

ANNEX A — ANNEXE A

No. 4789. AGREEMENT CONCERNING THE ADOPTION OF UNIFORM CONDITIONS OF APPROVAL AND RECIPROCAL RECOGNITION OF APPROVAL FOR MOTOR VEHICLE EQUIPMENT AND PARTS. DONE AT GENEVA ON 20 MARCH 1958¹

ENTRY INTO FORCE of Regulation No. 75 annexed to the above-mentioned Agreement of 20 March 1958

The said Regulation came into force on 1 April 1988 in respect of Czechoslovakia and Italy, in accordance with article 1 (5) of the Agreement.

Regulation No. 75

*[Uniform Provisions concerning the Approval
of Pneumatic Tyres for Motor Cycles]*

1. SCOPE

This Regulation covers new pneumatic tyres designed for highway use on motor cycles (categories L3* and L4*) and motor cycle derivatives (category L5*).

It does not cover:

- (a) New tyres for cycles and mopeds (categories L1 and L2);
- (b) New tyres for motor cycles designed for speeds exceeding 210 km/h;
- (c) New tyres designed only for off-the-road use and marked NHS (not for highway service) or for competitions.

Because of the design characteristics of motor cycle tyres, and particularly those of the tread, a substantial number of different types of tyres of the same nominal dimensions are available on the market. It appears desirable, for reasons of safety, that vehicles should be designed in such a manner as to accept all the different types of tyres which are available to the customer.

2. DEFINITIONS

For the purpose of this Regulation,

- 2.1. "Type of pneumatic tyre" means a category of pneumatic tyres which do not differ in such essential respects as:
 - 2.1.1. Trade name or mark,
 - 2.1.2. Tyre size designation,
 - 2.1.3. Category of use (*normal*: for normal highway service; *special*: for special applications such as on- and off-the-road; *snow*),

* As defined in the Consolidated Resolution R.E.3.

¹ United Nations, *Treaty Series*, vol. 335, p. 211; vol. 516, p. 378 (rectification of the authentic English and French texts of article 1 (8)); vol. 609, p. 290 (amendment to article 1 (1)); vol. 1059, p. 404 (rectification of the authentic French text of article 12 (2)); for subsequent actions, see references in Cumulative Indexes Nos. 4 to 15, as well as annex A in volumes 951, 955, 958, 960, 961, 963, 966, 973, 974, 978, 981, 982, 985, 986, 993, 995, 997, 1003, 1006, 1010, 1015, 1019, 1020, 1021, 1024, 1026, 1031, 1035, 1037, 1038, 1039, 1040, 1046, 1048, 1050, 1051, 1055, 1060, 1065, 1066, 1073, 1078, 1079, 1088, 1092, 1095, 1097, 1098, 1106, 1110, 1111, 1112, 1122, 1126, 1130, 1135, 1136, 1138, 1139, 1143, 1144, 1145, 1146, 1147, 1150, 1153, 1156, 1157, 1162, 1177, 1181, 1196, 1197, 1198, 1199, 1205, 1211, 1213, 1214, 1216, 1218, 1222, 1223, 1224, 1225, 1235, 1237, 1240, 1242, 1247, 1248, 1249, 1252, 1253, 1254, 1255, 1256, 1259, 1261, 1271, 1273, 1275, 1276, 1277, 1279, 1284, 1286, 1287, 1291, 1293, 1294, 1295, 1299, 1300, 1301, 1302, 1308, 1310, 1312, 1314, 1316, 1317, 1321, 1323, 1324, 1327, 1328, 1330, 1331, 1333, 1335, 1336, 1342, 1347, 1348, 1349, 1350, 1352, 1355, 1358, 1361, 1363, 1364, 1367, 1374, 1379, 1389, 1390, 1392, 1394, 1398, 1401, 1402, 1404, 1405, 1406, 1408, 1409, 1410, 1412, 1413, 1417, 1419, 1421, 1422, 1423, 1425, 1428, 1429, 1434, 1436, 1438, 1443, 1444, 1458, 1462, 1463, 1464, 1465, 1466, 1474, 1477, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1492, 1494, 1495 and 1499.

