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**Economic Commission for Europe****Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Noise and Tyres**

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Item 7 (c) of the provisional agenda

**Tyres: UN Regulations on retreaded tyres****Proposal for a new UN Regulation on the uniform provisions concerning the approval of retreaded tyres with regard to their snow performance and/or classification as traction tyre****Submitted by the Small Working Group on Retreaded Tyre Regulations\***

The text reproduced below was prepared by the expert from Small Working Group on Retreaded Tyre Regulations with the aim to implement a new specific regulation on type approval of retreaded tyres with respect to their snow grip performance and traction tyre classification.

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\* In accordance with the programme of work of the Inland Transport Committee for 2024 as outlined in proposed programme budget for 2024 (A/78/6 (Sect. 20), table 20.5), 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.



# I. Proposal

## UN Regulation No. [XXX]

### Uniform provisions concerning the approval of retreaded tyres with regard to their snow performance and/or classification as traction tyre

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## 1. Scope

This Regulation applies to retreaded pneumatic tyres<sup>1/2/</sup> of Classes C1, C2 and C3 produced by using pre-cured tread and/or mould cure process with regard to their snow performance and/or for C2 and C3 tyres with regard to their classification as traction tyre.

It does not, however, apply to the following tyres when retreaded either by using the pre-cured tread or the mould cure process:

- 1.1.1. Tyres of category of use "temporary use tyres" as declared in UN Regulation No. 108 for Class C1 tyres;
- 1.1.2. Tyres having a nominal rim diameter code  $\leq 10$  (or  $\leq 254$  mm) or  $\geq 25$  (or  $\geq 635$  mm);
- 1.1.3. Tyres designed for competitions;
- 1.1.4. Tyres intended to be fitted to road vehicles of categories other than M, N and O;<sup>3/</sup>
- 1.1.5. Tyres with a nominal speed category symbol less than 80 km/h (speed symbol F);
- 1.1.6. Professional off-road tyres;
- 1.1.7. Tyres fitted with additional devices to improve traction properties (e.g. studded tyres).

## 2. Definitions

For the purpose of this Regulation, in addition to the definitions contained in Regulations Nos. 108 and 109 and, with respect to the snow performance and the classification as traction tyre, in UN Regulation No. 117, the following definitions apply.

- 2.1. "*Type of retreaded tyre*" means retreaded tyres which do not differ in such essential characteristics as:
  - (a) The supplier of the tread used for the retreading process;
  - (b) The tyre class;
  - (c) The tyre structure;
  - (d) The category of use: normal or snow or special use;
  - (e) Whether tyre for use in severe snow conditions or not;
  - (f) For classes C2 and C3 tyres, whether traction tyre or not;
  - (g) The tread pattern (see section 4.2.1. of this Regulation).
- 2.2. "*Supplier of the tread used for retreading process*" means the person or body who is responsible to the Type Approval Authority for all aspects of the type-approval under this Regulation and for ensuring the conformity of production.
- 2.3. "*Tread used for retreading process*" means either a pre-cured tread or the specification of the major features of the tread used for mould cure process.
- 2.4. "*Range of retreaded tyres*" means a range of retreaded tyres as quoted in paragraph 2. of Appendix 1 or Appendix 2 to Annex 1 of this Regulation.
- 2.5. "*Retreader*" means the person or body who is responsible to the Type Approval

<sup>1/</sup> For the purpose of this Regulation "tyres" means "pneumatic tyres"

<sup>2/</sup> Retreaded tyres are refurbished tyres after retreading process

<sup>3/</sup> As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3).

- Authority for all aspects of the type-approval under UN Regulations Nos. 108 and/or 109.
- 2.6. "*Tyre manufacturer*" means the person or body who was responsible to the Type Approval Authority having granted the original type approval of new tyres and for ensuring the conformity of production under the applicable Regulation for new tyres.<sup>4/</sup>
- 2.7. "*Brand name/trademark*" means the identification of the brand or trademark as defined by the supplier of the tread used for the retreading process.
- 2.8. "*Trade description/commercial name*" means an identification of the tread used for the retreading process as given by the supplier. It may coincide with the brand name/trademark.
- 2.9. Category of use:
- 2.9.1. "*Normal tyre*" is a tyre intended for normal road use only.
- 2.9.2. "*Snow tyre*" means a tyre whose major features including tread pattern are primarily designed to achieve in mud and/or snow conditions a performance better than that of a normal tyre with regard to its ability to initiate and control vehicle motion.
- 2.9.3. "*Special use tyre*" is 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.
- 2.10. "*Tyre for use in severe snow conditions*" means a snow tyre or a special use tyre whose tread pattern, tread compound and construction are specifically designed to be used in severe snow conditions and that fulfils the requirements of paragraph 6.1. of this Regulation.
- 2.11. "*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 and that fulfils the requirements of paragraph 6.2 of this Regulation.
- 2.12. "*Professional off-road tyre*" is a special use tyre primarily used for service in severe off-road conditions.
- 2.13. "*Tyre class*" means one of the following groupings:
- 2.13.1. *Class C1 tyres*: new tyres conforming to UN Regulation No. 30 or retreaded tyres produced in conformity with UN Regulation No. 108, as applicable;
- 2.13.2. *Class C2 tyres*: new tyres conforming to UN Regulation No. 54 or retreaded tyres produced in conformity with UN Regulation No. 109, as applicable, and identified by a load capacity index in single formation lower or equal to 121 and a speed category symbol higher or equal to "N";
- 2.13.3. *Class C3 tyres*: new tyres conforming to UN Regulation No. 54 or retreaded tyres produced in conformity with UN Regulation No. 109, as applicable, and identified by:
- (a) A load capacity index in single formation higher or equal to 122 or;
  - (b) A load capacity index in single formation lower or equal to 121 and a speed category symbol lower or equal to "M".
- 2.14. "*Tread depth*" means the depth of the principal grooves.
- 2.15. "*Principal grooves*" means the wide circumferential grooves positioned in the central zone of the tyre tread, which, in the case of passenger and light truck

