



Economic and Social Council

Distr.: General
28 November 2025

Original: English

Economic Commission for Europe

Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations

Working Party on Noise and Tyres

Eighty-third session

Geneva, 10-13 February 2026

Item 5 (f) of the provisional agenda

Tyres:

UN Regulation No. 172 (Snow performance and traction tyre classification for retreaded tyres)

Proposal for the 01 series of amendments to UN Regulation No. 172

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

The text reproduced below was prepared by the experts from the European Tyre and Rim Technical Organization (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 2026 as outlined in proposed programme budget for 2026 (A/80/6 (Sect. 20), table 20.7), 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 2.2., amend to read:

"2.2. "Supplier of the tread used for retreading process" means the person or body who is responsible [...] for ensuring the conformity of production **of the supplied tread.**"

Paragraph 6.2., amend to read:

"6.2. [...] is required to meet **at least one of** the below reported conditions of **paragraph 6.2.1. or 6.2.2.**

6.2.1. The tyre shall have [...]"

Insert the new paragraphs 6.2.2., 6.2.2.1., 6.2.2.2. and 6.2.2.3. to read:

"**6.2.2.** The tyre shall have a total number (n_{TE}) of traction elements of its tread pattern is equal to or greater than a limit that is calculated based on the deformation potential (P_{def}) of its tread pattern pursuant to paragraph **6.2.2.3.**

6.2.2.1. Calculation of the deformation potential of the tread pattern

The "deformation potential" (P_{def}) is calculated as follows:

$$P_{def} = R_{void} \cdot d_{tr}^3$$

where:

R_{void} is a dimensionless figure between 0 and 1 representing the void to fill ratio of the tread pattern according to the definition in paragraph 2.16.;

d_{tr} is the maximum of the tread depths as defined in paragraph 2.14. of this Regulation expressed in millimetres.

The deformation potential P_{def} is expressed in mm^3 .

6.2.2.2. Calculation of the number of traction elements

"Traction elements" (TE) are elements of the tread pattern which are completely separated from each other by grooves and/or sipes, on all their edges, at tread surface.

The total number n_{TE} of traction elements is calculated as follows

$$n_{TE} = \frac{1}{2} \cdot (n_{TE,50} + n_{TE,70})$$

where:

$n_{TE,50}$ is the number of traction elements separated by grooves/sipes with a depth equal to or greater than 50% of the maximum tread depth;

$n_{TE,70}$ is the number of traction elements separated by grooves/sipes with a depth equal to or greater than 70% of the maximum tread depth.

For the avoidance of doubt, each traction element counted within $n_{TE,70}$ is also counted within $n_{TE,50}$.

6.2.2.3. In order to be classified as a traction tyre, the total number of traction elements in the tread pattern of a tyre shall, depending on tyre class and, for class C3 tyres, nominal rim diameter, fulfil the respective condition:

For class C2 tyres: $n_{TE} \geq -\frac{2}{25 \text{ mm}^3} \cdot P_{def} + 100$

For class C3 tyres with nominal rim diameter code less than 20:

$$n_{TE} \geq -\frac{1}{10 \text{ mm}^3} \cdot P_{def} + 200$$

For class C3 tyres with nominal rim diameter code equal to or greater than 20:

$$\text{If } P_{\text{def}} < 1400 \text{ mm}^3: \quad n_{\text{TE}} \geq -\frac{17}{70 \text{ mm}^3} \cdot P_{\text{def}} + 400$$

$$\text{If } P_{\text{def}} \geq 1400 \text{ mm}^3: \quad n_{\text{TE}} \geq -\frac{1}{10 \text{ mm}^3} \cdot P_{\text{def}} + 200 "$$

Paragraph 6.4., insert a new subparagraph (a) to read:

- " (a) **For class C1 tyres:**
- (i) **a tread depth ≥ 11 mm and**
 - (ii) **a void-to-fill ratio ≥ 35 per cent and**
 - (iii) **a speed category less than or equal to 160 km/h (speed category symbol Q)."**

Paragraph 6.4., former subparagraphs (a) and (b), renumber as (b) and (c), respectively.