- 2.1.4. Structure (diagonal or bias-ply, bias belted, radial),
- 2.1.5. Speed category,
- 2.1.6. Load capacity index,
- 2.1.7. Tyre cross-section;
- 2.2. "Structure of a pneumatic tyre" means the technical characteristics of the tyre's carcass. The following structures of a pneumatic tyre are distinguished in particular:
- 2.2.1.⁽¹⁾ "Diagonal" or "bias ply" describes a pneumatic tyre structure in which the ply cords extend to the beads and are laid at alternate angles substantially less than 90° to the centre line of the tread,
- 2.2.2. "Bias belted" describes a pneumatic tyre structure of diagonal (bias-ply) type in which the carcass is restricted by a belt comprising two or more layers of substantially inextensible cord material laid at alternate angles close to those of the carcass,
- 2.2.3.⁽¹⁾ "Radial" describes a pneumatic tyre structure in which the ply cords extend to the beads and are laid substantially at 90° to the centreline of the tread, the carcass being stabilized by an essentially inextensible circumferential belt,
- 2.2.4. "Reinforced" describes a pneumatic tyre structure in which the carcass is more resistant than that of the corresponding normal tyre;
- 2.3. "Bead" means the part of a pneumatic tyre which is of such shape and structure as to fit the rim and hold the tyre on it;⁽²⁾
- 2.4. "Cord" means the strands forming the fabric of the plies in the pneumatic tyre;⁽²⁾
- 2.5. "Ply" means a layer of rubber-coated parallel cords;⁽²⁾
- 2.6. "Carcass" means that part of a pneumatic tyre other than the tread and the rubber side walls which, when inflated, bears the load;⁽²⁾
- 2.7. "Tread" means that part of a pneumatic tyre which comes into contact with the ground, protects the carcass against mechanical damage and contributes to ground adhesion;⁽²⁾
- 2.8. "Side wall" means the part of a pneumatic tyre between the tread and the area designed to be covered by the rim flange;⁽²⁾
- 2.9. "Tread groove" means the space between two adjacent ribs or blocks in the tread pattern;⁽²⁾
- 2.10. "Principal groove" means the wide grooves situated in the central zone of the tread;
- 2.11. "Section width (S)" means the linear distance between the outsides of the side walls of an inflated pneumatic tyre, excluding elevations due to labelling (marking), decoration or protective bands or ribs;⁽²⁾
- 2.12. "Overall width" means the linear distance between the outsides of the side walls of an inflated pneumatic tyre, including labelling (marking), decoration and protective bands or ribs;⁽²⁾ in the case of tyres where the tread is wider than the section width, the overall width corresponds to the tread width;
- 2.13. "Section height (H)" means a distance equal to half the difference between the outer diameter of the tyre and the nominal rim diameter;⁽²⁾
- 2.14. "Nominal aspect ratio (Ra)" means the centuple of the number obtained by dividing the number expressing the section height (H) by the number expressing the nominal section width (S), both dimensions expressed in the same units;
- 2.15. "Outer diameter (D)" means the overall diameter of an inflated new pneumatic tyre;⁽²⁾
- 2.16. "Tyre-size designation" is a designation showing:
- 2.16.1. The nominal section width (S_n) must be expressed in mm except in the case of types of tyre for which the size designation is shown in the first column of the tables in annex 5 to this Regulation,
- 2.16.2. The nominal aspect ratio, except in the case of certain types of tyre, for which the size designation is shown in the first column of the tables in annex 5 to this Regulation,

⁽¹⁾ Also applicable to Regulation No. 54.

⁽²⁾ See explanatory figure.

