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Working Party on Lighting and Light-Signalling (GRE)
(Fifty-fifth session, 3-7 October 2005,
agenda item 20.3.)

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 insert into Regulation No. 48 the definition and additional provisions for light-emitting diode (LED) modules for the use in headlamps. The modifications to the existing text of the Regulation are marked in **bold** characters.

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

A. PROPOSAL

Insert a new paragraph 2.7.1.1.7., to read:

"2.7.1.1.7. "LED module" means a light source module containing as light sources only LEDs."

Insert a new paragraph 2.7.10.1., to read:

"2.7.10.1. "principal dipped beam" is the dipped beam produced without the contribution of infrared (IR) emitter and / or bending light, for example."

Paragraph 2.7.27., amend to read:

"2.7.27. "Objective luminous flux" means a design value of the luminous flux of a replaceable light source or light source module. It shall be achieved, within the specified tolerances, when the replaceable light source or light source module is energized by the power supply at the specified test voltage, as indicated in the data sheet of the light source or the technical specification as submitted with the light source module."

Paragraph 6.2.7., amend to read:

"6.2.7. ... during the main-beam operation.

One additional light source or one or more LED module(s), located inside the dipped-beam headlamps or in a lamp (except the main-beam headlamp) grouped or reciprocally incorporated with the respective dipped-beam headlamps, may be activated to produce bend lighting, provided that the horizontal radius of curvature of the trajectory of the centre of gravity of the vehicle is 500 m or less. This may ..."

Paragraph 6.2.8., amend to read:

"6.2.8. Tell-tale

Tell-tale optional.

However, in the case where the whole beam or the kink of the elbow of the cut-off is moved to produce bend lighting, an operational tell-tale is mandatory.

[Also, if one or more LED modules are used to produce the principal dipped-beam, an operational tell-tale is mandatory.

If present, it shall be a flashing warning light which comes on:

- in the event of a malfunction of the displacement of the kink of the elbow of the cut-off, or
- **in case of a failure of any one of the LED module(s) producing the principal dipped-beam.]"**

Paragraph 6.2.9., amend to read:

"6.2.9. ... to dipped-beam headlamps.

Dipped-beam headlamps with a light source **[and /] or LED module(s)** having a **total** objective luminous flux which exceeds 2,000 lumen shall only be installed in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45. 7/ In addition, with respect to vertical inclination, the provisions of paragraph 6.2.6.2.2. above shall not be applied.

Only dipped-beam headlamps ..."

B. JUSTIFICATION

At the fifty-second GRE session, GTB presented a report on the status of the development of LED's for application in headlamps. The application of LED's in signal lighting has conclusively proved the benefits of semiconductor technology particularly with regard to reliability, high system efficiency and new design possibilities and now these benefits can also be realised in headlamps. The programme proposed by GTB to introduce suitable provisions into the ECE Regulations was accepted.

The present proposal complements the draft amendments to Regulation No. 112 as proposed in document TRANS/WP.29/GRE/2005/37.

C. PENDING ISSUES

Two issues have been highlighted by square brackets:

- (a) The tell-tale question is currently being discussed within GTB and GRE also for other multi light source functions (e.g. front/rear direction indicators), therefore the GTB-proposal for the headlamp application was put into square brackets to indicate the need for discussion.
- (b) The question whether mixing of LED modules and a filament lamp also inside the principal beam should be allowed, needs to be clarified under paragraph 6.2.10 of Regulation No. 112. Paragraph 6.2.9. of Regulation No. 48 is also affected by this decision.
