

Revision of GRE/2017/07

I. Proposal to amend installation regulation No. 48

A. Proposal for Supplement 9 to the 06 series of amendments to Regulation No. 48 (Installation of lighting and light-signalling devices)

Insert a new paragraph 5.30:

“5.30. All lamps (devices) shall, where applicable, be type approved according to corresponding UN device Regulations as specified in relevant subparagraphs of paragraph 6 of this Regulation when installed on a vehicle.”

Insert a new paragraph 5.31:

“5.31. Lamps installed on a vehicle which is approved according to this UN Regulation and approved for one or more replaceable light source categories according to Regulations Nos. 37, 99 or 128, shall be fitted with light sources approved according to these light source categories only.

This requirement does not concern light source modules, LED modules and non-replaceable light sources, except for when they are required to be approved by the applicable Regulation.”

II. Proposals to amend lighting and light signalling device regulations

A. Proposal for Supplement 19 to Regulation No. 4 (Illumination of rear registration plate lamps)

Paragraph 5.6.1., amend to read:

“5.6.1. The illuminating device shall only be equipped with ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

B. Proposal for Supplement 28 to the 01 series of amendments to Regulation No. 6 (Direction indicators)

Paragraph 5.5.1., amend to read:

“5.5.1. **The device shall only be equipped with** ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

C. Proposal for Supplement 27 to the 02 series of amendments to Regulation No. 7 (Position, stop and end-outline lamps)

Paragraph 5.9.1., amend to read:

“5.9.1. **The device shall only be equipped with** ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

D. Proposal for Supplement 10 to the 04 series of amendments to Regulation No. 19 (Front fog lamps)

Paragraph 5.6., amend to read:

“5.6. In the case of Class B, the front fog lamp shall **only** be equipped with one filament lamp approved according to Regulation No. 37 even if the filament lamp cannot be replaced. Any Regulation No. 37 **approved** filament lamp may be used provided that;

- (a) Its objective luminous flux does not exceed 2,000 lumens, and
- (b) No restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval.

5.6.1. Even if this filament lamp cannot be replaced it shall comply with the requirements in paragraph 5.6. above.”

Paragraph 5.7., amend to read:

“5.7. In the case of Class F3, irrespective of whether the light sources can be replaced or not, ~~they~~ **the front fog lamp shall only be equipped with:**

5.7.1. One or more light sources approved according to:

5.7.1.1. Regulation No. 37 and its series of amendments in force at the time of application for type approval, provided that no restriction on their use is made,

5.7.1.2. Or, Regulation No. 99 and its series of amendments in force at the time of application for type approval,

5.7.2. And/or, one or more LED modules where the requirements of Annex 12 to this Regulation shall apply; compliance with these requirements shall be tested.”

E. Proposal for Supplement 22 to Regulation No. 23 (Reversing lamps and manoeuvring lamps)

Paragraph 5.4.1., amend to read:

“5.4.1. **The reversing lamp or manoeuvring lamp shall only be equipped with** ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

F. Proposal for Supplement 19 to Regulation No. 38 (Rear fog lamps)

Paragraph 5.5.1., amend to read:

“5.5.1. **The rear fog lamp shall only be equipped with** ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

G. Proposal for Supplement 20 to Regulation No. 50 (Position, stop, direction indicator lamps for mopeds and motorcycles)

Paragraph 6.4.1., amend to read:

“6.4.1. **The device shall only be equipped with** ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

H. Proposal for Supplement 18 to Regulation No. 77 (Parking lamps)

Paragraph 6.4.1., amend to read:

“6.4.1. **The parking lamp shall only be equipped with** ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

I. Proposal for Supplement 20 to Regulation No. 87 (Daytime running lamps)

Paragraph 6.5.1., amend to read:

“6.5.1. **The daytime running lamp shall only be equipped with** ~~Any category or categories of filament lamp~~ **light source(s)** approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

J. Proposal for Supplement 17 to Regulation No. 91 (Side-marker lamps)

Paragraph 6.4.1., amend to read:

“6.4.1. **The side-marker lamp shall only be equipped with** ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

K. Proposal for Supplement 9 to the 01 series of amendments to Regulation No. 98 (Headlamps with gas-discharge light sources)

Paragraphs 5.8.1. and 5.8.2., amend to read:

“5.8.1. **Gas-discharge headlamps shall only be equipped with** ~~The replaceable~~ gas-discharge light source(s) ~~used in gas-discharge headlamps shall be replaceable and~~ approved according to Regulation No. 99 and its series of amendments in force at the time of application for type approval.

