

## **Proposal for amendments to the 01 series of amendments to UN Regulation No. 109 (approval for the production of the retreaded pneumatic tyres for commercial vehicles and their trailers)**

The text reproduced below was prepared by the expert from BIPAVER, France and the Netherlands to amend UN Regulation No. 109, in order to propose a new scheme of approval for Retreaded snow tyres for use in severe snow conditions. The modifications are marked in **bold** for new or ~~strike through~~ for deleted characters.

### **I. Proposal**

#### 1. SCOPE

**1.1** This Regulation covers

**1.1.1. Part I:** The production of retreaded pneumatic tyres<sup>1</sup> designed primarily for vehicles of category M<sub>2</sub>, M<sub>3</sub>, N, O<sub>3</sub> and O<sub>4</sub> 1/2/.

**1.1.2. Part II:** **For retreaded snow tyre materials and patterns for use in severe snow conditions:**

**1.1.2.1. Part II.A.: pre-cured tread material(s) and pattern(s).**

**1.1.2.2. Part II.B.: mould cure material(s) and pattern(s).**

**1.1.3.** However, ~~it~~ **this regulation** does not apply to the production of:

**1.1.3.1.** Retreaded tyres with a speed capability below 80 km/h;

**1.1.3.2.** Tyres originally produced without speed symbols and/or load indices;

**1.1.3.3.** Tyres originally produced without type approval and without ~~either~~ an "E" ~~or~~ "e" mark.

#### 2. DEFINITIONS - See also figure in annex 9

For the purpose of this Regulation:

2.1. "Range of retreaded tyres"

means a range of retreaded tyres as quoted in **paragraphs 1. to 3. of appendix 1 to annex 1A, annex 1B or annex 1C**~~paragraph 4.1.5~~

2.2. "Retreader"

means the person or body who is responsible to the Type Approval Authority (TAA) for all aspects of the type-approval under **part I** of this Regulation and for ensuring the conformity of production.

**2.2.1. "pre-cured tread manufacturer"**

**means the person or body who is the design holder and who is responsible to the TAA for all aspects of the type-approval under part II.A. of this Regulation and for ensuring the conformity of production.**

**2.2.2. "mould cure manufacturer"**

**means the person or body who is responsible to the mould cure material, who is the design holder and who is responsible to the TAA for all aspects of the type-approval under part II.B. of this Regulation and for ensuring the conformity of production.**

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

1/ A s defined in Annex 7 to the Consolidated Resolution on the Construction of Vehicles R.E.3 (document TRANS/WP.29/78/Rev.1 as last amended by Amend.4).

2/ This Regulation defines requirements for tyres as a component. It does not limit their installation on any categories of vehicles.

[...]

#### 2.5. "Brand name/trademark"

means the identification by the retreader **or pre-cured tread or mould cure manufacturer, as declared in the appendices to annex 1A, annex 1B and annex 1C. In case of approval according to part I, the brand name/trademark is marked on the sidewall(s) of the tyre .**

#### 2.6. "Trade description/commercial name"

means an identification of a range of tyres **or patterns** as given by the retreader **or the manufacturer, respectively**. It may coincide with the brand name/trademark.

[...]

2.8.3. "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 or maintain vehicle motion.

2.8.3.1. "Snow tyre for use in severe snow conditions" means a snow 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 ~~7.2~~**15.1.** of this Regulation.

[...]

2.60. "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.

## **I PART1: The production of retreaded pneumatic tyres designed primarily for vehicles of category M<sub>2</sub>, M<sub>3</sub>, N, O<sub>3</sub> and O<sub>4</sub>.**

### 3. MARKINGS

[...]

3.2.8. The inscription M+S or MS or M.S. or M & S in the case of a snow tyre.

3.2.8.1. The "Alpine" symbol (3-peak-mountain with snowflake) shall be added if the snow tyre is classified as "snow tyre for use in severe snow conditions.

~~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 shall be marked, at least once, on both sides of the tread shoulder.~~

~~In both cases, †The "Alpine" symbol ("3-peak-mountain with snowflake") shall conform to the symbol described in Annex 10, Appendix 1.~~

[...]

3.5. The markings referred to in paragraph 3.2. and the approval mark prescribed in paragraphs 3.1.4. and 5.8. shall be clearly legible and indelible. They shall be raised above or sunk below the tyre surface or shall be permanently marked on to the tyre.

[...]

3.7. The original "E" ~~or "e"~~ approval mark and approval number and any other subsequent retreading production unit's approval mark and number, if no longer applicable, shall be removed.

### 4. APPLICATION FOR APPROVAL

The following procedures are applicable to the approval of a tyre retreading production unit:

4.1. The application for approval of a retreading production unit shall be submitted by the retreader or by his duly accredited representative.

**4.1.1. The application referred to in paragraph 4.1. shall be drawn up in accordance with the model of the information document set out in appendix 1 to annex 1A to this Regulation.**

It shall specify:

~~4.1.1. An outline of the structure of the company producing the retreaded tyres.~~

~~4.1.2. A brief description of the quality management system, which ensures the effective control of the tyre retreading procedures to meet the requirements of this Regulation.~~

~~4.1.3. The brand name(s)/trademark(s) to be applied to the retreaded tyres produced.~~

~~4.1.4. The trade description(s)/commercial name(s) (see paragraph 2.) which could be applied to the retreaded tyres produced.~~

4.1.5. The following information in relation to the range of tyres to be retreaded:

4.1.5.1. The range of tyre sizes;

4.1.5.2. The structure of tyres (diagonal or bias ply, bias belted or radial);

4.1.5.3. The category of use of tyres (normal, snow or special tyres);

**4.1.2. In addition, the retreader shall submit the following information:**

4.1.2.1. For snow tyres the list of tyres having to fulfil the requirements of paragraph 7.2.

~~4.1.5.3.1.1. For tyres retreaded by using pre-cured tread material with a tread pattern covered by paragraph 6.4.4.1. the list shall clearly identify the tyres in order to make the relevant link with the list(s) quoted in paragraph 6.4.4.1. b). The following table is an example:~~

<del>Tyre Size Designation, Load indexes, Speed symbol</del>	<del>TM1</del>	<del>TM2</del>	<del>TM3</del>
<del>215/75 R 17.5 126/124 M</del>	<del>TPM1/TPR1, TR1/TL1</del>	<del>-</del>	<del>TPM2/TPR2, TR2/L2</del>
<del>235/75 R 17.5 132/130 M</del>	<del>TPM1/TPR1, TR1/TL1</del>	<del>-</del>	<del>-</del>
<del>265/70 R 17.5 138/136 M</del>	<del>-</del>	<del>TPM3/TPR3, TR3/TL3</del>	<del>TPM4/TPR4, TR4/TL4</del>
<del>245/70 R 19.5 136/134 M</del>	<del>-</del>	<del>-</del>	<del>-</del>
<del>12 R 22.5 152/148 K</del>	<del>-</del>	<del>TPM5/TPR5, TR5/TL5</del>	<del>-</del>

