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World Forum for Harmonization of Vehicle Regulations

Working Party on Lighting and Light-Signalling

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Item 4(d) of the provisional agenda

REGULATION No. 48

(Installation of lighting and light-signalling devices)

Proposal for Corrigendum 3 to Revision 5

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) in order to clarify the definition and requirements in Regulation No. 48 relating to "objective luminous flux". The modifications to the existing text of the Regulation 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 2.7.27., amend to read:

"2.7.27. "Objective luminous flux" means ~~the~~ a design (**target**) value of the luminous flux of a ~~replaceable~~ light source or **of a** light source module ~~that it shall be~~ **is to be** achieved, ~~within the specified tolerances, when the replaceable light source or light source module is energized by the power supply at the specified test voltage,~~ as indicated in:

- (a) the **relevant** data sheet of the **applicable** light source **Regulation according to which the light source is approved,** or
- (b) the technical specification as submitted with the light source module **for approval of the lamp of which the light source module is a part."**

Paragraph 6.2.9., amend to read:

"6.2.9. Other requirements

The requirements of paragraph 5.5.2. shall not apply to dipped-beam headlamps.

Dipped-beam headlamps with a light source or LED module(s) producing the principal dipped beam and having a total objective luminous flux which exceeds 2,000 lumen shall only be installed in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45. [12/]

With respect to vertical inclination the provisions of paragraph 6.2.6.2.2. above shall not be applied for dipped-beam headlamps:

- (a) with LED module(s) producing the principal dipped beam, or
- (b) with a light source producing the principal dipped beam and having an objective luminous flux which exceeds 2,000 lumen.

In the case of dipped-beam headlamps equipped with an approved light source, the applicable objective luminous flux is the value at the relevant test voltage as given in the relevant data sheet in the Regulation, according to which the applied light source was approved, without taking into account the tolerances to the objective luminous flux specified on this datasheet.

Only dipped-beam headlamps according to Regulations Nos. 98 or 112 may be used to produce bend lighting.

If bend lighting is produced by a horizontal movement of the whole beam or the kink of the elbow of the cut-off, it shall be activated only if the vehicle is in forward motion; this shall not apply if bend lighting is produced for a right turn in right hand traffic (left turn in left hand traffic)."

B. JUSTIFICATION

The objective luminous flux was originally only defined in Regulations Nos. 37 and 99. Later on, a general definition was inserted in Regulation No. 48.

On the occasion of the introduction of light emitting diode (LED) modules, the definition in Regulation No. 48 was amended in such a way that objective luminous flux can also apply to LED modules. It may however be unclear that the "data sheet of the replaceable light source" in the definition is intended to be the data sheet as is included in the respective regulation according to which the replaceable light source is approved. This value, together with the reference luminous flux is the linking pin between approved light source and lamp.

Clarification of the value of objective luminous flux is also needed for correct interpretation when evaluated in relation to levelling and cleaning requirements. The tolerances as given in the data sheet are intended for approval of the light source. It may be unclear that the value of objective luminous flux should be evaluated without taking these tolerances into account when comparing with the limit value of 2,000 lm, which is specified for light-sources in relation to mandatory automatic levelling and cleaning.

Often, there is also confusion about the terms "replaceable" and "approved", regarding light sources. Approved light sources are constructed in such a way that they can be applied as replaceable components. In the recent past "replaceable" light sources were mostly regarded equivalent to "approved" light sources. This has been changed since Regulations Nos. 19 and 123 allow approved light sources that cannot be replaced. This is clarified by this proposal.
