



**Economic and Social
Council**

Distr.
GENERAL

TRANS/WP.29/GRRF/2003/29
17 July 2003

Original: ENGLISH
ENGLISH AND FRENCH ONLY

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Brakes and Running Gear (GRRF)
(Fifty-fourth session, 6-8 October 2003,
agenda item 1.4.)

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

Transmitted by the experts from the United Kingdom on behalf of
the ad-hoc group on braking compatibility

Note: The text reproduced below has been prepared by the expert from the United Kingdom in order to complete the proposals on braking compatibility. It is based on the text of a proposal distributed without a symbol (informal document No. 5) during the fifty-first session (TRANS/WP.29/GRRF/53, para.15).

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

A. PROPOSAL

Annex 10,

Insert new paragraphs 1.3. to 1.3.1.1., to read:

"1.3. Validation of the development of braking force.

1.3.1. At the time of type approval it shall be checked that the development of braking on an axle of each independent axle group */ shall be within the following pressure ranges:

(a) Laden vehicles:

At least one axle shall commence to develop a braking force when the pressure at the coupling head is within the pressure range 0.2 to 1.0 bar.

At least one axle of any other axle group shall commence to develop a braking force when the pressure at the coupling head is at a pressure \leq 1.2 bar.

(b) Unladen vehicles:

At least one axle shall commence to develop a braking force when the pressure at the coupling head is within the pressure range 0.2 to 1.0 bar.

*/ An axle group is where a number of axles have a maximum axle spread of 2m.

1.3.1.1. With the wheel(s) of the axle(s) raised off the ground and free to rotate, apply an increasing brake demand and measure the coupling head pressure corresponding to when the wheel(s) can no longer be rotated by hand. This condition is defined as the development of the braking force."

Paragraph 1.3. (former), renumber as paragraph 1.4.

Paragraph 7.5., amend to read:

"7.5. Electronically controlled brake force distribution systems that cannot fulfil the requirements of paragraphs 7.1., 7.2., 7.3. and 7.4. above shall have a self-checking procedure of the functions, which influence brake force distribution. In addition, when the vehicle is stationary, it must be possible to carry out the checks defined in paragraph 1.3.1. above by generating the nominal demand pressure value associated with the commencement of braking for both the laden and the unladen conditions."

Paragraph 8., amend to read:

"8. VEHICLE TESTING

At the time of type approval the technical service shall verify conformity with the requirements contained within this annex and carry out any further tests considered necessary to this end. The results of any further tests shall be recorded and appended to the type approval report."

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B. JUSTIFICATION

Ref. to paragraph 1.3.:

Whilst the majority of brake applications occur at low pressure, to date no defined test procedure exist enabling the compatibility requirements to be verified and therefore the addition of paragraph 1.3. within annex 10 addresses this issue by:

- (a) Defining a standard procedure by which the reference values (development of a braking force) referred to in annex 10, paragraph 1.2. can be easily verified.
- (b) Controlling/improving the differentials in brake performance that can exist between motor vehicles and their trailers and so aiding the issue to brake compatibility.

Ref. to paragraph 7.5.:

For vehicles with EBS, the addition of the second sentence ensures that the coupling head nominal demand pressure value associated with the commencement of braking fulfils the requirements as defined within annex 10, paragraph 1.2.

Ref. to paragraph 8.:

Alignment of terminology with supplement 6 of the 09 series of amendments to this Regulation.
