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**PROPOSAL FOR DRAFT SUPPLEMENT 9 TO THE 09 SERIES OF AMENDMENTS
TO REGULATION No. 13**

(Braking)

Transmitted by the Working Party on Brakes and Running Gear (GRRF)

Note: The text reproduced below was adopted by GRRF at its fifty-fourth session, and is transmitted for consideration to WP.29 and to AC.1. It is based on the texts of documents TRANS/WP.29/GRRF/51, annex 2, TRANS/WP.29/GRRF/2003/11, TRANS/WP.29/GRRF/2003/18, TRANS/WP.29/GRRF/2003/26 as amended by TRANS/WP.29/GRRF/54, para. 6.

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Paragraph 5.2.1.21., amend to read:

"5.2.1.21. In the case of a power driven vehicle authorized to tow a trailer of category O3 or O4, the service braking system of the trailer may only be operated in conjunction with the service, secondary or parking braking system of the towing vehicle. However, application of the trailer brakes alone is permitted where the operation of the trailer brakes is initiated automatically by the towing vehicle for the sole purpose of vehicle stabilization."

Add a new paragraph 5.2.2.21., to read:

"5.2.2.21. In addition to the requirements of paragraphs 5.2.1.18.4.2. and 5.2.1.21. above, the brakes of the trailer may also be applied automatically when this is initiated by the trailer braking system itself following the evaluation of on-board generated information."

Annex 8.

Paragraph 2.3., amend to read:

- "2.3. The following requirements shall apply to power-driven vehicles equipped with spring brakes:
- 2.3.1. The feed circuit to the spring compression chamber must either include an own energy reserve or must be fed from at least two independent energy reserves. The trailer supply line may be branched from this feed line under the condition that a pressure drop in the trailer supply line must not be able to apply the spring brake actuators.
- 2.3.2. Auxiliary equipment may only draw its energy from the feed line for the spring brake actuators under the condition that its operation, even in the event of damage to the energy source, cannot cause the energy reserve for the spring brake actuators to fall below a level from which one release of the spring brake actuators is possible.
- 2.3.3. In any case, during re-charging of the braking system from zero pressure, the spring brakes shall remain fully applied irrespective of the position of the control device until the pressure in the service braking system is sufficient to ensure at least the prescribed secondary braking performance of the laden vehicle, using the service braking system control.
- 2.3.4. Once applied, the spring brakes must not release unless there is sufficient pressure in the service braking system to at least provide the prescribed residual braking performance of the laden vehicle by application of the service braking control."

Paragraph 3., amend to read:

"3. AUXILIARY RELEASE SYSTEM"

Insert a new paragraph 3.3., to read:

- "3.3. Where an auxiliary release system utilizes stored energy to release the spring brakes the following additional requirements shall apply:
- 3.3.1. Where the control of the auxiliary spring brake release system is the same as that used for the secondary/parking brake, the requirements defined in paragraph 2.3. above shall apply in all cases.
- 3.3.2. Where the control for the auxiliary spring brake release system is separate to the secondary/parking brake control, the requirements defined in paragraph 2.3. above shall apply to both control systems. However, the requirements of paragraph 2.3.4. above shall not apply to the auxiliary spring brake release system. In addition the auxiliary release control shall be located so that it is protected against application by the driver from the normal driving position.
- 3.4. If compressed air is used in the auxiliary release system, the system should be activated by a separate control, not connected to the spring brake control."

Annex 13, Appendix 2.

Paragraph 2.2.1., amend the symbol Z_{Cmax} to read Z_{Cmaxi} in the $F_{i\ dyn}$ formulas for front and rear axles.

Paragraph 2.3.1., amend the symbol Z_C to read $Z_{C\ max}$ in the $F_{R\ dyn}$ formula.

Paragraph 2.3.2., amend the symbol Z_C to read Z_{CAL} in the $F_{R\ dyn}$ formula.
