

Draft proposal of amendments to Doc. ECE/TRANS/WP.29/GRE/2007/54

The text reproduced below was prepared by the expert from Germany on the base of the document **ECE/TRANS/WP.29/GRE/2007/54** in order to insert provisions

- to prohibit the use of incandescent light sources in the case of light source modules and lamps with non-replaceable light sources, furthermore
- to clarify, that for light source modules the use of ECE cap – holder systems are not allowed.

The modifications to the document **ECE/TRANS/WP.29/GRE/2007/54** are marked in **bold** characters.

A. PROPOSAL

A.1. PROPOSAL TO AMEND REGULATION No. 4 – (Rear registration plate lamp)
(The following text is based upon Supplement 12 to the Regulation)

Paragraph 3.5.2., amend to read:

"3.5.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 4.4.1. below **and, in the case several non identical light source modules are used, followed by additional symbols or characters**; this specific identification code shall be shown in the drawings mentioned in paragraph 2(a) above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraphs 5.5. to 5.5.2., amend to read:

"5.5. **In the case of light source modules, it shall be checked that:**

5.5.1. The design of the light source module(s) shall be such as:

- (a) that each light source module can **only** be fitted in no **other** position **than** the **designated** and correct one **and can only be removed with the use of tool(s)**;
- (b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**

5.5.2. The light source module(s) shall be tamperproof."

Add a new paragraph 5.5.3. to read:

5.5.3. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 5.5.4. to read:

5.5.4. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

Annex 5

PHOTOMETRIC MEASUREMENT OF LAMPS EQUIPPED WITH SEVERAL LIGHT SOURCES

1. The photometric performance shall be checked:

1. 1. For non-replaceable light sources (~~filament lamps and other~~):
with the light sources present in the lamp, in accordance with paragraph 5. 2. of this Regulation.

A.2. PROPOSAL TO AMEND REGULATION No. 6 – (Direction indicators)
(The following text is based upon Supplement 15 to the 01 series of amendments)

Paragraph 3.5.2., amend to read:

"3.5.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 4.2.1.1. below **and, in the case several non identical light source modules are used, followed by additional symbols or characters**; this specific identification code shall be shown in the drawings mentioned in paragraph 2.2.1. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraph 5.3. to 5.3.2., amend to read:

"5.3. **In the case of light source modules, it shall be checked that:**

5.3.1. The design of the light source module(s) shall be such as:
(a) that each light source module can only be fitted in no **other** position **than** the **designated** and correct one **and can only be removed with the use of tool(s)**;
(b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**

5.3.2. The light source module(s) shall be tamperproof."

Add a new paragraph 5.3.3. to read:

5.3.3. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 5.5. to read:

5.5. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

Annex 4
PHOTOMETRIC MEASUREMENTS

3. Photometric measurement of lamps equipped

The photometric performance shall be checked:

3. 1. For non-replaceable light sources (~~filament lamps and other~~):

with the light sources present in the lamp, in accordance with the relevant sub-paragraph of paragraph 7. 1. of this Regulation.

A.3. PROPOSAL TO AMEND REGULATION No. 7 – (Front and rear position lamps, stop-lamps and end-outline marker lamps). (The following text is based upon Supplement 12 to the 02 series of amendments)

5.3.4. Shall bear the specific identification code of the module; this marking must be clearly legible and indelible.

This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 4.2.1. below and in the case several non identical light source modules are used, followed by additional symbols or characters; this specific identification code shall be shown in the drawings mentioned in paragraph 2.2.1. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant.

5.6. In case of light source modules it shall be checked, that:

5.6.1. The design of the light source module(s) shall be such as:

- that each light source module can only be fitted in no other position than the designated and correct one and can only be removed with the use of tool(s).

- light source modules having different characteristics, can not be interchanged within the same lamp housing.

5.3.5. The light source module(s) shall be tamperproof."

Add a new paragraph 5.6.3. to read:

5.3.6. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 5.9. to read:

5.9. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

7. TEST PROCEDURE

7.1. All measurements, photometric and colorimetric, shall be made:

7.1.2. In the case of a lamp equipped with non-replaceable light sources (~~filament lamps and other~~), at 6. 75 V, 13. 5 V or 28. 0 V respectively.

