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PROPOSAL FOR DRAFT AMENDMENTS (SUPPLEMENT) 3) TO REGULATION No. 50

(Position, stop and direction indicator lamps for motor cycles)

Transmitted by the Expert from the Working Party "Brussels 1952" (GTB)

Note: The text reproduced below was prepared by the Expert from GTB in order to introduce into Regulation No. 50 the test procedure for devices with LEDs and some clarification regarding the existing provisions. It is based on the text of a document distributed without a symbol (informal document No. 12) during the forty-first session of GRE (TRANS/WP.29/GRE/41, para. 37).

Note: This document is distributed to the Experts on Lighting and Light-Signalling only.

A. PROPOSAL

Paragraph 2.5.3. and footnote 1/, should be deleted.

Paragraph 5.5.3., amend to read:

"5.5.3. In the general case of a direction indicator: a number indicating the category 11 or 12 close to the circle according to the paragraph 5.5.1. and on the opposite side to the approval number;"

Add a new paragraph 5.9., to read:

"5.9. The approval marking may be placed on an inner or outer part (transparent or not) of the device which cannot be separated from the transparent part of the device emitting the light. In any case the marking shall be visible when the device is fitted on the vehicle."

Paragraph 7.4.3., should be deleted.

Paragraph 7.5., to be renumbered as 7.5.1.

Add a new paragraph 7.5.2., to read:

"7.5.2. In the case of a single lamp containing more than one light source:

- (i) the lamp shall comply with the minimum intensity required when any one light source has failed, and
- (ii) when all light sources are illuminated the maximum intensity specified for a single lamp in paragraphs 7.1. to 7.4. for an assembly of two lamps is given by multiplying by 1.4. the value prescribed for a single lamp.

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

Paragraph 7.7.2., amend to read:

"..... of the light distribution table.
If the rear position lamp or the stop lamp or both contain more than one light source and are considered as single lamps as defined in paragraph 7.5.2., the values to be considered are those obtained with all light sources in operation."

Insert new paragraphs 13. to 13.9., to read:

"13. TRANSITIONAL PROVISIONS

- 13.1. As from the official date of entry into force of Supplement 3 to this Regulation, no Contracting Party applying this Regulation shall refuse to grant ECE approval under this Regulation as amended by Supplement 3.
- 13.2. As from [24] months after the date of entry into force, Contracting Parties applying this Regulation shall grant ECE approvals only if the type of device to be approved meets the requirements of this Regulation as amended by Supplement 3.
- 13.3. Contracting Parties applying this Regulation shall not refuse to grant extensions of approval to the preceding series of amendments to this Regulation.
- 13.4. ECE approvals granted under this Regulation earlier than [48] months after the date of entry into force and all extensions of approvals, including those of Supplement 3 to the original version of this Regulation granted subsequently, shall remain valid indefinitely. When the type of device approved to the original version meets the requirements of this Regulation as amended by Supplement 3, the Contracting Party which granted the approval shall notify the other Contracting Parties applying this Regulation thereof.
- 13.5. Contracting Parties applying this Regulation shall continue to issue approvals for devices on the basis of the original version of the Regulation, provided that the devices are intended as replacements for fitting to vehicles in use and that it is not technically feasible for the devices in question to satisfy the new requirements of Supplement 3 to the Regulation.
- 13.6. As from the official date of entry into force of Supplement 3 to the Regulation, no Contracting Party applying this Regulation shall prohibit the fitting on a vehicle of devices approved under this Regulation as amended by Supplement 3.
- 13.7. Contracting Parties applying this Regulation shall continue to allow the fitting on a vehicle of devices approved to this Regulation in the original version during the 48 months period which follows the date of entry into force of Supplement 3.
- 13.8. Upon the expiration of a period of 48 months after the date of entry into force of Supplement 3 Contracting Parties applying this Regulation may prohibit the fitting of devices which do not meet the requirements of this Regulation as amended by Supplement 3 on a

new vehicle for which national type or individual approval was granted more than 24 months after the entry into force of Supplement 3 to the original version of this Regulation.

