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

Working Party on Lighting and Light-Signalling (GRE)
(Fifty-fourth session, 5–8 April 2005,
agenda item 3.4.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 48

(Installation of lighting and light-signalling devices)

Transmitted by the expert from the Netherlands

Note: The text reproduced below was prepared by the expert from the Netherlands in order to improve the provisions for the automatic activation of a hazard warning signal and indication of an emergency braking. It refers to document TRANS/WP.29/GRE/2005/2 and proposes amendments to the new requirements for electrical connections (para. 6.22.7.1.). The modifications to the proposed text of TRANS/WP.29/GRE/2005/2 are marked in **bold** characters.

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

A. PROPOSAL

Paragraph 6.22.7.1., amend to read:

"6.22.7.1. The signal shall be given by the simultaneous operation of all the stop lamps, which shall be activated and deactivated automatically and shall flash in phase at a frequency of $[4.0 \pm 1.0]$ Hz 6/ "

Insert a new footnote 6/, to read:

"6/ With regard to the light sources used for all the stop lamps: filament lamps shall not be used in case of frequencies higher than 4.0 Hz."

* * *

B. JUSTIFICATION

The light sources used for all the stop lamps must have a sufficient dynamic response to the frequency applied. Both from research done by TNO-Human Factors in the Netherlands (see informal documents Nos. GRE-52-36 and GRE-53-2) as well as from information presented by the IEC (see informal document No. GRE-52-3), it has been shown that for filament lamps (P21W in particular) frequencies higher than 4 Hz are not appropriate. In fact, it was found that higher frequencies even have an adverse effect (i.e. longer reaction time). Therefore, the addition of a new footnote 6/ is necessary.

Furthermore, the range of frequency should not be too large to ensure the uniformity of the signal and also to ensure the distinction from the frequency of other flashing signals used on vehicles, which is 1.0 to 2.0 Hz. For this purpose, it is proposed to reduce the frequency range.
