

Proposal to replace document GRBP/2025/10 (Proposal for Supplement 28 to UN Regulation No. 54)

The changes compared to document GRBP/2025/10 are marked in **bold** for added text and **strike through** for deleted text, all in red font.

Additional changes compared to document GRBP/2025/10 proposed by Contracting Parties are marked in **bold** for added text and **strike through** for deleted text, all in blue font.

Additional changes compared to document GRBP-81-06 are marked in **bold** for added text and **strike through** for deleted text, all in purple font.

A green frame highlights the triggering element for the amendment

I. Proposal

Paragraph 1, amend to read:

"1. Scope

This Regulation covers new pneumatic tyres* designed primarily for vehicles of categories M₂, M₃, N, O₃ and O₄^{1,2}. However, it does not apply to tyre types identified by nominal speed category ~~symbols~~ corresponding to speeds below eighty (80) km/h (**speed category symbol F**)."

Footnote 1, amend to read:

"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/wp29wgs/wp29gen/wp29resolutions.html~~ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3)."

Paragraph 2.1., amend to read:

- "2.1. "Type of tyre" means tyres which do not differ in such essential characteristics as:
- (a) The manufacturer's name;
 - (b) Tyre-size designation;
 - (c) Category of use (normal tyre, snow tyre, special use tyre);
 - (d) Structure (diagonal (bias-ply), radial (**radial-ply**));
 - (e) Speed category symbol;

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/wp29wgs/wp29gen/wp29resolutions.html~~

² This Regulation defines requirements for tyres as a component. It does not limit their installation on any categories of vehicles.

* For the purpose of this Regulation, "tyres" means "pneumatic tyres".

- (f) Load-capacity ~~indexes~~indices;
- (g) Tyre cross-section."

Add new paragraphs ~~2.37.14.1. and 2.38.~~:

~~"2.37.14.1.~~ **"Principal grooves"** means the wide tread grooves positioned in the central zone of the tyre tread, ~~which covers about three-quarters of the width of the tread surface. The central zone represents~~is the area on the tread which comprises of 75 per cent of the width of the tread measured ~~width defined by the $\frac{3}{4}$ (75%) of the reference tread width (C) symmetrically measured from the centre line.~~

~~2.38.~~ **"Tread depth"** means the depth of the principal grooves."

Paragraph 2.20.4., amend to read:

"2.20.4. **the nominal rim diameter;** A conventional number "d" (the "d" symbol) denoting the nominal diameter of the rim and corresponding to its diameter expressed either in codes (number below 100) or in millimetres (numbers above 100). Numbers corresponding to both types of measurement may be used together in the designation;"

Paragraph 2.21., amend to read:

"2.21. **"Nominal rim diameter"** means a conventional number denoting the diameter of the rim on which a tyre is designed to be mounted; **the diameter is expressed either by codes (numbers below 100) or in millimetres (numbers above 100) but not both;**

~~"Nominal rim diameter (d)" means the diameter of the rim on which a tyre is designed to be mounted³;~~"

Paragraph 2.20.4.1., renumber to 2.21.1. and amend to read:

"2.20.4.21.1. **When the nominal rim diameter ("d" symbol) is expressed by code, the values of the "d" symbol expressed in millimetres** The values of the "d" symbols expressed in millimetres are as follows shown below:

| <i>Nominal rim diameter code ("d" symbol)</i> | <i>Value of the "d" symbol expressed in mm</i> |
|---|--|
| 8 | 203 |
| 9 | 229 |
| 10 | 254 |
| 11 | 279 |
| 12 | 305 |
| 13 | 330 |
| 14 | 356 |
| 15 | 381 |
| 16 | 406 |
| 17 | 432 |
| 18 | 457 |
| 19 | 483 |
| 20 | 508 |
| 21 | 533 |
| 22 | 559 |
| 24 | 610 |
| 25 | 635 |
| 26 | 660 |
| 28 | 711 |
| 30 | 762 |
| 32 | 813 |
| 34 | 864 |
| 36 | 914 |
| 38 | 965 |
| 40 | 1016 |
| 42 | 1067 |
| 14.5 | 368 |
| 16.5 | 419 |
| 17.5 | 445 |
| 19.5 | 495 |
| 20.5 | 521 |
| 22.5 | 572 |
| 24.5 | 622 |
| 26.5 | 673 |
| 28.5 | 724 |
| 30.5 | 775 |

"

Paragraph 2.36., amend to read:

"2.36. *"Additional service description"* means ~~a an additional~~ service description, marked within a circle, to identify a special type of service (load-capacity index or indices and speed-category symbol) to which the tyre type is also allowed to operate in addition to the applicable load variation with speed (see Annex 8)."