5.8.2. In the case that one or more (additional) filament light sources are used in the gas-discharge headlamp, **the gas-discharge headlamp shall only be equipped with** these filament light sources **that** shall be replaceable and approved according to Regulation No. 37 and its series of amendments in force at the time of application for type approval, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval.”

L. Proposal for Supplement 8 to the 01 series of amendments to Regulation No. 112 (Headlamps emitting an asymmetrical passing-beam)

Paragraphs 5.3.1., amend to read:

“5.3. The headlamp shall be equipped with:

5.3.1. **Only** filament lamp(s) approved according to Regulation No. 37. Any filament lamp covered by Regulation No. 37 may be used, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval.”

M. Proposal for Supplement 7 to the 01 series of amendments to Regulation No. 113 (Headlamps emitting a symmetrical passing-beam)

Paragraph 5.3.1., amend to read:

“5.3. Class A, B, C or D”

“5.3.1. Headlamps shall **only** be equipped with filament lamp(s) approved according to Regulation No. 37 and/or, with (an) LED module(s).

In the case of the use of additional light source(s) and/or additional lighting unit(s) to provide bend lighting, **the additional light source(s) shall correspond to and the additional lighting unit(s) shall only be equipped with ~~only categories~~ approved** filament lamps covered by Regulation No. 37, provided that no restriction on the use for bending light is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval, and/or LED modules(s) ~~shall be used~~.

5.3.2. It is possible to use two filament light sources for the principal passing-beam and several filament light sources for the driving-beam.

Any Regulation No. 37 filament lamp may be used, provided that: ...]

Paragraph 5.4.1., amend to read:

“5.4. Class E headlamps

“5.4.1. The headlamp shall **only** be equipped with (a) gas-discharge light source(s) approved according to Regulation No. 99 and/or (an) LED module(s).

In the case of the use of additional light source(s) and/or additional lighting unit(s) to provide bend lighting, **the additional light source(s) shall correspond to and the additional lighting unit(s) shall only be equipped with ~~only categories of approved~~** filament lamps covered by Regulation No. 37, provided that no restriction on the use for bending light is made in Regulation No. 37 and its series of amendments in force at the time of application for type, and/or LED modules(s) ~~shall be used~~.”

N. Proposal for Supplement 6 to the 01 series of amendments to Regulation No. 119 (Cornering lamps)

Paragraph 5.4.1., amend to read:

5.4.1. **The cornering lamp shall only be equipped with** ~~Any category or categories of~~ light source(s) approved according to Regulation No. 37 and/or Regulation No. 128 ~~may be used~~, provided that no restriction on the use is made in Regulation No. 37 and its series of amendments in force at the time of application for type approval or in Regulation No. 128 and its series of amendments in force at the time of application for type approval.”

O. Proposal for Supplement 9 to the 01 series of amendments to Regulation No. 123 (Adaptive front-lighting systems (AFS))

Paragraph 5.3.1., amend to read:

- “5.3. Replaceable and non-replaceable light sources and LED modules:
- 5.3.1. The system shall **only** be equipped with one or a combination of:
- 5.3.1.1. Light sources that are approved according to Regulation No. 37 and its series of amendments in force at the time of application for type approval and for which no restriction on the use is made;
- 5.3.1.2. Light sources that are approved according to Regulation No. 99;
- 5.3.1.3. LED module(s).”

III. Justification

1. This proposal is related to para. 62 of the report of the 170th session of World Forum for Harmonization of Vehicle Regulations (WP.29) (ECE/TRANS/WP.29/1126): “62. The World Forum noted the request by the Informal Working Group (IWG IWVTA) to clarify the individual Regulations on lighting and light-signalling devices with a requirement that light sources in these devices should be type approved pursuant to Regulations Nos. 37, 99 or 128. WP.29 invited GRE, in cooperation with IWG, to consider how to better address this issue, taking into account the IWVTA objectives, the ongoing process of the simplification of lighting and light-signalling Regulations and the fact that not all light sources were covered by Regulations Nos. 37, 99 and 128.”

