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**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Lighting and Light-Signalling (GRE)  
(Fifty-first session, 15-19 September 2003,  
agenda item 1.2.1.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 3

(Retro-reflecting devices)

Transmitted by the expert from Finland

Note: The text reproduced below was prepared by the expert from Finland in order to introduce into the Regulation provisions for triangular retro-reflectors of Class IIIB (TRANS/WP.29/GRE/50 paras. 15, 16 and 24). This proposal is a revised version of TRANS/WP.29/GRE/2003/2. The modifications to the original proposal are marked in **bold** characters.

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

**A. PROPOSAL**

Contents, "ANNEXES",

Title of appendix of annex 5, amend to read:

"Annex 5 – Appendix – Retroreflectors for trailers –  
Class IIIA and IIIB . . . . "

Title of annex 16, amend to read:

"Annex 16 Test procedure for Class IB and IIIB devices"

Text of the Regulation,

Paragraph 2.15., amend to read:

"2.15. Retro-reflecting devices are divided into three classes according to their photometric characteristics: Class IA or IB, Class IIIA or IIIB, and Class IVA."

Paragraph 2.16., amend to read:

"2.16. Retro-reflecting devices of Class IB and IIIB are devices combined with other signal lamps which are not watertight according to annex 8, paragraph 1.1., and which are integrated into the body of a vehicle."

**Paragraph 3.1.1., amend to read**

**"3.1.1. drawings, in triplicate, in sufficient detail to permit identification of the type, showing geometrically the position(s) in which the retro-reflecting device may be fitted to the vehicle, and in case of class IB or IIIB-retro-reflectors details of installation. The drawings must show the position intended for the approval number and class indicator in relation to the circle of the approval mark;"**

Paragraph 5.5.1.3., amend to read:

"5.5.1.3. a group of symbols IA, IB, IIIA, IIIB or IVA showing the class of the approved retro-reflecting device."

Paragraph 7.1., amend to read:

".... this Regulation. The test procedures are described in annex 4 (Class IA, IIIA), annex 14 (Class IVA) and annex 16 (Class IB, IIIB)."

**Annex 2, item 9, amend to read:**

**"9. Concise description:**

**In isolation/part of an assembly of devices: 2/.....**  
**Colour of light emitted:white/red/amber: 2/.....**  
**Installation as an integral part of a lamp which is integrated into the body of a vehicle: yes/no 2/**  
**Geometric conditions of installation and relating variations, if any: .....**  
**....."**

**Annex 3, the note, amend to read:**

"..... The competent authorities shall avoid using approval numbers IA, IB, IIIA, IIIB and IVA which might be confused with the class symbols IA, IB, IIIA, IIIB and IVA.

These sketches ....."

**Annex 5,**

**Paragraph 2., amend to read:**

"2. SHAPE AND DIMENSIONS OF RETRO-REFLECTING DEVICES IN CLASS IIIA AND IIIB (see appendix to this annex)"

Paragraph 2.1., amend the words "Class III A" to read "Class III A and III B".

Paragraph 2.6., amend the words "Class III A" to read "Class III A and III B".

**Annex 5, appendix, amend to read:**

"RETROREFLECTORS FOR TRAILERS – CLASS IIIA AND IIIB"

**Annex 7,**

**Paragraph 2., amend to read:**

"..... of the area to be used. In the case of Class III A, III B and Class IV A", the whole of ....."

**Paragraph 3.1., amend to read:**

"3.1. Class IA, Class IB, Class IIIA and Class IIIB"

Paragraph 3.1.1., the table, in the column "Class" on the third line, amend the entry "IIIA" to read "IIIA, IIIB".

Annex 8, paragraph 1.2., amend to read:

"1.2. Alternative test procedure for Class IB and IIIB devices"

Annex 16, amend to read:

"Annex 16

#### TEST PROCEDURE FOR CLASS IB AND IIIB DEVICES

Retro-reflecting devices of Class IB and IIIB shall be tested according to the test procedures specified in annex 4, following the chronological order of tests given in annex 12, with the exception of the test according to annex 8, paragraph 1., which for Class IB and IIIB devices may be replaced by the test specified in annex 8, paragraph 1.2."

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#### **B. JUSTIFICATION**

1. By permitting the triangular rear retro-reflector to be Class IIIB and to have a common apparent surface with any other lamp or lamps makes it possible to use common, widely proven solutions or even common parts with vehicle lamps, which improves the general quality level of trailer lamps.
2. The safety decreasing situation where snow attaches to the retro-reflector is avoided because the heat coming from lamps melts the snow away from the retro-reflector.
3. This also makes it possible for the devices to get the same type of appearance as other automotive lighting devices; it gives more volume.
4. As the area of the triangular rear retro-reflector is quite large, it still meets the photometrical requirements even when other signalling functions can be seen through the apparent surface of the retro-reflector, that is, some prisms are replaced by other types of optics. The shape of the retro-reflector remains the same and reflects normally even when the signalling function is switched on.

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