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Item 6 (e) of the provisional agenda

Tyres: UN Regulation No. 117 (Tyre Rolling Resistance, Rolling Noise and Wet Grip)

Proposal for Supplement 3 to the 04 series of amendments to UN Regulation No. 117

Submitted by the experts from the European Tyre and Rim Technical Organisation*

The text reproduced below was prepared by the experts from the European Tyre and Rim Technical Organisation (ETRTO). The modifications to the existing text of the UN 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 2025 as outlined in proposed programme budget for 2025 (A/79/6 (Sect.20), table 20.6), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



I. Proposal

Paragraph 1.1., amend to read:

- "1.1. This Regulation applies to new pneumatic tyres * of classes C1, C2 and C3 in new state with regard to their sound emissions, **and** rolling resistance, and to ~~adhesion performance on wet surfaces (wet adhesion) in new and for class C1~~ **tyres in worn state with regard to adhesion performance on wet surfaces (wet adhesion)**. It also applies to C1 tyres in new state with regards to their ~~tyre~~ abrasion as defined in paragraph 1.3. of this UN Regulation. It does not, however, apply to:"

Paragraph 2.11. and footnote 2, amend to read:

- "2.11. "Reinforced tyre" or "extra load tyre" of class C1 means a tyre structure designed to carry more load at a higher inflation pressure than the load carried by the corresponding standard version tyre at the standard inflation pressure as specified in ISO 4000-1:2021**2024**.²

² Class C1 tyres correspond to "passenger car tyres" in ISO 4000-1:2021**2024**."

Paragraph 2.16.1., amend to read:

- "2.16.1. "Principal grooves" means the wide ~~circumferential~~ grooves positioned in the central ~~zone-part~~ of the tyre tread, ~~which, in the case of passenger and light truck (commercial) tyres, have the treadwear indicators located in the base~~ **which covers about three-quarters of the width of the tread surface.**"

Add a new paragraph 2.16.2., to read:

- "2.16.2. "Tread groove" means the space between two adjacent ribs or blocks in the tread pattern."

Subparagraphs 2.18.(b), (c), (i) and (j), amend to read:

- "2.18. ...
- (b) F2493 – ~~2324~~ for the size P225/60R16 and referred to as "SRTT16";
 - (c) F3611 – ~~22e124~~ for the size P225/60R16 in worn state and referred to as "moulded SRTT16 worn";
 - ...
 - (i) F3676 – ~~2324~~ for the size 225/45R17 and referred to as "SRTT17S";
 - (j) F3675 – ~~2324~~ for the size 225/45R17 and referred to as "SRTT17W".
- "

Paragraph 6.8., amend to read:

- "6.8. In order to be classified as a "professional off-road tyre", a **special use** tyre shall have ~~all of~~ the following characteristics:
- (a) For ~~classes class C1 and C2~~ **class C1** tyres:
 - (i) A tread depth ≥ 11 mm;
 - (ii) A void-to-fill ratio ≥ 35 per cent;
 - (iii) A maximum speed category **less than or equal to 160 km/h (speed category symbol of $\leq Q$)**.
 - (b) **For class C2 tyres, a maximum speed category less than or equal to 160 km/h (speed category symbol Q).**
 - (~~b~~c) **For class C3 tyres, a maximum speed category less than or equal to 110 km/h (speed category symbol K).**
 - (i) ~~A tread depth ≥ 16 mm;~~

(ii) ~~A void to fill ratio ≥ 35 per cent;~~

(iii) ~~A maximum speed rating of $\leq K$."~~

Paragraph 12.26., amend to read:

"12.26. As from the 1 September 2028, Contracting Parties applying this Regulation shall not be obliged to accept type approval issued according to Supplement 2 to the 04 series of amendments to this Regulation, **first issued after 31 August 2028**, if the track characteristics for measuring wet adhesion of tyre in new state are not established using the following reference tyres:

Tyre class	Reference tyres
C2	SRTT16C
C3	SRTT19.5 siped or SRTT22.5 siped

"

Annex 6, subparagraph 2.2.(a), amend to read:

"2.2. ...

(a) For class C1 tyres, the width of the rim shall be as defined in ISO 4000-1:2021**2024**,

..."

Annex 6 – Appendix 1, paragraph 2.1., amend to read:

"2.1. Width

For passenger car tyre rims (class C1 tyres), the test rim width shall be the same as the measuring rim determined in ISO 4000-1:2021**2024**, clause 6.2.2.

..."

Annex 8,

Paragraph 2.1.3.1., amend to read:

"2.1.3.1. Standard Reference Test Tyre

For the evaluation of the ice performance of class C1 tyres, the Standard Reference Test Tyre SRTT16 shall be used. The reference tyre shall not be older than 30 months starting from the production week and shall be stored in accordance with ASTM F2493 – ~~23~~**24**."

Paragraph 2.1.3.2.1., amend to read:

"2.1.3.2.1. Fit each test tyres on an approved rim pursuant to ISO 4000-1:2021**2024** using conventional mounting methods. Subject to the foregoing, the rim width code shall not differ more than 0.5 from the measuring rim. If a commercialized rim is not available for the test vehicle, it will be acceptable to use a rim whose rim width code differs by 1.0 from the measuring rim width code. Ensure proper bead seating by the use of a suitable lubricant. Excessive use of lubricant should be avoided to prevent slipping of the tyre on the wheel rim."

Annex 9, paragraph 2.1.3., amend to read:

"2.1.3. "Groove" means **tread groove** ~~the space between two adjacent ribs or blocks in the tread pattern.~~"

II. Justification

1. Paragraph "Scope" is amended to reflect that adhesion performance on wet surfaces (wet adhesion) is required not only for C1 tyres, but also C2 and C3 tyres.

2. The year reference to the latest international standard specifications ASTM F2493-24, F3611-24, F3676-24 and F3675-24 are updated.
 3. The reference to the latest International Standard ISO 4000-1:2024 (published in March 2024) is updated.
 4. The definitions of tread groove and principal grooves are aligned to the ones proposed in UN Regulations Nos. 30 and 54.
 5. Editorial revision is proposed to simplify the wording of the requirements for professional off-road tyres.
 6. The transitional provision in paragraph 12.26. is amended to correctly specify that it applies to type approvals “first issued after 31 August 2028” (and it is consistent with the transitional provisions in paragraph 12.21. and 12.25.).
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