- 2.16.3. A conventional number “d” denoting the nominal diameter of the rim and corresponding to its diameter expressed either in inches (number below 100) or in mm (numbers above 100). The two may also be shown together,
 2.16.3.1. The values of the symbol “d” expressed in mm and in inches are as follows:

<i>Symbol “d” indicated by one or two figures according to the nominal rim diameter</i>	<i>Value of “d” in mm</i>
4	102
5	127
6	152
7	178
8	203
9	229
10	254
11	279
12	305
13	330
14	356
15	381
16	406
17	432
18	457
19	483
20	508
21	533
22	559
23	584

- 2.17. “Nominal rim diameter (d)” means the diameter of the rim on which a tyre is designed to be mounted;⁽¹⁾
- 2.18. “Rim” means the support for a tyre-and-tube assembly, or for a tubeless tyre, on which the tyre beads are seated⁽¹⁾ (for rims having diameter codes of 17, 18 and 19, see annex 9),
- 2.19. “Theoretical rim” means the rim whose width would be equal to X times the nominal section width of a tyre. The value of X shall be specified by the manufacturer of the tyre;
- 2.20. “Measuring rim” means the rim on which a tyre is required to be fitted for size measurements;
- 2.21. “Test rim” means the rim on which a tyre is required to be fitted for testing;
- 2.22. “Chunking” means the breaking away of pieces of rubber from the tread;
- 2.23. “Cord separation” means the parting of the cords from their rubber coating;
- 2.24. “Ply separation” means the parting of adjacent plies;
- 2.25. “Tread separation” means the pulling away of the tread from the carcass;
- 2.26. “Load capacity index” means a figure associated with the maximum load a tyre can carry at the speed corresponding to its speed symbol according to the operating conditions specified by the tyre manufacturer. A list of those indices and of the corresponding loads is given in annex 4 to this Regulation.
- 2.27. “Table of tyre load capacities at various speeds” means the table in annex 8 which shows, by reference to indices of load capacity and of capacity at nominal speed, load variations of a tyre if used at speeds other than that corresponding to the index of its nominal speed category;

⁽¹⁾ See explanatory figure.

- 2.28. "Speed category" means:
- 2.28.1. The speeds, indicated by a symbol, at which the tyre can carry the load indicated by the associated load-capacity index. In relation to tyres with rim diameter 14 and above, the category in which a tyre is classified if, in conformity with the requirements specified by the manufacturer for its use, it can be fitted to a motor cycle which does not reach a speed higher than the maximum speed prescribed for that category;
- 2.28.2. The speed categories are as shown in the table below:

<i>Speed category symbol</i>	<i>Corresponding speed (km/h)</i>
F	80
G	90
J	100
K	110
L	120
M	130
N	140
P	150
Q	160
R	170
S	180
T	190
U	200
H	210

- 2.29. "Snow tyre" means a tyre whose tread pattern and whose structure are primarily designed to ensure in mud and fresh or melting snow a performance better than that of an ordinary (road-type) tyre. The tread pattern of a snow tyre generally consists of groove (rib) and/or solid-block elements more widely spaced than on an ordinary (road-type) tyre;
- 2.30. "MST" means "multiservice tyre", suitable both on and off road.
3. MARKINGS
- 3.1. Pneumatic tyres submitted for approval shall bear on at least one side wall the following markings:
- 3.1.1. The trade name or mark;
- 3.1.2. The tyre size designation as defined in paragraph 2.16 of this Regulation;
- 3.1.3. An indication of the structure as follows:
- 3.1.3.1. On diagonal (bias-ply) tyres, no marking, or the letter "D",
- 3.1.3.2. On bias-belted tyres, the letter "B" placed in front of the rim-diameter marking, and in addition the words "BIAS-BELTED" can be added,
- 3.1.3.3. On radial-ply tyres, the letter "R" placed in front of the rim-diameter marking, and, the word "RADIAL" can be added,
- 3.1.4. An indication of the tyre's speed category by means of the symbol shown in paragraph 2.28.2 above;
- 3.1.5. The load-capacity index as defined in paragraph 2.26 above;
- 3.1.6. The word "TUBELESS" if the tyre is designed for use without an inner tube;
- 3.1.7. The word "REINFORCED" or "REINF" if the tyre is a reinforced tyre;
- 3.1.8. The date of manufacture in the form of a group of three digits, the first two showing the week and the last one the year of manufacture. However, this marking, which may be affixed to one side wall only, shall not be mandatory, on any tyre submitted for approval, until two years after the date of entry into force of this Regulation;

