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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****Eighty-sixth session**

Geneva, 26–29 April 2022

Item 4 (c) of the provisional agenda

**Simplification of lighting and light-signalling UN Regulations:****UN Regulation No. 149 (Road illumination devices)****Proposal for Supplement [5] to the 00 series of amendments  
to UN Regulation No. 149****Submitted by the Informal Working Group on Simplification of  
Lighting and Light-Signalling Regulations\***

The text reproduced below was prepared by the Informal Working Group on Simplification of Lighting and Light-Signalling Regulations (IWG SLR) with the aim to clarify and to correct the text of the 00 series of amendments to UN Regulation No. 149. The modifications 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 2022 as outlined in proposed programme budget for 2022 (A/76/6 (Sect.20), para 20.76), 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

Paragraph 3.3.2.4.2., amend to read:

“3.3.2.4.2. In the case of headlamps/AFS installation unit designed to meet the requirements of both traffic systems, ~~by means of~~ **with or without** an appropriate adjustment of the setting of the optical unit or the light source(s) or LED module(s), a horizontal arrow with a head on each end, the heads pointing respectively to the left and to the right.”

Annex 1,

Item 9.1., amend to read:

“9.1. For Headlamps of Classes A and B<sup>+2</sup>”

Item 9.1.6., amend to read:

“9.1.6. Number and specific identification code(s) of LED module(s) and for each LED module a statement whether it is replaceable or not: yes/no<sup>+2</sup>.....”

Item 9.1.8., amend to read:

“9.1.8. Total objective luminous flux as described in paragraph 4.5.2.6. of this Regulation exceeds  $2.00 \cdot 10^3$  lumens: yes/no/does not apply<sup>+2</sup>”

Item 9.1.9., amend to read:

“9.1.9. The adjustment of the cut-off has been determined at: 10 m/25 m/does not apply<sup>+2</sup>  
The determination of the minimum sharpness of the "cut-off" has been carried out at: 10 m/25 m/does not apply<sup>+2</sup>”

Item 9.2.2., amend to read:

“9.2.2. The passing beam light source may/may not<sup>+2</sup> be lit simultaneously with the driving beam light source and/or another reciprocally incorporated headlamp.”

Item 9.2.6., amend to read:

“9.2.6. The adjustment of the "cut-off" has been determined at 10 m/25 m. <sup>+2</sup>  
The determination of the minimum sharpness of the "cut-off" has been carried out at 10 m/25 m. <sup>+2</sup>”

Item 9.2.8., amend to read:

“9.2.8. Distributed lighting system with one common gas-discharge light source: Yes/No<sup>+2</sup>”

Item 9.3.2.1., amend to read:

“9.3.2.1. Number and specific identification code(s) of LED module(s) and for each LED module a statement whether it is replaceable or not: yes/no<sup>+2</sup>  
.....”

Item 9.3.2.3., amend to read:

“9.3.2.3. Total objective luminous flux as described in paragraph 4.5.2.6. of this Regulation exceeds 2,000 lumen: yes/no<sup>+2</sup>”

Item 9.3.3., amend to read:

- “9.3.3. (a) Indications according to paragraph 5.3.5.1. of this Regulation (which lighting unit(s) provide a "cut-off" as defined in Annex 5 of this Regulation, that projects into a zone extending from 6 degrees left to 4 degrees right and upwards from a horizontal line positioned at 0.8 degree down) .....
- (b) The adjustment of the "cut-off" has been determined at 10 m / 25 m<sup>+2</sup>

- (c) The determination of the minimum sharpness of the "cut-off" has been carried out at 10 m / 25 m<sup>12</sup> ”

*Item 9.3.5.*, amend to read:

- “9.3.5. Whether approval is sought for a system which is not intended to be included as part of the approval of a vehicle type according to UN Regulation No. 48: yes/no<sup>12</sup>”

*Item 9.3.7.*, amend to read:

- “9.3.7. Whether approval is sought for a system intended to be installed on vehicles only, which provide means for a stabilization/limitation of the system's supply: yes/no<sup>12</sup>”

*Item 9.3.8.*, amend to read:

- “9.3.8. The adjustment of the "cut-off" has been determined at 10 m / 25 m.<sup>12</sup>  
The determination of the minimum sharpness of the "cut-off" has been carried out at 10 m / 25 m.<sup>12</sup>”

*Item 9.4.*, amend to read:

- “9.4. For headlamps of Classes AS, BS, CS, DS and ES<sup>12</sup>”

*Item 9.4.3.*, amend to read:

- “9.4.3. Number and specific identification code(s) of LED modules and for each LED module a statement whether it is replaceable or not: yes/no<sup>12</sup>.....”

