

27 November 2013

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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 86 – Regulation No. 87**

#### **Revision 3 - Amendment 1**

Supplement 17 to the original version of the Regulation – Date of entry into force:  
3 November 2013

#### **Uniform provisions concerning the approval of daytime running lamps for power-driven vehicles**



**UNITED NATIONS**

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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.

*Paragraph 2.1.*, amend to read:

"2.1. "Daytime running lamp" means a lamp or an interdependent lamp system facing in a forward direction used to make the vehicle more easily visible when driving during daytime;"

*Paragraph 2.3.*, amend to read:

"2.3. "Daytime running lamps of different types" means lamps or interdependent lamp systems which differ in such essential respects as:

- (a) The trade name or mark;
- (b) The characteristics of the optical system, (levels of intensity, light distribution angles, category of light source, light source module, etc.);

A change of the colour of the light source or the colour of any filter does not constitute a change of type."

*Paragraph 3.1.*, amend to read:

"3.1. ...

At the choice of the applicant, it will specify that the daytime running lamp may be installed on the vehicle with different inclinations of the reference axis in respect to the vehicle reference planes and to the ground or rotate around its reference axis; these different conditions of installation shall be indicated in the communication form.

All the interdependent lamps of an interdependent lamp system shall be submitted for type approval by the same applicant."

*Paragraph 3.2.2.*, amend to read:

"3.2.2. A brief technical description stating, in particular, with the exception of daytime running lamps with non-replaceable light sources:

- (a) The category..., and/or;
- (b) The category or categories of LED light source(s) prescribed; this LED light source category shall be one of those contained in Regulation No. 128 and its series of amendments in force at the time of application for type approval; and/or;
- (c) The light source module specific identification code."

*Paragraph 3.2.3.*, amend to read:

"3.2.3. Two daytime running lamps."

*Paragraph 4.2.*, amend to read:

"4.2. With the exception of daytime running lamps with non-replaceable light sources, bear a clearly legible and indelible marking indicating:

- (a) The category or categories of light source(s) prescribed; and/or
- (b) The light source module specific identification code."

*Paragraph 4.3.*, amend to read:

"4.3. In the case of daytime running lamps with an electronic light source control gear and/or non-replaceable light sources and/or light source module(s), bear the marking of the rated voltage or range of voltage and rated maximum wattage."

*Paragraph 4.5.*, amend to read:

"4.5. In the case of daytime running lamps with light source module(s), the light source module(s) shall bear:"

*Paragraph 5.1.1.*, amend to read:

"5.1.1. If the two daytime running lamps which are submitted in pursuance of paragraph 3.2.3. above satisfy the requirements to this Regulation, approval shall be granted."

*Paragraph 5.1.3.*, amend to read:

"5.1.3. An approval number shall be assigned to each type approved. Its first two digits (at present 00 for the Regulation in its original form) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party shall not assign this number to another type of daytime running lamp covered by this Regulation."

*Paragraph 5.1.4.*, amend to read:

"5.1.4. Notice of approval or of extension or refusal or withdrawal of approval or production definitively discontinued of a type of daytime running lamp pursuant to this Regulation shall be communicated to the Parties to the Agreement which apply this Regulation, by means of a form conforming to the model in Annex 1 to this Regulation."

*Paragraph 5.1.5.*, amend to read:

"5.1.5. Every daytime running lamp conforming to a type approved under this Regulation shall bear, in the space referred to in paragraphs 4.4. above, an approval mark as described in paragraphs 5.2. and 5.3. below."

*Paragraph 5.1.6.*, amend to read:

"5.1.6. The mark and symbols mentioned in paragraph 5.2. below shall be indelible and clearly legible even when the daytime running lamp is mounted on the vehicle."

*Paragraph 5.2.2.*, amend to read:

"5.2.2. The additional symbol "RL" and"

*Insert a new paragraph 5.2.2.1.*, to read:

"5.2.2.1 An additional letter "Y" to the right on each interdependent lamp which may be used as part of an interdependent lamp system."

