

**Economic and Social Council**Distr.: General
23 July 2010Original: English
English and French only

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

Geneva, 4–7 October 2010

Item 4(c) of the provisional agenda

Regulation No. 48 (Installation of lighting and light-signalling devices)**Proposal for Corrigendum 4 to Revision 6****Submitted by the expert of France ***

The text reproduced below was prepared by the expert from France to harmonize the introduction of the voltage control gear in Regulation Nos. 112 and 48 and to clarify the use of such a device built-in with the headlamp or provided by the car manufacturer. It is based up on Informal document GRE-63-09 distributed during the sixty-third session of the Working Party on Lighting and Light-Signalling (GRE). The modifications to the current text of Regulation No. 48, including draft Corrigendum 3 to Revision 5 (ECE/TRANS/WP.29/2010/107), are shown in bold for new or strikethrough for deleted 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 the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Paragraph 2.7.27., amend to read:

- “2.7.27. “Objective luminous flux” means the design (target) value of the luminous flux of a light source or of a light source module that is to be achieved at the specified test voltage, as **specified indicated in:**
- (a) **in** the relevant data sheet of the applicable light source Regulation according to which the light source is approved, or
 - (b) **by the manufacturer in the case of a system that uses an electronic light source control gear,**
 - (~~b-c~~) **in** 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.~~

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:

- (a) **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, or**
- (b) **declared by the manufacturer in the case of a system that uses an electronic light source control gear or a variable intensity control.**

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).”

II. Justification

1. The filament lamps in the current version of the Regulation No. 112 must be subject to a power supply that produces the reference flux specified in Regulation No. 37.
 2. The informal group on operating voltage (OVIG) has clarified the use of control gear in lighting and light-signalling devices as headlamps. Regulations Nos. 19 (class F3, paragraphs 2.4.3. and 6.4.1.1.3.) and 123 (paragraph 2.4.) already contain such requirements.
 3. For harmonization reasons, we propose to introduce voltage control gear in Regulations Nos. 112 and 48 to clarify the use of such device built-in with the headlamp or provided by the car manufacturer.
 4. Such device may reduce the thermal stress inside the headlamp and allow the headlamp manufacturer to use different materials for the design of the headlamps. The vehicle manufacturer may also use it to optimize the design taking into account the true power supply delivered to the equipment.
 5. The root mean square (RMS) voltage reduction also has a beneficial effect on power consumption because power consumption varies with the square value of the voltage. It might be convenient for electrical cars or energy saving cars (e.g.: Hybrid cars).
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