Note:

TM: Identification of the Tread Manufacturer

TPM: Identification of the Tread Pattern by the tread Manufacturer

TPR: Identification of the Tread Pattern by the Retreader if different of TPM

TR: Number of the test report

TL: Reference of the list linked to the test report

~~4.1.5.3.1.2. For tyres retreaded by using either mould cure or pre-cured tread material with the same major features including tread pattern(s) as a new tyre type and covered by paragraph 6.4.4.2., the list shall clearly identify the tyres in order to make the relevant link with the list(s) quoted in paragraph 6.4.4.2. a).~~

**4.1.2.3. For tyres retreaded by using either mould cure or pre-cured tread material approved according to part II.A. and part II.B. respectively, the list shall clearly identify the tyres in order to make the relevant link with the list(s) quoted in paragraph 6.4.4.1. b).**

4.2. The application for approval shall be accompanied by:

~~4.2.1. Details of the major features, including the tread pattern, with respect to the effects on the snow grip performance of the range of tyre sizes listed as required by paragraph 4.1.25.3.1. 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 will adversely affect the tyre performance. The effects of changes to minor details of tyre~~

~~construction on tyre performances will be evident and determined during checks on conformity of production;~~4.2. At the request of the Type Approval Authority, the Retreader shall submit:

- samples of tyres for test or copies of test reports from the technical services, communicated as given in paragraph 12. of this Regulation.
- **approval certificate(s) of pre-cured tread or mould cure pattern according to part II.**

## 5. APPROVAL

5.1. The retreaded tyre requires the approval of the retreading production unit by the approval authorities in accordance with the requirements of this Regulation The approval authority shall take the necessary measures as described in this Regulation in order to ensure that the tyres retreaded in the respective production unit will meet with the requirements stated in this Regulation. The retread production unit shall be fully responsible for ensuring that the retreaded tyres will meet the requirements of this Regulation and that they will perform adequately in normal use.

[...]

5.4. Before granting approval the authority must be satisfied that retreaded tyres conform to this Regulation and that the tests have been successfully carried out on at least five and not necessarily more than 20 samples of retreaded tyres representative of the range of tyres produced by the retreading production unit when prescribed according to paragraphs 6.5. and 6.6.1. and;

~~(b) On at least one sample of retreaded tyres, of each pattern not covered by paragraphs 6.4.4.1. and 6.4.4.2., representative of the range of tyres produced by the retreading production unit when prescribed according to paragraph 6.6.2.\* In case of paragraph 6.4.4.2., the Type Approval Authority might request a test of compliance for the retreaded tyre. Testing of sampled sizes may be confined to a worst case selection\*, at the discretion of the Type Approval Authority or designated Technical Service.~~

5.5. In the case of each failure being recorded during tests, two further samples of the same specification tyre shall be tested. If either or both of these second two samples fail, then a final submission of two samples shall be tested. If either one or both of the final two samples fail, then the application for approval of the retreading production unit shall be rejected.

**5.6. In case of a retreaded snow tyre for use in severe snow conditions, according to paragraphs 6.4.4.1. and 6.4.4.2. the corresponding certificates (according to UN Regulation No.117 or part II of this Regulation) shall be provided by the retreader.**

~~5.67.~~ If all the requirements of this Regulation are met, then approval shall be granted and an approval number shall be assigned to each retreading production unit approved. The first two digits of this number shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The approval number shall be preceded by "109R" signifying that the approval applies to a tyre retreaded as prescribed in this Regulation.

The same authority shall not assign the same number to another production unit, **pre-cured tread or mould cure pattern** covered by **part I, II.A. and II.B.** of this Regulation.

~~5.87.~~ Notice of approval or of extension, refusal or withdrawal of approval or of production definitely discontinued pursuant to this Regulation shall be communicated to the Parties to the 1958 Agreement applying this Regulation, by means of a form conforming to the model in annex 1A to this Regulation.

~~5.98.~~ There shall be affixed conspicuously to every retreaded tyre conforming to this Regulation, in the space referred to in paragraph 3.3. and in addition to the markings prescribed in paragraph 3.2., an international approval mark consisting of:

~~5.98.1.~~ A circle surrounding the letter "E" followed by the distinguishing number of the country which granted approval 11/; and

~~5.98.2.~~ An approval number as described in paragraph 5.7.

~~5.109.~~ Annex 2 to this Regulation gives an example of the arrangements of the approval mark.

## 6. REQUIREMENTS

6.1. Tyres shall not be accepted for first retread unless they have been type approved and bear either an "E" mark either for Regulation n° 54 or this Regulation for a second or further retreading. ~~or "e" mark,~~ except that this requirement shall not be mandatory until 1 January 2000 at the latest

[...]

6.4.4. The retreader shall ensure that either the material manufacturer or the supplier of tread and sidewall material issues specifications concerning the conditions of storage and use of the material in order to guarantee the material's qualities. If requested by the retreader, this information shall be in the national language of the country in which the materials are to be used.

**The retreader shall ensure traceability of the pre-cure tread or mould cure pattern having to fulfil the requirements of paragraph 15.1 used for the retreading.**

**6.4.4.1. For tyres retreaded by using pre-cured tread or mould cure pattern not covered by paragraph 6.4.4.2. having to fulfil the requirements of paragraph 15.1 the retreader shall provide to the Type Approval Authority and the Technical Service issuing the approval according to this Regulation:**

- (a) A copy of UN Regulation No. 109 part II.A. or part II.B. certificate(s).**
- (b) The list(s) of tyre sizes to which it can be applied for the retreading process. The list(s) shall include at least the tyres defined in paragraph 4.1.2.3.;**
- (c) The drawing(s) of the tread pattern(s) covered by the UN Regulation No 109 part II.A. or part II.B. certificate(s) including the major features with respect to the snow performance;**
- (d) A copy of a valid compliance statement of the Conformity of Production as required in UN Regulation No. 109 part II.A. or part II.B. and demonstrating periodically the compliance with the requirement defined in paragraph 17.1. or 17.2., respectively.**

~~6.4.4.1. For tyres retreaded by using pre-cured tread material(s) or an identical tread pattern design in a mould cure product with a tread pattern not covered by paragraph 6.4.4.2. having to fulfil the requirements of paragraph 7.2.\* the retreader shall ensure that the material manufacturer(s) or the material supplier(s) of the pre-cured tread(s) provides to the Type Approval Authority (TAA) and the Technical Service issuing the approval according to this Regulation and optionally to the retreader:~~