*Paragraph 5.3.2.4.*, amend to read:

"5.3.2.4. An approval number shall be assigned to each type approved. The same Contracting Party may not assign the same number to another type of grouped, combined or reciprocally incorporated daytime running lamps covered by this Regulation."

*Paragraph 5.3.3.*, amend to read:

"5.3.3. Lamps reciprocally incorporated with other lamps, of which the lens may also be used for other types of lamps.

The provisions laid down in paragraph 5.3.2. above are applicable."

*Paragraph 5.3.3.1.*, amend to read:

"5.3.3.1. In addition, where the same lens is used, the latter may bear the different approval marks relating to the different types of headlamps or units of lamps, provided that the main body of the lamps, even if it cannot be separated from the lens, also comprises the space described in paragraph 4.4. above and bears the approval marks of the actual functions.

If different types of lamps comprise the same main body, the latter may bear the different approval marks."

*Insert a new paragraph 5.3.4.*, to read:

"5.3.4. Interdependent lamps as part of an interdependent lamps system

Annex 2, Figure 1a, to this Regulation gives an example of the arrangement of approval marks relating to the above case."

*Paragraph 6.1.*, amend to read:

"6.1. Each daytime running lamp shall conform to the specifications set forth in the paragraphs below. An interdependent lamp system shall meet the requirements when all its interdependent lamps are operated together."

*Paragraph 6.5.2.*, amend to read:

"6.5.2. The design of the daytime running lamp shall be such that the light sources can be fixed in no other position but the correct one."

*Paragraph 7.1.*, amend to read:

"7.1. The luminous intensity of the light emitted by each daytime running lamp shall not be less than 400 cd in the axis of reference."

*Paragraph 7.2.*, amend to read:

"7.2. Outside the reference axis and within the angular fields defined in the arrangement diagram in Annex 6 to this Regulation, the intensity of the light emitted by each daytime running lamp shall:"

*Paragraph 7.2.2.*, amend to read:

"7.2.2. Not exceed 1,200 cd in any direction the daytime running lamp is visible."

*Paragraph 7.3.*, amend to read:

"7.3. Moreover, throughout the field defined in the diagram in Annex 6, the intensity of the light emitted shall not be less than 1.0 cd."

*Paragraph 7.4.*, amend to read:

"7.4. Light source failure

7.4.1. In the case of a daytime running lamp containing more than one light source, the daytime running lamp shall comply with the minimum intensity required and the maximum intensity shall not be exceeded.

- 7.4.2. In case of failure of any one light source in a single lamp containing more than one light source, one of the following provisions shall apply:
- (a) The light intensity at the points of standard light distribution defined in Annex 3 to this Regulation shall be at least 80 per cent of the minimum intensity required, or
  - (b) The light intensity in the axis of reference shall be at least 50 per cent of the minimum intensity required, provided that a note in the communication form states that the lamp is only for use on a vehicle fitted with an operating tell-tale.
- 7.4.3. A group of light sources, wired so that the failure of any one of them causes all of them to stop emitting light, shall be considered to be one light source."

*Paragraph 8.*, amend to read:

## **"8. Apparent surface**

The area of the apparent surface in the direction of the axis of reference of the daytime running lamp shall be not less than 25 cm<sup>2</sup> and not more than 200 cm<sup>2</sup>."

*Paragraph 10.1.*, amend to read:

- "10.1. All measurements, photometric and colorimetric, when not supplied by an electronic light source control gear, shall be carried out with an uncoloured or coloured standard light source of the category prescribed for the daytime running lamp, supplied with the voltage:
- (a) In the case of filament lamps, that is necessary to produce the reference luminous flux required for that category of filament lamp;
  - (b) In the case of LED light sources of 6.75 V, 13.5 V or 28.0 V; the luminous flux value produced shall be corrected. The correction factor is the ratio between the objective luminous flux and the mean value of the luminous flux found at the voltage applied."

*Paragraph 10.2.*, amend to read (footnote 3 remains unchanged):

- "10.2. In the case of a system that uses an electronic light source control gear being part of the daytime running lamp<sup>3</sup>, all measurements, photometric and colorimetric, shall be made applying at the input terminals of the lamp a voltage of 6.75 V, 13.5 V or 28.0 V respectively."