Paragraph 8., replace "Appendix 1" by "Schedule 1":

Insert a new paragraph 12.1. to read:

- "12.1. As from the official date of entry into force of the 01 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 01 series of amendments."**

Paragraph 12.1. (former), renumber as paragraph 12.2. and amend to read:

- ~~"12.2.1-~~ [...] type approvals **issued according to the 01 series of amendments to this Regulation, [...]"**

Paragraph 12.2.(former), renumber as paragraph 12.3. and amend to read:

- ~~"12.3.2-~~ [...] type approvals **issued according to the 01 series of amendments to this Regulation, first issued after 31 August 2030, [...]"**

Paragraph 12.3. (former), renumber as paragraph 12.4 and amend to read:

- ~~"12.4.3-~~ Notwithstanding paragraph ~~12.1~~ **12.2**, [...] **according to the 01 series of amendments** to this Regulation, first ~~granted~~ **issued** before 1 September 2030, [...]"

Insert new paragraphs 12.5., 12.6., 12.7. to read:

- "12.5. As from 1 September 2028, Contracting Parties applying this Regulation shall not grant type approvals issued according to the 01 series of amendments to this Regulation, first issued after 1 September 2028, if, in the case of tyres of classes C2 and C3 classified as traction tyre, the requirements for traction tyre classification set out in paragraph 6.2.2. are not complied with.**
- 12.6. Until 31 August 2032, Contracting Parties applying this Regulation shall accept type approvals and grant extension to type approvals issued according to the 01 series of amendments to this Regulation, first issued before 1 September 2028, if, in the case of tyres of classes C2 and C3 classified as traction tyre, the requirements for traction tyre classification set out in paragraph 6.2.2. are not complied with.**
- 12.7. As from 1 September 2032, Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued according to the 01 series of amendments to this Regulation if, in the case of tyres of classes C2 and C3 classified as traction tyre, the requirements for traction tyre classification set out in paragraph 6.2.2. are not complied with."**

Annex 1, amend to read:

"Communication

[...]

Approval No.:

Extension No.:

[...]"

II. Justification

1. The definition of “supplier of the tread used for the retreading process” has been amended to clarify that he is responsible to assure the conformity of production of the supplied tread with respect to the performance and/or classification of the type of retreaded tyre approved under this Regulation.

2. To ensure consistency between retreaded tyres and new tyres, the requirements for the classification as “traction tyre” has been aligned to the ones given in the regulation No. 117.

3. Transitional provisions have been introduced to ensure that the switch from the requirements given in paragraph 6.2.1. to the ones given in the paragraph 6.2.2. will be required with the same rules and with a timeline equivalent to the one implemented in UN Regulation No. 117. This change is necessary and urgent in order to:

- Minimize the amount of type approvals pursuant the original version of regulation No. 172 to be then updated to the 01 series of amendments,
- Minimize number of moulds to be modified due to the change in the series of amendments,
- Avoid the situation where retreaded tyres would be classified as “traction tyre” whereas new tyres would not be classified as “traction tyre” and vice versa even if they have the same tread pattern.

4. To be noted that this is also advisable in view of a possible future labelling of retreaded tyres with respect to fuel efficiency and other parameters currently under evaluation by the European Commission. Specifically, among the labelled performances there will be also the external tyre noise which is based on the minimum requirements set in UN Regulation No. 117 where allowances are given to tyres classified as “traction tyres”.

5. The requirements for the classification of special use tyres of class C1 as “professional off-road tyre” were erroneously cancelled by the amendments of the paragraph 6.4. made by Supplement 1 to the original version of UN Regulation No. 172. The proposed amendment confirms such requirements also for the 01 series of amendments to Regulation No. 172 and aligns the wording of item (c) to the one used in paragraph 6.3.2. of UN Regulation No. 30.

6. The first paragraph of section 8 refers to Appendix 1 of the 1958 Agreement. However, the Conformity of production procedures are contained in Schedule 1 of that Agreement.

7. The transitional provisions, introduced with supplement 1 to the original version of this regulation to assure a smooth transition to the new standard reference test tyres (SRTTs) 19.5 and 22.5 siped without premature disposal of current SRTTs 19.5 and 22.5, have been amended to refer to the new series of amendments.

8. Based on Revision 3 of the 1958 Agreement, the extension number is already included in the approval number.
