

Revision of document GRE/2016/31

Proposal for a collective amendment to Regulations Nos. 7, 23, 38, 48, 77, 91 and 119

During the GRE 76th session it has been found that the amendments proposed to Regulation 48 need further improvement from editorial point of view.

To provide more time to found a better wording for the proposed changes and to avoid to postpone the approval of the whole document, blocking the process of simplification of the other regulations included in the proposal, the part of the document related to Regulation 48 has been deleted from document GRE/2016/31 and will be presented separately at the next GRE session.

In addition the corrections contained in document GRE-76-07, related to Regulation 119, have been introduced into this document in such a way that a completely updated proposal is available for discussion in the 76th GRE session.

I. Proposal

A. Supplement 26 to the 02 series of amendments to Regulation No. 7 (Position, stop and end-outline lamps)

Paragraph 6.1.7., amend to read:

"6.1.7. ~~In case of f~~ Failure of a single lamp containing more than one light source ~~the following provisions shall apply:~~

6.1.7.1. **A In a single lamp containing more than one light source, 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.

6.1.7.2. ~~The lamp shall comply with the minimum intensity required in the table of standard light distribution in space as shown in Annex 4 when any one light source has failed. However, for lamps designed for only two light sources, 50 per cent of the minimum intensity in the axis of reference of the lamp shall be considered sufficient, 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 which indicates when any one of these two light sources has failed.~~

In case of failure of any one light source in a single lamp containing more than one light source, at least one of the following provisions shall apply:

(a) **The light intensity complies with the minimum intensity required in the table of standard light distribution in space as shown in Annex 4, or**

(b) **A signal for activation of a tell-tale indicating failure, as indicated in paragraphs 6.7.8., 6.9.8, 6.10.8. and 6.13.8. of Regulation No. 48, is produced, provided that the luminous intensity in the axis of reference is at least 50 per cent of the minimum intensity required. In this case a note in the**

communication form states that the lamp is only for use on a vehicle fitted with a tell-tale indicating failure."

B. Supplement 21 to the 00 series of amendments to Regulation No. 23 (Reversing and manoeuvring lamps)

Paragraph 6.1.5., amend to read:

"6.1.5. In the case of a single lamp containing more than one light source, ~~the lamp shall comply with the minimum intensity required when any one light source has failed and~~ when all light sources are illuminated the maximum intensities shall not be exceeded. ~~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.~~"

Insert a new paragraph 6.1.6., to read:

"6.1.6. Failure of a single lamp containing more than one light source:

6.1.6.1. In a single lamp containing more than one light source, 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.

6.1.6.2. In case of failure of any one light source in a single lamp containing more than one light source, at least one of the following provisions shall apply:

- (a) The light intensity complies with the minimum intensity required in the table of standard light distribution in space as shown in Annex 3, or**
- (b) A signal for activation of a tell-tale indicating failure, as indicated in paragraph 6.4.8. of Regulation No. 48, is produced, provided that the luminous intensity in the axis of reference is at least 50 per cent of the minimum intensity required. In this case a note in the communication form states that the lamp is only for use on a vehicle fitted with a tell-tale indicating failure."**

Annex 1, item 9, amend to read:

"9. Concise description:

Number, category and kind of light source(s):

Voltage and wattage:

Application of an electronic light source control gear:

(a) Being part of the lamp: yes/no²

(b) Being not part of the lamp: yes/no²

Input voltage(s) supplied by an electronic light source control gear:

Electronic light source control gear manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body):

Light source module: yes/no²

Light source module specific identification code:

Geometrical conditions of installation and relating variations; if any:

For a type of manoeuvring lamp pursuant to Regulation No. 23 paragraph 6.2.2.

Maximum mounting height:

The lamp is only for use on a vehicle fitted with a tell-tale indicating failure:yes/no²"

C. Supplement 18 to the 00 series of amendments to Regulation No. 38 (Rear fog lamps)

Paragraph 6.4., amend to read:

"6.4. In the case of a single lamp containing more than one light source, ~~the lamp shall comply with the minimum intensity required when any one light source has failed and~~ when all light sources are illuminated the maximum intensities shall not be exceeded."

