

22 June 2015

Agreement

Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions*

(Revision 2, including the amendments which entered into force on 16 October 1995)

Addendum 105 – Regulation No. 106

Revision 2 - Amendment 1

Supplement 11 to the 00 series of amendments – Date of entry into force: 15 June 2015

Uniform provisions concerning the approval of pneumatic tyres for agricultural vehicles and their trailers

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2014/50/Rev.1.



UNITED NATIONS

* Former title of the Agreement: Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

Paragraph 1., amend to read:

"1. Scope

...

It does not apply to tyre types designated primarily for other purposes, such as:

- (a) Earth-moving equipment;
- (b) Industrial and lift trucks."

Paragraph 2.1.3., amend to read:

" Category of use:

...

- (g) Forestry machines – standard tread;
- (h) Forestry machines – special tread;
- (i) Construction applications (IND)."

Insert a new paragraph 2.15.11., to read:

"2.15.11. The letters "IND" after the nominal rim diameter marking in case of tyres for construction application (industrial tractors)."

Insert a new paragraph 2.42., to read:

"2.42. "Construction application (industrial tractor) tyre" means a tyre designed to be fitted on industrial tractors, backhoe loaders and other vehicles working in industrial or construction applications (e.g. loaders, excavators, etc.) or some agricultural vehicles (e.g. telehandlers)."

Paragraphs 3.1.4.1. and 3.1.4.2., amend to read:

"3.1.4.1. In the case of implement tyre, the service description supplemented with the relevant application symbol;

3.1.4.2. In the case of implement tyre for mixed applications, two service descriptions one for "trailer" applications and the other for "traction";"

Paragraph 3.1.7., amend to read:

"3.1.7. The inscriptions "F-1" or "F-2" or "F-3" in the case of a Tractor steering wheel tyre that is not already marked as per paragraph 2.15.6. above;"

Paragraph 3.1.12., amend to read:

"3.1.12. The inscription "IF" in front of the tyre-size designation when the tyre is "Improved Flexion Tyre".

The inscription "VF" in front of the tyre-size designation when the tyre is "Very High Flexion Tyre".

Insert a new paragraph 3.1.13., to read:

"3.1.13. The inscription "R-4" in the case of a construction application tyre, identified in Annex 5, Table 9, that is not already marked as per paragraph 2.15.11. above."

Paragraph 3.1.13. (former), renumber as paragraph 3.2.

Paragraphs 3.2. to 3.5., renumber as paragraphs 3.3. to 3.6.

Paragraph 6.4.2., add at the bottom of the table a new row, to read:

"

...				
Construction Applications	0.96	1.04	0.97	1.07

Annex 3,

Add a new Part E, to read:

"Part E: Tyres for construction applications (industrial tractors)

Example of the markings to be borne by types of tyres complying with this Regulation

b 400/80 – 24 IND b b 156 A8 b b 153 B b
c TUBELESS c c 2513 c

Minimum heights of markings:

b: 9 mm c: 4 mm

These markings define a tyre for construction applications (IND):

- (a) Having a nominal section width of 400;
- (b) Having a nominal aspect ratio of 80;
- (c) Of diagonal ply structure (-);
- (d) Having a nominal rim diameter of 610 mm for which the code is 24;
- (e) Having a load capacity of 4000 kg, corresponding to load index 156 in Annex 4;
- (f) Classified in the speed category A8 (reference speed 40 km/h) ;
- (g) Allowed to be used additionally at 50 km/h (speed category symbol B) with a load, capacity of 3650 kg corresponding to the load capacity index 153 shown in Annex 4;
- (h) For fitting without an inner tube ("TUBELESS");
- (i) Manufactured during the twenty-fifth week of the year 2013 (see paragraph 3.2. of the Regulation).

