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Collective Amendments

Regulations Nos. 19, 48, 98, 113 and 123

Submitted by the experts from the Working Party “Brussels 1952”*

The text reproduced below was prepared by the expert from the Working Party “Brussels 1952” (GTB) in order to introduce into Regulation Nos. 19, 48, 98, 113, 123 the provisions for a ballast that is an integrated part of the gas-discharge light source according to Regulation No. 99. The modifications to the existing text of the Regulation are marked in bold for new characters.

* In accordance with the programme of work of the Inland Transport Committee for 2006–2010 (ECE/TRANS/166/Add.1, 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.

I. Proposal

A. Proposal of Supplement 1 to the 04 series of amendments to Regulation No. 19 - (Front fog lamps)

(The following text is based upon the 04 series of amendments to the Regulation)

Paragraph 2.4.6.1., amend to read:

“2.4.6.1. **and the ballast is not integrated with the light source**, one ballast, which may be totally or partly integrated in the front fog lamp.”

Paragraph 6.4.1.2., amend to read:

“6.4.1.2. In the case of a gas-discharge light source:

A standard light source shall be used as specified in Regulation No. 99, which has been aged during at least 15 cycles, in accordance with Annex 4, paragraph 4. of Regulation No. 99.

During testing of the front fog lamp the voltage at the terminals of the ballast **or at the terminals of the light source in case the ballast is integrated with the light source** shall be regulated to maintain 13.2 V for a 12 V system, or at the vehicle voltage as specified by the applicant, with a tolerance of ± 0.1 V.

The objective luminous flux of the gas-discharge light source may differ from that specified in Regulation No. 99. In this case, the luminous intensity values shall be corrected accordingly.”

Paragraph 6.4.4.1., amend to read:

“6.4.4.1. In the case of front fog lamps equipped with gas-discharge light sources **with the ballast not integrated with the light source**, the luminous intensity shall exceed 1080 cd in the measuring point at 0° horizontal and 2° D vertical, four seconds after activation of the fog lamp which has not been operated for 30 minutes or more.”

Annex 5, Paragraph 1.1.2.5., amend to read:

“1.1.2.5. For a gas-discharge light source, the test voltage for the ballast **or for the light source in case the ballast is integrated with the light source** is 13.2 ± 0.1 volts for 12 V network system, or otherwise specified in the application for approval.”

B. Proposal of Supplement 7 to the 04 series of amendments to Regulation No. 48 (Installation of lighting and light-signalling devices)

(The following text is based upon the Supplement 6 to the 04 series of amendments of this Regulation)

Paragraph 2.7.1.2., amend to read:

“2.7.1.2. “*Electronic light source control gear*” means one or more components between supply and light source, **whether or not integrated with the light source or the applied lamp**, to control voltage and/ or electrical current of the light source;”

Paragraph 2.7.1.2.1., amend to read:

“2.7.1.2.1. “Ballast” means an electronic light source control gear between supply and light source, **whether or not integrated with the light source or applied lamp**, to stabilise the electrical current of a gas-discharge light source;”

C. Proposal of Supplement 1 to the 01 series of amendments to Regulation No. 98 (Headlamps with gas-discharge light sources)

(The following text is based upon the 01 series of amendments to the Regulation)

Paragraph 1.4., shall be deleted.

Paragraphs 1.5 to 1.7., renumber as paragraphs 1.4. to 1.6.

Paragraph 6.1.7., amend to read:

“6.1.7. Four seconds after ignition of a headlamp, **equipped with a gas discharge light source with the ballast not integrated with the light source**, and that has not been operated for 30 minutes or more:”

Paragraph 6.2.4.4., amend to read:

“6.2.4.4. The voltage applied to the terminals of the ballast(s) **or at the terminals of the light source in case the ballast is integrated with the light source**, is:

either: 13.2 V \pm 0.1 for 12 V systems

or: otherwise specified (See Annex 7)”

Annex 8, Paragraph 1.2., amend to read:

“1.2. With respect to photometric performance, the conformity of mass-produced headlamps shall not be contested if, when testing photometric performance of any headlamp chosen at random and measured at 13.2 V \pm 0.1 V or as otherwise specified and:

either

equipped with a ~~removable~~ **replaceable** standard gas-discharge light source according to paragraph 6.1.3. The luminous flux of this gas-discharge light source may differ from the ~~reference~~ **objective** luminous flux **value** specified in Regulation No. 99. In this case, the illuminances shall be corrected accordingly.

or

equipped with the serial production gas-discharge light source and the serial ballast, **if any**. The luminous flux of this light source may deviate from the ~~nominal~~ **objective** luminous flux due to light source and ballast tolerances as specified in Regulation No. 99; accordingly the measured illuminances may be corrected by 20 per cent in the favourable direction.”

D. Proposal for draft Supplement 10 to Regulation No. 113 - (Headlamps emitting symmetrical beams)

(The following text is based upon Supplement 9 to the original version of the Regulation)

Paragraph 1.9., shall be deleted.

Paragraph 1.10., renumber as paragraph 1.9.

Paragraph 2.2.2.1., amend to read:

“2.2.2.1. for gas discharge lamps, the make and type of the ballast(s) **in the case that the ballast(s) is (are) not integrated with the light source(s);**”

Paragraph 6.1.4.3., amend to read:

“6.1.4.3. Four seconds after ignition of a headlamp, **equipped with a gas discharge light source with the ballast not integrated with the light source, and** which has not been operated for 30 minutes or more, 60 lux at least must be reached at point HV of a driving beam and 6 lux at point 2 (0. 86D-V) of a passing beam for headlamps incorporating driving beam and passing beam functions, or 6 lux at point point 2 (0. 86D-V) for headlamps having only a passing beam function. The power supply shall be sufficient to secure the quick rise of the high current pulse.”

