



**Economic and
Social Council**

Distr.
GENERAL

ECE/TRANS/WP.29/GRRF/2007/7
10 July 2007

Original: ENGLISH
ENGLISH AND FRENCH ONLY

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations

Working Party on Brakes and Running Gear

Sixty-second session
Geneva, 25-28 September 2007
Item 3(d) of the provisional agenda

REGULATIONS Nos. 13 AND 13-H (Braking)

Requirements for trailer ABS in case of failure

Proposal for draft amendments to Regulation No. 13
(Braking)

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

The text reproduced below was prepared by the expert from CLEPA to clarify in Regulation No. 13 the requirements for the residual braking performance of vehicles equipped with an anti-lock braking function. It is based on a document without a symbol (informal document No. GRRF-61-36), distributed during the sixty-first GRRF session (see report ECE/TRANS/WP.29/GRRF/61, para. 6).

The modifications to the current text of the Regulation are marked in **bold** characters.

A. PROPOSAL

Annex 13, paragraph 1.2., amend to read:

"1.2 The anti-lock systems known at present comprise a sensor or sensors, a controller or controllers and modulator or modulators. Any device of a different design which may be introduced in the future or where the anti-lock braking function is integrated into another system shall be deemed to be an anti-lock system within the meaning of this annex and Annex 10 to this Regulation if it provides performance equal to that prescribed by this annex. **However, only in the case of an anti-lock braking function integrated into a braking system with electric control transmission, the requirements of paragraph 4.3. of this annex shall not apply as the failure requirements for such a control system are specified within paragraph 5.2.1.27.3. of the Regulation for the power driven vehicle and paragraph 5.2.2.15.2. of the Regulation for the trailer.**"

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 to retain the existing failure requirements for anti-lock braking systems, the provisions of paragraph 4.3 of Annex 13 will remain valid. However, in the case where an anti-lock braking function is integrated into a braking system with electric control transmission, the specified failure requirements for vehicles with electric control transmission shall apply.
