

Distr.
GENERAL

TRANS/WP.29/GRE/2002/22
29 January 2002

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Construction of Vehicles

Working Party on Lighting and Light Signalling (GRE)
(Forty-eighth session, 9-12 April 2002,
Agenda item 6.3.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 48

(Installation of lighting and light-signalling devices)

Transmitted by the Expert from Germany

Note: The text reproduced below was prepared by the expert from Germany, in order to allow the signalling of an emergency braking (TRANS/WP.29/GRE/47, paras. 9 and 10).

The proposed amendments should also be considered for the candidate draft global technical regulation concerning uniform provisions with regard to the installation of lighting and light-signalling devices (document TRANS/WP.29/GRE/2001/6).

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

GE.02-20420

A. PROPOSAL:

Paragraph 2.7.12., amend to read:

2.7.12. "Stop lamp" means the lamp used to indicate to other road-users to the rear of the vehicle that its driver is applying the service brake.

The stop lamps may be activated by the application of a retarder or a similar device.

The stop lamp may be used as an emergency brake display to indicate emergency braking to other road users."

Insert new paragraphs 2.26. to 2.28., to read:

"2.26. "Emergency braking" means a braking which results in a high deceleration near the physical limits of tyre adhesion to the road surface.

2.27. "Brake assistance system" means a part of the service braking system, which automatically initiates a braking manoeuvre with full deceleration, as a function of brake control activation.

2.28. "Anti-lock braking system" is a part of a service braking system, which automatically controls the degree of slip, in the direction of rotation of the wheel(s), on one or more wheels of the vehicle during braking."

Paragraph 5.9., amend to read:

"5.9. In the absence of specific instructions, no lamps other than direction-indicator lamps, the vehicle-hazard warning signal, the stop lamp of the category S3 in the case of emergency braking, and amber side-marker lamps complying with paragraph 6.18.7. below, shall be flashing lamps."

Paragraph 6.7.2., amend to read:

"6.7.2. Number

Two S1 or S2 category devices and one S3 category device on all categories of vehicles.

In order to indicate an emergency braking, one optional additional pair of stop lamps of category S1 or S2 on all categories of vehicles."

Paragraph 6.7.7., amend to read:

"6.7.7. Electrical connections

Must light up when the service brake is applied. The stop lamps need not function if the device, which starts and/or stops the engine, is in a position, which makes it impossible for the engine to operate.

The stop lamps may be activated by the application of a retarder or a similar device.

An emergency braking shall be indicated when the vehicle speed is higher than 5 km/h and at least one of the following conditions is met:

- (a) The deceleration is higher than 7 m/s^2 ;
- (b) An anti-lock brake system is activated;
- (c) A brake assistance system is activated.

In the case of an emergency braking:

- (i) the stop lamp of category S3 shall flash with a frequency of $4 \text{ Hz} \pm 1 \text{ Hz}$ and, in addition
- (ii) the light emitting surface and/or luminous intensity of the stop lamps of category S1 or S2 may be increased to a higher level within the relevant limits, or
- (iii) the optional additional pair of stop lamps of category S1 or S2 may be activated.

The flashing and the increase in light emitting surface and/or luminous intensity shall be activated and deactivated automatically."

Paragraph 6.11.9., amend to read:

"6.11.9. Other requirements

In all cases, the distance between the rear fog lamp and each stop lamp must be greater than 100 mm.

This requirement does not apply to stop lamps dedicated to indicate emergency braking."

* * *

B. JUSTIFICATION:

The display of an emergency braking improves safety. Rear-end accidents can be avoided by using an emergency brake display due to an improved reaction of the following drivers. A flashing stop lamp attracts the driver's view to the vehicle ahead and an increase in light emitting surface or luminous intensity gives the intuitive impression of approaching the vehicle ahead.

The automatic activation and deactivation ensure that the emergency brake display is actuated immediately and that misuse is avoided.

The coupling of the activation to a brake assistance system or an anti-lock braking system ensure that the emergency brake display is also active on surfaces low friction coefficient (low μ), e.g. wet or icy roads.

The threshold velocity of 5 km/h, the coupling of the activation to a brake assistance system, an anti-lock braking system or a deceleration of 7 m/s² ensure that the emergency brake display is only activated in severe braking situations.

Transitional provisions must be included in the amendments to this Regulation. They remain to be proposed.