~~(a) A copy of the test report(s) as in Annex 10, Appendix 2 and/or 3 of the representative tyre size(s) (see definition in paragraph 2.) demonstrating compliance of the pre-cured tread(s) to the requirements of paragraph 7.2.~~

~~(b) The list(s) of tyre sizes to which it can be applied for the retreading process and validated by the same designated Technical Service and TAA which issued the test report(s) requested in paragraph 6.4.4.1. (a). The list(s) shall include at least the tyres defined in paragraph 4.1.5.3.1.1.~~

~~(c) A copy of the measures taken to ensure the conformity of production. These measures shall include test results demonstrating that the minimum levels of the snow performances required in paragraph 7.2.1 will be maintained and demonstrating periodically the compliance with the requirement defined in paragraph 9.2.3. or 9.4.3.~~

**6.4.4.2. For tyres retreaded by using either mould cure or pre-cured tread material(s) with the same major features including tread pattern(s) as a new tyre type approved according to UN Regulation No. 117 having fulfilled the requirements about minimum snow performance in severe snow conditions, the retreader shall ensure that the manufacturer of the new tyre type provides to the Type Approval Authority (and the Technical Service) issuing the approval according to this UN Regulation and optionally to the retreader:**

- (a) A copy of the UN Regulation No. 117 certificate(s) and a copy of the compliance of the new tyre to the minimum snow performance in severe snow conditions.**

**(b) The list(s) of tyre sizes to which it can be applied for the retreading process and validated by the same designated Technical Service\*\* and/or Type Approval Authority that issued the UN Regulation No. 117 certificate(s). The list(s) shall include at least the tyres defined in paragraph 4.1.2.2.;**

**(c) The drawing(s) of the tread pattern(s) covered by the UN Regulation No 117 certificate(s) including the major features with respect to the snow performance;**

**(d) A copy of a valid compliance statement of the Conformity of Production as required in UN Regulation No. 117 and demonstrating periodically the compliance with the requirement defined in paragraph 9.2.2. or 9.4.2.**

~~6.4.4.2. — For tyres retreaded by using either mould cure or pre-cured tread material(s) with the same major features including tread pattern(s) as a new tyre type approved according to UN Regulation No. 117 having fulfilled the requirements about minimum snow performance in severe snow conditions, the retreader shall ensure that the manufacturer of the new tyre type provides: to the Type Approval Authority (and the Technical Service) issuing the approval according to this UN Regulation and optionally to the retreader:~~

~~(a) A copy of the UN Regulation No. 117 certificate(s) and a copy of the compliance of the new tyre to the minimum snow performance in severe snow conditions.~~

~~(b) The list(s) of tyre sizes to which it can be applied for the retreading process and validated by the same designated Technical Service\*\* and/or Type Approval Authority that issued the UN Regulation No. 117 certificate(s). The list(s) shall include at least the tyres defined in paragraph 4.1.5.3.1.2.;~~

~~(c) — The drawing(s) of the tread pattern(s) covered by the UN Regulation No 117 certificate(s) including the major features with respect to the snow performance;~~

~~(d) — A copy of the last report of the Conformity of Production as required in UN Regulation No. 117 and demonstrating periodically the compliance with the requirement defined in paragraph 9.2.4. or 9.4.4."~~

Insert a new paragraph 6.4.4.3., to read:

~~"6.4.4.3. — For tyres retreaded by using mould cure tread material(s) and design(s) not covered by paragraphs 6.4.4.1. or 6.4.4.2., having to fulfil the requirements of paragraph 7.2.\*, the retreader shall provide to the Type Approval Authority (TAA) and the Technical Service issuing the approval according to this Regulation:~~

~~(a) — A copy of the test report(s) as in Annex 10, Appendix 2 and/or 3 of the representative tyre size(s) (see definition in paragraph 2.) demonstrating compliance of the mould cure tread(s) to the requirements of paragraph 7.2.;~~

~~(b) — The list(s) of tyre sizes to which it can be applied for the retreading process and validated by the same designated Technical Service and TAA which issued the test report(s) requested in paragraph 6.4.4.3.~~

~~(a). The list(s) shall include at least the tyres defined in paragraph 4.1.5.3.1.3.;~~

~~(c) — A copy of the measures taken to ensure the conformity of production. These measures shall include test results demonstrating that the minimum levels of the snow performances required in paragraph 7.2.1. will be maintained and demonstrating periodically the compliance with the requirement defined in paragraph 9.2.2. or 9.4.2.;~~

~~(d) — The drawing(s) of the tread pattern(s) and including the major features with respect to the snow performance~~

6.4.5. The retreader must ensure that the repair material and/or compound is documented in a manufacturer's or supplier's certificate. The material compound must be suitable for the intended use of the tyre.

[...]

6.4.9. The service description of a retreaded tyre shall not show either a higher speed symbol or a higher load index than that of the original, first life, tyre unless approval has been granted to the manufacturer of the original, first life, tyre for that same carcass to be used at the revised service description.

Information that an original, first life, carcass has been upgraded in this way shall be made freely available by an approval authority to any retreading production unit and shall be communicated to other parties to the 1958 Agreement (see Article 5 of the Agreement Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the basis of these Prescriptions - document E/ECE/324-E/ECE/TRANS/505/Rev.32).

The standard form shown in annex 9 to Regulation No. 54 shall be used to communicate this information.

6.4.10. Upgrading of the service description as given in paragraph 6.4.9. shall be permitted

(a) for the first retread of an original, first life tyre;

(b) for a used casing, if the traceability of the carcasses to be retreaded is guaranteed. The speed symbol or load index used for retreading shall then not exceed the conditions mentioned in the standard form in Annex 9 of Regulation No. 54 for these carcasses;

**The retreader shall demonstrate to the approval authority the traceability of retreaded carcasses.**

**6.4.11. (c) For a used casing, if the traceability of the carcasses to be retreaded is not guaranteed till the original, first life, tyre, the speed symbol or the load index shall then not be raised above higher than the one(s) that shown on the used casing.**

[...]

6.6.2. Snow test

**For tyres retreaded by using either mould cure or pre-cured tread material(s) with the same major features including tread pattern(s) as a new tyre type approved according to UN Regulation No. 117 having fulfilled the requirements about minimum snow performance in severe snow conditions, the demonstration is done via the supply of documents listed in 6.4.4.2.6.6.2.1. Retreaded Snow Tyres for use in severe snow conditions to comply with this regulation shall be capable of meeting snow performance test as specified in Annex 10 to this Regulation.**

## 7. SPECIFICATIONS

[...]

7.2. In order to be classified as a "snow tyre for use in severe snow conditions", **the retreaded tyre should have an approval according to part II.A. or II.B. of this regulation**, the retreaded tyre to comply with this Regulation shall meet the performance requirements of paragraph 7.2.1. The retreaded tyre size shall meet these requirements based on a test method of Annex 10 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 a candidate tyre is compared to that of a Standard Reference Test Tyre (SRTT).

