



Economic and Social Council

Distr.: General
14 January 2011

Original: 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-fifth session

Geneva, 28–31 March 2011

Item 5 (i) of the provisional agenda

**Collective amendments— Regulations Nos. 19, 48,
53, 86, 112 and 123**

Proposal for supplements to Regulations Nos. 19, 48, 53, 86, 112 and 123

Submitted by the expert from Canada*

The text reproduced below was prepared by the expert from Canada to eliminate reference to the 2000 lumens of "objective luminous flux" as threshold for requiring additional vehicle instrumentation. The modifications to the existing text of the Regulations Nos. 19 (including draft Supplement 1 to the 04 series of amendments: ECE/TRANS/WP.29/2011/9), 48 (including draft Supplement 7 to the 04 series of amendments: ECE/TRANS/WP.29/2011/11), 53, 86, 112 (including draft Supplement 1 to the 01 series of amendments: ECE/TRANS/WP.29/2011/15) and 123 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

A. Proposal of Supplement 2 to the 04 series of amendments to Regulation No. 19 - (Front fog lamps)

Paragraph 5.6., amend to read:

"5.6. In the case of Class B, the front fog lamp shall be equipped with one filament lamp approved according to Regulation No. 37 even if the filament lamp cannot be replaced. Any Regulation No. 37 filament lamp 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.**

(a) ~~its objective luminous flux does not exceed 2000 lumen, and~~

(b) ~~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."~~

B. Proposal of Supplement 8 to the 04 series of amendments to Regulation No. 48 (Installation of lighting and light-signalling devices)

Paragraph 6.2.9., amend to read:

"6.2.9. Other requirements

6.2.9.1. 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. 45.⁴⁴~~

~~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 filament lamps for which more than one test voltage is specified, the objective luminous flux which produces the principal dipped beam, as indicated in the communication form for the type approval of the device, is applied.~~

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

6.2.9.3. If bend lighting is produced by a horizontal movement of the whole beam ..."

Paragraph 6.3.4.2., the reference to footnote ¹² and footnote ¹², renumber as footnote ¹¹

Paragraph 6.3.5., the reference to footnote ¹³ and footnote ¹³, renumber as footnote ¹²

Paragraphs 6.3.6.1. to 6.3.6.1.2.2., shall be deleted

Paragraph 6.3.6.1.2.2.1.(former), renumber as paragraph 6.3.6.1. and amend to read:

"6.3.6.1. Depending on the mounting height... conditions of Annex 5 automatically remain ~~between the following values:~~

$h \leq 0.8$ **below -1.5 per cent**

~~Limits: between 1.5 per cent and 3.0 per cent~~

~~Initial aiming: between 1.5 per cent and 2.0 per cent~~

$h > 0.8$ **below -2.0 per cent**

~~Limits: between 2.0 per cent and 3.5 per cent~~

~~Initial aiming: between 2.0 per cent and 2.5 per cent"~~

Paragraph 6.3.6.1.2.2.2., shall be deleted

Paragraphs 6.3.6.2.1. to 6.3.6.2.4., amend to read:

"6.3.6.2.1. Where a levelling device is ... between the limits ~~prescribed in paragraph 6.3.6.1.2.2.1.:~~

$h \leq 0.8$

Limits: between -1.5 per cent and - 3.0 per cent

$h > 0.8$

Limits: between -2.0 per cent and - 3.5 per cent

6.3.6.2.2. In the case where the front fog lamp of category "F3" is part of ...

...

6.3.6.2.3. The levelling device ... in paragraph 6.3.6.2.1.2.2.1. are not exceeded.

6.3.6.2.4. In the case of a failure of the levelling device, the front fog beam shall not assume a position in which the cut off is ~~less inclined than it was at the time when the failure of the device occurred~~ **above values set in 6.3.6.1."**

Paragraph 6.5.8., the reference to footnote ¹³ and footnote ¹³, renumber as footnote ¹²

Paragraph 6.19., the reference to footnote ¹⁴ and footnote ¹⁴, renumber as footnote ¹³

Paragraph 6.19.7.3., the reference to footnote ¹⁵ and footnote ¹⁵, renumber as footnote ¹⁴

Paragraphs 6.21.4.1.3. and 6.21.4.2.3., the reference to footnote ¹⁶ and footnote ¹⁶, renumber as footnote ¹⁵

Paragraph 6.22.4.1.2., the reference to footnote ¹⁷ and footnote ¹⁷, renumber as footnote ¹⁶

Paragraph 6.22.7.4.3., the reference to footnote ¹⁸ and footnote ¹⁸, renumber as footnote ¹⁷

Paragraph 6.22.7.4.5., the reference to footnote ¹⁹ and footnote ¹⁹, renumber as footnote ¹⁸

Paragraph 6.22.9.1., shall be deleted.