Paragraph 6. 2.7.1., amend to read:

“6.2.7.1. The voltage applied ~~to~~ **at** the terminals of the ballast(s) **or at the terminals of the light source in case the ballast is (are) integrated with the light source,** is: either: 13.5 V ± 0. 1 V for 12 V systems or: otherwise specified (see Annex 11).”

Annex 4, paragraph 1.1.1.2., amend to read:

“

(b) In case of replaceable gas discharge light source(s): The test voltage for the electronic light source control-gear **or the light source in case the ballast is integrated with the light source,** is 13. 2 ± 0.1 volts for 12 V vehicle voltage systems, or otherwise specified in the application for approval.”

Annex 5, paragraph 1.3.1.1., amend to read:

“1.3.1.1. equipped with gas discharge light sources according to Regulation No. 99:
With respect to photometric performance, the conformity of mass-produced headlamps shall not be contested when testing photometric performance of any headlamp chosen at random and measured at 13.5 V ± 0.1 V or as otherwise specified

either equipped with a ~~removable~~ **replaceable** standard gas-discharge light source. The luminous flux of this gas-discharge light source may differ from the ~~reference~~ **objective** luminous flux specified in Regulation No. 99. In this case, the illuminances shall be corrected accordingly; or

equipped with the serial production gas-discharge light source and the serial ballast, possibly integrated with the light source. The luminous flux of this light source may deviate from the ~~nominal~~ **objective** luminous flux due to light source and ballast tolerances as specified in Regulation No. 99; accordingly the measured illuminances may be corrected by 20 per cent in the favourable direction;”

Annex 5, paragraph 1.3.5., amend to read:

“1.3.5. If the results of the tests described above do not meet the requirements, tests on the headlamp shall be repeated using another standard gas-discharge light source, gas-discharge light source and/or ballast, or LED module and

electronic light source control gear, whichever is applicable according to paragraph 1.3.1. above.”

Annex 7, paragraph 1.3.1.1., amend to read:

“1.3.1.1. gas discharge light sources according to Regulation No. 99:

With respect to photometric performance, the conformity of mass-produced headlamps shall not be contested when testing photometric performance of any headlamp chosen at random and measured at $13.5\text{ V} \pm 0.1\text{ V}$ or as otherwise specified if

either equipped with a ~~removable~~ **replaceable** standard gas-discharge light source. The luminous flux of this gas-discharge light source may differ from the ~~reference~~ **objective** luminous flux specified in Regulation No. 99. In this case, the illuminances shall be corrected accordingly; or

equipped with the serial production gas-discharge light source and the serial ballast, possibly integrated with the light source. The luminous flux of this light source may deviate from the ~~nominal~~ **objective** luminous flux due to light source and ballast tolerances; accordingly the measured illuminances may be corrected by 20 per cent in the favourable direction.”

Annex 7, paragraph 1.3.5., amend to read:

“1.3.5. If the results of the tests described above do not meet the requirements, tests on the headlamp shall be repeated using another standard gas-discharge light source, a gas-discharge light source and/or ballast, or (an) LED module(s) and electronic light source control gear(s), whatever is applicable according to paragraph 1.3.1. above.”

E. Proposal of Supplement 1 to the 01 series of amendments to the Regulation No. 123 (Adaptive Front-lighting Systems (AFS))

(The following text is based upon the 01 series of amendments to the Regulation including draft Corrigendum 1 to the 01 series of amendments (ECE/TRANS/WP.29/2010/109)).

Paragraph 6.1.4.4., amend to read:

“6.1.4.4. In case of a headlamp using a gas-discharge light source **with the ballast not integrated with the light source**, four seconds after ignition of a headlamp that has not been operated for 30 minutes or more:”

Annex 9, paragraph 2.2., amend to read:

“2.2. In the case of a replaceable gas-discharge light source:

The voltage applied ~~to~~ **at the terminals of the ballast(s) or at the terminals of the light source(s) in case the ballast is integrated with the light source**, is $13.2\text{ V} \pm 0.1$ for 12 V systems.

The system or parts thereof using a replaceable gas-discharge light source shall comply with the photometric requirements set out in the relevant paragraphs of this Regulation with at least one standard (étalon) light source, which has been aged during at least 15 cycles, as specified in Regulation No. 99. The luminous flux of this gas-discharge light source may differ from the objective luminous flux specified in Regulation No. 99.

In this case, the measured photometric values shall be corrected accordingly.”

II. Justification

1. With the introduction into Regulation No. 99 of new gas-discharge light sources having the ballast integrated with the light source, it is necessary to clarify the provisions concerning ballasts in the forward lighting device regulations that allow the use of gas-discharge light sources. This proposal introduces the necessary clarification.
 2. Apart from a proposal to exempt forward lighting devices using light sources with integrated ballast from the run-up test, the proposed changes are merely editorial. Their aim is to align the texts of the corresponding paragraphs in the five affected Regulations (Regulations No. 19, 98, 112, 113 and 123).
 3. The changes proposed to Regulation No. 48 integrate into the definitions the modifications for the “ballast integrated with the light source”. Since the definitions are currently referenced in all the above cited Regulations, the corresponding definitions in these Regulations are deleted to avoid possible (future) discrepancies between them and the “original” definition of Regulation No. 48.
 4. Additionally, a few editorial changes have been included. These concern the terms ‘reference’ and ‘nominal’ luminous flux that do not exist for gas-discharge light sources according to Regulation No. 99, and “old” wordings such as ‘removable’ vs. ‘replaceable’ specifically in ECE/TRANS/WP.29/GRE/2008/56.
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