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

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

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 48  
02 SERIES OF AMENDMENTS

(Installation of lighting and light-signalling devices)

Transmitted by the Experts from Germany

Note: The text reproduced below was prepared by the experts from Germany, in order to allow the signalling of emergency braking. This proposal is based on document TRANS/WP.29/GRE/2002/22/Rev.1. The amended text is marked in **bold** characters.

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

## A. PROPOSAL

**Insert a new paragraph 2.27., to read:**

**"2.27. "Emergency braking" means a braking with a deceleration at the physical limits of tire adhesion to the road surface."**

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 lamps in the case of emergency braking**, and amber side-marker lamps complying with paragraph 6.18.7. below, shall be flashing lamps."

Paragraph 6.7.7., amend to read:

"6.7.7. Electrical connections

**6.7.7.1.** 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.

**6.7.7.2. In the case of an emergency braking the stop lamps may flash. If so the following conditions shall be met:**

- **the frequency of flashing is  $5 \text{ Hz} \pm 2 \text{ Hz}$**
- **the vehicle speed is higher than 10 km/h**
- **the signal is activated and deactivated automatically."**

\* \* \*

## B. JUSTIFICATION:

The indication of an emergency braking increases road safety:

Research studies prove that the reaction time of the drivers is reduced. An earlier reaction time of 0.2 sec at a vehicle speed of 80 km/h results in a reduced stopping distance of 4.4 m which corresponds to 30 km/h residual speed.

The frequency of  $5 \text{ Hz} \pm 2 \text{ Hz}$  allows the flashing of filament bulbs as well as for LED's.

The threshold of velocity of 10 km/h ensures that emergency brake indication is only activated during deceleration of the vehicle and a signalisation at standstill is prevented.

Only automatic activation assures the immediate signalisation of emergency braking. Automatic deactivation avoids false signals and misuse.