<sup>4/</sup> In this Regulation the type approval under UN Regulation No. 117 may be used as a reference for assessing the performance for the case of tread pattern as described in 8.2.2.

(commercial) tyres, have the treadwear indicators located in the base.

- 2.16. "Void to fill ratio" means the ratio between the area of voids in a reference surface and the area of this reference surface calculated from the mould drawing.

### 3. Markings

- 3.1. Retreaded tyres in scope of this regulation shall display on both sidewalls in the case of symmetrical tyres and at least on the outer sidewall in the case of asymmetrical tyres:
- 3.1.1. The "Alpine" symbol (3-peak-mountain with snowflake) described in Annex 7, Appendix 1 to UN Regulation No. 117 and the inscription M+S or MS or M.S. or M & S, if the tyre is classified as tyre for use in severe snow conditions.
- 3.1.1.1. In addition, in case a pre-cured tread is used for the retreading process, the inscription M+S or MS or M.S. or M & S and the "Alpine" symbol may be marked on the tread shoulder with the following minimum dimensions:
- (a) inscription M+S or MS or M.S. or M & S: minimum height of 4 mm
- (b) "Alpine" symbol: 10 mm base and 10 mm height.
- 3.1.2. The inscription "TRACTION", with the minimum height of 4 mm, if the tyre is classified as traction tyre.
- 3.1.2.1. In addition, in case a pre-cured tread is used for the retreading process, the inscription "TRACTION" may be marked on the tread shoulder with the minimum height of 4 mm.
- 3.2. The markings referred to in paragraph 3.1. shall be clearly legible. They shall be raised above or sunk below the tyre surface or shall be permanently marked on the tyre surface.
- 3.3. In the case of type of retreaded tyres produced by using pre-cured tread, the approval marking as shown in annex 2 to this Regulation shall be considered either as a label and put on a sticker of the pre-cured tread packaging or as a marking on the tread shoulder in order to ensure that the approval marking is affixed to the retreaded tyres approved pursuant this Regulation as required by paragraph 3.4.1. to the Regulation Nos. 108 or 109.
- 3.3.1. In the case of approval marking as shown in annex 2 to this Regulation is displayed on tread shoulder, the minimum height required for the dimension "a" is 8 mm and optionally, if the tread shoulder height is not sufficient, the circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval may be removed.
- 3.3.2. The "Alpine" symbol (3-peak-mountain with snowflake) and the inscription M+S or MS or M.S. or M & S, if applicable, shall also be on the sticker unless already marked on the tread shoulder.
- 3.3.3. The inscription "TRACTION", if applicable, shall be also on the sticker unless already marked on the tread shoulder.
- 3.4. The approval mark prescribed in paragraph 5.4. of this Regulation shall be clearly legible. It shall be raised above or sunk below the tyre surface or shall be permanently marked on the tyre surface.
- 3.4.1. Prior to approval tyres shall exhibit a free space sufficiently large to accommodate an approval mark as referred to in paragraph 5.4. and as shown in Annex 2 to this Regulation.
- 3.4.2. Following approval, the markings referred to in paragraph 5.4. and as shown in Annex 2 to this Regulation shall be affixed in the free space referred to in paragraph 3.4.1. This marking may be affixed to one sidewall only.
- 3.4.3. In the case of type approval pursuant to this Regulation of a retreaded tyre

produced by using a tread the supplier of which is the retreader himself granted by the same Type Approval Authority which granted to the retreading production unit the approval pursuant to Regulations Nos. 108 or 109, the approval marks can be combined using sign “+” which indicates that the approval of the retreading production facility is complemented by an approval of the tyre type pursuant to this Regulation, as described in Annex 2, Appendix 3 of this Regulation.