- 13.9. Upon the expiration of a period of 60 months after the date of entry into force of Supplement 3, Contracting Parties applying this Regulation may prohibit the fitting of devices which do not meet the requirements of this Regulation as amended by Supplement 3 on a new vehicle first registered more than 60 months after the entry into force of Supplement 3 to the original version of this Regulation."

Paragraph 13. (former), renumber as paragraph 14.

Annex 1,

Paragraph 4. and the relevant drawing, should be deleted.

Paragraph 5, to be renumbered as paragraph 4.

Annex 4,

Paragraph 3., amend the title to read:

"3. Photometric measurement of lamps.

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Add a new paragraph 3.3., to read:

"3.3. For any signalling lamp equipped with non-filament light source(s), the luminous intensities measured after one minute and after 30 minutes of operation under following conditions:

- (i) continuously alight for position lamps, stop lamp and rear registration plate illuminating device
- (ii) in flashing mode for direction indicators
(f=1,5 Hz, duty factor 50 per cent)

shall comply with the minimum and maximum requirements. The luminous intensity (luminance) distribution after one minute of operation can be calculated by applying at each test point the ratio of luminous intensity (luminance) measured in HV after one minute and after 30 minutes of operation."

Annex 5,

Add a new paragraph 6, to read:

"6. Photometric measurements for devices equipped with several light sources:
The requirements of annex 4, paragraph 3 shall be applied equivalently."

* * *

B. JUSTIFICATION

Re. paragraphs 2.5.3., 5.5.3., 7.4.3., annex 1 paragraphs 4. and 5.

As from 1 January 1985 it is not possible to give an approval for devices of category 31. Therefore reference to this device should be deleted.

Re. paragraph 5.9.

According to the decision taken during the one hundredth session of WP.29 (TRANS/WP.29/384, annex 3), the simplified marking of an optical group may be placed on a part (transparent or not) of the device which cannot be separated from the transparent part of the group transmitting the light. Such part bearing the marking will however be visible when the device is fitted on the vehicle.

This solution is deemed to satisfy all requirements for simple marking, considering that the examination of the approval mark is normally necessary only when the vehicle is under inspection for approval or for periodical checks on in-use vehicles.

This solution should not be limited to simplified marking but should be applicable for approval marking in general.

Re. paragraph 7.5., 7.5.2., and 7.7.2.,

This proposal to amend Regulation No. 50 is intended to update the text in the same manner as in Regulation No. 6 or 7 and to improve the present text concerning calculation of the ratio between the luminous intensities of stop and rear position lamps turned on simultaneously. The definition given in Regulation No. 50 is no longer satisfactory for actual design practice.

Re. paragraph 7.5.2. (sentence added after the second subparagraph)

In the relevant paragraph to this Regulation it is required that, 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.

Depending on the electrical design it is not always clear what is meant by "one" light source.

It is clear in the case where all light sources are connected in parallel, that a single light source is one light source. But if the light sources are connected in series, all these light sources will fail if any single light source has failed. In that case, all light sources which are connected in series are one light source.

Re. annex 4, paragraphs 3., 3.3., and annex 5 paragraph 6

It is common knowledge that some categories of non-filament light sources give reduced luminous flux after a few minutes of continuous operation. The proposal by GTB (TRANS/WP.29/GRE/R.298) would deem it necessary for all lamps incorporating such light sources to comply to the applicable photometric charts after both 1 minute and 30 minutes of operation.

Furthermore, the maximum intensities must still be fulfilled after 1 minute, and thus the deviation between the maximum and minimum intensities is greatly reduced. Industry will have to spend more for design to guarantee compliance whatever the unavoidable manufacturing deviations.

Non-filament light sources have shown a non-constant behaviour after starting to operate. It means that the luminous intensity of signalling lamps may change, sometimes by more than 20 per cent, also depending on the characteristics of the particular non-filament light source(s) used. It may lead to non-compliance with the luminous intensity requirements.

Not only the energy dissipation of the non-filament light sources themselves is the cause of the luminous intensity changes, but also the external heat and sun radiation especially in hot climates. During the approval test the extended duration of energy dissipation of the light sources is intended to simulate such practical operating conditions.

For signalling lamps except direction indicators and rear registration plate illuminating devices, a reference is also made to the SAE standard J1889 of October 1993, in which the same testing procedure is recommended. Therefore the proposal will contribute to harmonization.
