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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****Seventy-eighth session**

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Item 7(d) of the provisional agenda

Tyres – Other business**Proposal for amendments to Regulation No. 106 (Tyres for agricultural vehicles)****Submitted by International Motorcycle Manufacturers Association***

The text reproduced below was prepared by the experts from the International Motorcycle Manufacturers Association (IMMA). This is a counter-proposal to European Tyre and Rim Technical Organisation (ETRTO) proposal to amend Regulation No. 75 and replaces documents ECE/TRANS/WP.29/GRRF/2013/22 and ECE/TRANS/WP.29/GRRF/2013/20 to consider the comments made at the last GRRF session in February 2014. Modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

* 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.

I. Proposal

Paragraph 1., amend to read:

"1. Scope

This Regulation covers new pneumatic tyres designed primarily, but not only, for agricultural and forestry vehicles (power-driven vehicles in category T¹), agricultural machines (power-driven and trailed) and agricultural trailers, and identified by speed category symbols corresponding to speeds of 90 km/h (speed symbol G) and below for AT tyres and by speed category symbols corresponding to 65 km/h (speed symbol "D") and below for other tyres."

Add a new paragraph 2.42., to read:

"2.42. "AT (all terrain) tyre" means a low pressure tyre designed primarily, but not only, for the equipment of agricultural or forestry all-terrain vehicles or side-by-side vehicles and their trailers.

Add a new paragraph 3.1.14., to read:

"3.1.14. For all terrain (AT) tyres, the symbol identifying the reference inflation pressure as follows:

Symbol	Reference Inflation Pressure (kPa)
☆	25
☆☆	35
☆☆☆	45

"

Add a new paragraph 4.1.16., to read:

"4.1.16. For all terrain (AT) tyres, the symbol identifying the reference inflation pressure (see paragraph 3.1.14.) "

Annex 1,

Add a new paragraph 5.8., to read:

"5.8. For all terrain (AT) tyres, the symbol (stars) identifying the reference inflation pressure."

Annex 5,

Table 7 (1 and 2 of 4), complete rows for the following tyre size designations, to be deleted:

AT21x7-10, AT22x9-8, AT23x7-10, AT23x8-11, AT24x8-11, AT24x9-11, AT24x10-11, AT25x8-12, AT25x11-9 and AT25x11-10.

¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.2, para. 2. - www.unece.org/trans/main/wp29/wgs/wp29gen/wp29resolutions.html

Annex 5,

Add a new table 8, to read:

"Table 8

All terrain tyres

Tyre size ¹	Measuring rim width code	Section width (mm)	Overall diameter (mm)			Maximum overall width (mm)
			D _{min}	D	D _{max}	
AT16x6-8	5	154	394	406	418	168
AT16x7-7	5.5	177	392	406	420	193
AT16x8-7	6.5	204	392	406	420	222
AT18x7-7	5.5	177	440	457	474	193
AT18x7-8	5.5	177	442	457	472	193
AT18x8-7	6.5	204	440	457	474	222
AT18x9-8	7	227	442	457	472	247
AT18x9.5-8	7.5	240	442	457	472	262
AT18x10-10	8	254	445	457	469	277
AT18x10-8	8	254	442	457	472	277
AT18x11-10	9	281	445	457	469	306
AT18x11-8	9	281	442	457	472	306
AT18x11-9	9	281	443	457	471	306
AT19x6-10	5	154	469	483	497	168
AT19x7-8	5.5	177	466	483	500	193
AT19x8-8	6.5	204	466	483	500	222
AT19x9-8	7	227	466	483	500	247
AT19x10-9	8	254	468	483	498	277
AT20x7-10	5.5	177	493	508	523	193
AT20x7-8	5.5	177	490	508	526	193
AT20x7-9	5.5	177	491	508	525	193
AT20x8-10	6.5	204	493	508	523	222
AT20x10-10	8	254	493	508	523	277
AT20x10-8	8	254	490	508	526	277
AT20x10-9	8	254	491	508	525	277
AT20x11-10	9	281	493	508	523	306
AT20x11-8	9	281	490	508	526	306
AT20x11-9	9	281	491	508	525	306
AT21x7-10	5.5	177	516	533	550	193
AT21x8-9	6.5	204	515	533	551	222
AT21x10-10	8	254	516	533	550	277
AT21x10-8	8	254	513	533	553	277
AT21x11-8	9	281	513	533	553	306
AT21x11-9	9	281	515	533	551	306
AT21x12-8	9.5	304	513	533	553	331
AT22x7-10	5.5	177	541	559	577	193
AT22x7-11	5.5	177	542	559	576	193
AT22x7-12	5.5	177	544	559	574	193
AT22x7-9	5.5	177	539	559	579	193
AT22x8-10	6.5	204	541	559	577	222
AT22x9-10	7	227	541	559	577	247
AT22x9-11	7	227	542	559	576	247

