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Working Party on Lighting and Light-Signalling (GRE)
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agenda item 1.4.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 48

(Installation of lighting and light-signalling devices)

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 include into the Regulation provisions for the installation of retro-reflective markings and materials. The proposed modifications are marked in bold text.

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

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A. PROPOSAL

Paragraph 2.7.16.3., amend to read:

"2.7.16.3. other **retro-reflective markings** which must be used to comply with national requirements for use as regards certain categories of vehicles or certain methods of operation."

Insert a new paragraph 2.7.17., to read: 1/

"2.7.17. "Retro-reflective marking" means an additional marking or plate of characteristic shape and/or pattern faced with retro-reflective and in some cases combined with fluorescent materials, intended to increase the visibility and easy identification of certain categories of vehicles and their trailers."

Paragraphs 2.7.17. (former) to 2.7.24., renumber as paragraphs 2.7.18. to 2.7.25.

Paragraph 2.9.1., amend the reference to "(paragraphs 2.7.9., 2.7.10., 2.7.18. and 2.7.20.)", to read "(paragraphs 2.7.9., 2.7.10., 2.7.19. and 2.7.21.)".

Paragraph 2.9.2., amend the reference to "(paragraphs 2.7.11. to 2.7.15., 2.7.17., 2.7.19. and 2.7.21. to 2.7.24.)" to read "(paragraphs 2.7.11. to 2.7.15., 2.7.18., 2.7.20. and 2.7.22. to 2.7.25.)".

Paragraph 5.2., amend the reference to "paragraphs 2.7.9., 2.7.10. and 2.7.18." to read "paragraphs 2.7.9., 2.7.10. and 2.7.19."

Insert a new paragraph 2.26., to read:

"2.26. "Slow moving vehicle" means a vehicle with a maximum speed which either by construction or by operational restrictions does not exceed [30] km/h."

1/ This definition is a combination of those found in Regulation No. 69, 01 series of amendments, No. 70, 01 series of amendments and in Regulation No. 104.

Paragraphs 6.14.2. and 6.14.3. (concerning rear retro-reflector, non-triangular), amend to read:

"6.14.2. Number

Two, the performances of which shall conform to the requirements concerning Class IA or IB retro-reflectors in Regulation No. 3.

They may be supplemented by retro-reflective lines or contour markings installed on vehicles used for the transport of goods (category N) and for the transport of passengers (categories M2 and M3) which conform to the requirements of Regulation No. 104.

Additional retro-reflecting devices and materials are permitted, provided they do not impair the effectiveness of the mandatory lighting and light-signalling devices.

6.14.3. Arrangement

No special requirement.

Retro-reflective lines or contour markings made of one or more strips shall identify at least 80 per cent of the rear width, respectively shape, of a power-driven vehicle symmetrically to its median longitudinal plane."

Paragraph 6.14.4.2., amend to read:

"6.14.4.2. In height: above the ground, not less than 250 mm nor more than 900 mm (1,500 mm if the shape of the bodywork makes it impossible to keep within 900 mm) **or not more than 1,500 mm in the case of retro-reflective line markings.**"

Paragraphs 6.15.2. and 6.15.3. (concerning rear retro-reflector, triangular), amend to read:

"6.15.2. Number

Two, the performances of which shall conform to the requirements concerning Class IIIA retro-reflectors in Regulation No. 3.

They may be supplemented by retro-reflective lines or contour markings installed on trailers of the categories O2, O3 and O4 which conform to the requirements of Regulation No. 104.

Additional retro-reflecting devices and materials are permitted, provided they do not impair the effectiveness of the mandatory lighting and light-signalling devices.

6.15.3. Arrangement

The apex of the triangle shall be directed upwards.

Retro-reflective lines or contour markings made of one or more strips shall identify at least 80 per cent of the width, respectively shape, of a trailer symmetrically to its median longitudinal plane."

Paragraph 6.15.4.2., amend to read:

"6.15.4.2. In height: above the ground, not less than 250 mm or more than 900 mm (1,500 mm if the shape of the bodywork makes it impossible to keep within 900 mm) **or not more than 1,500 mm in the case of retro-reflective line markings.**"

Paragraphs 6.16. to 6.16.3., amend to read:

6.16. FRONT RETRO-REFLECTOR, NON-TRIANGULAR

6.16.1. Presence

Mandatory on all vehicles having forward facing lamps with **concealable reflectors and on trailers of power-driven vehicles mentioned in paragraph 1.**

Optional on other vehicles."

6.16.2. Number

Two, the performances of which shall conform to the requirements concerning Class IA or IB retro-reflectors in Regulation No. 3.

On trailers, front retro-reflectors may be supplemented by white retro-reflective lines or contour markings which conform to the requirements of Regulation No. 104.

Additional retro-reflecting devices and materials are permitted, provided they do not impair the effectiveness of the mandatory lighting and light-signalling devices.

6.16.3. Arrangement

No special requirement.

White retro-reflective lines or contour markings made of one or more strips shall identify at least 80 per cent of the front width, respectively shape, of a trailer symmetrically to the median longitudinal plane."

Paragraph 6.16.4.2., amend to read:

"6.16.4.2. In height: above the ground, not less than 250 mm nor more than 900 mm (1,500 mm if the shape of the bodywork makes it impossible to keep within 900 mm) **or not more than 1,500 mm in the case of retro-reflective lines.**"

Paragraphs 6.17.2. and 6.17.3. (concerning side retro-reflector, non-triangular), amend to read:

"6.17.2. Number

Such that the requirements for longitudinal positioning are complied with the performances of these devices shall conform to the requirements concerning Class IA or IB retro-reflectors in Regulation No. 3.