3. Photometric measurement of lamps

The photometric performance shall be checked:

3.1. For non-replaceable light sources (~~filament lamps and other~~):
with the light sources present in the lamp, in accordance with the relevant sub-paragraph of paragraph 7. 1. of this Regulation.

A.4. PROPOSAL TO AMEND REGULATION No. 23 – (Reversing lamps)
(The following text is based upon Supplement 13 to the Regulation)

Paragraph 3.6.2., amend to read:

"3.6.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 4.3.1.1. below **and, in the case several non identical light source modules are used, followed by additional symbols or characters**; this specific identification code shall be shown in the drawings mentioned in paragraph 2.2.1. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraphs 5.3. and 5.3.2., amend to read:

"5.3. **In the case of light source modules, it shall be checked that:**

5.3.1. The design of the light source module(s) shall be such as:

- (a) that **each** light source module can **only** be fitted in no other position **that the designated** and correct one **and can only be removed with the use of tool(s);**
- (b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**

5.3.2. The light source module(s) shall be tamperproof."

Add a new paragraph 5.3.3. to read:

5.3.3. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 5.4. to read:

5.4. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

7. TEST PROCEDURE

7.1. All measurements shall be carried out with uncoloured standard filament lamps of the types prescribed for the device, adjusted to produce the normal luminous flux prescribed for those types of filament lamps.

7.1.1. All measurements on lamps equipped with non-replaceable light sources (~~filament lamps and other~~) shall be made at 6.75 V, 13.5 V or 28.0 V respectively. In the case of light sources supplied by a special power supply, the above test voltages shall be applied to the input terminals of that power supply. The test laboratory may require from the manufacturer the special power supply needed to supply the light sources.

Annex 3 PHOTOMETRIC MEASUREMENTS

3. Photometric measurement of lamps equipped with several light sources

The photometric performance shall be checked:

3. 1. For non-replaceable light sources (~~filament lamps and other~~) :

with the light sources present in the lamp, in accordance with paragraph 7. 1. 1. of this Regulation.

3. 2. For replaceable filament lamps:

A.5. PROPOSAL TO AMEND REGULATION No. 38 – (Rear fog lamps) (The following text is based upon Supplement 12 to the Regulation)

Paragraph 3.5.2., amend to read:

"3.5.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 4.3.1.1. below **and, in the case several non identical light source modules are used, followed by additional symbols or characters**; this specific identification code shall be shown in the drawings mentioned in paragraph 2.2.1. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraphs 5.3. to 5.3.2., amend to read:

"5.3. **In the case of light source modules, it shall be checked that:**

5.3.1. The design of the light source module(s) shall be such as:

- (a) that each light source module can only be fitted in no other position **than** the designated and correct one **and can only be removed with the use of tool(s)**;
- (b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**

5.3.2. The light source module(s) shall be tamperproof."

Add a new paragraph 5.6.3. to read:

5.3.4. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 5.5. to read:

5.5. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

7. TEST PROCEDURE

7.1. All measurements, photometric and colorimetric, shall be made:

7.1.1. In the case of a lamp with replaceable light source, if not supplied by an electronic light source control gear or a variable intensity control, with an uncolored or colored standard filament lamp of the category prescribed for the device, supplied with the voltage necessary to produce the reference luminous flux required for that category of filament lamp,

- 7.1.2. In the case of a lamp equipped with non-replaceable light sources (~~filament lamps and other~~), at 6.75 V, 13.5 V or 28.0 V respectively.

Annex 3
PHOTOMETRIC MEASUREMENTS

5. Photometric measurement of lamps equipped with several light sources
The photometric performance shall be checked:
- 5.1. For non-replaceable light sources (~~filament lamps and other~~):
with the light sources present in the lamp, in accordance with paragraph 7.1. of this Regulation.
- A.6. PROPOSAL TO AMEND ECE REGULATION No. 50 – (Position, stop and direction indicator lamps for mopeds and motorcycles).
(The following text is based upon Supplement 10 to the Regulation)

Paragraph 4.4.2., amend to read:

- "4.4.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 5.5.1. below **and in the case several non identical light source modules are used, followed by additional symbols or characters**; this specific identification code shall be shown in the drawings mentioned in paragraph 3.2.1. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraphs 6.3. to 6.3.2., amend to read:

- "6.3. **In the case of light source modules, it shall be checked that:**
- 6.3.1. The design of the light source module(s) shall be such as:
- (a) that **each** light source module can **only** be fitted in no other position **than** the **designated** and correct one **and can only be removed with the use of tool(s)**;
 - (b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**
- 6.3.2. The light source module(s) shall be tamperproof."

