

17 January 2020

Agreement

Concerning the Adoption of Harmonized Technical United Nations Regulations 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 United Nations Regulations*

(Revision 3, including the amendments which entered into force on 14 September 2017)

Addendum 29 – UN Regulation No. 30

Revision 3 - Amendment 7

Supplement 21 to the 02 series of amendments – Date of entry into force: 11 January 2020

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

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2019/50.



UNITED NATIONS

* Former titles 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 (original version);
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, done at Geneva on 5 October 1995 (Revision 2).



Paragraph 2.1., amend to read:

"2.1. "Type of tyre" means tyres which do not differ in such essential characteristics as:

...

(d) Structure (diagonal (bias-ply), bias-belted, radial (radial-ply), run flat tyre);"

Paragraphs 2.8. to 2.8.2., renumber as 2.9. to 2.9.2. accordingly.

Paragraph 2.8.3., renumber as 2.9.3. and amend to read:

"2.9.3. "Radial" or "radial-ply" describes tyre structure in which the ply cords extend to the beads and are laid substantially at 90° to the centre line of the tread, the carcass being stabilized by an essentially inextensible circumferential belt;"

Paragraph 2.8.4., renumber as 2.10. and delete "structure".

Paragraph 2.8.5., renumber as 2.8.

Paragraph 2.8.6., renumber as 2.8.1.

Paragraph 2.8.7., renumber as 2.9.4. and amend to read:

"2.9.4. "Run flat tyre" or "Self supporting tyre" describes a tyre structure provided with any technical solutions (for example, reinforced sidewalls, etc.) allowing the tyre, mounted on the appropriate wheel and in the absence of any supplementary component, to supply the vehicle with the basic tyre functions, at least, at a speed of 80 km/h and a distance of 80 km when operating in flat tyre running mode."

Paragraphs 2.9. to 2.15. (former), renumber as 2.12. to 2.18. accordingly.

Insert a new paragraph 2.11., to read:

"2.11. "Extended Mobility Tyre (EMT)" describes a tyre with a radial structure allowing the tyre, mounted on the appropriate wheel and in the absence of any supplementary component, to provide the vehicle with the basic tyre functions at a speed of 80 km/h and a distance of 80 km when operating in flat tyre running mode."

Paragraph 2.15.1., renumber as 2.18.1. and replace 3.1.10. with 2.27.1.

Paragraphs 2.16. to 2.21., renumber as 2.19. to 2.24. accordingly.

Paragraph 2.22., renumber to 2.25. and amend to read:

"2.25. "Tyre-size designation" is a designation showing:"

Paragraph 2.22.1. should be deleted

Paragraphs 2.22.1.1. and 2.22.1.2., renumber as 2.25.1. and 2.25.2.

Add new paragraphs 2.25.3. to 2.25.3.5. to read:

"2.25.3. An indication of the structure as follows:

2.25.3.1. On diagonal (bias-ply) tyres, no marking or the letter "D" placed in front of the rim diameter marking;

2.25.3.2. On radial-ply tyres, the letter "R" placed in front of the rim-diameter marking, and, optionally, the word "RADIAL";

2.25.3.3. On bias-belted tyres, the letter "B" placed in front of the rim-diameter marking, and in addition the words "BIAS-BELTED";

2.25.3.4. On radial ply tyres suitable for speeds in excess of 240 km/h but not exceeding 300 km/h (tyres marked with the speed symbol "W" or "Y" as part of the service description), the letter "R", placed before the rim diameter marking,

Paragraph 3.4.1., replace 3.1.10. with 2.27.1.

Insert a new paragraph 4.1.9., to read:

"4.1.9. Whether the tyre is an EMT;"

Paragraphs 4.1.9. to 4.1.16. (former), renumber as 4.1.10. to 4.1.17. respectively.

Paragraph 4.1.15. (former 4.1.14.), amend to read:

"4.1.14. The factor x referred to in paragraph 2.28. above."

Paragraph 6.1.1.3., replace 3.1.10. with 2.27.1.

Paragraph 6.1.2.1., replace 2.23. with 2.26.

Paragraph 6.1.2.3., replace 3.1.10. with 2.27.1.

Paragraph 6.1.4.2.4., replace 3.1.10. with 2.27.1.

Paragraph 6.1.5.1., replace 3.1.10. with 2.27.1.

Paragraph 6.2.1.1., replace twice 4.1.15. with 4.1.16.

Paragraph 6.2.1.2., amend to read:

"6.2.1.2. Where application is made for the type approval of a "run flat tyre" the above load speed test is carried out on one tyre, inflated as per paragraph 1.2. of Annex 7, at the load and speed conditions marked on the tyre (see paragraphs 3.1.5. and 3.1.8.). Another load/speed test must be carried out on a second sample of the same tyre type as specified in paragraph 3. of Annex 7. The second test may be carried out on the same sample if the manufacturer agrees."

Insert new paragraph 6.2.1.3., to read:

"6.2.1.3. Where application is made for the type approval of an EMT the above load speed test is carried out on one tyre, inflated as per paragraph 1.2. of Annex 7, at the load and speed conditions marked on the tyre (see paragraphs 3.1.5. and 3.1.8.). Another load/speed test must be carried out on a second sample of the same tyre type as specified in paragraph 4. of Annex 7. The second test may be carried out on the same sample if the manufacturer agrees."

Paragraph 6.2.2.2., amend to read:

"6.2.2.2. If a "run flat tyre" which, after undergoing the test as specified in paragraph 3. of Annex 7, does not exhibit a change in the deflected section height, compared to the deflected section height at the start of the test, higher than 20 per cent and retains the tread connected to the two sidewalls, it is deemed to have passed the test."