Insert a new paragraph 6.5. to read:

- "6.5. Failure of a single lamp containing more than one light source:**
- 6.5.1. In a single lamp containing more than one light source, 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.**
- 6.5.2. In case of failure of any one light source in a single lamp containing more than one light source, at least one of the following provisions shall apply:**
- (a) The light intensity complies with the minimum intensity required in the table of standard light distribution in space as shown in Annex 3, or**
 - (b) A signal for activation of a tell-tale indicating failure, as indicated in paragraph 6.11.8. of Regulation No. 48, is produced, provided that the luminous intensity in the axis of reference is at least 50 per cent of the minimum intensity required. In this case, a note in the communication form states that the lamp is only for use on a vehicle fitted with a tell-tale indicating failure."**

Paragraphs 6.5. (former), and its subparagraphs, to 6.7., renumber accordingly.

Annex 1, item 9, amend to read:

- "9. Concise description:
- Number, category and kind of light source(s)
- Voltage and wattage:
- Light source module specific identification code:
- Geometrical conditions of installation and relating variations, if any:
- Application of an electronic light source control gear/variable intensity control:
- (a) Being part of the lamp: yes/no²
 - (b) Being not part of the lamp: yes/no²
- Input voltage(s) supplied by an electronic light source control gear/variable intensity control
- Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body):
- Variable luminous intensity: yes/no²
- The lamp is only for use on a vehicle fitted with a tell-tale indicating failure:yes/no²"**

D. Supplement 17 to the 00 series of amendments to Regulation No. 77 (Parking lamps)

Paragraph 7.1.3. amend to read:

"7.1.3. In the case of a single lamp containing more than one light source, ~~the lamp shall comply with the minimum intensity required when any one light source has failed and~~ when all light sources are illuminated the maximum intensities shall not be exceeded.

~~All light sources which are connected in series are considered to be one light source."~~

Insert a new paragraph 7.1.4. to read:

"7.1.4. Failure of a single lamp containing more than one light source:

7.1.4.1. In a single lamp containing more than one light source, 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.

7.1.4.2. In case of failure of any one light source in a single lamp containing more than one light source, at least one of the following provisions shall apply:

(a) The light intensity complies with the minimum intensity required in the table of standard light distribution in space as shown in Annex 4, or

(b) A signal for activation of a tell-tale indicating failure, as indicated in paragraph 6.12.8. of Regulation No. 48, is produced, provided that the luminous intensity in the axis of reference is at least 50 per cent of the minimum intensity required. In this case a note in the communication form states that the lamp is only for use on a vehicle fitted with a tell-tale indicating failure."

Annex 1, item 9, amend to read:

"9. Concise description:

Colour of light emitted:red / white /amber²

Number and category (ies) of light source(s):

Light source module: Yes /No²

Light source module specific identification code:

Geometrical conditions of installation and relating variations, if any:

Application of an electronic light source control gear/variable intensity control:

(a) Being part of the lamp: Yes/No/Not applicable²

(b) Being not part of the lamp: Yes/No/Not applicable²

Input voltage(s) supplied by an electronic light source control gear/variable intensity control:

Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body):

The lamp is only for use on a vehicle fitted with a tell-tale indicating failure: yes/no²"

E. Supplement 16 to the 00 series of amendments to Regulation No. 91 (Side-marker lamps)

Paragraph 7.1.4. amend to read:

"7.1.4. In the case of a lamp containing more than one light source:
~~The lamp shall comply with the minimum intensity required when any one light source has failed;~~
~~When all light sources are illuminated the maximum intensity specified may not be exceeded.~~
~~All light sources which are connected in series are considered to be one light source."~~

Insert a new paragraph 7.1.5. to read:

- "7.1.5. Failure of a single lamp containing more than one light source:**
- 7.1.5.1. In a single lamp containing more than one light source, 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.**
- 7.1.5.2. In case of failure of any one light source in a single lamp containing more than one light source, at least one of the following provisions shall apply:**
- (a) The light intensity complies with the minimum intensity required in the table of standard light distribution in space as shown in Annex 4, or**
 - (b) A signal for activation of a tell-tale indicating failure, as indicated in paragraph 6.18.8. of Regulation No. 48, is produced, provided that the luminous intensity in the axis of reference is at least 50 per cent of the minimum intensity required. In this case a note in the communication form states that the lamp is only for use on a vehicle fitted with a tell-tale indicating failure."**