## **4. Application for approval**

- 4.1. The application for approval of a type of retreaded tyres shall be submitted by the supplier of the tread used for retreading process or by his duly accredited representative.
  - 4.1.1. The application referred to in paragraph 4.1. for approval of a type of retreaded tyres produced by using pre-cured tread of a certain pattern shall be drawn up in accordance with the model of the technical information document set out in Appendix 1 to Annex 1 of this Regulation.
  - 4.1.2. The application referred to in paragraph 4.1. for approval of a type of retreaded tyres produced by mould cure process shall be drawn up in accordance with the model of the technical information document set out in Appendix 2 to Annex 1 of this Regulation.
- 4.2. The application for approval shall be accompanied by:
  - 4.2.1. Details of the major features of the tread pattern with respect to the effects on the snow grip performance of the range of tyre sizes listed as required by paragraph 2. of Appendix 1 or Appendix 2 to Annex 1 of this Regulation. This may be by means of descriptions supplemented by drawings and/or photographs which must be sufficient to allow the Type Approval Authority or Technical Service to determine whether any subsequent changes to the major features of the tread pattern will adversely affect the tyre performance. The effects of changes to minor details of the tread pattern on tyre performances will be evident and determined during checks on conformity of production;
- 4.3. At the request of the Type Approval Authority, the applicant shall submit samples of tyres for the test or copies of test reports from the Technical Services, communicated as given in paragraph 12. of this Regulation.
- 4.4. With regard to the application:
  - 4.4.1. in the case of retreaded tyre not covered by 4.4.2. testing may be confined to a representative tyre size of the type of retreaded tyre produced either by using a pre-cured tread or produced by mould cure process, whichever applicable, at the discretion of the Type Approval Authority.
    - 4.4.1.1. in the case of retreaded tyre produced by using both a pre-cured tread or a mould cure process with a tread having the same major features including tread pattern, the supplier of the tread used for the retreading process may apply for an approval according to this UN Regulation covering a type of retreaded tyre produced by using both the mould cure process and the pre-cured tread.
  - 4.4.2. in the case of retreaded tyre produced by using either mould cure process or pre-cured tread with the same major features including tread pattern as a type of new tyre approved according to UN Regulation No. 117 having fulfilled the requirements about minimum snow performance in severe snow conditions, the tyre manufacturer as supplier of the tread used for the retreading process shall provide to the Type Approval Authority issuing the approval according to this Regulation a copy of the UN Regulation No. 117 certificate(s).

## **5. Approval**

- 5.1. If the representative tyre size of the type of retreaded tyre submitted for

- approval pursuant to this Regulation meets the requirements of paragraph 6. below, approval of that type of retreaded tyre, shall be granted.
- 5.2. An approval number according to Schedule 4 to Revision 3 of the 1958 Agreement shall be assigned to the type of retreaded tyre. The same Contracting Party may not assign the same number to another type of retreaded tyre.
- 5.2.1. In the case of retreaded tyre produced by using a tread the supplier of which is the retreader himself, instead of granting the original type approval number pursuant to this regulation, upon the request of the retreader, the Type Approval Authority may grant the type approval number, which had been granted before to the retreading production unit pursuant to UN Regulations Nos. 108 or 109 with the subsequent extension number.
- 5.3. Notice of approval or extension of approval or refusal of approval of a type of retreaded tyre pursuant to this Regulation shall be communicated to the Parties to the Agreement, which apply this Regulation by means of a form conforming to the model in Annex 1 to the Regulation.
- 5.3.1. With reference to paragraph 5.2.1. above, retreaders are entitled to submit an application for extension of type approval to the requirements of UN Regulations Nos. 108 or 109 relevant to the retreading production unit. In that case, a copy of the relevant type approval communication(s), as issued by the relevant Type Approval Authority, shall be attached to the application for extension of approval. All applications for extension of approval(s) shall only be granted by the Type Approval Authority which issued the original approval for the retreading production unit.
- 5.3.1.1. When extension of approval is granted to incorporate into the communication form (see Annex 1 to this Regulation) certification(s) of conformity to UN Regulations Nos. 108 or 109, the specific type approval number shall be added to item 9. of Annex 1 "Communication form".
- 5.4. In the space referred to in paragraph 3.4.2. and in accordance with the requirements of paragraph 3.4. above there shall be affixed to every retreaded tyre conforming to the type approved under this regulation, an international approval mark consisting of:
- 5.4.1. A circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval <sup>5/</sup>; and
- 5.4.2. The part of the approval number specified in paragraph 3, Section 3 of Schedule 4 to the Revision 3 of the 1958 Agreement, which shall be placed close to the circle prescribed in paragraph 5.4.1. above either above or below the "E" or to the left or right of that letter.
- 5.4.3. In the case of type of retreaded tyre produced by using a pre-cured tread, on the approval label prescribed in paragraph 3.3. and in accordance with the requirements of paragraph 3.4. above there shall be printed to every pre-cured tread package the international approval mark described at paragraphs 5.4.1. and 5.4.2. which has to be affixed to every retreaded tyre as required in paragraph 5.4.
- 5.5. If the retreaded tyre is produced in a retreading production unit which conforms to an approval under the Regulation 108 or 109 in the country which has granted approval under this Regulation, it is not needed to repeat the symbol prescribed in paragraph 5.4.1. above. In such a case the additional numbers and symbols of the Regulation 108 or 109 under which approval has been granted in the country which has granted approval under this Regulation shall be placed

