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Item 6 (d) of the provisional agenda

Tyres: UN Regulation No. 117 (Tyre rolling resistance, rolling noise and wet grip)

Proposal for a Supplement to the 02 series of amendments to UN Regulation No. 117

Submitted by the group of interested experts on snow tyre provisions*

The text reproduced below was prepared by the group of interested experts on snow tyre provisions. The modifications to the existing text are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, Cluster 3), 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.

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I. Proposal

Table of contents, Annexes, amend to read:

"7 Procedures for snow performance testing relative to ~~snow~~ tyres for use in severe snow conditions"

Paragraph 2.1. (e) (ii), amend to read:

"(ii) In case of tyres submitted for approval of performance adhesion on wet surfaces, whether normal tyres or snow tyres **that are classified as tyres for use in severe snow conditions** with a speed category of Q or below excluding H (≤ 160 km/h) or speed category R and above including H (> 160 km/h);"

Paragraph 2.13.1., amend to read:

"2.13.1. ~~"Snow tyre"~~ **Tyre for use in severe snow conditions** means a snow tyre **or a special use tyre** whose tread pattern, tread compound or structure is specifically designed to be used in severe snow conditions and that fulfils the requirements of paragraph 6.4. of this Regulation."

Paragraph 3.1.1., amend to read:

"3.1.1. The performance characteristics to be assessed for the tyre type; "rolling sound emissions level" and/or "adhesion performance level on wet surfaces" and/or "rolling resistance level" **and the ~~Tyre~~ "snow performance level"** in cases of ~~"snow tyre for use in severe snow conditions";~~

Paragraph 3.1.8. (b), amend to read:

"(b) Speed category symbol "Q" or below (excluding "H") or "R" and above (including "H") in case of "snow" tyres **that are classified as tyres for use in severe snow conditions** for approval with regard to adhesion on wet surfaces;"

Paragraph 4.2.6., amend to read:

"4.2.6. The "Alpine" symbol ("3-peak-mountain with snowflake" conforming to the symbol described in Annex 7, Appendix 1) shall be added if the snow tyre **or the special use tyre** is classified as ~~"snow tyre for use in severe snow conditions";~~"

Paragraph 6.1.1., footnote below the table of limits for Stage 2, amend to read:

"The above limits shall be increased by 1 dB(A) for ~~"snow"~~tyres for use in severe snow conditions², extra load tyres or reinforced tyres, or any combination of these classifications."

Paragraph 6.1.2., table of limits for Stage 2, amend to read:

Stage 2			
Category of use		Limit dB(A)	
		Other	Traction tyres
Normal tyre		72	73
Snow tyre		72	73

<i>Stage 2</i>			
	Snow tyre that is classified as tyre for use in severe snow conditions	73	75
Special use tyre		74	75
	Special use tyre that is classified as tyre for use in severe snow conditions	75	77

Paragraph 6.1.3., table of limits for Stage 2, amend to read:

<i>Stage 2</i>			
<i>Category of use</i>		<i>Limit dB(A)</i>	
		<i>Other</i>	<i>Traction tyres</i>
Normal tyre		73	75
Snow tyre		73	75
	Snow tyre that is classified as tyre for use in severe snow conditions	74	76
Special use tyre		75	77
	Special use tyre that is classified as tyre for use in severe snow conditions	76	78

Paragraph 6.2.1., table of limits, amend to read:

<i>Category of use</i>		<i>Wet grip index (G)</i>
Normal tyre		≥ 1.1
Snow tyre		≥ 1.1
	"Snow tyre that is classified as tyre for use in severe snow conditions" and with a speed symbol ("R" and above, including "H") indicating a maximum permissible speed greater than 160 km/h	≥ 1.0
	"Snow tyre that is classified as tyre for use in severe snow conditions" and with a speed symbol ("Q" or below, excluding "H") indicating a maximum permissible speed not greater than 160 km/h	≥ 0.9
Special use tyre		Not defined
	Special use tyre that is classified as tyre for use in severe snow conditions	Not defined

Paragraph 6.2.2., table of limits, amend to read:

Category of use		Wet grip index (G)	
		Other	Traction tyres
Normal tyre		≥ 0.95	≥ 0.85
Snow tyre		≥ 0.95	≥ 0.85
	Snow tyre that is classified as tyre for use in severe snow conditions	≥ 0.85	≥ 0.85
Special use tyre		≥ 0.85	≥ 0.85
	Special use tyre that is classified as tyre for use in severe snow conditions	≥ 0.85	≥ 0.85

Paragraph 6.2.3., table of limits, amend to read:

Category of use		Wet grip index (G)	
		Other	Traction tyres
Normal tyre		≥ 0.80	≥ 0.65
Snow tyre		≥ 0.65	≥ 0.65
	Snow tyre that is classified as tyre for use in severe snow conditions	≥ 0.65	≥ 0.65
Special use tyre		≥ 0.65	≥ 0.65
	Special use tyre that is classified as tyre for use in severe snow conditions	≥ 0.65	≥ 0.65

Paragraph 6.3.1., last sentence, amend to read:

"For ~~snow~~ tyres for use in severe snow conditions", the limits shall be increased by 1 N/kN."

Paragraph 6.3.2., last sentence, amend to read:

"For ~~snow~~ tyres for use in severe snow conditions", the limits shall be increased by 1 N/kN."

Paragraph 6.4., amend to read:

"6.4. In order to be classified as a ~~snow~~ tyre for use in severe snow conditions" the tyre shall meet the performance requirements of paragraph 6.4.1. below. The tyre shall meet these requirements based on a test method of Annex 7 by which:

- (a) The mean fully developed deceleration ("mfdd") in a braking test,
 - (b) Or alternatively an average traction force in a traction test,
 - (c) Or alternatively the average acceleration in an acceleration test
- of the candidate tyre is compared to that of a standard reference tyre.

The relative performance shall be indicated by a snow index."

Annex 1,

Item 3.1., amend to read:

"3.1. ~~Snow tyre~~**Tyre** for use in severe snow conditions (Yes/No)²

Footnote 4, amend to read:

⁴ In the case of "~~snow~~tyres for use in severe snow conditions" a test report according to Appendix 2 to Annex 7 shall be submitted.

Annex 7, title, amend to read:

**"Procedures for snow performance testing relative to
~~snow~~tyres for use in severe snow conditions"**

II. Justification

1. This amendment has been prepared in line with ECE/TRANS/WP.29/GRRF/83, para. 48. It is the first step in the work of the group of interested experts on snow tyre provisions.
 2. The proposal is aimed to introduce provisions to allow the type approval of special use tyres that fulfil the requirements for snow performance as laid out in Annex 7. The respective marking related to the "Alpine" symbol has been considered for those tyres complying with these requirements.
 3. Currently special use tyres that are classified as tyres for use in severe snow condition do not exist. As a consequence, the allowances for rolling sound emission and rolling resistance proposed for special use tyres that are classified as tyres for use in severe snow condition follow the same logic as for snow tyres that are classified as tyres for use in severe snow conditions.
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