On vehicles of categories M2, M3 and N and their trailers, side retro-reflectors may be supplemented by white or yellow retro-reflective lines or contour markings which conform to the requirements of Regulation No. 104.

Additional retro-reflecting devices and materials are permitted, provided they do not impair the effectiveness of the mandatory lighting and light-signalling devices.

6.17.3. Arrangement

No special requirement.

Retro-reflective lines or contour markings made of one or more strips of retro-reflective material shall identify at least 80 per cent of the length, respectively shape, of the vehicle."

Paragraph 6.17.4.2., amend to read:

"6.17.4.2. In height: above the ground, not less than 250 mm nor more than 900 mm (1,500 mm if the shape of the bodywork makes it impossible to keep within 900 mm).

Retro-reflective lines or contour markings shall be placed in such a way that the lower part of the marking materials shall have a minimum height above the ground of at least 250 mm and, for retro-reflective line markings, a maximum height of 1,500 mm."

Insert new paragraphs 6.20. to 6.20.6., to read: 2/

- "6.20. REAR MARKING PLATES FOR SLOW MOVING VEHICLES (BY CONSTRUCTION) AND THEIR TRAILERS (Regulation No. 69, 01 series of amendments).
- 6.20.1. Presence
Optional.
- 6.20.2. Number
At least one.
- 6.20.3. Arrangement
The apex of the rear marking shall be directed upwards. Every part of the marking shall lie within 5° of a transverse vertical plane at right angles to the longitudinal axis of the vehicle and shall face to the rear.
- 6.20.4. Position
in width: If there is only one rear marking, it must be on the opposite side of the median longitudinal plane of the vehicle to the direction of traffic.
in height: Above the ground, not less than 250 mm (lower edge), not more than 1,500 mm (upper edge).
in length: at the rear of the vehicle
- 6.20.5. Geometric visibility
Horizontal angle: 30° inwards and outwards; covering by indispensable construction parts of the vehicle up to 10 per cent of the rear marking plate surface is permitted.
Vertical angle: 15° above and below the horizontal
- 6.20.6. Orientation
Rearwards."

2/ Similar new paragraphs should be inserted at the appropriate place in Regulation No. 86, concerning agricultural and forestry tractors.

Insert new paragraphs 6.21. to 6.21.7., to read:

"6.21. REAR MARKING PLATES FOR HEAVY AND LONG VEHICLES AND THEIR TRAILERS (Regulation No. 70, 01 series of amendments).

6.21.1. Presence

Optional on vehicles of category N2 having a maximum mass exceeding 7.5 tonnes, N3, M2, M3 and their trailers.

6.21.2. Number

One, two or four.

6.21.3. Arrangement

Every rear marking shall be fitted such that the lower edge is horizontal. Every part of the rear marking shall lie within 5° of a transverse vertical plane at right angles to the longitudinal axis of the vehicle and shall face to the rear. The set of markings shall be arranged with respect to the median longitudinal plane of the vehicle.

6.21.4. Position

In width: no individual specifications

In height: above the ground, not less than 250 mm (lower edge), not more than 2,100 mm (upper edge).

6.21.5. Geometric visibility

Horizontal angle: 30° inwards and outwards

Vertical angle: 15° above and below the horizontal

6.21.6. Orientation

Rearwards.

6.21.7. Other requirements

Rear marking(s) on a same vehicle, trailer or semi trailer shall meet the following requirements:

For heavy vehicles of category N2 with a maximum mass exceeding 7.5 tonnes and categories N3, M2 and M3:

Class 1. Alternate, oblique stripes of red fluorescent and yellow retro-reflective materials;

Class 3. Alternate, oblique stripes of red retro-reflective and yellow retro-reflective materials.

For long vehicles of categories O1 to O3 - trailers /
semitrailers exceeding 8 m in length (including the draw bar)
and O4:

Class 2. Yellow retro-reflective centre with a red fluorescent
border;

Class 4. Yellow retro-reflective centre with a red retro-
reflective border."

* * *

B. EXPLANATORY NOTES

1. At its forty-fourth session in April 2000, GRE agreed to include in future discussions regarding Regulation No. 70, 01 series of amendments a proposal by GTB which would incorporate into Regulation No. 48 requirements for additional rear marking plates according to Regulation No. 70, 01 series of amendments for heavy and long vehicles and their trailers.
2. The scope of Regulation No. 48 covers the installation requirements for lighting and light-signalling devices of power-driven vehicles intended for use on the road with not less than four wheels, and a design speed exceeding 25 km/h and their trailers, with the exception of vehicles which run on rails, agricultural or forestry tractors and machinery, and public works vehicles.
3. At present no installation requirements exist in Regulation No. 48 for any of the retro-reflective markings and materials used to supplement the mandatory retro-reflective light-signalling devices of the different categories of vehicles mentioned in its scope.
4. The above GTB proposal covers installation requirements for all additional retro-reflective markings and light-signalling devices on the vehicles described in the scope of Regulation No. 48, which are the object of Regulations concerning the approval of retro-reflective materials of Regulations No. 69, 01 series of amendments, No. 70, 01 series of amendments and No. 104, annexed to the 1958 Agreement.
5. In addition, GTB also proposes to GRE to include the installation requirements for additional markings for slow moving vehicles (by construction) described in annex to Regulation No. 69, 01 series of amendments into Regulation No. 86 for agricultural or forestry tractors. 3/

3/ Note by the secretariat: No detailed proposal was received.