<sup>5/</sup> The distinguishing numbers of the Contracting Parties to the 1958 Agreement are reproduced in Annex 3 to the Consolidated Resolution on the Construction of Vehicles (R.E.3)

adjacent to the symbol prescribed in paragraph 5.4.1. above, as described in Annex 2, Appendix 2 of this Regulation.

- 5.6. Annex 2 to this Regulation gives examples of arrangements of approval marks.

## 6. Specifications

- 6.1. Snow performance of tyres retreaded either with a pre-cured tread or by using mould cure process, when tested according to Annex 7 to UN Regulation No. 117.<sup>6/</sup>

The retreaded tyre shall meet the minimum snow grip index value compared with the respective Standard Reference Test Tyre (SRTT) as follows:

Class of tyre	Snow grip index (brake on snow method) <sup>(a)</sup>		Snow grip index (spin traction method) <sup>(b)</sup>	Snow grip index (acceleration method) <sup>(c)</sup>
	Ref.s =, SRTT16	Ref. = SRTT16C	Ref. = SRTT16	Ref.s = SRTT19.5, SRTT22.5
C1	1.07	No	1.10	No
C2	No	1.02	1.10	No
C3	No	No	No	1.25

<sup>(a)</sup> See paragraph 3 of Annex 7 to UN Regulation No. 117

<sup>(b)</sup> See paragraph 2 of Annex 7 to UN Regulation No. 117

<sup>(c)</sup> See paragraph 4 of Annex 7 to UN Regulation No. 117

- 6.2. In order to be classified as a "traction tyre", a tyre retreaded either with a pre-cured tread or by using mould cure process is required to meet at least one of the below reported conditions of paragraph 6.2.1. or 6.2.2.

- 6.2.1. 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 of one half of the tread depth. The use of an alternative option of a physical test will only apply at a later stage following a further amendment to the Regulation including a reference to an appropriate test methods and limit values.

- 6.2.2. The tyre shall have a total number ( $n_{TE}$ ) of traction elements of its tread pattern is equal to or greater than a limit that is calculated based on the deformation potential ( $P_{def}$ ) of its tread pattern pursuant to paragraph 6.2.2.3.

- 6.2.2.1. Calculation of the deformation potential of the tread pattern

The "deformation potential" ( $P_{def}$ ) is calculated as follows:

$$P_{def} = R_{void} \cdot d_{tr}^3$$

where:

$R_{void}$  is a dimensionless figure between 0 and 1 representing the void to fill ratio of the tread pattern according to the definition in paragraph 2.16.;

$d_{tr}$  is the maximum of the tread depths as defined in paragraph 2.14. of this Regulation expressed in millimetres.

The deformation potential  $P_{def}$  is expressed in  $mm^3$ .

- 6.2.2.2. Calculation of the number of traction elements

<sup>6/</sup> If a tread pattern can be applied by mould cure and pre-cure retread processes, the snow test may be performed with a representative tyre size retreaded with only one of the two possible processes and the snow performance test report can be used for both cases as long as the major features of the tread are technically identical.



"Traction elements" (TE) are elements of the tread pattern which are completely separated from each other by grooves and/or sipes, on all their edges, at tread surface.

The total number  $n_{TE}$  of traction elements is calculated as follows

$$n_{TE} = \frac{1}{2} \cdot (n_{TE,50} + n_{TE,70})$$

where:

$n_{TE,50}$  is the number of traction elements separated by grooves/sipes with a depth equal to or greater than 50% of the maximum tread depth;

$n_{TE,70}$  is the number of traction elements separated by grooves/sipes with a depth equal to or greater than 70% of the maximum tread depth.

For the avoidance of doubt, each traction element counted within  $n_{TE,70}$  is also counted within  $n_{TE,50}$ .