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

7.2.1. For Class C2 and C3 tyres, the minimum snow grip index value, as calculated in the procedure described in Annex 10 and compared with the respective Standard Reference Test Tyre (SRTT) shall be 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. = SRTT16C	Ref. = SRTT16	Ref. = SRTT19.5, SRTT22.5
C2	1.02	1.10	No
C3	No	No	1.25

<sup>(a)</sup> See paragraph 3 of Annex 10 to this Regulation

~~(b) See paragraph 2 of Annex 10 to this Regulation~~  
~~(c) See paragraph 4 of Annex 10 to this Regulation~~

7.3. In order to be classified as a "traction tyre", a tyre is required to meet the conditions of paragraph 7.3.1. below.

[...]

## 9. CONFORMITY OF PRODUCTION

The conformity of production procedures shall comply with those set out in the Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.23), with the following requirements:

9.1. The retreading production unit approved according to this Regulation shall conform to the requirements set out in paragraph 6.

9.2. The holder of the approval shall ensure that, at least the following number of tyres, representative of the range being produced, is checked and tested as prescribed in this Regulation:

9.2.1. 0.01 per cent of the total annual production but in any case not less than 2 and not necessarily more than 10 during each year of production, and spread throughout that year.

~~9.2.2. At least 1 tyre once every two years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and not covered by paragraphs 6.4.4.1. or 6.4.4.2.~~

~~9.2.3. At least one tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and covered by paragraph 6.4.4.1. The retreader can use the snow performance periodic test results obtained by the tread manufacturer or tread supplier for this purpose.~~

9.2.2. At least one tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and covered by paragraphs 6.4.4.2. The retreader can use the current snow performance periodic test results obtained by the owner of the original UN Regulation No. 117 approval certificate.

9.3. If the requirements of paragraph 9.2. are carried out by or under the control of the approval authority, the results may be used as part of, or instead of, those prescribed in paragraph 9.4.1.

9.4. The authority which has approved the retreading production unit may at any time verify the conformity control methods applied in each production facility including among others the prescriptions defined in the paragraph 6.4.4.1.de and 6.4.4.2.de. For each production facility, the type Approval Authority shall take samples at random and at least the following number of tyres, representative of the range being produced, shall be checked and tested as prescribed in this Regulation:

9.4.1. 0.01 per cent of the total annual production but in any case not less than 2 and not necessarily more than 10 during each and every production year.

~~9.4.2. At least 1 tyre once every two years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and not covered by paragraphs 6.4.4.1. or 6.4.4.2.~~

~~9.4.3. At least one tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and covered by paragraphs 6.4.4.1. The retreader can use the snow performance periodic test results obtained by the tread manufacturer or tread supplier for this purpose.~~

9.4.2. At least one tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and covered by paragraphs 6.4.4.2. The retreader can use the current snow performance periodic test results obtained by the owner of the original UN Regulation No. 117 approval certificate.

9.5. The tests and checks of paragraph 9. 4.1. may replace those required in paragraph 9.2.1.

## 10. Penalties for non-conformity of production



10.1. The approval granted in respect of a retreading production unit pursuant to Part I of this Regulation may be withdrawn if the requirements of paragraph 9 are not complied with or if the retreading production unit or the retreaded tyres produced by that retreading production unit have failed to meet the requirements prescribed in paragraph 9.

10.2. If a Party to the Agreement which applies this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties to the 1958 Agreement applying this Regulation, by means of a communication form conforming to the model shown in annex 1A to this Regulation.

## II. Part II: For retreaded snow tyres for use in severe snow conditions:

### 11. Markings

#### 11.1. Part II.A.: pre-cured tread material(s) and pattern(s)

11.1.1. The precured-tread material(s) does not need to be individually marked. However, the packaging with which they are supplied shall be marked with an international approval mark according to paragraph 13.1.4. and as shown in annex 2 to this Regulation.

11.1.2. The "Alpine" symbol (3-peak-mountain with snowflake) shall also be on the packaging. The "Alpine" symbol ("3-peak-mountain with snowflake") shall conform to the symbol described in Annex 10, Appendix 1.

11.1.3. The approval label prescribed in paragraphs 11.1.1.1., 11.1.1.2. and 13.1.4. shall be clearly legible and the retreader shall ensure the precured tread packaging bears the marking till the retread.

#### 11.2. Part II.B.: mould cure material(s) and pattern(s)

11.2.1. No additional marking other than part I marking as referred to in paragraph 3 of this regulation applies.

### 12. APPLICATION FOR APPROVAL

#### 12.1. Part II.A.: pre-cured tread material(s) and pattern(s)

12.1.1. The following procedures are applicable to the approval of pre-cured tread for snow tyres for use in severe snow conditions:

12.1.2. The application for approval of a pre-cured tread shall be submitted by the pre-cured tread manufacturer or his duly accredited representative.

12.1.2.1. The application referred to in paragraph 12.1.2. shall be drawn up in accordance with the model of the information document set out in appendix 1 to annex 1B to this Regulation.

12.1.2.2. The application for approval shall be accompanied by:

12.1.2.2.1. A list of tyres with size designation to which it can be applied for the retreading process;

12.1.2.2.2. Details of the major features, with respect to the effects on the snow grip performance of the tyres, including the tread pattern, included in the designated range of tyre sizes. This may be by means of descriptions supplemented by technical data, drawings, photographs and Computer Tomography (CT), and must be sufficient to allow the type approval authority or technical service to determine whether any subsequent changes to the major features will adversely affect the tyre performance. The effects of changes to minor details of tyre construction on tyre performances will be evident and determined during checks on conformity of production.

#### 12.2. Part II.B.: mould cure material(s) and pattern(s)

12.2.1. The following procedures are applicable to the approval of the mould cure pattern for snow tyres for use in severe snow conditions:

12.2.2. The application for approval of a mould cure pattern shall be submitted by the retreader or his duly accredited representative.

**12.2.2.1.** The application referred to in paragraph 12.2.2. shall be drawn up in accordance with the model of the information document set out in appendix 1 to annex 1C to this Regulation.

**12.2.2.2.** The application for approval shall be accompanied by:

**12.2.2.2.1.** A list of tyres with size designation to which it can be applied for the retreading process;

**12.2.2.2.2.** Details of the major features, with respect to the effects on the snow grip performance of the tyres, including the tread pattern, included in the designated range of tyre sizes. This may be by means of descriptions supplemented by technical data, drawings, photographs and Computer Tomography (CT), and must be sufficient to allow the type approval authority or technical service to determine whether any subsequent changes to the major features will adversely affect the tyre performance. The effects of changes to minor details of tyre construction on tyre performances will be evident and determined during checks on conformity of production.