The positioning and order of the markings constituting the tyre designation are as follows:

- (a) The size designation, comprising the nominal section width, the nominal aspect ratio, the type of structure symbol, the nominal rim diameter and the suffix IND, must be grouped as shown in the above example: 400/80 – 24 IND;
- (b) The service description (load index and the speed category symbol) is placed near the size designation. It may either precede or follow it or be placed above or below it;
- (c) The symbols "TUBELESS", "R-4" if applicable, and the date of production may be at a distance from the size designation";
- (d) The marking of the additional Service Description inside the circle, if any, may show either the speed category symbol after or below the load index.

Annex 5,

Table 1, Note 1, amend to read:

- "1. Agricultural steering wheels tyres are identified either by suffix "Front" placed after the Tyre size designation (e.g. 4.00 - 9 Front) or by one of the following additional markings added to the Tyre sidewalls: "F - 1", "F - 2" or "F - 3".

Add new Tables 8 and 9, to read:

"Table 8

Forestry Tyres – Code Designated sizes

<i>Tyre size designation</i>	<i>Theoretical rim width code (A1)</i>	<i>Nominal section width (S1) (mm)</i>	<i>Overall diameter (D) (mm)</i>	<i>Nominal rim diameter (d) (mm)</i>
23.1-26 LS	20	587	1632	660
24.5-32 LS	21	622	1831	813
28L-26 LS	25	714	1644	660
30.5L-32 LS	27	775	1847	813
35.5L-32 LS	31	902	2011	813

Notes:

1. Forestry Tyres are identified by suffix "LS-2" or "LS-3" placed after the Tyre size designation (e.g. 30.5L- 32 LS-2).
2. Tyres of radial structure are identified by means of the letter "R" in place of "-" (e.g. 30.5LR32 LS).

Table 9

Tyres for construction applications (industrial tractors)

<i>Tyre size designation</i>	<i>Theoretical rim width code (A1)</i>	<i>Nominal section width (S1) (mm)</i>		<i>Overall diameter (D) (mm)</i>		<i>Nominal rim diameter (d) (mm)</i>
		<i>Radial</i>	<i>Diagonal</i>	<i>Radial</i>	<i>Diagonal</i>	
14.9-24	13	378	378	1 245	1 240	610
14.9-28	13	378	378	1 350	1 345	711
16.9-24	15	429	429	1 320	1 310	610
16.9-28	15	429	429	1 420	1 410	711
16.9-34	15		429		1 560	864
17.5L-24	15	445	445	1 250	1 241	610
18.4-24	16	467	467	1 395	1 375	610
18.4-26	16		467		1 425	660
18.4-28	16	467	467	1 490	1 477	711
18.4-30	16		467		1 525	762
19.5L-24	17	495	495	1 320	1 314	610
21L-24	18	533	533	1 395	1 378	610
23.1-26	20		587		1 580	660

Notes:

1. These tyres are identified either by suffix "IND", placed after the Tyre size designation (e.g. 14.9-24 IND), or by the following marking added to the tyre sidewalls: "R – 4".
2. Tyres of radial structure are identified by means of the letter "R" in place of "-" (e.g. 14.9 R 24).
3. Coefficient for the calculation of the overall width of radial tyres: + 8 %."

Annex 7,

Add a new Part E, to read:

"Part E: Tyres for construction applications (industrial tractors)

Applicable to tyres classified with categories of use: "Construction Applications" (see paragraph 2.42.)

Variation of load carrying capacity (per cent) for tyres marked with speed category symbol A8

Speed (km/h)	Variation of load carrying capacity (%)	
	Constant load	Cyclic applications (+)
5	+ 45	+ 67 (1)
10	+ 25	+ 50 (2)
15	+ 13	+ 34
20	+ 9	+ 23
25	+ 6	+ 11
30	+ 4	+ 7
35	+ 2	+ 3
40	[0]	[0]
45	- 4	- 4
50	- 9	- 9

(+) Cyclic means applications where tyres are used one way laden and return unladen (e.g loaders).

(1) One way distance 150 m, fully loaded.

(2) One way distance 600 m, fully loaded."