- 6.2.2.3. In order to be classified as a traction tyre, the total number of traction elements in the tread pattern of a tyre shall, depending on tyre class and, for class C3 tyres, nominal rim diameter, fulfil the respective condition:

For class C2 tyres: 
$$n_{TE} \geq -\frac{2}{25 \text{ mm}^3} \cdot P_{\text{def}} + 100$$

For class C3 tyres with nominal rim diameter code less than 20:

$$n_{TE} \geq -\frac{1}{10 \text{ mm}^3} \cdot P_{\text{def}} + 200$$

For class C3 tyres with nominal rim diameter code equal to or greater than 20:

If  $P_{\text{def}} < 1400 \text{ mm}^3$ : 
$$n_{TE} \geq -\frac{17}{70 \text{ mm}^3} \cdot P_{\text{def}} + 400$$

If  $P_{\text{def}} \geq 1400 \text{ mm}^3$ : 
$$n_{TE} \geq -\frac{1}{10 \text{ mm}^3} \cdot P_{\text{def}} + 200$$

- 6.3. In order to be classified as "special use tyre" a tyre shall have a block tread pattern in which the blocks<sup>7/</sup> are larger and more widely spaced than for normal tyres and have the following characteristics:

- (a) For C1 tyres:
  - (i) a tread depth  $\geq 9$  mm and
  - (ii) a void to fill ratio  $\geq 30$  per cent;
- (b) For C2 tyres:
  - (i) a tread depth  $\geq 11$  mm and
  - (ii) a void to fill ratio  $\geq 35$  per cent;
- (c) For C3 tyres:
  - (i) a tread depth  $\geq 16$  mm and
  - (ii) a void to fill ratio  $\geq 35$  per cent.

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

- (a) For C1 tyres:
  - (i) a tread depth  $\geq 11$  mm and
  - (ii) a void-to-fill ratio  $\geq 35$  per cent and
  - (iii) a speed category  $\leq 160$  km/h.
- (b) For C2 tyres:

<sup>7/</sup> Blocks may be shaped as lugs and cleats.

- (i) a tread depth  $\geq 11$  mm;
  - (ii) a void-to-fill ratio  $\geq 35$  per cent;
  - (iii) a speed category  $\leq 160$  km/h.
- (c) For C3 tyres:
- (i) a tread depth  $\geq 16$  mm and
  - (ii) a void-to-fill ratio  $\geq 35$  per cent and
  - (iii) a speed category  $\leq 110$  km/h.

## **7. Modifications to the approval**

- 7.1. Every modification of the type of retreaded tyre which may influence the performance characteristics approved in accordance with this Regulation, shall be notified to the Type Approval Authority which approved the type of retreaded tyre. That Authority may either:
- 7.1.1. Consider that the modifications are unlikely to have any appreciable adverse effect on the performance characteristics approved and that the retreaded tyre produced either by using a pre-cured tread or by using mould cure process will comply with the requirements of this Regulation; or
- 7.1.2. Require further samples to be submitted for test or further test reports from the designated Technical Service.
- 7.2. Confirmation or refusal of approval, specifying the modifications, shall be communicated by the procedure given in paragraph 5.3. of this Regulation to the Parties to the Agreement which apply this Regulation.
- 7.3. The Type Approval Authority granting the extension of approval shall assign a series number for such an extension which shall be shown on the communication form.

## **8. Conformity of production**

The conformity of production procedures shall comply with those set out in the Agreement, Appendix 1 (E/ECE/324-E/ECE/TRANS/505/Rev.3), with the following requirements:

- 8.1. Any retreaded tyre approved under this Regulation shall be so manufactured as to conform to the performance characteristics of the type approved and satisfy the requirements of paragraph 6. above;
- 8.2. The holder of the approval shall ensure that, at least the following number of retreaded tyres, representative of the approved type range being produced, is checked and tested as prescribed in this Regulation:
- 8.2.1. In the case of type approval granted to retreaded tyres not covered by 8.2.2., at least one tyre once every four years in order to verify conformity of the performance of the tyres for use in severe snow conditions fulfilling paragraph 6.1.
- 8.2.2. In the case of type approval granted to a retreaded tyres produced by using a tread with the same major features including tread pattern(s) as a new tyre type approved according to UN Regulation No. 117, the conformity to the requirement given in paragraph 6. can be confirmed through the compliance statement obtained in conformity of paragraph 8 of UN Regulation No. 117 by the manufacturer of the new type of tyre.
- 8.3. The authority which has granted type approval may at any time verify the conformity control methods applied by the supplier of the tread used for the retreading process. In general, the conformity control methods should take into consideration the production volumes of the type of the pre-cured tread or of the retreaded tyre produced by using the mould process at each manufacturing

facility. The normal frequency of these verifications shall be at least once every two years.

- 8.4. Verification tests shall be carried out on random samples of retreaded tyres bearing the approval mark required by this Regulation taken from the series production.

The Type Approval Authority shall satisfy itself that all retreaded tyres falling within an approved type comply with the approval requirement.

- 8.4.1. In the case of verification tests with regard to approvals in accordance with paragraph 6. of this Regulation, these shall be carried out using the same testing method (see Annex 7 of UN Regulation No. 117) as that adopted for original approval as declared in item 8 of the communication form.

- 8.5. Production shall be deemed to conform to the requirements of this Regulation if the levels measured comply with the limits prescribed in paragraph 6. of this Regulation.

## **9. Penalties for non-conformity of production**

- 9.1. The approval granted in respect of a type of retreaded tyre pursuant to this Regulation may be withdrawn if the requirements laid down in paragraph 8. above are not complied with.