Paragraphs 6.22.9.2. to 6.22.9.5., renumber as paragraphs 6.22.9.1. to 6.22.9.4.

C. Proposal of Supplement 14 to the 01 series of amendments to Regulation No. 53 (Installation of lighting and light-signalling devices on motorcycles)

Paragraph 6.2.5.3., amend to read:

"6.2.5.3. For ~~passing beam class E~~ headlamps with a light source having an objective luminous flux which exceeds 2,000 lumen, the vertical inclination of the passing beam..."

D. Proposal of Supplement 6 to Regulation No. 86 - (Installation of lighting and light-signalling devices for agricultural or forestry tractors)

Paragraph 6.2.11., amend to read:

"6.2.11. Other requirements The requirements of paragraph 5.5.2. shall not apply to the passing lamps.

Passing beam headlamps with LED or gas discharge light source(s) ~~producing the principal dipped beam (as defined in Regulation No. 48) and having a total objective luminous flux which exceeds 2,000 lumens~~ are prohibited."

E. Proposal of Supplement 2 to the 01 series of amendments to the Regulation No. 112 (Headlamps emitting an asymmetrical beam pattern)

Paragraph 5.9., shall be deleted.

Annex 1, item 9, amend to read:

"9. Brief description:

...

Number and specific identification code(s) of electronic light source control gear(s)

~~Total objective luminous flux as described in paragraph 5.9. exceeds 2,000 lumen:~~
yes/no/does not apply²

The adjustment of the cut-off has been determined at: 10 m/25 m/does not apply².....

..."

F. Proposal of Supplement 2 to the 01 series of amendments to the Regulation No. 123 (Adaptive Front-lighting Systems (AFS))

Paragraph 5.13., shall be deleted.

Paragraph 5.14., renumber as 5.13.

Annex 1, paragraph 9.2.3., shall be deleted

II. Justification

1. The use of objective luminous flux of the light source as threshold for requiring headlamp-washing system is not justifiable. Installed in poorly designed lamp, light sources of lesser flux than 2,000 lumens are capable of creating more glare than light sources with over 2,000 lumens output. Moreover, the true "political" reason for establishing this particular threshold is well known to lighting experts, who are well aware that moving it up or down may not have any effect on actual glare situation on the road. If GRE truly wants to address glare issue caused by brighter than "usual" headlamps, it should concentrate on the actual headlamp light output and the way the beam pattern is developed at a distance.

2. In view of a proposal for deletion of an old exemption, which still allows manual levelling (i.e. requiring automatic levelling devices on all headlamps, as it was envisaged already more than thirty years ago), the only requirement for additional equipment related to the brightness of a light source would be the headlamp washing system.

3. As headlamp aim is not readily verifiable, headlamp cleanliness is. It is drivers' responsibility to maintain their vehicle in good running order (tire pressure, window cleanliness, burned out lamps etc) – cleaning lamps should be a part of the vehicle daily maintenance. Between drivers' awareness of the technical state of the vehicle and enforcement, requirement of mandatory headlamp washing may be not an absolute necessity to assure safe vehicle operation.

4. The threshold of 2,000 lumens of objective luminous flux was subsequently used in Regulation No. 86 to disallow glaring headlamp on forestry tractors. Until better variable is established to eliminate glare problem of new technology headlamps, it is proposed to disallow of the new technology headlamp to be installed on forestry tractors.

5. With regard to front fog lamps, it is proposed to simplify their aiming requirements and remove 2,000 lumens threshold as variable deciding on automatic aiming.

Recently, in Regulation No. 53 GRE added allowance for installation of high intensity discharge (HID) headlamps on motorcycle and agreed on associated requirement to have automatic aiming for headlamps with objective luminous flux exceeding 2000 lumens. It is proposed that the 2,000 lumens threshold is replaced with requirement for automatic aiming for class E headlamps.
