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Item **xx** of the provisional agenda

Collective amendments - UN Regulations No. 48

Proposal for amendment to Regulation No. 48

Submitted by the expert from Germany*

The text reproduced below was prepared by the expert from Germany, with the support from the expert of The Netherlands, in order to insert provisions for the use of light source control gear in the case of halogen incandescent light sources. It is based on Revision 6, up to and including Supplement 7 and Corrigendum 4; ECE/TRANS/WP.29/GRE/2012/12, GRE-67-17 and GRE-67-30. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2010-2014 (ECE/TRANS/208, para. 106, ECE/TRANS/2010/8, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

Proposal

Paragraph 5.9, amend to read:

- “5. 9. In the absence of specific instructions, the photometric characteristics (e. g. intensity, colour, apparent surface, etc.) of a lamp shall not be intentionally varied during the period of activation of the lamp.
- 5. 9. 1. Direction-indicator lamps, the vehicle-hazard warning signal, amber side-marker lamps complying with paragraph 6. 18. 7. below, and the emergency stop signal shall be flashing lamps.
- 5. 9. 2. The photometric characteristics of any lamp, **except from those producing the principal passing beam**, may vary:
 - (a) in relation to the ambient light;
 - (b) as a consequence of the activation of other lamps; or
 - (c) when the lamps is being used to provide another lighting function;

provided that any variation in the photometric characteristics is in compliance with the technical provisions for the lamp concerned.”

Paragraph 5.27, amend to read:

- “ 5.27. For vehicles of M and N categories the applicant shall demonstrate to the Technical Service responsible for type approval testing that the electric power supply conditions for the devices indicated in 2.7.9, 2.7.10, 2.7.12, 2.7.14 and 2.7.15 above comply, when the electrical system of the vehicle is in a constant voltage operating condition, representative for the relevant category of powered vehicle as specified by the applicant, with the following provisions:
 - 5.27.1. The voltage supplied at the terminals of devices which, according to their type approval documentation, have been tested by the application of a special power supply/electronic light source control gear, or in a secondary operating mode or at a voltage requested by the applicant, shall not exceed the voltage specified for the relevant devices or functions as they have been approved.
 - 5.27.2. In all cases of electric power supply conditions not covered by paragraph 5.27.1., the voltage at the terminals of the device(s) or function(s) shall not exceed 6.75V (6 Volt-Systems), 13.5V (12 Volt-Systems) or 28.V (24 Volt-Systems) by more than 3 per cent.
 - 5.27.3. The provisions of paragraphs 5.27.1. and 5.27.2. shall not apply to devices which include an electronic light source control gear or a variable intensity control being part of the device.
 - 5.27.4. In the particular case where devices equipped with a filament light source produce the principal passing beam in conjunction with electronic light source control gear, the effective voltage (root-mean-square, r.m.s.) determined over a sufficient long time to measure the correct value at the terminals of the filament light source when the electrical system of the vehicle is in a constant voltage operating**

condition according to paragraph 5.27. shall not be less than 6.3 V (6 Volt-Systems), 13.2 V (12 Volt-Systems) or 28.0 V (24 Volt-Systems) minus 3%.

Additionally, in the case of filament light sources for which more than one test voltage is specified in Regulation No. 37 this deviation shall not be more than minus 3% from the lowest value of these test voltages that are being applied in the device.

However, if the electronic light source control gear is part of the device, the necessary measurements may be performed in addition to the procedures for the approval test. The manufacturer shall provide to the Technical Service the value of the vehicle voltage corresponding to the electrical system of the vehicle is in a constant voltage operating condition. The results shall be indicated in the communication document and test report “

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- 5.27.5. A report shall be attached to the approval documentation describing the methods used to demonstrate compliance and the results obtained.”

Justification

1. During GRE-67, the GTB proposal ECE/TRANS/WP.29/GRE/2012/12 was adopted. The expert from IEC introduced GRE-67-17 and GRE-67-30, raising some concerns to the proposal. GRE noted that the experts from Germany and the Netherlands raised their objection to a general voltage variation of filament lamps.
 2. This is why the German expert, with the support of the expert from The Netherlands, proposes to introduce requirements to avoid intentional (voltage) variation of the most critical application of halogen light sources, i.e. the principal passing beam, using halogen light sources.
 - a. Paragraph 5.9 of Regulation No. 48 is clarified.
 - b. A lower voltage limit is proposed in (new) paragraph 5.27.4 of Regulation No. 48.
 3. Unnecessary reduction of the lifetime of halogen filaments light sources is potentially detrimental to traffic safety, especially when there is no mandatory tell-tale showing malfunction of a lamp.
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