- 9.2. If a Party to the Agreement, which applies this Regulation, withdraws an approval, it has previously granted, it shall forthwith notify the other Contracting Parties applying this Regulation by means of a copy of the approval form conforming to the model in Annex 1 to this Regulation.

## **10. Transitional provisions**

- 10.1. As from the official date of entry into force, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation.

- 10.2. As from [1 September 2025], Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued according to this Regulation, first issued after [1 September 2025], if, in the case of classes C2 and C3 traction tyre, the requirements for traction classification set out in paragraph 6.2.2. are not complied with.

- 10.3. Until 31 August 2030, Contracting Parties applying this Regulation shall accept type approvals and grant extension to type approvals issued according to this Regulation, first issued before [1 September 2025], if, in the case of classes C2 and C3 traction tyre, the requirements for traction classification set out in paragraph 6.2.2. are not complied with.

- 10.4. As from 1 September 2030, Contracting Parties applying this Regulation shall not be obliged to accept type approvals of tyres issued according to this Regulation if, in the case of classes C2 and C3 traction tyre, the requirements for traction classification set out in paragraph 6.2.2. are not complied with.

## **11. Production definitively discontinued**

If the holder of an approval completely ceases to manufacture a type of retreaded tyre approved in accordance with this Regulation, they shall so inform the Type Approval Authority, which granted the approval. Upon receiving the relevant communication that Authority shall inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in Annex 1 to this Regulation.

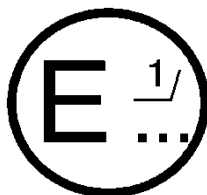
**12. Names and addresses of technical services responsible for conducting approval tests, of test laboratories, and of Type Approval Authorities.**

- 12.1. The Contracting Parties to the 1958 Agreement which apply this Regulation shall communicate to the United Nations Secretariat the names and addresses of the Technical Services responsible for conducting approval tests and, where applicable, of the approved test laboratories and of Type Approval Authorities which grant approval and to which forms certifying approval or extension of approval or refusal of approval or withdrawal of approval or production definitely discontinued, issued in other countries, are to be sent.
- 12.2. The Contracting Parties to the 1958 Agreement which apply this Regulation may designate laboratories of supplier of the tread used for the retreading process as approved test laboratories.
- 12.3. Where a Contracting Party to the 1958 Agreement applies paragraph 12.2. above, it may, if it so desires, be represented at the tests by one or more persons of its choice.

# Annex 1

## Communication

(maximum format: A4 (210 x 297 mm))



Issued by: Name of administration:

.....  
 .....  
 .....

- concerning: <sup>2/</sup>
- APPROVAL GRANTED
  - APPROVAL EXTENDED
  - APPROVAL REFUSED
  - APPROVAL WITHDRAWN
  - PRODUCTION DEFINITELY DISCONTINUED

of a type of retreaded tyre with regard to "snow performance" and/or classification as traction tyre pursuant to UN Regulation No. [XXX].

Approval No.: .....

Extension No.: .....

1. Tread supplier's name and address: .....
2. If applicable, name and address of retreading production unit: .....
3. If applicable, name and address of tread supplier's representative: .....
4. Summarized description as defined in appendix 1 <sup>2/</sup> or appendix 2 <sup>2/</sup> to Annex 1 of this Regulation:
  - 4.1. Brand name(s)/trademark(s) <sup>3/</sup>:.....
  - 4.2. Trade description(s)/Commercial name(s) <sup>3/</sup>:.....
  - 4.3. Class of tyres: .....
  - 4.4. Structure of tyres: .....
  - 4.5. Category of use of tyres: .....
  - 4.6. Tyre for use in severe snow conditions: Yes/No <sup>2/</sup>
  - 4.7. Tyres classified as Traction tyre: Yes/No <sup>2/</sup>
  - 4.8. Information in relation to the range of tyres as defined in paragraph 2. of Appendix 1 <sup>2/</sup> and/or Appendix 2 <sup>2/</sup> to Annex 1 of this Regulation:.....
  - 4.9. Retreaded tyres with the major features of the tread technically identical to a new tyre type approved according to UN Regulation No. 117 (Yes/No) <sup>2/</sup>
  - 4.10. Retreaded tyres produced by using mould cure process and pre-cured tread with the major features of the tread technically identical (Yes/No) <sup>2/</sup>
5. Technical service and, where applicable, test laboratory approved for purposes of approval or verification of conformity tests:
6. Snow performance level of the representative tyre size, as per item 7. of the test report in the appendix 2 or 3, as applicable, to Annex 7 of the UN Regulation No. 117: (Snow grip index) using the brake on snow method <sup>2/</sup> or spin traction method <sup>2/</sup> or acceleration method <sup>2/</sup>.
7. Date of report issued by that service: .....
8. Number of report issued by that service:.....

