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Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Lighting and Light-Signalling****Sixty-fifth session**

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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 14 to Regulation No. 91
(Side-marker lamps)****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 the use of light-emitting diode (LED) light sources according to the draft Regulation (Regulation No. XXX: ECE/TRANS/WP.29/2010/44 and Corr.1). 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 2.3., amend to read:

"2.3. "Side-marker lamps of different types" means lamps which ~~do not~~ differ in such essential respects as:

- (a) The trade name or mark;
- (b) The characteristics of the optical system, (levels of intensity, light distribution angles, category of ~~filament-lamp~~ **light source**, light source module, etc.);

A change of the colour of the ~~filament-lamp~~ **light source** or the colour of any filter does not constitute a change of type."

Paragraph 2.4., amend to read:

"2.4. 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 3.2.2., amend to read:

"3.2.2. A brief ...sources:

- (a) The category ...; and/or
- (b) **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**
- (c) the light source module..."

Paragraph 4.3., amend to read:

"4.3. With the ... indicating:

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

Paragraphs 6.4. to 6.4.3., amend to read:

"6.4. In the case of replaceable ~~filament-lamp(s)~~ **light source(s)**:

6.4.1. 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.**

6.4.2. The design of the device shall be such that the ~~filament-lamp~~ **light source** can be fixed in no other position but the correct one.

- 6.4.3. 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."

Paragraphs 9.1. to 9.1.4., amend to read :

- "9.1. **All measurements, photometric and colorimetric shall be carried out with an uncoloured or coloured standard light source of the category prescribed for the device, supplied with the voltage:**
- (a) **In the case of filament lamps, that is necessary to produce the reference luminous flux required for that category of filament lamp;**
 - (b) **In the case of LED light sources of 6.75 V or 13.5 V; the luminous flux value produced shall be corrected. The correction factor is the ratio between the objective luminous flux and the mean value of the luminous flux found at the voltage applied.**
 - (c) **In the case of lamps with non-replaceable light sources: 6.75 V and 13.5 V respectively.**
 - (d) **In the case of a system that uses an electronic light source control gear being part of the lamp ¹ applying at the input terminals of the lamp the voltage declared by the manufacturer or, if not indicated, 6.75 V, 13.5 V or 28.0 V, respectively.**
 - (e) **In the case of a system that uses an electronic light source control gear not being part of the lamp, the voltage declared by the manufacturer shall be applied to the input terminals of the lamp."**

Annex 2, item 9, amend to read:

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

Annex 4, paragraph 3.2., amend to read:

- "3.2. 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 luminous intensity 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."

¹ For the purpose of this Regulation..."

Annex 5,

Paragraph 1.2., amend to read:

"1.2. With respect ... a standard ~~filament lamp~~ **light source**, or when ..."

Paragraph 1.2.2., amend to read:

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

Paragraph 1.3., amend to read:

"1.3. The chromaticity ... standard ~~filament lamp~~ **light source**, or for lamps equipped ..."

Annex 6,

Paragraph 1.2., amend to read:

"1.2. With respect ... standard ~~filament lamp~~ **light source**, or when ...:

Paragraph 1.2.2., amend to read:

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

Paragraph 1.3., amend to read:

"1.3. The chromaticity ... standard ~~filament lamp~~ **light source**, or for side-maker ..."

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 aims to incorporate LED light sources into Regulation No. 91 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" to allow in future both types of approved light source 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.