## **13 Approval**

### **13.1. Part II.A.: pre-cured tread material(s) and pattern(s)**

**13.1.1.** Before granting approval the authority must be satisfied that pre-cured tread pattern conform to this Regulation and that the tests have been successfully carried out according to paragraph 14.1.1.

**13.1.1.1.** In case of pre-cured tread with identical tread pattern design than a mould cure tread as already approved according to part II.B., including the compliance with the snow test, then compliance with paragraph 14.1.1. is deemed to be fulfilled.

**13.1.2.** If all the requirements of this Regulation are met, then approval shall be granted, and an approval number shall be assigned to the pre-cured tread. The first two digits of this number shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The approval number shall be preceded by "109RT" signifying that the approval applies to a pre-cured tread as prescribed in this Regulation.

The same authority shall not assign the same number to another production unit, pre-cured tread or mould cure covered by this Regulation.

**13.1.3.** Notice of approval or of extension, refusal or withdrawal of approval or of production definitely discontinued pursuant to this Regulation shall be communicated to the Parties to the 1958 Agreement applying this Regulation, by means of a form conforming to the model in annex 1B to this Regulation.

**13.1.4.** There shall be put conspicuously to every packaging of pre-cured tread conforming to this Regulation, on the packaging referred to in paragraph 11.1.1.2. and in addition to the marking prescribed in paragraph 11.1.1.3., an international approval mark consisting of:

**13.1.4.1.** A circle surrounding the letter "E" followed by the distinguishing number of the country which granted approval 11/; and

**13.1.4.2.** An approval number as described in paragraph 13.1.2.

**13.1.5.** Annex 2 to this Regulation gives an example of the arrangements of the approval mark.

### **13.2. Part II.B.: mould cure material(s) and pattern(s)**

**13.2.1.** Before granting approval the authority must be satisfied that the combination of the mould cure pattern and the major features with respect to the snow performance conform to this Regulation and that the tests have been successfully carried out according to paragraph 14.1.1.

**13.2.1.1.** In case of mould cure tread with identical tread pattern design than a pre-cured tread as already approved according to part II.A., including the compliance with the snow test, then compliance to paragraph 14.1.1. is deemed to be fulfilled.

**13.2.2.** If all the requirements of this Regulation are met, then approval shall be granted and an approval number shall be assigned to the mould cure pattern. The first two digits of this number shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The approval number shall be preceded by "109RT" signifying that the approval applies to mould cure retread as prescribed in this Regulation.

The same authority shall not assign the same number to another production unit, pre-cured tread or mould cure covered by this Regulation.

13.2.3. Notice of approval or of extension, refusal or withdrawal of approval or of production definitely discontinued pursuant to this Regulation shall be communicated to the Parties to the 1958 Agreement applying this Regulation, by means of a form conforming to the model in annex 1C to this Regulation.

## 14 Requirements

### 14.1. Snow test

14.1.1. The procedure prescribed in Annex 10 of this Regulation shall apply in case of approval according to part II.A. or part II.B. to demonstrate the pre-cured tread material(s) and pattern(s) or mould cure material(s) and pattern(s) for use in severe snow conditions comply with this Regulation. For each pre-cured tread material(s) and pattern(s) or mould cure material(s) and pattern(s), at least one sample of retreaded tyres representative of the range of tyres to be retreaded shall be tested and meet the performance requirements of paragraph 15.1.1.

## 15 Specifications

15.1. In order to be classified as a "snow tyre for use in severe snow conditions", the retreaded tyre shall meet the performance requirements of paragraph 15.1.1. The retreaded tyre size shall meet these requirements based on a test method of Annex 10 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 a candidate tyre is compared to that of a Standard Reference Test Tyre (SRTT).

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

15.1.1. For Class C2 and C3 tyres, the minimum snow grip index value, as calculated in the procedure described in Annex 10 and compared with the respective Standard Reference Test Tyre (SRTT) shall be 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. = SRTT16C	Ref. = SRTT16	Ref. = SRTT19.5, SRTT22.5
C2	1.02	1.10	No
C3	No	No	1.25
<p><sup>(a)</sup> See paragraph 3 of Annex 10 to this Regulation  <sup>(b)</sup> See paragraph 2 of Annex 10 to this Regulation  <sup>(c)</sup> See paragraph 4 of Annex 10 to this Regulation</p>			

## 16 Modification to the approval

16.1. Every modification concerning a pre-cured tread or mould cure pattern, for example the major features with respect to the snow performance, amending any of the information given by the holder of the approval in the Application for Approval, see paragraph 12, shall be notified to the approval authority which approved pre-cured tread or mould cure pattern. That authority may then either:

- 16.1.1. Consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case the pre-cured tread or mould cure pattern still meets the requirements; or
- 16.1.2. Require a further investigation of the approval.

16.2. Confirmation of, or refusal of, approval, specifying the modifications, shall be communicated by the procedure specified in paragraph 13.1.3 or 13.2.3. to the Parties to the Agreement which apply this Regulation.

## **17 Conformity of production**

### **17.1. Part II.A.: pre-cured tread material(s) and pattern(s)**

**17.1.1.** The pre-cured tread pattern approved according to this Regulation shall conform to the requirements set out in paragraph 14.

The holder of the approval shall carry out appropriate periodical checks on the tread pattern and the compound specification in order to ensure that any pre-cured pattern approved under this Regulation is so manufactured as to conform to the issued type approval.

**17.1.1.1.** The holder of the approval shall ensure that, at least the following number of tyres, representative of the pre-cured tread pattern being produced, is checked and tested as prescribed in this Regulation:

**17.1.1.2.** At least one representative tyre of each approved pre-cured tread pattern once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 14.1.1.

**17.1.1.3.** If the requirements of paragraph 17.1.1.2. are carried out by or under the control of the approval authority, the results may be used as part of, or instead of, those prescribed in paragraph 17.1.1.5.

**17.1.1.4.** The authority which has approved the pre-cured tread pattern may at any time verify the conformity control methods applied in each production facility. For each production facility, the type Approval Authority shall take samples at random and at least the following number of tyres, representative of the pre-cured tread pattern being produced, shall be checked and tested as prescribed in this Regulation:

**17.1.1.5.** At least one representative tyre of each approved pre-cured tread pattern once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 14.1.1.

**17.1.1.6.** The tests and checks of paragraph 17.1.1.5. may replace those required in paragraph 17.1.1.2.

### **17.2. Part II.B.: mould cure material(s) and pattern(s)**

**17.2.1.** The mould cure pattern approved according to this Regulation shall conform to the requirements set out in paragraph 14.

The holder of the approval shall carry out appropriate periodical checks on the tread pattern and the compound specification in order to ensure that any mould cure pattern approved under this Regulation is so manufactured as to conform to the issued type approval.