- 9. Reason(s) of extension (if applicable): .....
- 10. Any remarks: .....
- 11. Place: .....
- 12. Date: .....
- 13. Signature .....
- 14. Annexed to this communication is a list of documents in the approval file, including the information document as defined in Appendix 1 <sup>2/</sup> or Appendix 2 <sup>2/</sup> to Annex 1 of this Regulation, deposited at the Approval Authority which has considered this approval and which can be obtained upon request.

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<sup>1/</sup> Distinguishing number of the country which has granted/extended/refused/withdrawn an approval (see approval provisions in the Regulation).

<sup>2/</sup> Delete that which does not apply.

<sup>3/</sup> A list of brand name(s)/trademark(s) or Trade description(s)/ Commercial name(s) may be annexed to this communication.

## **Annex 1 – Appendix 1**

### **Technical information document: retreaded tyres produced by using a pre-cured tread**

0. GENERAL
  - 0.1. Tread supplier's name...
  - 0.2. Name and address of tread supplier's representative: ...
  - 0.3. Brand name(s)/trademark(s): ...
  - 0.4. Trade description(s)/commercial name(s) of the pre-cured tread(s): ...
1. TYRES TO BE RETREATED
  - 1.1. Class of tyres: ...
2. RANGE OF TYRES TO BE RETREADED
  - 2.1. Range of tyre sizes: ...
3. PRE-CURED TREAD PATTERN
  - 3.1. Drawing(s) and/or photographs of the tread pattern(s): ...
    - 3.1.1. UN Regulation No. 117 approval number of new tyre type having the major features of the tread technically identical to the pre-cured tread (if applicable): ...

## **Annex 1 – Appendix 2**

### **Technical information document: retreaded tyres produced by using mould cure process**

0. GENERAL
  - 0.1. Supplier's name: ...
  - 0.2. Name and address of supplier's representative: ...
  - 0.3. Brand name(s)/trademark(s): ...
  - 0.4. Trade description(s)/commercial name(s) of the tread pattern(s) specified for mould cure process: ...
1. RETREATED TYRES
  - 1.1. Class of tyres: ...
2. RANGE OF RETREADED TYRES
  - 2.1. Range of tyre sizes: ...
3. PATTERN USED FOR MOULD CURE PROCESS
  - 3.1. Drawing(s) and/or photographs of the tread pattern(s): ...
    - 3.1.1. UN Regulation No. 117 approval number of new tyre type having the major features of the tread technically identical to the tread of the retreaded tyre produced by using mould cure process (if applicable): ...



## Annex 2

### Arrangements of approval marks

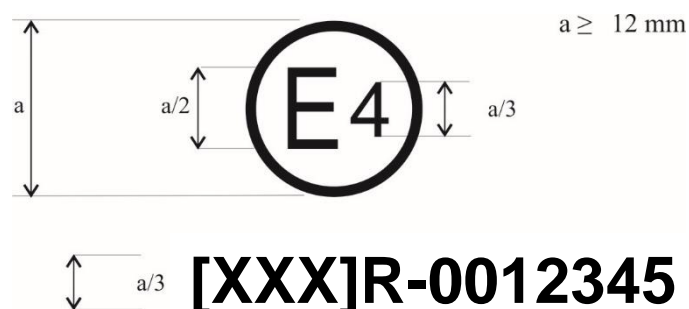
#### Annex 2 – Appendix 1

#### Examples of a separate UN Regulation No. [XXX] approval mark

(See paragraph 5.4. of this Regulation)

Approval pursuant to UN Regulation No. [XXX]

Example



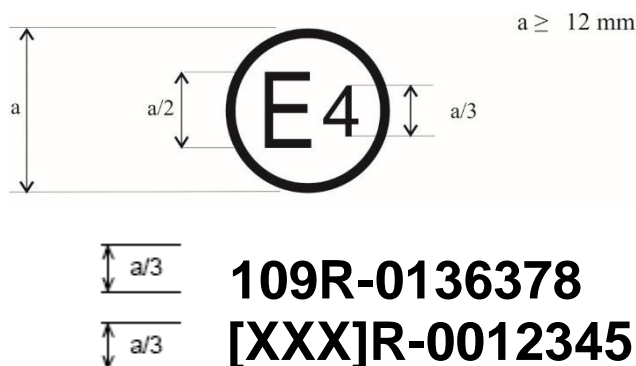
The above example of the approval mark shows that the concerned retreaded tyre has been approved in the Netherlands (E4) pursuant to UN Regulation No. [XXX], under approval number 0012345. The first two digits of the approval number (00) indicate that the approval was granted pursuant to the original form of that Regulation.