- 3.1.9. The inscription of “M + S” or “M.S” or “M & S” in the case of a snow tyre;
- 3.1.10. The inscription MST in the case of multiservice tyres.
- 3.2. Tyres shall provide adequate space for the approval mark, as shown in annex 2 to this Regulation.
- 3.3. Annex 3 to this Regulation gives an example of the tyre markings.
- 3.4. The markings referred to in paragraph 3.1 and the approval mark prescribed in paragraph 5.4 of this Regulation shall be moulded on to or into the tyres. They shall be clearly legible.
4. APPLICATION FOR APPROVAL
 - 4.1. The application for approval of a type of pneumatic tyre shall be submitted by the holder of the trade name or mark or by his duly accredited representative. It shall specify:
 - 4.4.1. The tyre-size designation as defined in paragraph 2.16 of this Regulation;
 - 4.1.2. The trade name or mark;
 - 4.1.3. The category of use (normal, special or snow);
 - 4.1.4. The structure;
 - 4.1.5. The speed category;
 - 4.1.6. The load-capacity index of the tyre;
 - 4.1.7. Whether the tyre is to be used with or without an inner tube;
 - 4.1.8. Whether the tyre is “normal” or “reinforced”;
 - 4.1.9. The ply-rating number of tyres for motor cycle derivatives (see table 5 of annex 5 to this Regulation);
 - 4.1.10. The overall dimensions: overall section width, and overall diameter;
 - 4.1.11. The rims on which the tyre can be mounted;
 - 4.1.12. The measuring rim and test rim;
 - 4.1.13. The test and measurement pressures;
 - 4.1.14. The factor X referred to in paragraph 2.19 above.
 - 4.2. The application for approval shall be accompanied by drawings or photographs in triplicate of the side walls and tread of the tyre, and by a dimensioned drawing of the cross-section of the tyre submitted for approval. Two samples of the tyre may also be required.
5. APPROVAL
 - 5.1. If the pneumatic tyre submitted for approval in pursuance of this Regulation meets the requirements of paragraph 6 below, approval of that type of tyre shall be granted.
 - 5.2. An approval number shall be assigned to each type approved. Its first two digits (at present 00 for the Regulation in its original form) 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 number so assigned shall not be assigned by the same Contracting Party to another type of pneumatic tyre.
 - 5.3. Notice of approval or of refusal or of extension or withdrawal of approval of a type of pneumatic tyre pursuant to this Regulation shall be communicated to the Parties to the Agreement applying this Regulation, by means of a form conforming to the model in annex 1 to this Regulation.
 - 5.4. There shall be affixed conspicuously to every pneumatic tyre conforming to a type of tyre approved under this Regulation, in the space referred to in paragraph 3.2 above, and in addition to the markings prescribed in paragraph 3.1 above, 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;⁽¹⁾
- 5.4.2. The number of this Regulation, followed by the letter "R", a dash and the approval number.
- 5.5. The approval mark shall be clearly legible and be indelible.
- 5.6. Annex 2 to this Regulation gives an example of the arrangement of the approval mark.

6. REQUIREMENTS

6.1. *Dimensions of tyres*

6.1.1. *Section width of a tyre*

- 6.1.1.1. The section width is obtained by means of the following formula:

$$S = S_1 + K(A - A_1)$$

where:

S is the "section width" expressed in millimetres and measured on the measuring rim;

S_1 is the "nominal section width" (in millimetres) as shown on the side wall of the tyre in the designation of the tyre as prescribed;

A is the width (expressed in millimetres) of the measuring rim, as shown by the manufacturer in the descriptive note; and

A_1 is the width (expressed in millimetres) of the theoretical rim.