*Item 9.4.5.*, amend to read:

- “9.4.5. The determination of "cut-off" sharpness yes / no<sup>12</sup>  
If yes, it was carried out at 10 m / 25 m<sup>12</sup> .....”

*Item 9.4.7.*, amend to read:

- “9.4.7. The passing beam light source may/may not<sup>12</sup> be lit simultaneously with the driving beam light source and/or another reciprocally incorporated headlamp.”

*Item 9.4.9.*, amend to read:

- “9.4.9. Primary Driving Beam: yes / no<sup>12</sup>  
Secondary Driving Beam: yes / no<sup>12</sup>  
The Secondary Driving Beam shall only be operated together with a passing beam or a primary driving beam.”

*Item 9.5.3.*, amend to read:

- “9.5.3. LED module: yes/no<sup>12</sup> and for each LED module a statement whether it is replaceable or not: yes/no<sup>12</sup>”

*Items 9.5.5. to 9.5.9.*, amend to read:

- “9.5.5. Application of electronic light source control gear:<sup>10</sup> yes/no<sup>12</sup>  
Supply to the light source: .....  
Specification of the light source control gear: .....  
Input voltage:<sup>11</sup> .....  
In the case of an electronic light source control gear not being part of the lamp:  
Output signal specification: .....  
9.5.6. Colour of light emitted: ..... white/selective yellow<sup>12</sup>  
9.5.7. Luminous flux of the light source (see paragraph 4.5.2.6.)  
greater than 2,000 lumens: ... yes/no<sup>12</sup>”

- 9.5.8. Luminous intensity is variable: ... yes/no<sup>42</sup>
- 9.5.9. The determination of the cut-off gradient (if measured)  
 was carried out at ..... 10 m / 25 m<sup>42</sup>”

*Item 9.6.3.*, amend to read:

- “9.6.3. Light source module: ..... yes/no<sup>42</sup>”

*Item 9.6.5.*, amend to read:

- “9.6.5. Application of an electronic light source control gear:
- (a) Being part of the lamp.....yes/no<sup>42</sup>
- (b) Being not part of the lamp ..... yes/no<sup>42</sup>”

*Item 12.*, amend to read:

- “12. Approval granted / extended / refused / withdrawn<sup>42</sup>”

## II. Justification

*Paragraph 3.3.2.4.2.*

1. In UN Regulations Nos. 112 (paragraph 4.2.2.2.), 113 (paragraph 4.2.2.1.) and 123 (paragraph 4.2.2.7.), the marking of a double-headed arrow was mandatory for devices designed to meet the requirements of both traffic systems.
2. While devices type approved to UN Regulations Nos. 112 or 123 can meet the requirements of both traffic systems "by means of an appropriate adjustment", for devices type approved to UN Regulation No. 113 this is an inherent characteristic as the beam is symmetric.
3. When UN Regulation No. 149 was drafted, the different paragraphs of UN Regulations Nos. 112, 113 and 123 were merged and led into the current paragraph 3.3.2.4.2. The resulting text may be misinterpreted as if now only systems that include “means of an appropriate adjustment” need to be marked with the double-headed arrow, and symmetrical devices are no longer required to be marked.
4. The proposed change to paragraph 3.3.2.4.2. clarifies that the marking requirements continue to apply to all systems, including the symmetrical ones.

*Annex 1*

5. The proposed changes correct two typos:
  - In item 9.1.8. the correct reference should be 4.5.2.6. Paragraph 4.5.6. does not exist.
  - The reference to footnote 1 throughout Annex 1 is obviously wrong as it should be footnote 2, i.e. “*Strike out what does not apply*”.

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