



Proposal for a new classification of tyres in
UN Regulation No 117:

**‘Special use tyre that is classified as tyre
for use in severe snow conditions’**

MVWG February 12th 2020



1. Background
2. UNECE GRBP Group of Interested Experts on Snow Tyre Provisions
3. Proposal for a new classification: **Special use tyre that is classified as tyre for use in severe snow conditions'**
4. Technical requirements
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1. Background



Some EU countries require vehicles to be fitted with 3PMSF-approved tyres in winter season or in wintry conditions.

In UN R117, only tyres in the category of use “Snow” can be approved as Snow Tyres for use in Severe Snow Conditions and bear the 3PMSF pictogram.

The category of use “Snow” and “Special use” are two different categories, and a tyre can only be classified in one of them.

Some vehicles are equipped with tyres in the category of use “Special use”, consequently they can not bear the 3PMSF pictogram in the sense of UN R117.

The performance requirements for these vehicles, essentially on/off road service, are such that the tyres equipping these vehicles cannot meet the performance requirements associated to ‘snow tyres for use in severe snow conditions’.

2. Group of interested experts on snow tyre provisions



In GRRF 83th session (January 2017), the expert from Germany introduced GRRF-83-05 looking for guidance on the possibility to develop snow tyre provisions for all tyres and vehicles categories as it was already existing for snow tyres of category C1, C2 and C3 for vehicles categories M and N by amending all relevant Regulations or by amending the scope of UN R117.

GRRF agreed that a Group of Interested experts (GOIE) can work on the development of snow tyre provisions for tyres that are not in the scope of UN R117.

GOIE on Snow Tyre Provisions experts:

Finland, France, Germany, Norway, Sweden, Russian Federation, Japan, BIPAVER, ETRTO and OICA

3. Special use tyre that is classified as tyre for use in severe snow conditions'



*One of the outcomes of the GRBP GOIE is proposing to create a possibility to classify a tyre of **special use** category as a tyre **for use in severe snow conditions'***

The proposal was made by the GOIE to GRBP in September 2019 (ECE/TRANS/WP.29/GRBP/2019/14), with additional clarifications in January 2020 (GRBP-71-26)

*This proposal would allow Special Use tyres to bear the 3PMSF marking **provided they meet the qualification test** in Annex 7 of UNR 117.*

*This proposal introduces specific allowances for **special use + 3PMSF** tyres corresponding to the needed allowances for existing 3PMSF approved tyres*



4. Technical requirements

Different Uses



Normal



3PMSF



Special



Special
+ 3PMSF

?



(Special use) Tyres for use in Severe Snow conditions must perform in the same conditions as Special use tyres (on/off the road) and also in snow conditions

Special use tyre

Snow tyre for use in
severe snow conditions
(3PMSF marked)



Fusion



"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."

Normal tyre



Snow tyre that is classified as tyre for use in severe snow conditions



Existing design differences to comply with 3PMSF

- Tread pattern (more sipes and knife blades)
- Tread compound



Special use tyre

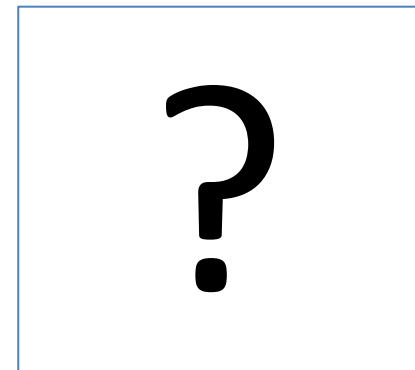


NEW: Special use tyre that is classified as tyre for use in severe snow condition



Design and material changes needed to meet the Severe Snow Performance Requirements

- Tread pattern (sipes and knife blades)
- Tread compound
- Chip resistance + flexibility for snow conditions.





Specific allowances for special use + 3PMSF tyres should be the same as the existing allowances for existing 3PMSF approved tyres and special use tyres as the tread design of special use + 3PMSF tyres shall be adapted in order to comply with the already existing R117 Snow Performance threshold

The specific on/off road service requirements coupled with the additional snow traction performance, can only be achieved through tread design and tread compound modifications, justifying an additional allowances similar to that required for Snow tyres for severe snow vs normal tyres.

C2 R117 Regulatory Noise requirements



Normal tyre

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



Snow tyre that is classified as tyre for use in severe snow conditions

Stage 2			
Category of use		Limit dB(A)	
		Other	Traction tyres
Snow tyre		72	73
	Snow tyre for use in severe snow conditions	73	75

+1 dB(A) & +2 dB(A)
Noise allowances that considered the specific 3PMSF tread pattern design

Special use tyre

Stage 2			
Category of use		Limit dB(A)	
		Other	Traction tyres
Special use tyre		74	75



NEW: Special use tyre that is classified as tyre for use in severe snow condition

Stage 2			
Category of use		Limit dB(A)	
		Other	Traction tyres
Special use tyre		74	75
	Special use tyre that is classified as tyre for use in severe snow conditions	75	77

The same +1 dB(A) & +2 dB(A) Noise allowances proposal to consider specific new tread pattern and compound design

C3 R117 Regulatory Noise requirements



Normal tyre

Stage 2			
Category of use		Limit dB(A)	
		Other	Traction tyres
Normal tyre		73	75



Snow tyre that is classified as tyre for use in severe snow conditions

Stage 2			
Category of use		Limit dB(A)	
		Other	Traction tyres
Snow tyre		73	75
	Snow tyre for use in severe snow conditions	74	76

+1 dB(A) Noise allowances that considered the specific 3PMSF tread pattern design

Special use tyre

Stage 2			
Category of use		Limit dB(A)	
		Other	Traction tyres
Special use tyre		75	77



NEW: Special use tyre that is classified as tyre for use in severe snow condition

Stage 2			
Category of use		Limit dB(A)	
		Other	Traction tyres
Special use tyre		75	77
	Special use tyre that is classified as tyre for use in severe snow conditions	76	78

The same +1 dB(A) Noise allowances proposal to consider specific new tread pattern design

5. Conclusions



This proposal is aimed at **allowing and enabling the development of special use tyres qualified for severe snow conditions**, allowing the needed circulation of vehicles using these tyres in countries requiring the 3PMSF pictogram in wintry conditions .

The proposed allowances follow the **same rules as already enforced in EU661/2009 and R117**.

GRBP received the comment from European Commission that the proposal to consider a **new classification of tyres at WP.29 level need to be considered in the EU legislative framework**.

5. Conclusions



Advice request from GRBP GOIE on Snow tyre provisions to EC:

- To clarify the possible legislative process that can be put in place that this proposal can be adopted at European level.



Thank you



Annexes

C1 R117 Regulatory Wet Grip requirements



Category of use		Wet grip index (G)
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

The same requirements

C2 R117 Regulatory Wet Grip requirements



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

The same requirements

C3 R117 Regulatory Wet Grip requirements



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

The same requirements



Paragraph 6.3.1., last sentence, amend to read:

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

The same requirements