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PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 13
(Braking)

Submitted 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 align the failure requirements specified for trailer anti-lock braking systems with those specified for failures in the electric control transmission. The modifications to the current text of the Regulation are marked in **bold** characters.

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

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A. PROPOSAL

Annex 13, paragraph 4.3., amend to read:

"4.3. In the event of a failure as defined in paragraph 4.1. above, the following requirements shall apply:

Motor vehicles: The residual braking performance shall be that prescribed for the vehicle in question in the event of a failure of part of the transmission of the service braking system as defined in paragraph 5.2.1.4. of this Regulation. This requirement shall not be construed as a departure from the requirements concerning secondary braking.

Trailers: The residual braking performance shall be that defined in paragraph 5.2.2.15.2. of this Regulation."

B. JUSTIFICATION

In 07 series of amendments the residual braking performance for a trailer in the event of an anti-lock braking system failure was defined as 80 per cent of the prescribed requirements for the relevant trailer. In terms of semi and centre axle trailers, this requirement did not impact on the design of the braking system, but on full trailers there were design implications. Generating the prescribed braking force must be achieved without wheel lock which can be fulfilled by the installation of an anti-lock braking system. However, having a failure requirement of 80 per cent of that prescribed in the event of a failure of the anti-lock braking system meant that brake force distribution systems must be installed on the trailer i.e. load sensing valve(s) to comply with the no wheel locking requirement. This was later amended to only apply to the laden trailer.

During discussion to introduce requirements for electronic control of the braking system, provisions were defined to cover failures within the "electric control transmission". For motor vehicles, the existing residual performance requirements specified in Annex 4 also applied to this failure. However, in the case of trailers (new failure requirements were introduced and are specified in paragraph 5.2.2.15.2. of the Regulation) where a failure within the electric control transmission occurs, the residual braking performance shall be at least 30 per cent of prescribed.

Based on the above, there is inconsistency within the current requirements as "Control Transmission" is defined as the combination of components that control the operation of the brakes which includes cables, processing and sensors. In paragraph 4.1. of Annex 13 reference is made to the failure conditions where there is also reference to cables, processing and sensors. Both control systems are subject to the requirements of Annex 18 where again there is reference to sensors, control units and transmission links (cables). It is clear that the components within the anti-lock braking system are the same as those defined within electric control transmission yet there are different failure requirements. Logically, the same failure requirements should apply for common failures. Therefore, it is recommended that the anti-lock braking requirements for trailers specified with paragraph 4.3. of Annex 13 refer to the general failure requirements for electric control transmission specified within paragraph 5.2.2.15.2.