Tyre size ¹	Measuring rim width code	Section width (mm)	Overall diameter (mm)			Maximum overall width (mm)
			D _{min}	D	D _{max}	
AT22x9-8	7	227	538	559	580	247
AT22x10-10	8	254	541	559	577	277
AT22x10-8	8	254	538	559	580	277
AT22x10-9	8	254	539	559	579	277
AT22x11-10	9	281	541	559	577	306
AT22x11-8	9	281	538	559	580	306
AT22x11-9	9	281	539	559	579	306
AT22x12-8	9,5	304	538	559	580	331
AT22.5x10-8	8	254	550	572	594	277
AT23x7-10	5.5	177	564	584	604	193
AT23x8-10	6.5	204	564	584	604	222
AT23x8-11	6.5	204	566	584	602	222
AT23x8-12	6.5	204	567	584	601	222
AT23x10-10	8	254	564	584	604	277
AT23x10-12	8	254	567	584	601	277
AT23x10-8	8	254	561	584	607	277
AT23x11-9	9	281	563	584	605	306
AT23x12-9	9,5	304	563	584	605	331
AT24x8-11	6.5	204	590	610	630	222
AT24x8-12	6.5	204	592	610	628	222
AT24x9-11	7	227	590	610	630	247
AT24x9-12	7	227	592	610	628	247
AT24x10-11	8	254	590	610	630	277
AT24x11-10	9	281	589	610	631	306
AT24x11.5-10	9	290	589	610	631	316
AT24x12-10	9,5	304	589	610	631	331
AT24x13-9	10.5	330	587	610	633	360
AT25x8-10	6.5	204	612	635	658	222
AT25x8-12	6.5	204	615	635	655	222
AT25x8-13	6.5	204	617	635	653	222
AT25x10-10	8	254	612	635	658	277
AT25x10-12	8	254	615	635	655	277
AT25x11-10	9	281	612	635	658	306
AT25x11-12	9	281	615	635	655	306
AT25x11-9	9	281	611	635	659	306
AT25x11.5-9	9	290	611	635	659	316
AT25x12-10	9,5	304	612	635	658	331
AT25x12-9	9,5	304	611	635	659	331
AT25x13-9	10.5	330	611	635	659	360
AT26x9-12	7	227	639	660	681	247
AT26x10-12	8	254	639	660	681	277
AT26x10.5-12	8.5	268	639	660	681	292
AT26x12-10	9.5	304	636	660	684	331
AT26x12-12	9.5	304	639	660	681	331
AT26x12-14	9.5	304	642	660	678	331
AT27x9-12	7	227	663	686	709	247
AT27x11-12	9	281	663	686	709	306
AT27x12-10	9.5	304	660	686	712	331

Tyre size ¹	Measuring rim width code	Section width (mm)	Overall diameter (mm)			Maximum overall width (mm)
			D _{min}	D	D _{max}	
AT27x12-12	9.5	304	663	686	709	331

¹ Tyres in Radial construction are identified by the letter "R" in place of "-" (e.g. AT16x6 R 8). In case of Tyre Size designations not included in this table, refer to any edition of one of the following International Tyre Standards for the relevant dimensional data:

- (a) The European Tyre and Rim Technical Organisation (ETRTO) 'Standards Manual';
- (b) The Tire and Rim Association Inc. (TRA) 'Year Book';
- (c) The Japan Automobile Tire Manufacturers Association (JATMA) 'Year Book';
- (d) The Scandinavian Tyre and Rim Organisation (STRO) 'Data Book'.

In that case the nominated International Tyre Standard, to which the tyre conforms, shall be specified in the application for approval.

"

Annex 7,

Add a new Part E for all terrain (AT) tyres with speed symbol "F", to read:

" Part E: AT tyres

Applicable to tyres classified with categories of use: agricultural or forestry all-terrain vehicles and side-by-side vehicles (see paragraph 2.42. of this Regulation)

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

Speed (km/h)	Variation in Load Carrying Capacity (%)
50 and below	+ 12
60	+ 7
70	+ 3
80	0
90	- 5

"

Annex 9,

Paragraph 1.1., amend to read:

"1.1. This test procedure is applicable for new tyres marked with speed category symbol "D" and, in case of AT tyres with speed category symbol D, E, F, G."

Paragraph 3.2., amend to read:

"3.2. Test drum speed: ~~20 km/h~~ see table in paragraph 3.4. below"

Paragraph 3.3.1., amend to read:

"3.3.1. The mass corresponding to load index marked on the tyre ~~in case of tyres marked with speed symbol D.~~"

Paragraph 3.4., amend to read:

"3.4. Load/speed test programme

<i>Tyre speed category symbol</i>	<i>Test step</i>	<i>Percentage of the test load</i>	<i>Duration (hours)</i>
D	1	66 per cent	7
	2	84 per cent	16
	3	101 per cent	24

<i>Load index</i>	<i>Tyre speed category symbol</i>	<i>Test-drum speed</i>		<i>Load placed on the wheel as a percentage of the load corresponding to the load index</i>		
		<i>Radial-ply min⁻¹</i>	<i>Diagonal (bias-ply) min⁻¹</i>	<i>7 h.</i>	<i>16 h.</i>	<i>24 h.</i>
122 or more	D	62.5	62.5	66 %	84 %	101 %
	E	75	75			
	F	100	100			
	G	125	100			
121 or less	D	62.5	62.5	66 %	84 %	101 %
	E	75	75			
	F	100	100			
	G	125	125			

II. Justification

1. This proposal enables the type approval of tyres designed to equip all-terrain vehicles and side-by-side vehicles covered by the new EU Regulation No. 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles. It also enables the type approval of tyres designed to equip those quadricycles categorised as all-terrain quads and side-by-side buggies and covered by the new EU Regulation No. 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles (L category vehicles).

2. In order to cover the speeds between 65 and 90 km/h, relevant requirements for the load/speed tests have been copied from Regulation No. 54.