Add a new paragraph 6.3.4. to read:

6.3.4. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 6.4. to read:

6.4. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

Annex 4
PHOTOMETRIC MEASUREMENTS

3. Test conditions

The photometric performance shall be checked:

3.1. For non-replaceable (fixed) ~~filament lamps or other~~ light sources: at the voltage prescribed by the manufacturer; the test laboratory may require from the manufacturer the special power supply needed to supply such lamps;

A.7. PROPOSAL To AMEND REGULATION No. 77 – (Parking lamps)
(The following text is based upon Supplement 10 to the Regulation)

Paragraph 4.3.2., amend to read:

"4.3.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 5.5.1. below **and, in the case several non identical light source modules are used, followed by additional symbols or characters**; this specific identification code shall be shown in the drawings mentioned in paragraph 3.2.2. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraphs 6.3. to 6.3.2., amend to read:

"6.3. **In the case of light source modules, it shall be checked that:**

6.3.1. The design of the light source module(s) shall be such as:

- (a) that **each** light source module can **only** be fitted in no other position **than** the **designated** and correct one **and can only be removed with the use of tool(s)**;
- (b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**

6.3.2. The light source module(s) shall be tamperproof."

Add a new paragraph 6.3.3. to read:

6.3.3. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 6.4. to read:

6.4. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

8. TEST PROCEDURE

All measurements shall be carried out with uncoloured standard filament lamps of the types prescribed for the device, adjusted to produce the normal luminous flux prescribed for those types of lamps.

8.1. All measurements on lamps equipped with non-replaceable light sources (~~filament lamps and other~~) shall be made at 6.75 V, 13.5 V or 28.0 V respectively.

In the case of light sources supplied by a special power supply, the above test voltages shall be applied to the input terminals of that power supply. The test laboratory may require from the manufacturer the special power supply needed to supply the light sources.

Annex 4 PHOTOMETRIC MEASUREMENTS

3. Photometric measurement of lamps

The photometric performance shall be checked:

3.1. For non-replaceable light sources (~~filament lamps and other~~):
with the light sources present in the lamp, in accordance with paragraph 8. 1. of this Regulation.

A.8. PROPOSAL TO AMEND REGULATION No. 87 – (Daytime running lamps)
(The following text is based upon Supplement 10 to the Regulation)

Paragraph 4.5.2., amend to read:

"4.5.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 5.2.1.1. below **and, in the case several non identical light source modules are used, followed by additional symbols or characters**; this specific identification code shall be shown in the drawings mentioned in paragraph 3.2.1. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraphs 6.3. to 6.3.2., amend to read:

"6.3. **In the case of light source modules, it shall be checked that:**

6.3.1. The design of the light source module(s) shall be such as:

- (a) that **each** light source module can **only** be fitted in no other position **than** the **designated** and correct one **and can only be removed with the use of tool(s);**
- (b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**

6.3.2. The light source module(s) shall be tamperproof."

Add a new paragraph 6.3.3. to read:

6.3.3. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 6.5. to read:

6.4. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

Annex 3 PHOTOMETRIC MEASUREMENTS

4. Photometric measurement of lamps

The photometric performance shall be checked:

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

A.9. PROPOSAL TO AMEND REGULATION No. 91 – (Side marker lamps)
(The following text is based upon Supplement 9 to the Regulation)

Paragraph 4.6.2., amend to read:

"4.6.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 5.4.1.1. below **and, in the case several non identical light source modules are used, followed by additional symbols or characters;** this specific identification code shall be shown in the drawings mentioned in paragraph 3.2.1. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraphs 6.3. to 6.3.2., amend to read:

"6.3. **In the case of light source modules, it shall be checked that:**

6.3.1. The design of the light source module(s) shall be such as:

- (a) that **each** light source module can **only** be fitted in no other position **than** the **designated** and correct one **and can only be removed with the use of tool(s);**
- (b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**

6.3.2. The light source module(s) shall be tamperproof."

Add a new paragraph 6.3.3. to read:

6.3.3. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 6.4. to read:

6.4. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

9. TEST PROCEDURE

9.1. Measurements shall be carried out with a colourless standard filament lamp of the type recommended for the side-marker lamp and so regulated as to produce the reference luminous flux prescribed for this type of lamp, taking into account the provisions of paragraph 9. 2. below.

