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World Forum for Harmonization of Vehicle Regulations

Working Party on Brakes and Running Gear

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Item 3(d) of the provisional agenda

**REGULATIONS Nos. 13 AND 13-H
(Braking)**

Clarifications

Proposal for amendments to Regulation No. 13

Submitted by the experts from the European Association of Automotive Suppliers*

The text reproduced below was prepared by the experts from the European Association of Automotive Suppliers (CLEPA) to ensure that a trailer equipped with an electric control line will always brake when the driver activates the braking system. It is based on informal document No. GRRF-66-09. The modifications to the existing text of the Regulation are marked in bold characters.

* In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles. The present document is submitted in conformity with that mandate.

A. PROPOSAL

Insert new paragraphs 5.1.3.6.4. and 5.1.3.6.5., to read:

"5.1.3.6.4. In the case of trailers equipped with an electric control line, when the average of both "relative brake demand" messages (see byte 7-8 of EBS11) is less than [50 per cent] for more than [2] seconds, the relative brake demand function shall be disabled by the trailer and an "error" indication shall be sent by the trailer in the "support of the axle wise or side wise brake force distribution" message (see byte 2, bit 3 & 4 of EBS21).

5.1.3.6.5. When a towing vehicle is equipped with an electric control line and electrically connected to a trailer with an electric control line and supports automatic braking of the towed vehicle, the automatic brake demand shall not be less than the demand requested by the driver."

B. JUSTIFICATION

The message "relative brake demand" is used to brake independent axles or sides of a trailer to enhance stability. The requested brake demand value is transmitted using EBS 11 which is also used for the driver brake demand. The relative brake demand then reduces the pressure to an axle(x) or side. In using this control strategy there is the possibility that the use of the relative demand message could result in the towed vehicle being unbraked. The proposal for paragraph 5.1.3.6.4. limits the amount of time that is permitted for a significant deviation in the pressures between axles or sides.

Since all automatic or driver initiated brake demands utilize a common message EBS 11, there is a need to ensure the driver brake demand is not overridden. The proposal for paragraph 5.1.3.6.5. is designed to ensure any automatic brake application cannot be less than the brake demand requested by the driver.