Annex 2, item 9, amend to read:

- "9. Concise description:¹
- Colour of light emitted: amber / red²
- Number and category(ies) of light source(s):
- Light source module: yes/no²
- Light source module specific identification code:
- Only for limited mounting height equal to or less than 750 mm above the ground: yes/no²
- Geometrical conditions of installation and relating variations, if any:
- Application of an electronic light source control gear/variable intensity control:
- (a) Being part of the lamp: yes/no/not applicable²
 - (b) Being not part of the lamp: yes/no/not applicable²
- Input voltage(s) supplied by an electronic light source control gear/variable intensity control:
- Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body):

The lamp is only for use on a vehicle fitted with a tell-tale indicating failure:yes/no²"

F. Supplement 5 to the 01 series of amendments to Regulation No. 119 (Cornering lamps)

Paragraph 6.4. amend to read:

"6.4. In the case of a single lamp containing more than one light source, ~~the lamp shall comply with the minimum intensity required when any one light source has failed and~~ when all light sources are illuminated the maximum intensities shall not be exceeded."

Insert a new paragraph 6.5. to read:

"6.5. **Failure of a single lamp containing more than one light source:**

6.5.1. **In a single lamp containing more than one light source, 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.**

6.5.2. **In case of failure of any one light source in a single lamp containing more than one light source, at least one of the following provisions shall apply:**

(a) **The light intensity complies with the minimum intensity required in the table of standard light distribution in space as shown in Annex 3, or**

(b) **A signal for activation of a tell-tale indicating failure, as indicated in paragraph 6.20.8. of Regulation No. 48, is produced, provided that the luminous intensity at 2.5°D 45°L for a left-side lamp (the L angle should be substituted for the R angle for a right-side lamp) is at least 50 per cent of the minimum intensity required. In this case a note in the communication form states that the lamp is only for use on a vehicle fitted with a tell-tale indicating failure."**

Annex 1, item 9, amend to read:

"9. Concise description:

By category of lamp:

Number, category and kind of light source(s)²:

Voltage and wattage:

Light source module: yes/no³

Light source module specific identification code:

Application of an electronic light source control gear:

(a) Being part of the lamp: yes/no³

(b) Being not part of the lamp: yes/no³

Input voltage supplied by an electronic light source control gear:

Electronic light source control gear manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body):

Geometrical conditions of installation and relating variations, if any:

The lamp is only for use on a vehicle fitted with a tell-tale indicating failure: yes/no³"

II. Justification

1. The current requirements on light source failure in lamps equipped with multiple light sources differ from one Regulation to another. To address this situation, GTB prepared a proposal to align these requirements and submitted it to the seventy-fifth session of GRE (ECE/TRANS/WP.29/GRE/2016/13). However, after additional consideration, GTB requested that the document be withdrawn for further development. This updated proposal aims to improve the text of the previous proposal without changing the fundamental principles already presented on this issue.

2. The intention is to align the requirements in all the involved Regulations in such a way that the conditions for type approval, to apply in case of multiple light sources, will guarantee the conformity of the lamp in case of any failure or the mandatory indication that a failure had occurred. The following table is an example from Regulation No. 7:

	<i>Failure condition</i>	<i>Approval requirement</i>
(a)	In the case of failure of one light source, the lamp still produces more than the minimum photometric values prescribed in the photometric field	The lamp may be approved either according to the requirement in paragraph 6.1.7.2. (a) or to the requirement in paragraph 6.1.7.2. (b)
(b)	In case of failure of one light source, the lamp produces less than the minimum photometric values prescribed but more than 50% of the value required in the reference-axis (H-V)	The lamp may only be approved according to the requirement in paragraph 6.1.7.2. (b).
(c)	In case of failure of one light source, the lamp produces less than 50% of the photometric value required in the reference-axis (H-V) *	The lamp cannot be approved.
	* H-V replaced by at 2.5°D, 45° Lor R, in the case of cornering lamp	

3. Clearly, when the lamp is installed on a vehicle, the same basic concept shown above applies. This means that, in the case where the failure indication signal is provided by the lamp, the vehicle shall be equipped with a failure tell-tale operating in line with the failure situation of the lamp.

Amendments to Regulation 48 will be presented as separate document.
