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**Economic Commission for Europe**

Inland Transport Committee

**World Forum for Harmonization of Vehicle Regulations**

**Working Party on Brakes and Running Gear**

**Eightieth session**

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Item 7(e) of the provisional agenda

**Tyres – Regulation No. 106**

 Proposal for amendments to Regulation No. 106 (Tyres for Agricultural Vehicles)

 Submitted by the experts from the European Tyre and Rim Technical Organisation[[1]](#footnote-2)\*

The text reproduced below was prepared by the experts from the European Tyre and Rim Technical Organisation (ETRTO) amending Annex 5 and Annex 7 as far as Improved Flexion (IF) tyres and Very high Flexion (VF) tyres are concerned. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

 I. Proposal

*Annex 5, table 4*, amend to read:

**"**Drive wheel tyres for agricultural tractors - Low section series

| *Tyre sizedesignation* ***(1)*** | *Theoretical rim width code (A1)* | *Nominal sectionwidth (S1) (mm)* | *Overall diameter (D) (mm)* | *Nominal rimdiameter (d)(mm)* |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| 300/70R20 | 9 | 295 | 952 | 508 |
| 320/70R20 | 10 | 319 | 982 | 508 |
| 320/70R24 | 10 | 319 | 1 094 | 610 |
| 320/70R28 | 10 | 319 | 1 189 | 711 |
| 360/70R20 | 11 | 357 | 1 042 | 508 |
| 360/70R24 | 11 | 357 | 1 152 | 610 |
| 360/70R28 | 11 | 357 | 1 251 | 711 |
| 380/70R20 | 12 | 380 | 1 082 | 508 |
| 380/70R24 | 12 | 380 | 1 190 | 610 |
| 380/70R28 | 12 | 380 | 1 293 | 711 |
| 420/70R24 | 13 | 418 | 1 248 | 610 |
| 420/70R28 | 13 | 418 | 1 349 | 711 |
| 420/70R30 | 13 | 418 | 1 398 | 762 |
| 480/70R24 | 15 | 479 | 1 316 | 610 |
| 480/70R26 | 15 | 479 | 1 372 | 660 |
| 480/70R28 | 15 | 479 | 1 421 | 711 |
| 480/70R30 | 15 | 479 | 1 478 | 762 |
| 480/70R34 | 15 | 479 | 1 580 | 864 |
| 480/70R38 | 15 | 479 | 1 681 | 965 |
| 520/70R26 | 16 | 516 | 1 456 | 660 |
| 520/70R30 | 16 | 516 | 1 536 | 762 |
| 520/70R34 | 16 | 516 | 1 640 | 864 |
| 520/70R38 | 16 | 516 | 1 749 | 965 |
| 580/70R38 | 18 | 577 | 1 827 | 965 |

**(1) "Improved flexion tyres" are identified by means of the letters "IF" added in front of the size designation (e.g. IF480/70R38) ; "Very high flexion tyres" are identified by means of the letters "VF" added in front of the size designation (e.g. VF480/70R38) – see paragraph 3.1.12. of this Regulation.**"

*Annex 7- Variation of load capacity with speed,* amend to read:

"Part A: Drive wheel tyres for agricultural tractors

Applicable to tyres classified with categories of use: "Tractor drive wheel" (see paragraph 2.20. of this Regulation)

Variation of load carrying capacity (per cent)

|  |  |  |  |
| --- | --- | --- | --- |
| *Speed**(km/h)* | *Speed category symbol* |  |  |
| *A2* | *A6 (+)* | *A8 (+)* | *D (+)* | ***A8 (2)*** | ***D (2)*** | *(1)* |
| 10 | [0] | +40 | +50 | +50 | **0** | **0** |  | + 58 |
| 15 | -6 | +30 | +34 | +34 | **0** | **0** |  | + 32 |
| 20 | -11 | +20 | +23 | +23 | **0** | **0** |  | + 26 |
| 25 | -16 | +7 | +11 | +18,5 | **0** | **0** |  | + 19 |
| 30 | -20 | [0] | +7 | +15 | **0** | **0** |  | + 12 |
| 35 | -24 | **-5**~~10~~ | +3 | +12 | **0** | **0** |  | + 10 |
| 40 | -27 | **-10**~~20~~ | [0] | +9,5 | **[0]** | **0** |  | + 6 |
| 45 | - | - | -4 | +7 | **-4** | **0** |  | + 2 |
| 50 | - | - | -9 | +5 | **-9** | **0** |  | [0] |
| 55 | - | - | - | +3 | - | **0** |  | - |
| 60 | - | - | - | +1,5 | - | **0** |  | - |
| 65 | - | - | - | [0] | - | **[0]** |  | - |
| 70 | - | - | - | -9 | - | **-9** |  | - |

The above load/speed variations apply when the tyre is not subjected to sustained high torque service.

(+) For field applications with sustained high torque service the values shown in the line 30 km/h apply.

(1) These percentages apply only in case of tyres listed in Annex 5, Table 7, with nominal rim diameter (d) 381 mm and above, marked with speed symbol "B"

**(2)** The**se** ~~above~~ load/speed variations ~~table~~ ~~does not~~ apply to IF and VF Tyres."

II. Justification

1. In order to permit interchangeability and to properly identify the tyre family the note below table 4 of Annex 5 clarifies that the table applies also to IF and VF tyres; in that case the appropriate size designation is clearly explained.

2. The revision of the table in Annex 7 is in accordance to International standards (e.g. ETRTO, T&RA and ISO 4351-2 table 2) as far as it concerns IF and VF tyres. This proposal will also avoid any possible misunderstanding for the application of the EC Regulation 167/2013 that refers to Regulation No. 106. Such revision is also needed for conformity with the EC Reg. 2015/208 – Annex XXX.

3. This document supersedes and replaces Informal document GRRF-79-32.

1. \* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate. [↑](#footnote-ref-2)