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**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-ninth session, 30 January - 3 February 2006,  
agenda item 5.5.)

REVISED PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 106 \*/

(Pneumatic tyres for agricultural vehicles)

Transmitted by the expert from the European Tyre and Rim Technical Organization (ETRTO)

Note: The text reproduced below was prepared by the expert from ETRTO in order to insert a new category for radial tyres operating at very high deflection, to clarify the markings and to re-insert the former design tyre "14.9LR-20". This document is a revised version of TRANS/WP.29/GRRF/2005/15, taking into consideration comments made during the fifty-eighth session of GRRF. The modifications to the existing text of the Regulation are marked in **bold** characters.

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

\*/ The present document has previously been circulated under the symbol "TRANS/WP.29/GRRF/2005/15".

**A. PROPOSAL**

Insert a new paragraph 2.15.8., to read:

**"2.15.8. The letters "IF" before the nominal section width in case of "Improved Flexion Tyre".  
The letters "VF" before the nominal section width in case of "Very High Flexion Tyre"."**

Insert a new paragraph 2.20.1., to read:

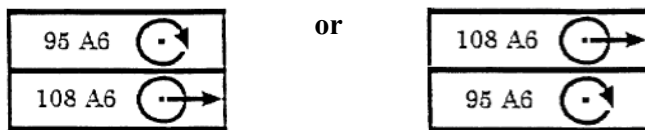
**"2.20.1. "Improved Flexion Tyre" or "Very High Flexion Tyre" describe a pneumatic-tyre structure in which the carcass is more resistant than that of the corresponding standard tyre."**

Insert a new paragraph 2.30.2., to read:

**"2.30.2. The table "Variation of load capacity with speed" is not applicable to "Improved Flexion" or "Very High Flexion" tyres."**

Paragraph 3.1.4.2., amend to read:

**"3.1.4.2. in the case of implement tyre for mixed applications the tyre must be marked with two service descriptions one for "trailer" applications and the other for "traction" applications, each supplemented with the relevant symbol (see paragraphs 2.23. and 2.24. above) as follows:**



"

Insert a new paragraph 3.1.12., to read:

**"3.1.12. The inscription "IF" shall be added in front of the tyre-size designation when the tyre is "Improved Flexion Tyre".  
The inscription "VF" shall be added in front of the tyre-size designation when the tyre is "Very High Flexion Tyre." "**

Annex 3, Part A, note (a), amend to read:

**"(a) the size designation, comprising the prefix (if any), the nominal section width, the nominal aspect ratio, the type-of-structure symbol (where applicable) and the nominal rim diameter, must be grouped as shown in the examples:  
360/70 R 24, IF 360/70 R 24, VF 360/70 R 24."**

Annex 5, Table 2 (3 of 3), low section height, between the tyre size designations 7.5L-15 and 17.5L-24, insert a new tyre size "14.9LR-20" to read:

"

Tyre size designation	Theoretical rim width code (A1)	Nominal section Width (S1) (mm)		Overall Diameter (D) (mm)		Nominal rim Diameter (d) (mm)
		Radial	Diagonal	Radial	Diagonal	
<b>14.9LR-20</b>	<b>13</b>	<b>378</b>		<b>1100</b>		<b>508</b>

"

Annex 7, Part A, insert a new sentence below the table to read:

**"The above load/speed variations table does not apply to IF and VF Tyres."**

## **B. JUSTIFICATION**

Ad paragraphs 2.15.8., 2.20.1., 2.30.2.,3.1.12., Annexes 3 and 7:

To permit the type approval of a new radial agricultural tractor tyre category:

This proposal describes a new radial agricultural category of tyres operating at higher deflection than the corresponding regular radial tyre and also able to run without any adjustment of the pressure according to the speed.

At a given pressure, the load capacity of an Improved Flexion Tyre (IF) is almost 20 per cent higher than the load capacity of the corresponding standard tyre.

At a given pressure, the load capacity of a Very High Flexion Tyre (VF) is almost 40 per cent higher than the load capacity of the corresponding standard tyre.

Consequently for a given load, the operating inflation pressure can be significantly reduced and maintained regardless of the speed. Such a feature allows the tractor to travel on the road with the low inflation pressure used for field works and important for the reduction of soil compaction. The farmer no longer needs to adjust the tyre inflation pressure to the use of its tractor in fieldwork or road transportation.

Ad paragraph 3.1.4.2.:

To recognize some markings existing on the market for some implement tyres without modifying the information on the service description that in any case identifies the type of application (drive or free rolling) with the appropriate symbol.

Ad Annex 5:

To add to Annex 5 an old design tyre that was omitted.

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