Add new paragraphs 2.37. ~~and 2.38.~~ to read:

~~"2.37. "Principal grooves" means the wide tread grooves positioned in the central zone of the tyre tread, which covers about three quarters of the width of the tread surface.~~

~~2.38.37. "Tread depth" means the depth of the principal grooves."~~

Add new paragraphs 2.39.38. and 2.39.38.1. to read:

"2.39.38. "Free Rolling Tyre" means a tyre, designed for the equipment of trailer axles and axles of motor vehicles other than front axles and drive axles.
2.39.38.1. "Front axle" means any axle, forward of the mid-point of the chassis, on which the wheels are controlled by the steering system."

Paragraph 3.1.15., amend to read:

"3.1.15. The inscription "FRT" **in case of a** (Free Rolling Tyre) ~~in case of tyres designed for the equipment of trailer axles and axles of motor vehicles other than front steering and drive axles."~~

Paragraph 6.1.1.1., amend to read:

"6.1.1.1. The section width **S of a tyre fitted on the measuring rim** shall be calculated by the following formula:

$$S = S_1 + K \cdot (A - A_1),$$

and rounded to the nearest millimetre,

where:

~~S is the section width rounded to the nearest millimetre and measured on the measuring rim;~~

[...]"

Paragraph 6.1.4., amend to read:

"6.1.4. Tyre section overall width specifications"

Paragraph 6.1.5.3.3., amend to read:

"6.1.5.3.3. For tyres of the category of use "snow tyre" the outer diameter shall not exceed the following value

$$D_{\max, \text{snow}} = 1.01 \cdot D_{\max} \quad \text{rounded to the nearest mm}$$

where D_{\max} is the maximum outer diameter established **for normal use tyres** in conformity with the above."

Paragraph 6.3.2., amend to read:

"6.3.2. In order to be classified as a 'professional off-road tyre', a **special use** tyre shall ~~have fulfil all of the following characteristics~~ **additional requirement:**

(a) For class C2 tyres, **the maximum speed category shall be less than or equal to 160 km/h (speed category symbol Q).**÷

(i) ~~A tread depth ≥ 11 mm;~~

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

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

(b) For class C3 tyres, **the maximum speed category shall be 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 $\leq K$."~~

Annex 1, add new item 4.2.1. to read:

"4.2.1. For special use tyres, whether professional off-road tyre: yes/no²"

II. Justification

1. A generic reference to the Consolidated Resolution on the Construction of Vehicles (R.E.3) is given in footnote 1.
2. Editorial corrections are done in the type of tyre and additional service description definitions.
3. The definition of nominal rim diameter is clarified in line with the proposal for amending UN Regulation No. 30. **The definition of nominal rim diameter is currently partly under the definition of tyre size designation (2.20.4.) and partly in a separate paragraph (2.21.). It is proposed to put it all in paragraph 2.21. and to refer to this definition in paragraph 2.20.4.**
4. **The definition of principal grooves does not exist in current text.** An amendment is proposed for the definition of principal grooves in line with the proposal for amending UN Regulation No. 30. **The definition is necessary for defining the tread depth, which is used in the definition of special use and professional off-road tyres (see tread pattern examples in the below sketches).** **It is also proposed to specify the meaning of central zone.** The rewording is aimed to make the definition of the central zone much clearer.



5. The definition of tread depth is introduced, which is used in the requirements for special use and professional off-road tyres.
 6. In line with informal documents GRBP-80-03 and GRBP-80-26, the definitions of free rolling tyre and front axle are introduced in this Regulation. The marking part has been revised accordingly.
 7. The D_{\max} requirement for snow tyres is clarified. **It is specified that its calculation is based on the maximum outer diameter established for normal use tyres.**
 8. Editorial revision is provided to simplify the wording of the requirements for professional off-road tyres.
 9. The indication whether a special use tyre is a professional off-road tyre has been added to the communication form in line with UN Regulation No. 30.
 10. **The calculation of tyre section width is clarified, in line with the proposal for UN Regulation No. 30. The current text reads as it is measured while it is calculated.**
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