2. It is reasonable to believe that the intention of WP.29, when mandating the task to GRE, was to address the issue of submission of approval certificates in the context of IWVTA for all lighting and light sourcing regulations, and not only in relation to those dealing with light sources. This is why this proposal introduces new requirements applicable both to the installation of type approved lamps/device/systems and the fitting of type approved light source categories.

Background

3. UN Regulation No. 0 requires submission of approval certificates for all UN Regulations listed in Annex 4 to the Regulation. In case of lighting this includes the installation of lighting systems, lamp units as well as light sources to be used in these lamp units.

4. Among the approval certificates required, those for lamp units and bulbs are obtained by suppliers, and therefore it is difficult for motor vehicle manufacturers to submit such certificates.

5. It was therefore agreed that those type approvals (for lamps and replaceable light sources) need not to be provided on condition they are contained in the approval for installation, i.e. in this case the approval to UN Regulation No. 48.

6. It is to be noted that approvals according to Regulations Nos. 37, 99 and 128 are (so far) not listed in Regulation No. 48 approvals.

Solution

7. Insert in Regulation No. 48 the provision that lamps installed on the vehicle shall be approved lamps and that these lamps, if approved for replaceable light sources, shall be equipped with approved light sources. These requirements are to be repeated in the conformity of production requirements.

8. Align the provisions concerning the use of replaceable approved light sources in all regulations, if not yet done so, with those in Regulation No. 112, meaning that devices shall be equipped with approved light sources.

This provision is not repeated in the conformity of production requirements to avoid that the device manufacturer/set-maker shall equip all production devices with approved light sources. Moreover, such conformity of production requirement is set in Regulation No. 48.

Additional information

9. Lighting and light signalling devices offer several light source options:

- Replaceable light sources,
- Non-replaceable light sources,
- Light source modules or LED modules.

10. Not all of these options are allowed in each Regulation for each application. This is expressed in the device Regulations itself and by means of a reference to use restrictions in Regulations Nos. 37, 99, 128 (and in the Consolidated Resolution R.E.5).

11. In the communication form of the device Regulations the categories of replaceable light sources and light source modules are indicated. Non-replaceable light sources are not specified since these are part of the device or light source module.

12. Replaceable light sources shall be approved according to Regulations Nos. 37, 99 or 128. In some cases also non-replaceable light sources shall be approved (like in Regulation No. 19).

13. The approval of devices equipped with replaceable light sources is usually done with standard (étalon) light sources. Standard (étalon) light sources have tighter tolerances. By using such light sources in approval testing of the device, the effect of the light source tolerances on the performance of the device is minimized.

14. In some specific cases, devices may also be measured using approved production replaceable light sources.

15. A standard light source is not necessarily approved but it shall be accompanied by a test report showing that the standard light source complies to the stricter requirements than those that apply to approved light sources as specified in Regulations Nos. 37, 99 or 128. This is why the device Regulations specify that the category of the (standard) light source must be one of those contained in Regulations Nos. 37, 99 or 128.

16. The device Regulations (so far) do not specify that the certificate and approval of the device apply to conforming devices only if these devices are equipped with light source(s) approved according to these prescribed. This proposal will change that as suggested by IWG IWVTA.

17. In the same way, the installation Regulation does not require (so far) that approved devices installed on the vehicle shall be equipped with light sources that are approved. It is supposed to be, but this is not explicitly written. This proposal will change that in addition to the IWG IWVTA suggestion.

18. For vehicle installation approval, device certificates are collected but in case of replaceable approved light sources, this may not be necessary as they are replacement components. Certificates may be available from several manufacturers that happen to produce such light source at that time.

Notes

19. Although Regulation No. 50 (Position, stop, direction indicators lamps for mopeds and motorcycles), [Regulation No. 87 (Daytime running lamps)] and Regulation No. 113 (Headlamps emitting a symmetrical passing-beam) are not listed for IWVTA, they are part of the proposal to avoid creating an inconsistency in the device Regulations in view of the freeze period of amending device regulations.

20. Regulation No. 65 (Special warning lamps) is not part of this proposal due to its special character; in addition, it is not listed for IWVTA.

21. The other installation Regulations for lighting and light signalling devices Nos. 53, 74 and 86 are not part of this proposal as well as the 03, 04 and 05 series of amendments to Regulation No. 48 as not relevant for IWVTA. They may be considered at a later stage for consistency reasons.