**17.2.1.1.** The holder of the approval shall ensure that, at least the following number of tyres, representative of the mould cure pattern being produced, is checked and tested as prescribed in this Regulation:

**17.2.1.2.** At least one representative tyre of each approved mould cure pattern once every two years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 14.1.1.

**17.2.1.3.** If the requirements of paragraph 17.2.1.2. are carried out by or under the control of the approval authority, the results may be used as part of, or instead of, those prescribed in paragraph 17.2.1.5.

**17.2.1.4.** The authority which has approved the mould cure pattern may at any time verify the conformity control methods applied in each production facility. For each production facility, the type Approval Authority shall take samples at random and at least the following number of tyres, representative of the mould cure pattern being produced, shall be checked and tested as prescribed in this Regulation:

**17.2.1.5.** At least one representative tyre of each approved mould cure pattern once every two years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 14.1.1.

**17.2.1.6.** The tests and checks of paragraph 17.2.1.5. may replace those required in paragraph 17.2.1.2.

## **180. PENALTIES FOR NON-CONFORMITY OF PRODUCTION**

**180.1.** The approval granted in respect of a retreading production unit pursuant to **Part II** of this Regulation may be withdrawn if the requirements of paragraph **179** are not complied with or if the retreading production unit or the retreaded tyres produced by that retreading production unit have failed to meet the requirements prescribed in paragraph **179**.

**180.2.** If a Party to the Agreement which applies this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties to the 1958 Agreement applying this Regulation, by means of a communication form conforming to the models shown in annex **1B** or annex **1C** to this Regulation.

## **191. PRODUCTION DEFINITELY DISCONTINUED**

The authority which granted the approval of the retreading production unit shall be informed if operations and manufacture of retreaded tyres approved within the scope of this Regulation cease. On receipt of this information the authority shall communicate this information to the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model shown in annex **1A**, annex **1B** or annex **1C** to this Regulation.

## **2012. TRANSITIONAL PROVISIONS**

**As from the official date of entry into force of the 01 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 01 series of amendments.**

**As from 1 January 2025, Contracting Parties applying this Regulation shall not be obliged to accept type approvals to the preceding series of amendments, first issued after 1 January 2025.**

**Until 1 January 2026, Contracting Parties applying this Regulation shall accept type approvals to the preceding series of amendments, first issued before 1 January 2025.**

**As from 1 January 2026, Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the preceding series of amendments to this Regulation.**

## **213. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR CONDUCTING APPROVAL TESTS, OF TEST LABORATORIES, AND OF TYPE APPROVAL AUTHORITIES**

**213.1.** 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.

**213.2.** The Contracting Parties to the 1958 Agreement which apply this Regulation may designate laboratories of tyre manufacturers or retreading production units as approved test laboratories.

**213.3.** 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 1A**

### **COMMUNICATION**

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

issued by: Name of the Type Approval Authority:

.....

.....  
.....



concerning: 2/ APPROVAL GRANTED

APPROVAL EXTENDED

APPROVAL REFUSED

APPROVAL WITHDRAWN

PRODUCTION DEFINITELY DISCONTINUED

of a retreading production unit pursuant to UN Regulation No. 109.

Approval No.: ..... Extension No.:.....

1. Retreader's name and address: .....

2. Name and address of retreading production unit:

.....

3. If applicable, name and address of retreader's representative:

.....

4. Summarized description as defined in paragraphs 4.1.3., 4.1.4 and 4.1.5. **appendix 1 to annex 1A** 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. Information in relation to the range of tyres as defined in paragraphs 1.2 to 1.5 of **appendix 1 to annex 1A**, of this Regulation:.....

**4.4. Snow tyres for use in severe snow conditions: yes (as listed in paragraph 3.2 of appendix 1 to annex 1A) /no**

5. Technical service and, where applicable, test laboratory approved for purposes of approval or verification of conformity: .....

6. Date of report issued by that service: .....

7. Number of report issued by that service: .....

8. Reason (s) of extension (if applicable): .....

9. Any remarks: .....

10. Place: .....

11. Date: .....

12. Signature .....

13. Annexed to this communication is a list of documents in the approval file, **including the information document as defined in appendix 1 to annex 1A**, deposited at the Approval Authority which has considered this approval and which can be obtained upon request.

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

2/ 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.

## **Appendix 1 – Technical information document part I: the production of retreaded pneumatic tyres designed primarily for vehicles of category M<sub>2</sub>, M<sub>3</sub>, N, O<sub>3</sub> and O<sub>4</sub>**

### **0. GENERAL**

#### **0.1. Retreader's name or brand name/trademark: ...**

- 0.2. Name and address of Retreading production unit: ...
- 0.3. Name and address of retreader's representative: ...
- 0.4. Names or trademarks affixed on the retreaded tyres: ...

**1 - RETREADING METHOD**

- 1.1. Retreading type: Top capping / Re capping / Bead to bead
- 1.2. Retreading method: Pre-cured / Mould cure
- 1.3. Category of use: Normal / Special use / Snow tyre / temporary spare tyre / type T temporary spare tyre
- 1.4. Maximum Speed symbol to be retreaded:
  - 1.4.1. C2 tyres: ...
  - 1.4.2. C3 tyres: ...
- 1.5. Maximum Load index to be retreaded:
  - 1.5.1. C2 tyres: ...
  - 1.5.2. C3 tyres: ...

**2. TYRES TO BE RETREADED**

- 2.1. Original brand name(s) of new tyres retreaded by the company: ...
- 2.2. Structures: ...

**3. RANGE OF COVERED RETREADED TYRES**

- 3.1. Dimensional range of retreaded tyres: ...
- 3.2. List of dimensions and certificates of 3PMSF tyres (per profile): ...

**4 - CONFORMITY OF PRODUCTION**

- 4.1. Quality management system of the company: ...
- 4.2. Responsibility concerning the regulatory surveillance: ...
- 4.3. Inspection method of the tyres at reception level: ...
  - 4.3.1. Initial inspection: ...
  - 4.3.2. Allowed repairs: ...
  - 4.3.3. Destination of the tyres declared not reparable: ...
- 4.4. Selection method of the retread materials and control method at the reception level: ...
- 4.5. Procedure used during all the process to guarantee the quality level: ...
- 4.6. Sampling method used for the verification in accordance with this Regulation: ...
- 4.7. Procedure used when a sample is in non-compliant : ...

**5 - MARKINGS**

- 5.1. Dimensions and locations of the markings: ...
- 5.2. Markings removal: ...
- 5.3. Photographs – Sketches: ...

