

Informal Document No. GRRF-67-34
(67th GRRF, 2-5 February 2010,
agenda item 9(f))

Proposal for Draft Amendment to Regulation No. 117

Presentation to GRRF and GRB



European Commission
Enterprise and Industry

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

**3 Meetings of Informal Working
Group on Tyre Definitions:**

- 23 July 2009
- 31 August 2009
- 16 November 2009

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

- Tyre definitions (R30, 54, 117)
- Rolling resistance test methods (R117)
- New noise limit values (R117)

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

Tyre Definitions

- To cover snow tyres, traction tyres, special use tyres, extra load tyres and professional off-road tyres
- Definitions to be precise and based on physical and / or performance requirements
- Definitions agreed for Reg. No. 117 should also be transferred into Regulations No. 30 and No. 54

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

Rolling Resistance Test Methods

- Use of ISO standards
- Need to be repeatable and reproducible for use in a type-approval environment

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

New noise limit values

- New 'Stage 2' values need to be compatible with values in GSR
- Accept that some Contracting Parties may wish to stay with Stage 1 for the time being – Regulation should allow for this

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

New definitions (1):

"Reinforced tyre" or "extra load tyre" of Class C1 means a pneumatic-tyre structure designed to carry more load at a higher inflation pressure than the load carried by the corresponding standard version tyre at the standard inflation pressure as specified in ISO 4000-1[:2009].

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

New definitions (2):

"Traction tyre" means a tyre in class C2 or C3 bearing the inscription TRACTION and intended to be fitted primarily to the drive axle(s) of a vehicle to maximize force transmission in various circumstances.

Draft Amendment to Regulation No. 117 ECE/TRANS/WP.29/GRB/2010/3

New definitions (2):

6.5. In order to be classified as a 'traction tyre', a tyre is required to meet at least one of the conditions of paragraph 6.5.1. or 6.5.2. below.

6.5.1. The tyre shall have a tread pattern with minimum two circumferential ribs, each containing a minimum of 30 block-like elements, separated by grooves and/or sipe elements the depth of which has to be minimum $\frac{1}{2}$ of the tread depth, or

[6.5.2. The tyre shall have an increased performance compared to a Standard Reference Test Tyre.

Note: will only apply at a later time when appropriate test methods and limit values are available]

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

New definitions (3):

"Snow tyre" means a tyre whose tread pattern, tread compound or structure are primarily designed to achieve in snow conditions a performance better than that of a normal tyre with regard to its ability to initiate, maintain or stop vehicle motion.

Draft Amendment to Regulation No. 117 ECE/TRANS/WP.29/GRB/2010/3

New definitions (3):

In order to be classified in the category of use 'snow tyre', a tyre is required to meet performance requirements based on a test method (Annex 7) by which:

(a) the mean fully developed deceleration ("mfdd") in a braking test,

(b) or alternatively a maximum or average traction force in a traction test,

(c) or alternatively the mean fully developed acceleration in an acceleration test

of a candidate tyre is compared to that of a standard reference tyre. The relative performance shall be indicated by a snow index.

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

New definitions (4):

" Special use tyre" means a tyre intended for mixed use both on- and off-road or for other special duty. These tyres are primarily designed to initiate and maintain the vehicle in motion in off-road conditions.

Draft Amendment to Regulation No. 117 ECE/TRANS/WP.29/GRB/2010/3

New definitions (4):

In order to be classified as a 'special use tyre' a tyre shall have a block tread pattern in which the blocks are larger and more widely spaced than for normal tyres and have the following characteristics:

For C1 tyres: a tread depth ≥ 11 mm and void to fill ratio ≥ 35 per cent

For C2 tyres: [a tread depth ≥ 11 mm] [or][and] void to fill ratio ≥ 35 per cent

For C3 tyres: [a tread depth ≥ 16 mm] [or][and] void to fill ratio ≥ 35 per cent

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

New definitions (5):

"Professional off-road tyre" is a special use tyre primarily used for service in severe off-road conditions.

Draft Amendment to Regulation No. 117 ECE/TRANS/WP.29/GRB/2010/3

New definitions (5):

In order to be classified as a 'professional off-road tyre', a tyre shall have all of the following characteristics:

- (a) For C1 and C2 tyres:**
 - 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 C3 tyres:**
 - i) A tread depth ≥ 16 mm**
 - ii) A void-to-fill ratio ≥ 35 per cent**
 - iii) A maximum speed rating of $\leq K$**

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

Rolling Sound Emission Limits:

- **C1 tyres: limit depending on width, Stages 1 + 2, allowances for extra load and reinforced tyres, special use tyres (stage 1), snow tyres (stage 2)**
- **C2 and C3 tyres: different limits for normal, snow and special use tyres, Stages 1 + 2, allowance for traction tyres**

**Draft Amendment to Regulation No. 117
ECE/TRANS/WP.29/GRB/2010/3**

**Rolling Resistance Coefficient Limits:
Stages 1 and 2, different values for tyre
classes C1, C2 and C3, additional
allowance for snow tyres (1 N/kN)**

Draft Amendment to Regulation No. 117 ECE/TRANS/WP.29/GRB/2010/3

Annexes:

- 1 Communication form for type-approval
- 2 Examples for approval marks
- 3 Method for measuring tyre noise
- 4 Specifications for test site
- 5 Method for measuring wet grip
- 6 Method for measuring rolling resistance**
- 7 Procedures for snow performance testing**
- 8 Inter-laboratory comparison for rolling resistance**
- 9 Alignment of measurement machines and monitoring requirements**

Draft Amendment to Regulation No. 117 ECE/TRANS/WP.29/GRB/2010/3

- Annexes 8 and 9 refer to inter-laboratory calibration method
- In draft document both Annexes are informative
- Rolling resistance measurement for type-approval and tyre labelling
- For labelling high precision required
- Request to make both Annexes mandatory

Draft Amendment to Regulation No. 117 ECE/TRANS/WP.29/GRB/2010/3

Proposed Timetable

- Agreement in February sessions of GRRF and GRB
- Adoption at June 2010 WP29 session
- Amended Regulation No. 117 applicable March 2011
- 1 ½ year lead time until requirements in GSR become mandatory



European Commission

**Enterprise and Industry
Directorate General**

THANK YOU
for your attention