Insert a new paragraph 6.2.2.3., to read:

"6.2.2.3. If an EMT which, after undergoing the test as specified in paragraph 4. of Annex 7, does not exhibit a change in the deflected section height, compared to the deflected section height at the start of the test, higher than 20 per cent and retains the tread connected to the two sidewalls, it is deemed to have passed the test."

Annex 1

Insert a new item 4.6., to read:

"4.6. Extended Mobility Tyre: (Yes / No) ²....."

Annex 3,

Paragraph 2., replace 3.1.3. with 2.25.3.

Paragraph 3., amend to read:

- "3. The positioning and order of the markings constituting the tyre designation shall be the following:
- (a) the size designation as defined in paragraph 2.25. of this Regulation shall be grouped as shown in the above examples: 185/70 R 14, P185/70 R 14, T185/70 R 14 and 185-560 R 400A or 185-560 R 400U;
 - (b) the service description comprising the load index and the speed symbol shall be placed immediately after the tyre size designation as defined in paragraph 2.25. of this Regulation;
 - (c) The symbols "TUBELESS", "REINFORCED", "M + S" and "ET" and "POR" may be at a distance from the size-designation."

Annex 6,

Paragraph 1.1., replace 4.1.12. with 4.1.13.

Paragraph 1.2.3., amend to read:

"1.2.3. in standard radial tyres and in standard Run Flat tyres: to 1.8 bar;"

Paragraph 1.2.4., amend to read:

"1.2.4. in reinforced radial tyres and in reinforced Run Flat tyres: to 2.2 bar;"

Annex 7

Paragraph 1.1., replace 4.1.12. with 4.1.13.

Paragraph 1.2., table, title of the third column, replace " Radial / Run flat system" with "Radial and Run flat tyres".

Paragraph 2.2.2., replace 2.37.2. with 2.40.2.

Paragraph 2.2.3., replace 2.37.3. with 2.40.3.

Paragraph 2.2.4., replace 2.37.4. with 2.40.4.

Paragraph 2.5.2., replace 2.34.1. with 2.37.1.

Paragraph 2.6.1., replace 4.1.15. with 4.1.16.

Paragraph 3., amend to read:

"3. Procedure to assess the "flat tyre running mode" of "run flat tyre"

Paragraph 3.1., amend to read:

"3.1. Mount a new tyre on a test rim corresponding to the following specifications:

- (a) Measuring rim width, according to ISO 4000-1;
- (b) Contour with hump (round or flat) on both rim sides, according to ISO 4000-2."

Paragraph 3.2., amend to read:

"3.2. Carry out the procedure as detailed in paragraphs 1.2. to 1.5. above with a test room temperature at 38 °C + 3 °C in relation to conditioning the tyre-and-wheel assembly as detailed in paragraph 1.4. The temperature sensor shall be at a distance not less than 0.15 m and not more than 1.00 m from the tyre sidewall."

Paragraph 3.8.2., amend to read:

"3.8.2. Test speed: 80 km/h in case of 2.0 m ± 1 per cent drum diameter, or 75 km/h in case of 1.7 m ± 1 per cent drum diameter"

Insert new paragraphs from 4. to 4.9.1., to read:

"4. Procedure to assess the "flat tyre running mode" of "extended mobility tyres"

4.1. Mount a new tyre on a test rim corresponding to the following specifications:

- (a) Measuring rim width, according to ISO 4000-1
 - (b) Contour with hump (round or flat) on both rim sides, according to ISO 4000-2.
- 4.2. Carry out the procedure as detailed in paragraphs 1.2. to 1.5. above with a test room temperature at $25\text{ °C} \pm 3\text{ °C}$ in relation to conditioning the tyre-and-wheel assembly as detailed in paragraph 1.4. The temperature sensor shall be at a distance not less than 0.15 m and not more than 1.00 m from the tyre sidewall.
- 4.3. Remove the valve insert and wait until the tyre deflates completely.
- 4.4. Mount the tyre-and-wheel assembly to a test axle and press it against the outer surface of a smooth wheel $1.70\text{ m} \pm 1\text{ per cent}$ or $2.0\text{ m} \pm 1\text{ per cent}$ in diameter.
- 4.5. Apply to the test axle a load equal to 60 per cent of the maximum load rating corresponding to the load capacity index of the tyre.
- 4.6. At the start of the test, measure the deflected section height (Z1).
- 4.7. During the test the temperature of the test room must be maintained at $25\text{ °C} \pm 3\text{ °C}$.
- 4.8. Carry the test through, without interruption in conformity with the following particulars:
- 4.8.1. Time taken to pass from zero speed to constant test speed: 5 minutes
 - 4.8.2. Test speed: 80 km/h in case of $2.0\text{ m} \pm 1\text{ per cent}$ drum diameter, or 75 km/h in case of $1.7\text{ m} \pm 1\text{ per cent}$ drum diameter
 - 4.8.3. Duration of test at the test speed: 60 minutes
- 4.9. At the end of the test, measure the deflected section height (Z2).
- 4.9.1. Calculate the change in per cent of the deflected section height compared to the deflected section height at the start of the test as $((Z1 - Z2) / Z1) \times 100$."

Paragraph 4. (former), renumber as paragraph 5 and amend to read:

- "5. Equivalent test methods
- If a method other than that described in paragraphs 2. and/or 3., and/or 4. above is used, its equivalence must be demonstrated."
-