

25 January 2011

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## **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\***

(Revision 2, including the amendments which entered into force on 16 October 1995)

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### **Addendum 47: Regulation No. 48**

#### **Revision 6 – Amendment 2**

Supplement 5 to the 03 series of amendments - Date of entry into force: 9 December 2010

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



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\* Former title 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.

Paragraphs 6.21.1.2.1. to 6.21.1.2.3., amend to read:

"6.21.1.2.1. To the rear:

...

(b) O<sub>3</sub> and O<sub>4</sub> (with the exception of incomplete vehicles)

6.21.1.2.2. To the side:

6.21.1.2.2.1. Partial contour marking on vehicles exceeding 6,000 mm in length (including the drawbar for trailers) of the following categories:

...

(b) O<sub>3</sub> and O<sub>4</sub> (with the exception of incomplete vehicles)

6.21.1.2.3. A line marking may be installed instead of the mandatory contour marking if the shape, structure, design or operational requirements of the vehicle make it impossible to install the mandatory contour marking."

*Insert new paragraphs 6.21.1.2.4. and 6.21.1.2.5., to read:*

"6.21.1.2.4. If the exterior surfaces of the bodywork are partially constituted of flexible material, this line marking shall be installed on (a) rigid part(s) of the vehicle. The remaining portion of conspicuity markings may be fitted on the flexible material. However, if the exterior surfaces of the bodywork are fully constituted of flexible material, requirements of paragraph 6.21. shall be met.

6.21.1.2.5. In cases where the manufacturer, after verification by the Technical Service, can prove to the satisfaction of the authority responsible for type approval that it is impossible, due to the operational requirements which may require special shape, structure or design of the vehicle, to comply with the requirements contained in paragraphs 6.21.2. to 6.21.7.5., then partial fulfilment of some of these requirements is acceptable. This is conditional upon a portion of the requirements being met where possible, and the application of conspicuity markings that partially meet requirements maximised on the vehicle structure. This may include fitting of additional brackets or plates containing material compliant with Regulation No. 104 where structure is available to ensure clear and uniform signalling compatible with the objective of conspicuity.

Where partial fulfilment is deemed acceptable, retro-reflective devices like retro-reflectors of class IV of Regulation No. 3 or brackets containing retro-reflecting material compliant with photometric requirements of Class C of Regulation No. 104 may substitute part of the required conspicuity markings. In this case, at least one of these retroreflective devices shall be installed per 1500 mm.

The necessary information shall be indicated in the communication form."

*Paragraph 6.21.3., amend to read:*

"6.21.3. *Arrangement*

The conspicuity markings shall be as close as practicable to horizontal and vertical, compatible with the shape, structure, design and operational requirements of the vehicle; if this is not possible, the full or partial contour markings, when fitted, shall follow as close as practicable the contour of the outer shape of the vehicle.

Furthermore, the conspicuity markings shall be spaced as evenly as possible over the horizontal dimensions of the vehicle such that the total length and/or width of the vehicle can be identified."

*Paragraph 6.21.4.3.1.*, amend to read:

"6.21.4.3.1. Line markings and contour markings lower element(s)

As low as practicable within the range:

Minimum: not less than 250 mm above the ground.

Maximum: not more than 1,500 mm above the ground.

However, a maximum mounting height of 2,500 mm may be accepted where the shape, structure, design or operational conditions of the vehicle prevent compliance with the maximum value of 1,500 mm or, if necessary, to fulfil the requirements of paragraphs 6.21.4.1.2., 6.21.4.1.3., 6.21.4.2.2. and 6.21.4.2.3., or the horizontal positioning of the line marking or the lower element(s) of the contour marking.

The necessary justification for installation of conspicuity material higher than 1500 mm shall be indicated in the communication form."

*Paragraphs 6.21.5.*, amend to read:

"6.21.5. *Visibility*

The conspicuity marking shall be considered visible, if at least 80 per cent of the illuminating surface of the installed marking is visible when viewed by an observer positioned at any point within the observation planes defined below:"

*Paragraph 6.21.5.1.2.*, amend to read:

"6.21.5.1.2. In width, by two vertical planes which form an angle of 4° outwards from the vehicle's median longitudinal plane and which pass through the intersection of the vertical planes parallel to the vehicle's median longitudinal plane delimiting the vehicle's overall width, and the plane perpendicular to the longitudinal axis of the vehicle that delimits the end of the vehicle."

*Paragraphs 6.21.5.2.1 and 6.21.5.2.2.*, amend to read:

"6.21.5.2.1. In height, by two horizontal planes 1.0 m and 1.5 m respectively above the ground,

6.21.5.2.2. In width, by two vertical planes which form an angle of 4° outwards from a plane perpendicular to the vehicle's longitudinal axis and which pass through the intersection of the vertical planes perpendicular to the vehicle's longitudinal axis delimiting the vehicle's overall length and the extreme outer edge of the vehicle."

*Paragraphs 6.21.6.1. and 6.21.6.2.*, amend to read:

"6.21.6.1. To the side:

As close as practicable to being parallel to the median longitudinal plane of the vehicle, compatible with the shape, structure, design and operation requirements of the vehicle; if this is not possible, it shall follow as close as practicable the contour of the outer shape of the vehicle.

6.21.6.2. To the rear:

As close as practicable to being parallel to the transverse plane of the vehicle, compatible with the shape, structure, design and operation requirements of the vehicle, if this is not possible, it shall follow as close as practicable the contour of the outer shape of the vehicle."

*Paragraph 6.21.7.2., amend to read:*

"6.21.7.2. In the case of a partial contour marking, each upper corner shall be described by two lines at 90°, to each other and each at least 250 mm in length; if this is not possible, the marking shall follow as close as practicable the contour of the outer shape of the vehicle."

*Annex 1,*

*Insert a new item 9.24.4., to read:*

"9.24.4. Exemption regarding conspicuity marking according to paragraph 6.21.1.2.5.

Rear

yes/no<sup>2</sup>

Comments: .....

Side

yes/no<sup>2</sup>

Comments .....

*Insert new items 10.7. and 10.8., to read:*

"10.7. Comments regarding conspicuity marking (according to paragraphs 6.21.1.2.5. and 6.21.4.3.1. of this Regulation) ...

10.8. Comments regarding conspicuity marking (Incomplete vehicle or Complete Vehicles according to paragraphs 6.21.1.2.1. and 6.21.1.2.1.1.:

Incomplete vehicles: yes/no

Complete vehicles: yes/no

Completed vehicles: yes/no"

Annex 11, amend to read:

"Annex 11

**Visibility of conspicuity markings to the rear, front and side of a vehicle**

(see paragraph 6.21.5. of this Regulation)

