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Working Party on Brakes and Running Gear (GRRF)  
(Forty-eighth session, 11-13 September 2000,  
agenda item 1.1.)

**PROPOSAL FOR A DRAFT AMENDMENT TO REGULATION No. 13**  
(Braking)

Transmitted by the expert from the European Association of  
Automotive Suppliers (CLEPA)

Note: The text reproduced below was prepared by the expert from CLEPA in order to clarify the actuation of the service brake. It is based on the text of a document distributed without a symbol (informal document No. 8) during the forty-seventh session of GRRF (TRANS/WP.29/GRRF/47, para. 19).

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Note: This document is distributed to the Experts on Brakes and Running Gear only.

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**A. PROPOSAL**

Paragraph 5.2.2.14., should be deleted

Paragraph 5.2.2.14.1. (former), renumber as paragraph 5.2.2.14., and amend to read:

"5.2.2.14. In the event of a breakage ..... shall apply.

The above provisions are deemed to be fulfilled when the service brake storage device(s) is maintained under the conditions defined above at a pressure of at least 80 per cent of the control line demand pressure or equivalent digital demand as defined in paragraph 3.1.2.2. of annex 4 to this Regulation."

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**B. JUSTIFICATION**

The current paragraph 5.2.2.14. was introduced to simplify the verification of the provisions of paragraph 5.2.2.14.1. It was intended that the protection valve installed in the braking system to fulfil the provisions would allow the service braking storage system to achieve a pressure of 5.6 bar (80 per cent of 7 bar) before commencing to pressurise the auxiliary circuit(s) - opening pressure. However, the wording of paragraph 5.2.2.14. makes reference to the auxiliary equipment and its operation. Operation of the auxiliary equipment is an undefined usage as is the requirement of paragraph 5.2.2.14.1. when reference is made to breakage or leakage of the auxiliary equipment and connecting pipes.

The provisions applied by the two paragraphs require different pressures to be maintained within the service braking system as follows:

5.2.2.14 The service braking storage devices shall be maintained at a pressure of 5.6 bar (80 per cent of the pressure defined in paragraph 3.1.3.2 of annex 10 to the Regulation)

5.2.2.14.1 The provisions of this paragraph would be fulfilled when the service braking system is maintained at a pressure of 5.2 bar (80 per cent of 6.5 bar where 6.5 bar is the maximum demand pressure at which the Type-0 performance shall be fulfilled).

A protection valve having a closing pressure of 5.6 bar is likely to have an opening pressure of > 6 bar. The provisions of paragraph 3.1.3.2. of annex 10 are relatively new and are only now being introduced into the EC requirements by the European Community Directive 98/12/EC. Industry has concerns that setting the protection pressure at too high a value could result in the auxiliary system not being supplied with air pressure, thus causing damage to the vehicle suspension. In addition, with the suspension unpressurized, the resulting brake force available would be reduced to 30 per cent of that prescribed for all load conditions. The proposed amendment maintains the originally intended requirements, although with an alternative which enables easier verification but maintains equivalent or higher performance.

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