*Paragraph 10.3.*, amend to read:

- "10.3. In the case of a system that uses an electronic light source control gear not being part of the daytime running lamp the voltage declared by the manufacturer shall be applied to the input terminals of the daytime running lamp. The test laboratory shall require from the manufacturer the light source control gear needed to supply the light source and the applicable functions.

The voltage to be applied to the daytime running lamp shall be noted in the communication form in Annex 1 to this Regulation."

*Paragraph 10.4.*, amend to read:

- "10.4. For any daytime running lamp except those equipped with filament lamps, the luminous intensities, measured after one minute and after 30 minutes of operation, shall comply with the minimum and maximum requirements. The

luminous intensity distribution after one minute of operation can be calculated from the luminous intensity distribution after 30 minutes of operation by applying at each test point the ratio of luminous intensities measured at HV after one minute and after 30 minutes of operation."

*Paragraph 11.1.*, amend to read:

"11.1. The daytime running lamp shall be subjected to a one-hour test of continuous operation following a warm-up period of 20 minutes. The ambient temperature shall be  $23^{\circ}\text{C} \pm 5^{\circ}$ . The light source used shall be a light source of the category specified for the daytime running lamp, and shall be supplied with a current at a voltage such that it gives the specified average power at the corresponding test voltage. However, for daytime running lamps equipped with non-replaceable light sources (filament lamps and other), the test shall be made with the light sources present in the daytime running lamp, in accordance with paragraph 10.2. of this Regulation."

*Paragraph 11.2.*, amend to read:

"11.2. Where only the maximum power is specified, the test shall be carried out by regulating the voltage to obtain a power equal to 90 per cent of the specified power. The specified average or maximum power referred to above shall in all cases be chosen from the voltage range of 6, 12 or 24 V at which it reaches the highest value; for daytime running lamps equipped with non-replaceable light sources (filament lamps and other) the test conditions set in paragraph 10.2. of this Regulation shall be applied."

*Paragraph 11.3.*, amend to read:

"11.3. After the daytime running lamp has been stabilized at the ambient temperature, no distortion, deformation, cracking or colour modification shall be perceptible. In case of doubt the intensity of light according to paragraph 7. above shall be measured. At that measurement the values shall reach at least 90 per cent of the values obtained before the heat resistance test on the same device."

*Paragraph 12.1.*, amend to read:

"12.1. Every modification of the type of daytime running lamp shall be notified to the Administrative Departments which approved the type of daytime running lamp. The department may then either:"

*Paragraph 12.1.1.*, amend to read:

"12.1.1. Consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case the daytime running lamp still complies with the requirements; or"

*Paragraph 13.1.*, amend to read:

"13.1. Daytime running lamps approved under this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set forth in paragraphs 6., 7., 8. and 9. above."

*Annex 1,*

*Item 1,* amend to read:

"1. Trade name or mark of the daytime running lamp:"

Item 2, amend to read:

"2. Manufacturer's name for the type of daytime running lamp:"

Insert a new item 10, to read:

"10. The daytime running lamp is designed as an interdependent lamp system  
yes/no<sup>2</sup>

The interdependent lamp system consists of 2/3<sup>2</sup> interdependent lamps."

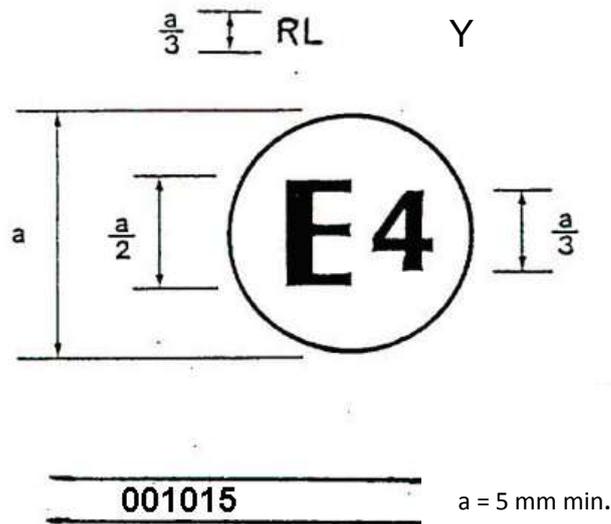
Items 10. to 16., renumber as items 11. to 17.

