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**Economic Commission for Europe****Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Brakes and Running Gear****Seventy-ninth session**

Geneva, 16-20 February 2015

Item 3(e) of the provisional agenda

**Regulations Nos. 13 and 13-H (Braking) – Other Business****Proposal for an amendment to Regulation No. 13 (Heavy vehicle braking)****Submitted by the experts from the European Association of Automotive Suppliers\***

The text reproduced below was prepared by the experts of the European Association of Automotive Suppliers (CLEPA), introducing an amendment to Annex 10 of UN Regulation No. 13 to address trailer EBS failure warning I shut down when detecting excessive supply line pressure. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

## I. Proposal

*Annex 10,*

*Paragraph 3.1.3.4. amend to read:*

"3.1.3.4. It shall be ensured that at the coupling head of the supply line, a pressure of at least 700 kPa is available when the system is at cut-in pressure **and shall not exceed 900kPa when the system is at cut-out pressure**. This pressure shall be demonstrated without applying the service brakes."

## II. Justification

1. At the seventy-sixth GRRF, the expert from Denmark raised an issue associated with trailer EBS failure warning/shut down when detecting excessive supply line pressure (see Item XIII, C, paragraph 41 of the GRRF Report). For many years this has been a known problem however it has not been understood as to why this should occur. In Annex 10 of UN Regulation 13 the following paragraphs control the pressures at the control and supply lines when measured at the coupling head:

2. Paragraph 3.1.3.1.: When tested with the energy source stopped, the supply line blocked off, a reservoir of 0.5 litre capacity connected to the pneumatic control line, and the system at cut-in and cut-out pressures, the pressure at full application of the braking control shall be between 650 kPa and 850 kPa at the coupling heads of the supply line and the pneumatic control line, irrespective of the load condition of the vehicle.

3. Paragraph 3.1.3.4.: It shall be ensured that at the coupling head of the supply line, a pressure of at least 700 kPa is available when the system is at cut-in pressure. This pressure shall be demonstrated without applying the service brakes.

4. It can be seen that there is no requirement for the maximum supply line pressure when the compressor is at cut-out only that paragraph 3.1.3.1. states that the pressure in the supply line shall not exceed 850kPa after one brake application with the compressor at cut-in and cut-out. [In reality when the compressor is at cut-out it is very unlikely that it would be necessary to generate a pressure in the supply line of a magnitude that would exceed the maximum acceptable pressure for the trailer EBS that would result in system shut down and comply with this requirement. Therefore as this problem has been known for some years then it could be concluded that the cause of the high supply line pressure is the result of drift or unauthorised manipulation].

5. As delegates were requested to provide additional information it would seem reasonable that CLEPA representing the trailer braking system manufacturers should comment. If it is considered necessary to define a specific requirement to specify the maximum supply line pressure when the compressor is at cut-out.