**ANNEX 1B**

**COMMUNICATION**

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

issued by: Name of the Type Approval Authority:

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



concerning: <sup>2</sup> APPROVAL GRANTED

APPROVAL EXTENDED

APPROVAL REFUSED

APPROVAL WITHDRAWN

PRODUCTION DEFINITELY DISCONTINUED

of a pre-cured tread pattern pursuant to UN Regulation No. 109.

Approval No.: ..... Extension No.:.....

1. Manufacturer's name and address: .....

2. Names and Address(es) of manufacturing plant(s):

3. If applicable, name and address of manufacturer's representative:

.....

4. Summarized description as defined in appendix 1 to annex 1B 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. Information in relation to the range of tyres as defined in paragraph 3. of appendix 1 to annex 1B. of this Regulation:.....

5. Technical service and, where applicable, test laboratory approved for purposes of approval or verification of conformity: .....

6. Date of report issued by that service: .....

7. Number of report issued by that service: .....

8. Reason (s) of extension (if applicable): .....

9. Any remarks: .....

10. Place: .....

11. Date: .....

12. Signature .....

13. Annexed to this communication is a list of documents in the approval file, including the information document as defined in appendix 1 to annex 1B, deposited at the Approval Authority which has considered this approval and which can be obtained upon request.

1/ 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.

Appendix 1 – Technical information document part II.A. : pre-cured tread material(s) and pattern(s).

## 0. GENERAL

0.1. Manufacturer's name or trade mark: ...

0.2. Name and address of manufacturing plant: ...

0.3. Name and address of manufacturer's representative: ...

0.4. Brand name/trademark: ...

0.5. Trade description/commercial name of the pre-cured tread: ...

## 2. PRE-CURED TREAD PATTERN

2.1. Drawing(s) of the tread pattern(s): ...



2.2. Compound specification: ...

**3 RANGE OF PNEUMATIC TYRES TO BE RETREADED**

3.1. Dimensional range of tyres to be retreaded<sup>1</sup>: ...

**4. MARKINGS**

4.1. Dimensions of the markings: ...

4.2. Sketch of the approval marking put on the packaging: ...

4.3. Position of the sticker on the packaging: ...

<sup>1</sup> In accordance with the range covered by the test report of snow tyre for use in severe snow conditions.

**ANNEX 1C**

**COMMUNICATION**

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

issued by: Name of the Type Approval Authority:

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



concerning: <sup>2</sup> APPROVAL GRANTED

APPROVAL EXTENDED

APPROVAL REFUSED

APPROVAL WITHDRAWN

PRODUCTION DEFINITELY DISCONTINUED

of a mould cure pattern pursuant to UN Regulation No. 109.

Approval No.: ..... Extension No.:.....

1. Manufacturer's name and address: .....

2. Names and Address(es) of manufacturing plant(s):

3. If applicable, name and address of manufacturer's representative:

.....

4. Summarized description as defined in appendix 1 to annex 1C 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. Information in relation to the range of tyres as defined in paragraph 3. of appendix 1 to annex 1C. of this Regulation:.....

5. Technical service and, where applicable, test laboratory approved for purposes of approval or verification of conformity: .....

6. Date of report issued by that service: .....

7. Number of report issued by that service: .....

8. Reason (s) of extension (if applicable): .....

9. Any remarks: .....

10. Place: .....

11. Date: .....

12. Signature .....

13. Annexed to this communication is a list of documents in the approval file, including the information document as defined in appendix 1 to annex 1C, deposited at the Approval Authority which has considered this approval and which can be obtained upon request.

1/ 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.

Appendix 1 – Technical information document part II.B.: mould cure material(s) and pattern(s).

0. GENERAL

0.1. Manufacturer's name or trade mark: ...

0.2. Name and address of manufacturing plant: ...

0.3. Name and address of manufacturer's representative: ...

0.4. Brand name/trademark: ...

0.5. Trade description/commercial name of the mould cure pattern: ...

2. MOULD CURE PATTERN

2.1. Drawing(s) of the tread pattern(s): ...

2.2. Compound specification: ...

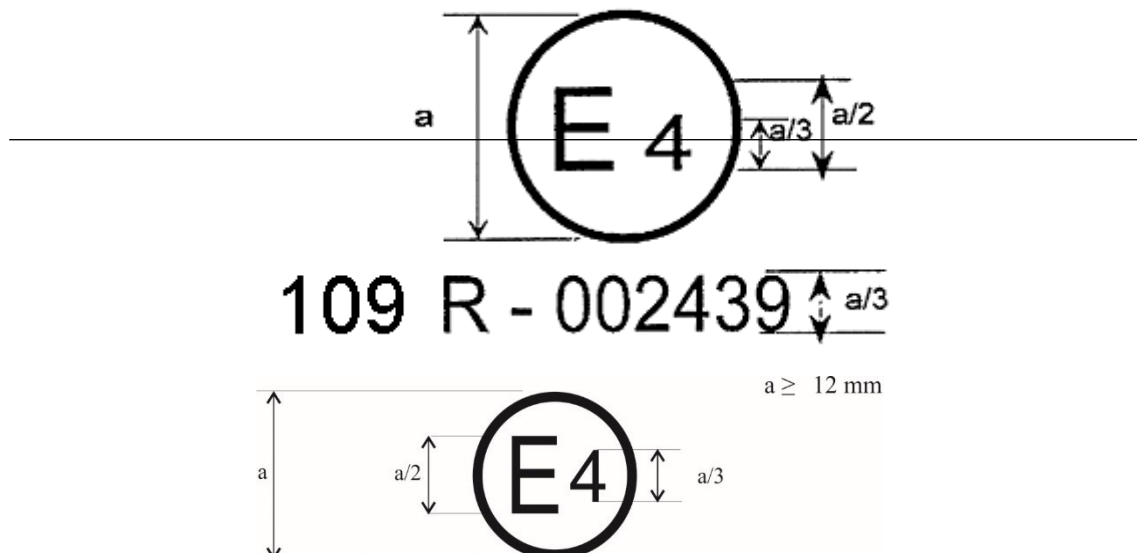
3 RANGE OF PNEUMATIC TYRES TO BE RETREADED

3.1. Dimensional range of tyres to be retreaded<sup>1</sup>: ...

<sup>1</sup> In accordance with the range covered by the test report of snow tyre for use in severe snow conditions.

Annex 2 - ARRANGEMENT OF APPROVAL MARK

I. The production of retreaded pneumatic tyres designed primarily for vehicles of category M<sub>2</sub>, M<sub>3</sub>, N, O<sub>3</sub> and O<sub>4</sub>



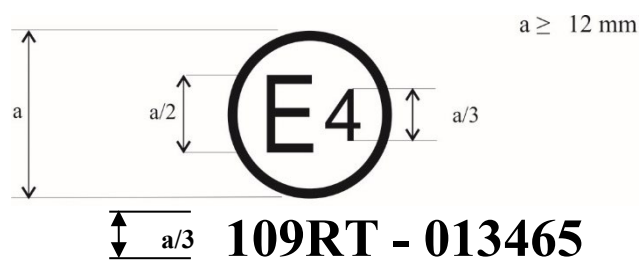
 **109R - 018754**

$a = 12 \text{ mm min}$

The above approval mark affixed to a retreaded tyre shows that the retreading production unit concerned has been approved in the Netherlands (E4) under approval number 109R09187542439 meeting the requirements of this Regulation in its original form **01 series of amendments (010)**.

