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World Forum for Harmonization of Vehicle Regulations

Working Party on Brakes and Running Gear

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Item 3(e) of the provisional agenda

REGULATIONS Nos. 13 AND 13-H
(Braking)

Clarifications

Proposal for amendments to Revision 6 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) in order to correct errors associated with Revision 6 of Regulation No. 13. The modifications to the existing text of the Regulation are marked in bold and strikethrough 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

Annex 19, paragraph 5.4.1.2.4.2., amend to read:

"5.4.1.2.4.2. With the load sensing valve set to the laden condition and the initial energy level set according to paragraph 6.1.2. of Annex 13 to this Regulation, the energy storage device(s) shall be isolated from further supply of air. The brakes shall be applied with a control pressure of 650 kPa at the coupling head and then released. Further applications shall be made until the pressure in the brake chambers is the same as that obtained after completing the tests defined in paragraphs 6.1.3. and 6.1.4. of Annex 13 to Regulation No. 13 completing the test procedure defined in paragraphs 5.4.1.2.1. and 5.4.1.2.2. above. The number of equivalent brake applications \( n_{er} \) shall be noted.

The equivalent number of static brake applications \( n_e \) is to be recorded in the test report.

Where \( n_e = 1.2 \cdot n_{er} \) and is to be rounded up to the nearest whole integer"
B. JUSTIFICATION

Amendments to Annex 19, paragraph 5.4.1.2.4.2.
The current reference of paragraphs 5.4.1.2.1. and 5.4.1.2.2. is incorrect as these refer to the test conditions and not to the test procedure. Paragraph 5.4.1.2.3. refers to the overall test procedure in paragraph 6.1. of Annex 13. However, the specific test procedure which is applicable to paragraph 5.4.1.2.4.2. is the one defined in paragraphs 6.1.3. and 6.1.4. of Annex 13. The equivalent number of static brake applications relates to the completion of both the dynamic test (paragraph 6.1.3.) and static applications (paragraph 6.1.4.)

Amendments to Annex 20, paragraph 3.2.1.
Paragraph 3.1.2. of Annex 4 is specifically for trailers of category O2 and O3, whereas the procedure is also applicable to trailers of category O4. Therefore a reference to paragraph 3.1.3. of Annex 4 has been added.

Annex 20, Appendices 2, 3 and 4:
In all three equations defined for the determination of $z_c$ the brackets are missing from the first part of the formula where 0.01 represents the rolling resistance which is initially subtracted and then added at the end.

Annex 20, Appendix 3:
The current formula in Annex 20 is

$$z_c = 0.45 - 0.01 \left( \frac{F_r}{(P + 7000)g} \right) + 0.01$$

Where the value of 0.45 is incorrect and should be 0.5 which is the minimum Type O performance for centre axle trailers.