

15 February 2023

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## Agreement

### **Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations\***

(Revision 3, including the amendments which entered into force on 14 September 2017)

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#### **Addendum 47 – UN Regulation No. 48**

#### **Revision 6 - Amendment 14**

Supplement 8 to the 03 series of amendments – Date of entry into force: 4 January 2023

#### **Uniform provisions concerning the approval of vehicles with regard to the installation of lighting and light-signalling devices**

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2022/95.



**UNITED NATIONS**

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\* Former titles of the Agreement:

Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958 (original version); Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, done at Geneva on 5 October 1995 (Revision 2).



Add a new paragraph 2.7.9.1. to read:

"2.7.9.1. "Auxiliary driving-beam (auxiliary main-beam) lamp" means a driving-beam approved as separate lamp in such a way that it is supplementing a driving-beam of another class."

Paragraph 5.10. and related sub-paragraphs, amend to read:

"5.10. Provisions regarding light which could give rise to confusion:

5.10.1. Red light emitted by a lamp fitted on the rear of the vehicle (as defined in paragraph 2.7.) shall not be visible from the front of the vehicle.

5.10.2. White light emitted by a lamp fitted on the front of the vehicle (as defined in paragraph 2.7.) shall not be visible from the rear of the vehicle.

5.10.3. No account shall be taken of light emitted by devices for the interior lighting of the vehicle.

5.10.4. To verify paragraphs 5.10.1. and 5.10.2.:

5.10.4.1. For the visibility of red light towards the front of a vehicle, with the exception of a red rearmost side-marker lamp, there shall be no direct visibility of the apparent surface of a red lamp if viewed by an observer moving within Zone 1 in a transverse plane situated 25 m in front of the vehicle (see Annex 4);

5.10.4.2. For the visibility of white light towards the rear of a vehicle, with the exception of reversing lamps and white side conspicuity markings, there shall be no direct visibility of the apparent surface of a white lamp if viewed by an observer moving within Zone 2 in a transverse plane situated 25 m behind the vehicle (see Annex 4);

5.10.4.3. In case of doubt, the requirement above shall be deemed fulfilled if the luminous intensity of the red light emitted to the front and/or the white light emitted to the rear, as verified during type approval of the lamps, is less than 0.25 cd per lamp taking into account the influence of the vehicle body if applicable."

Paragraph 6.1.2., amend to read:

"6.1.2. Number

Two, type approved according to:

- UN Regulation No. 98,  
or
- Class B of UN Regulation No. 112,  
or
- Classes B or D of the 00 series of amendments to UN Regulation No. 149,  
or
- Class B of the 01 and subsequent series of amendments series to UN Regulation No. 149.

Optionally, one or more additional pair(s) type approved according to:

- UN Regulation No. 98,  
and/or
- Classes A and/or B of UN Regulation No. 112,  
and/or
- Classes A and/or B and/or RA of UN Regulation No. 149."

*Paragraph 6.1.7.1., amend to read:*

"6.1.7.1. The main-beam headlamps may be switched ON either simultaneously or in pairs.

For changing over from the dipped to the main beam at least one pair of main-beam headlamps shall be switched ON. For changing over from the main-beam to the dipped-beam all main-beam headlamps shall be switched OFF simultaneously.

The auxiliary driving-beam(s), class RA, shall only be switched ON together with the driving-beams of another class, except when one or more pair(s) of auxiliary driving-beams, class RA, are used to produce light signals consisting of intermittent switching ON at short intervals (paragraph 5.12.)."

*Paragraph 6.1.7.3., delete.*

*Paragraph 6.1.9.2., amend to read:*

"6.1.9.2. This maximum intensity shall be obtained by adding together the individual reference marks which are indicated on the several headlamps."

*Paragraph 6.2.2., amend to read:*

"6.2.2. Number

Two, type approved according to:

- UN Regulations Nos. 98 or 112, excluding Class A,  
or
- Classes B or D of the 00 series of amendments to UN Regulation No. 149,  
or
- Class C of the 01 and subsequent series of amendments to UN Regulation No. 149."

*Paragraph 6.3.9., amend to read:*

"6.3.9. Other requirements

In the case where there is a positive indication in the communication form in item 10.9. of Annex 1 of Regulation No. 19 or item 9.5.8. of Annex 1 of Regulation No. 149 the alignment and the luminous intensities of the class "F3" front fog beam may be automatically adapted in relation to the prevailing ambient conditions. Any variations of the luminous intensities or alignment shall be performed automatically and in such a way that no discomfort, neither ..."

*Paragraph 6.22.6.1.2.1., amend to read:*

"6.22.6.1.2.1. In case the passing-beam is generated by several beams from different lighting units, the provisions according to paragraph 6.22.6.1.2. above apply to each said beam's "cut-off" (if any), which is designed to project into the angular zone, as indicated under item 9.4. of the communication form conforming to the model in Annex 1 to UN Regulations Nos. 123 or 149."