Annex 2,

Insert a new example of the approval mark, to read (the amendment is marked in RED):

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Figure 1a



The lamp bearing the approval mark shown above has been approved in the Netherlands (E 4) under number 001015 as a part of an interdependent lamp system composing a daytime running lamp. The approval number indicates that the approval was granted according to the requirements of this Regulation in its original (un-amended) form."

Annex 3,

Paragraph 4., amend to read:

"4. Photometric measurement of daytime running lamps

The photometric performance shall be checked:"

Paragraph 4.1., amend to read:

"4.1. For non-replaceable light sources (filament lamps or other): with the light sources present in the daytime running lamp, in accordance with paragraph 10. of this Regulation."

*Paragraph 4.2.*, amend to read:

"4.2. For replaceable filament lamps:

When equipped with filament lamps at 6.75 V, 13.5 V or 28.0 V the luminous intensity values produced shall be corrected. The correction factor is the ratio between the reference luminous flux and the mean value of the luminous flux found at the voltage applied (6.75 V, 13.5 V or 28.0 V). The actual luminous fluxes of each filament lamp used shall not deviate more than  $\pm 5$  per cent from the mean value. Alternatively standard filament lamp(s) may be used in turn, in each of the individual positions, operated at its reference flux, the individual measurements in each position being added together."

*Paragraph 5.1.*, amend to read:

"5.1. The direction  $H = 0^\circ$  and  $V = 0^\circ$  corresponds to the reference axis. (On the vehicle, it is horizontal, parallel to the median longitudinal plane of the vehicle and oriented in the required direction of visibility). It passes through the centre of reference. The values shown in the table give, for the various directions of measurement, the minimum intensities as a percentage of the minimum required in the axis for each daytime running lamp (in the direction  $H = 0^\circ$  and  $V = 0^\circ$ )."

*Annex 4,*

*Paragraph 1.2.*, amend to read:

"1.2. With respect to photometric performances, the conformity of mass-produced lamps shall not be contested if, when testing photometric performances of any lamp chosen at random and equipped with a standard light source or when the lamps are equipped with non-replaceable light sources (filament lamps or other), and when all measurements are made at 6.75 V, 13.5 V or 28.0 V respectively:"

*Paragraph 1.2.2.*, amend to read:

"1.2.2. If, in the case of a lamp equipped with a replaceable light sources and if results of the test described above do not meet the requirements, tests on lamps shall be repeated using another standard light source."

*Paragraph 1.3.*, amend to read:

"1.3. The chromaticity coordinates shall be complied with when the lamp is equipped with standard filament lamp(s), or for lamps equipped with non-replaceable light sources (filament lamps or other), when the colorimetric characteristics are verified with the light source present in the lamp."

*Annex 5,*

*Paragraph 1.2.*, amend to read:

"1.2. With respect to photometric performance, the conformity of mass-produced lamps shall not be contested if, when testing photometric performances of any lamp chosen at random and equipped with a standard light source, or when the lamps are equipped with non-replaceable light sources (filament lamps or other), and when all measurements are made at 6.75 V, 13.5 V or 28.0 V respectively:"

*Paragraph 1.2.2.*, amend to read:

"1.2.2. If, in the case of a lamp equipped with a replaceable light source(s) and if results of the test described above do not meet the requirements, tests on lamps shall be repeated using another standard light source."

*Paragraph 1.3.*, amend to read:

"1.3. The chromaticity coordinates shall be complied with when the lamp is equipped with a standard light source, or for lamps equipped with non-replaceable light sources (filament lamps or other), when the colorimetric characteristics are verified with the light source present in the lamp."

*Annex 6*, amend to read:

### **"Minimum angles required for light distribution in space**

In all cases, the minimum vertical angles of light distribution in space are 10° above and 5° below the horizontal for the daytime running lamp included in the Regulation.

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