³
- ...
- Number and category (ies) of ~~filament lamp(s)~~ **light source(s)**:
- ..."

Annex 5, paragraph 1.2., amend to read:

- "1.2. For replaceable ~~filament lamps~~ **light sources**:
- when equipped with ~~filament lamps~~ **light sources** at 6.75 V, 13.5 V or 28.0 V, the luminance values produced shall be corrected. **For filament lamps** the correction factor is the ratio between the reference luminous flux and the mean value of the luminous flux found at the voltage applied (6.75 V, 13.5 V or 28.0 V).
- For LED light sources the correction factor is the ratio between the objective luminous flux and the mean value of the luminous flux found at the voltage applied (6.75 V, 13.5 V or 28.0 V).**
- The actual luminous fluxes of each ~~filament lamp~~ **light source** used shall not deviate more than ± 5 per cent from the mean value. Alternatively **and in case of filament lamps only** a standard filament lamp may be used in turn, in each of the individual positions, operated at its reference flux, the individual measurements in each position being added together."

Annex 6,

Paragraph 1.2., amend to read:

"1.2. With respect to ... chosen at random and equipped with a standard ~~filament lamp~~ **light source**, or...respectively:"

Paragraph 1.2.3., amend to read:

"1.2.3. If, in the ... standard ~~filament lamp~~ **light source.**"

Annex 7,

Paragraph 1.2., amend to read:

"1.2. With respect to ...chosen at random and equipped with a standard ~~filament lamp~~ **light source**, or when the lamps are equipped with non-replaceable ..."

Paragraph 1.2.3., amend to read:

"1.2.3. If, in the case of a ... another standard ~~filament lamp~~ **light source.**"

II. Justification

1. At its sixty-second session GRE adopted ECE/TRANS/WP.29/GRE/2009/55, a draft Regulation for LED light sources (Regulation No. XXX), where it is intended to provide an additional light source option of replaceable, approved LED light sources.

2. This proposal has the aim to incorporate LED light sources into Regulation No. 4 as an alternative replaceable light source. Therefore all parts in the text referring to "filament lamps" have been replaced by the more general wording "light source" in order to allow in future both types of approved light sources categories to be used. Where necessary a distinction between both types has been made and references to the appropriate light source Regulations (Regulation No. 37 and Regulation No. XXX) have been added.

3. This proposal is part of a collective amendment comprising the following Regulations Nos. 4, 6, 7, 23, 38, 50, 77, 87, 91 and 119.