*Paragraph 6.22.9.1., amend to read:*

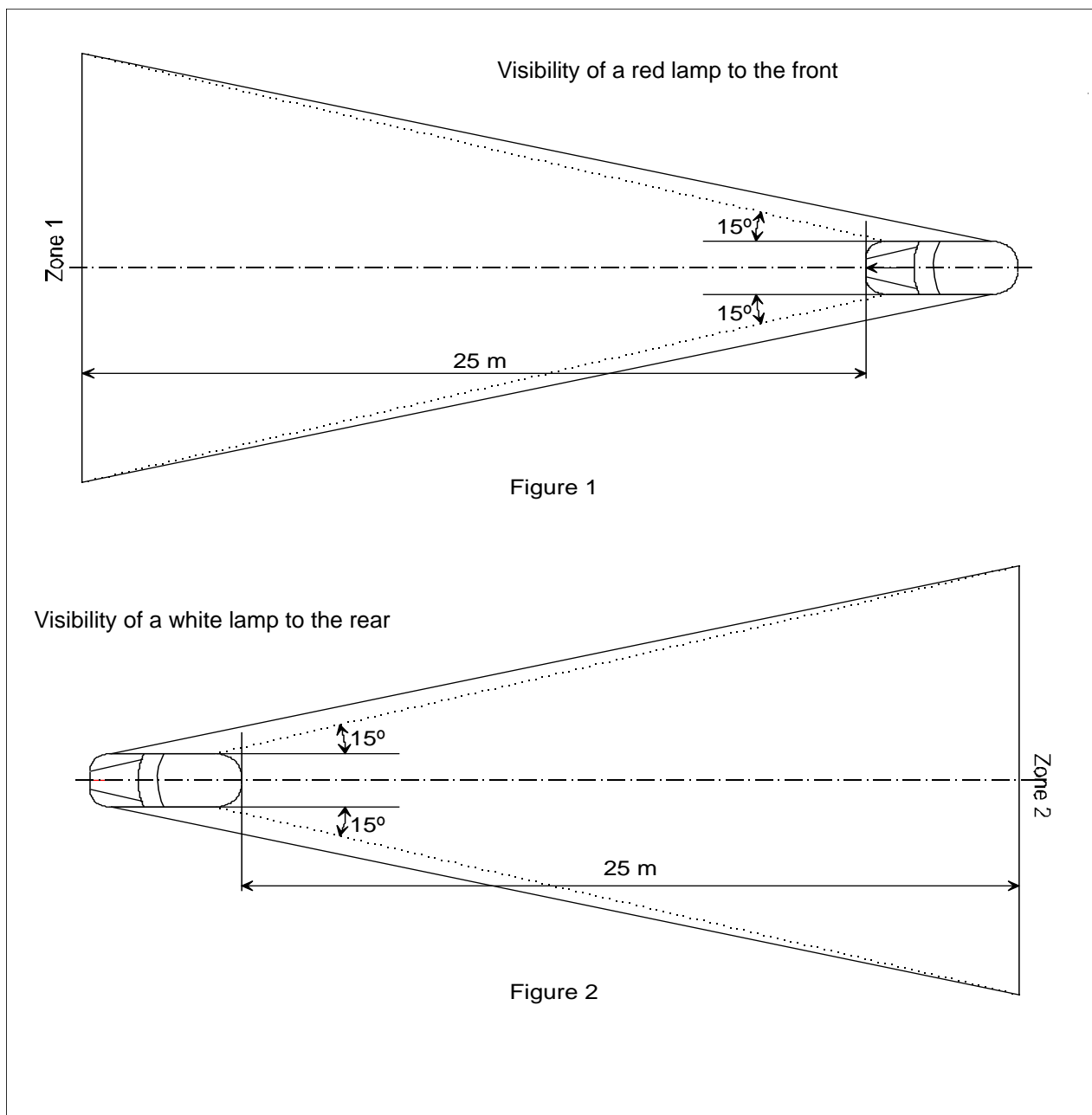
"6.22.9.1. An AFS shall be permitted only in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45<sup>22</sup> for at least those lighting units, which are indicated under item 9.3. of the communication form conforming to the model in Annex 1 to Regulation No. 123 or under item 9.3.3. in Annex 1 to Regulation No. 149, if the total objective luminous flux of the light sources of these units exceeds 2,000 lm per side, and which..."

Annex 4, amend to read:

## "Annex 4

### Visibility of a red lamp to the front and visibility of a white lamp to the rear

(See paragraph 5.10.4. of this Regulation)



In their respective planes, the zones 1 and 2 explored by the eye of the observer are bounded:

- In height, by two horizontal planes 1 m and 2.2 m respectively above the ground;
- In width, by two vertical planes which, forming to the front and to the rear respectively an angle of 15° outwards from the vehicle's median longitudinal plane, pass through the point or points of contact of vertical planes parallel to the vehicle's median longitudinal plane

delimiting the vehicle's overall width; if there are several points of contact, the foremost shall correspond to the forward plane and the rearmost to the rearward plane."

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