#### Annex 2 – Appendix 2

#### Approval according to UN Regulation No. [XXX] coincident with approval of UN Regulation Nos. 108 or 109

(See paragraph 5.5. of this Regulation)

Example 1



The above approval mark, affixed to a retreaded tyre according to paragraph 5.5. of this Regulation, shows that the concerned retreaded tyre is produced in a retreading production unit which has been approved in the Netherlands (E4) pursuant to UN Regulation No. 109 and that its type has been also approved in the Netherlands (E4) pursuant to UN Regulation No. [XXX]. The first two digits (01) of the approval number pursuant to UN

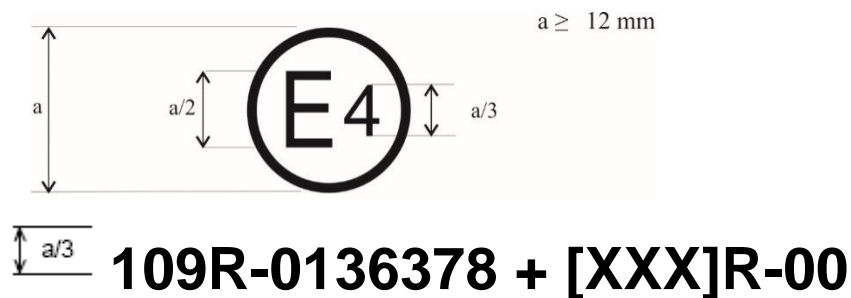
Regulation No. 109 indicate that the approval was granted pursuant to the 01 series of amendments to that Regulation while the first two digits of the approval number pursuant to UN Regulation No. [XXX] indicate that the approval was granted pursuant to the original form of that Regulation.

## Annex 2 – Appendix 3

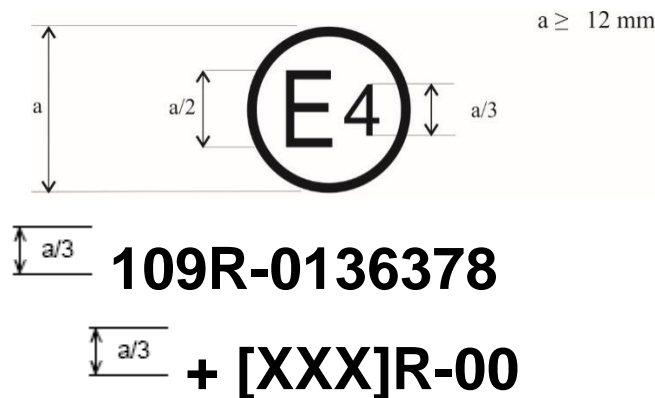
### Combinations of markings of approvals issued in accordance with Regulations Nos. 108 or 109 and [XXX]

(Applicable only to retreaded tyres produced by using a tread the supplier of which is the retreader himself - See paragraphs 3.4.3., 5.2.1, 5.3.1. and 5.3.1.1. of this Regulation)

Example 1



Example 2



The above examples of the approval mark, affixed to a retreaded tyre according to paragraph 3.4.3. of this Regulation, show that the concerned tyre is produced in a retreading production unit which has been approved in the Netherlands (E 4) pursuant to UN Regulation No. 109 under approval number 0136378. It is also marked by "+ [XXX]R-00", which indicates that the approval of the retreading production unit is complemented by an approval of the type of retreaded tyre pursuant to UN Regulation No. [XXX] in its original form. The first two digits (01) of the approval number pursuant to UN Regulation No. 109 indicate that the approval was granted pursuant to the 01 series of amendments to that Regulation. The addition (+) sign indicates that the approval granted pursuant to UN Regulation No. 109 has been complemented by an approval granted pursuant to UN Regulation No. [XXX].

## II. Justification

1. This new UN Regulation is proposed in order to address the following difficulties that the retreaders and the Type Approval Authorities have been facing in practice with regards

to the approval of retreading facilities producing “tyres for use in severe snow conditions” and the verification of the conformity of production of these retreaded tyres:

- (a) acceptance of snow test reports provided by the tread material suppliers or new tyre manufacturers as a proof of compliance to the snow requirements and their consequent marking with “Alpine” symbol;
- (b) unclear situation concerning the repartition of responsibilities between the retreader and the material suppliers or new tyre manufacturers, especially concerning the verification of the Conformity of Production of retreaded tyres either relying on tests under control plan of the tread supplier or on the compliance statement of new tyres approved according to UN Regulation No. 117 with a tread having the same major features including tread pattern of the retreaded tyres.

2. The proposal has been elaborated considering the removal of the prescriptions of snow grip performance of retreaded tyres from UN Regulations Nos. 108 and 109 and their implementation on this new Regulation on type approval of retreaded tyres of classes C1, C2 and C3 with respect to this performance. The rationale behind this proposal is to segregate type approval of retreading workshop from the performances of the retreaded tyres which result from the tread pattern used for the retreading process.

3. Additionally, based on the rationale mentioned at point 1, also the current requirements for the classification as “traction tyre” of classes C2 and C3 have been removed from UN Regulation No. 109 and implemented in this new Regulation and there complemented by the new requirements introduced by the 04 series of amendments to UN Regulation No. 117 with pertinent transitional provisions.

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