9.2. All measurements on lamps equipped with non-replaceable light sources (~~filament lamps and other~~) shall be made at 6. 75 V, 13. 5 V or 28. 0 V respectively. In the case of light sources supplied by a special power supply, the above test voltages shall be applied to the input terminals of that power supply. The test laboratory may require from the manufacturer the special power supply needed to supply the light sources.

A.10. PROPOSAL TO AMEND REGULATION No. 119 – (Cornering lamps)
(The following text is based upon Supplement 1 to the Regulation)

Paragraphs 3.5.2., amend to read:

"3.5.2. the specific identification code of the module; this marking must be clearly legible and indelible. This specific identification code shall comprise the starting letters "MD" for "MODULE" followed by the approval marking without the circle as prescribed in paragraph 4.3.1.1. below **and, in the case several non identical light source modules are used, followed by additional symbols or characters**; this specific identification code shall be shown in the drawings mentioned in paragraph 2.2.1. above.

The approval marking does not have to be the same as the one on the lamp in which the module is used, but both markings shall be from the same applicant."

Paragraphs 5.3. to 5.3.2., amend to read:

"5.3. **In the case of light source modules, it shall be checked that:**

5.3.1. The design of the light source module(s) shall be such as:

- (a) that **each** light source module can **only** be fitted in no other position **than** the **designated** and correct one **and can only be removed with the use of tool(s)**;
- (b) **light source modules having different characteristics can not be interchanged within the same lamp housing.**

5.3.2. The light source module(s) shall be tamperproof."

Add a new paragraph 5.3.3. to read:

5.3.3. A light source module shall be so designed that regardless the use of tool(s), it shall not mechanically interchangeable with any replaceable approved light source;

Add a new paragraph 5.4. to read:

5.4. No filament lamps are allowed in the case of the use of non-replaceable light sources or light source modules.

7. TEST PROCEDURE

7.1. All measurements shall be carried out with uncoloured standard filament lamps of the types prescribed for the device, adjusted to produce the reference luminous flux prescribed for those types of filament lamps.

7.1.1. All measurements on lamps equipped with non-replaceable light sources (~~filament lamps and other~~) shall be made at 6.75 V, 13.5 V or 28.0 V respectively. In the case of light sources supplied by a special power supply, the above test voltages shall be

applied to the input terminals of that power supply. The test laboratory may require from the manufacturer the special power supply needed to supply the light sources.

Annex 3 PHOTOMETRIC MEASUREMENTS

3. Photometric measurement of lamps equipped with several light sources
The photometric performance shall be checked:
 - 3.1. For non-replaceable light sources (~~filament lamps and other~~):
with the light sources present in the lamp, in accordance with paragraph 7. 1. 1. of this Regulation.

B. JUSTIFICATION

This proposal for collective amendments on the base of the document **ECE/TRANS/WP.29/GRE/2007/54** is intended to complete the requirements regarding the use of cap – holder systems in the case of light source modules in a lamp.

Furthermore it is intended to insert provisions which cover the prevention of the use of incandescent light sources in the case of light source modules and lamps with non-replaceable light sources. The reasons for this purpose are:

- Incandescent light sources have a relative short lifetime last but not least also in the case of so called long life type;
- Is the danger, that vehicle manufactures try to undermine with such solutions the requirements in ECE R48 concerning the easy exchange of replaceable light sources;
- The missing additional requirements concerning the light source quality, as in ECE-R 37, e.g. the colour endurance test;
- The danger of undermining the ECE-Regulation 37 by the use of low quality filament lamps.

Therefore the experts of Germany see here disadvantages for the road safety and consumers, which could be avoided by replaceable solutions.

Some counter-arguments of the vehicle manufactures are:

- The light sources used for such solutions have a long life time in relation to the on time in a vehicle in usual use;
- Problems with the cap – holder system reduces reliability;
- Reduction manufacturing costs by this solutions;
- ...

The experts of Germany see in this arguments not the reason for the use of filament lamps in non-replaceable designs, but the need for a review of the ECE-Regulation 37 by the industry to investigate which lamps or which cap – holder systems are not more useful for future projects and such categories should be put on the list of light sources “not for new lamp approvals”.