The approval number must be placed close to the circle and either above or below the "E" or left or right of that letter. The digits of the approval number must be on the same side of the "E" and face in the same direction. The use of Roman numerals as approval numbers should be avoided so as to prevent any confusion with other symbols.

## II. For retreaded snow tyre materials and patterns for use in severe snow conditions



The above approval mark affixed to the pre-cured tread packaging that has been approved in the Netherlands (E4) under approval number 109RT013465 meeting the requirements of this Regulation in its **01 series of amendments (01)**.

The approval number must be placed close to the circle and either above or below the "E" or left or right of that letter. The digits of the approval number must be on the same side of the "E" and face in the same direction. The use of Roman numerals as approval numbers should be avoided so as to prevent any confusion with other symbols.

Annex 3

[...]

2. In the particular case of tyres having a tyre to rim fitment configuration "A", the marking shall be in the form of the following example:

235-700 R 450A where:

235 is the nominal section width in mm

700 is the outer diameter expressed in mm

R is an indication of the structure of the tyre - see paragraph ~~3.1.3.3.2.4.~~ **3.2.4.** of this Regulation

450 is the nominal diameter of the rim expressed in mm

A is the tyre to rim fitment configuration.

The marking of the load index, speed category date of manufacture and other markings, shall be as given in example 1 above.

[...]

Annex 6

## METHOD OF MEASURING TYRES

1. The tyre shall be mounted on the test rim specified by the retreader and inflated to the nominal inflation pressure quoted in the nominated International Tyre Standard (~~see paragraph 4.1.4.7. of this Regulation~~) in relation to the maximum load carrying capacity for that size and load index.

[...]

### Annex 10

Procedures for snow performance testing relative to snow tyre for use in severe snow conditions

[...]

2. Spin traction method for Classes C2 tyres  
(traction force test per paragraph ~~7.215.1.b.)~~ **7.215.1.b.)** of this Regulation).

The test procedure of ASTM standard F1805-06 shall be used to assess snow performance through spin traction values on medium packed snow (The snow compaction index measured with a CTI penetrometer 1/ shall be between 70 and 80).

[...]

### 3.1.3. Tyres

The tyres should be "~~braked~~ **broken-in**" prior to testing to remove spew, compound nodules or flashes resulting from the moulding process. The tyre surface in contact with snow shall be cleaned before performing a test.

Tyres shall be conditioned at the outdoor ambient temperature at least two hours before their mounting for tests. Tyre pressures shall then be adjusted to the values specified for the test.

In case a vehicle cannot accommodate both the reference and candidate tyres, a third tyre ("control" tyre) may be used as an intermediate. First test control vs. reference on another vehicle, then test candidate vs. control on the vehicle.

[...]

### Annex 10 - Appendix 2

Test reports and test data for C2 tyres

#### Part 1 - Report

1. ~~Type Approval Authority or~~ Technical Service:

2. Name and address of the ~~Retreader~~ **pre-cured tread manufacturer or mould cure manufacturer:**

3. Test report No.:

4.1. Brand name/**trademark:**

4.2. ~~and~~ **Trade description/commercial name:** 5. Tyre class:

6. Category of use:

7. Snow grip index SG

7.1. Test procedure and SRTT used:

8. Comments (if any):

9. Date:

10. Signature:

~~11. Signature of the technical service:~~

~~12. Signature of the Type Approval Authority:~~

[...]

Annex 10 - Appendix 3  
Test reports and test data for C3 tyres

Part 1 - Report

1. ~~Type Approval Authority or Technical Service:~~
2. Name and address of the ~~Retreader~~ **pre-cured tread manufacturer or mould cure manufacturer:**
3. Test report No.:
- 4.1. Brand name/**trademark:**
- 4.2. ~~and~~ **Trade description/commercial name:**
5. Tyre class:
6. Category of use:
7. Snow grip index relative to SRTT according to paragraph 7.2.1.
- 7.1. Test procedure and SRTT used
8. Comments (if any):
9. Date:
10. Signature:
11. ~~Signature of the technical service:~~
12. ~~Signature of the Type Approval Authority:~~

[...]

## II. Justification

1. Scope:  
Leave the current approach for R109 and add additional requirement for approval of pre-cured tread and mould cure material(s) and profile in case snow tyres in severe snow conditions.
2. Approval and requirements:  
The actual requirements for the severe snow conditions and the corresponding marking into R109 could lead to
  - different interpretation of the responsibility of the Type Approval Authority and TS concerning the signature of the test reports for 3PMSF (Annex X, Appendices 2 and 3, §11 and §12)
  - some lack of information to the Type Approval Authority due to exchange and acceptance of test protocols/certificates from material manufacturers' side. Mainly caused by the fact that, e.g. for pre-cure materials, the material manufacturer delivered performance information to be used at retreader level without being an active part of the approval process itself.Following the described approach in this proposal:
  - the responsibilities of Technical Services and Type Approval Authorities are clarified via the introduction of a complete type approval process for the severe snow conditions retreaded tyres.
  - the responsibilities between the retreader and the material manufacturer are defined for retreaded tyres produced in precure or mould cure process.

Therefore, the new proposal is structured in

- Part I: General type approval of the retreading workshop without major change to the existing requirements/regulation (except for tyres for severe snow conditions)

- Part II: Approval for retreaded tyres for severe snow conditions (3PMSF requirements and marking). This is the new part introduces additional requirement for approval of precured tread and mould cure material(s) and patterns/designs.
  - o Part II. A: for retreaded tyres being retreaded in pre-cure process.
  - o Part II. B: for retreaded tyres being retreaded in mould-cure process.

In addition, integrating the material manufacturer as active part in the type homologation process clarifies COP requirements at facilitates the introduction of new developments in EU regulations (e.g. the future integration of retreaded tyres into EU labelling reg. 2020/740.)

3. Marking (for the severe snow conditions' retreaded tyres):  
No marking is requested for 3PMSF mould cure material(s) and pattern(s).  
The packaging with which they are supplied shall be marked for precured-tread material(s).
  4. Testing requirement (for the severe snow conditions' retreaded tyres):  
No change.
  5. Conformity of production (for the severe snow conditions' retreaded tyres):  
No change neither on the requirement, nor on the frequency. The responsibility is then put to the holder of the approval.
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