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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****Ninetieth session**

Geneva, 29 April – 3 May 2024

Item 6 (a) of the provisional agenda

**Installation UN Regulations: UN Regulation No. 48 (Installation of lighting and light-signalling devices)****Proposal for a Supplement to the 06, 07, 08 and 09 series of amendments to UN Regulation No. 48****Submitted by the experts from the International Automotive Lighting and Light-Signalling Expert Group \***

The text reproduced below was prepared by the experts from the International Automotive Lighting and Light-Signalling Expert Group (GTB) with the aim to align the requirements in UN Regulation No. 48 with the updated requirements in UN Regulation No. 149. The proposed modifications to the current text of the UN Regulations are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2024 as outlined in proposed programme budget for 2024 (A/78/6 (Sect. 20), table 20.5), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



## I. Proposal

### A. Proposal for a Supplement to the 06 series of amendments to UN Regulation No. 48

*Paragraph 6.2.9.2., amend to read:*

“6.2.9.2. Dipped-beam headlamps with a light source(s) **and/or LED light source** module(s) producing the principal dipped beam ~~and~~ having a total objective luminous flux for ~~each~~ **at least one** headlamp which exceeds 2,000 lumens shall only be installed in conjunction with the installation of headlamp cleaning device(s) according to UN Regulation No. 45<sup>11</sup>.”

*Paragraph 6.2.9.3., amend to read:*

“6.2.9.3. With respect to vertical inclination the provisions of paragraph 6.2.6.2.2. above shall not be applied for dipped-beam headlamps with a light source(s) **and/or LED light source** module(s) producing the principal dipped beam and having an objective luminous flux for each headlamp which exceeds 2,000 lumens.

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.

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.”

*Paragraph 6.22.9.1., amend to read:*

“6.22.9.1. An AFS shall be permitted only in conjunction with the installation of headlamp cleaning device(s) according to UN Regulation No. 45<sup>16</sup> for at least those lighting units, which are indicated under item 9.2.3. of the communication form conforming to the model in Annex 1 to UN Regulation No. 123 or under item 9.3.2.3. of the communication form conforming to the model in Annex 1 to the 00 series of amendments to UN Regulation No. 149, or under item 9.2.2.3. of the communication form conforming to the model in Annex 1 to the 01 series of amendments to UN Regulation No. 149, if the total objective luminous flux of the light source(s) **and/or light source module(s)** of these units exceeds 2,000 lm **at least on one** ~~per~~ side, and which contribute to the class C (basic) passing beam.”

### B. Proposal for a Supplement to the 07 and 08 series of amendments to UN Regulation No. 48

*Paragraph 6.2.9.2., amend to read:*

“6.2.9.2. Dipped-beam headlamps with a light source(s) **and/or LED light source** module(s) producing the principal dipped beam having a total objective luminous flux for ~~each~~ **at least one** headlamp which exceeds 2,000 lumens shall only be installed in conjunction with the installation of headlamp cleaning device(s) according to UN Regulation No. 45<sup>11</sup>.”

*Paragraph 6.2.9.3., amend to read:*

“6.2.9.3. With respect to vertical inclination the provisions of paragraph 6.2.6.2.2. above shall not be applied for dipped-beam headlamps with a light source(s) **and/or**

~~LED~~ **light source** module(s) producing the principal dipped beam and having an objective luminous flux for each headlamp which exceeds 2,000 lumens.

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.

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.”

*Paragraph 6.22.9.1.*, amend to read:

“6.22.9.1. An AFS shall be permitted only in conjunction with the installation of headlamp cleaning device(s) according to UN Regulation No. 45<sup>16</sup> for at least those lighting units, which are indicated under item 9.2.3. of the communication form conforming to the model in Annex 1 to UN Regulation No. 123 or under item 9.3.2.3. of the communication form conforming to the model in Annex 1 to the 00 series of amendments to UN Regulation No. 149, or under item 9.2.2.3. of the communication form conforming to the model in Annex 1 to the 01 series of amendments to UN Regulation No. 149, if the total objective luminous flux of the light source(s) **and/or light source module(s)** of these units exceeds 2,000 lm **at least on one** per side, and which contribute to the class C (basic) passing beam.”

## C. Proposal for a Supplement to the 09 serie of amendments to UN Regulation No. 48

*Paragraph 6.2.9.2.*, amend to read:

“6.2.9.2. Dipped-beam headlamps with a light source(s) **and/or LED light source** module(s) producing the principal dipped beam having a total objective luminous flux for ~~each~~ **at least one** headlamp which exceeds 2,000 lumens shall only be installed in conjunction with the installation of headlamp cleaning device(s) according to UN Regulation No. 45<sup>11</sup>.”

*Paragraph 6.22.9.1.*, amend to read:

“6.22.9.1. An AFS shall be permitted only in conjunction with the installation of headlamp cleaning device(s) according to UN Regulation No. 45<sup>16</sup> for at least those lighting units, which are indicated under item 9.2.2.3. of the communication form conforming to the model in Annex 1 to UN Regulation No. 149, if the total objective luminous flux of the light source(s) **and/or light source module(s)** of these units exceeds 2,000 lm **at least on one** per side, and which contribute to the Class C (basic) passing beam.”

## II. Justification

1. The latest provisions in the 01 series of amendments to UN Regulation No. 149 require to indicate in the communication form whether or not the total objective luminous flux of one or more light source(s) or light source module(s) for a dipped beam exceeds 2,000 lumens. However, UN Regulation No. 48 presently refers only to a light source or light-emitting diode (LED) module(s) for dipped beam (paragraph 6.2.9.) and to light sources of the lighting units for an adaptive front-lighting system (AFS) (paragraph 6.22.9.).

2. The proposed modifications are intended to align the requirements in UN Regulation No. 48 with the updated requirements in the 01 series of amendments to UN Regulation No. 149 to avoid inconsistencies.

3. The term “LED module” has been replaced by “Light source module” for technological neutrality reasons. Based on the LED module definition (*“LED module” means a light source module containing as light sources only LEDs* - paragraph 2.9.1.7.) the change is justified.
  4. The addition of the words “at least” in paragraphs 6.2.9.2. and 6.22.9.1. is necessary to adapt the application of this provisions to the introduction of “matched pair” requirements for headlamps and AFS.
  5. With this proposal, the text of paragraph 6.2.9.2. will be editorially aligned between the 06 series of amendments and the subsequent 07, 08 and 09 series.
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