A_1 shall be taken to equal S_1 multiplied by the Factor X specified by the manufacturer, and K shall be taken to equal 0.4.

- 6.1.1.2. However, for types of tyres for which the size designation is shown in the first column of the tables in annex 5 to this Regulation, the section width shall be allowed to be that given opposite the tyre designation in the tables.

6.1.2. *Outer diameter of a tyre*

- 6.1.2.1. The outer diameter of a tyre is obtained by means of the following formula:

$$D = d + 2H$$

where:

D is the outer diameter expressed in millimetres;

d is the conventional number defined in paragraph 2.16.3 above expressed in millimetres;

H is the nominal section height in millimetres and is equal to $S_1 \times 0.01 Ra$, where

S_1 is the nominal section width (in millimetres); and

Ra is the nominal aspect ratio,

all as shown on the side wall of the tyre in the tyre designation in conformity with the requirements of paragraph 3.4 above.

- 6.1.2.2. However, for types of tyres for which the size designation is shown in the first column of the tables in annex 5 to this Regulation, the outer diameter shall be allowed to be that given opposite the tyre designation in the tables.

⁽¹⁾ 1 for the Federal Republic of Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 5 for Sweden, 6 for Belgium, 7 for Hungary, 8 for Czechoslovakia, 9 for Spain, 10 for Yugoslavia, 11 for the United Kingdom, 12 for Austria, 13 for Luxembourg, 14 for Switzerland, 15 for the German Democratic Republic, 16 for Norway, 17 for Finland, 18 for Denmark, 19 for Romania, 20 for Poland, 21 for Portugal and 22 for the Union of Soviet Socialist Republics. Subsequent numbers shall be assigned to other countries in the chronological order in which they ratify or accede to the Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, and the numbers thus assigned shall be communicated by the Secretary-General of the United Nations to the Contracting Parties to the Agreement.

6.1.3. *Method of measuring pneumatic tyres*

The dimensions of pneumatic tyres shall be measured by the procedure described in annex 6 to this Regulation.

6.1.4. *Tyre section-width specifications*

6.1.4.1. The overall width of a tyre may be less than the section width S determined pursuant to paragraph 6.1.1 above.

6.1.4.2. It may exceed that value up to the value shown in annex 5 or for sizes not included in annex 5 by the following percentages:

6.1.4.2.1. For normal and snow service: —rim diameter code 14 and above: + 10 per cent
—rim diameter codes up to 13 inclusive: 8 per cent

6.1.4.2.2. For special service tyres which are suitable for limited road use and are marked MST: 25 per cent.

6.1.5. *Tyre outer-diameter specifications*

6.1.5.1. The outer diameter of a tyre must not be outside the values Dmin and Dmax specified in annex 5.

6.1.5.2. For sizes not listed in annex 5 the outer diameter of a tyre must not be outside the values Dmin and Dmax obtained from the following formulae:

$$D_{\min} = d + (2H \times a)$$

$$D_{\max} = d + (2H \times b)$$

where:

H and d are as defined in paragraphs 6.1.2.1 and a and b are as specified in paragraphs 6.1.5.2.1 and 6.1.5.2.2 respectively.

6.1.5.2.1. For normal highway service tyres and snow tyres	<i>a</i>
rim diameter code 14 and above	0.97
rim diameter codes up to 13 inclusive	0.93
for special service tyres	1.00
6.1.5.2.2. For normal highway service tyres	<i>b</i>
rim diameter code 14 and above	1.07
rim diameter codes up to 13 inclusive	1.10
for snow tyres and special service tyres	1.12

6.2. *Load/speed performance test*

6.2.1. The pneumatic tyre shall undergo a load/speed performance test carried out by the procedure described in annex 7 to this Regulation.

6.2.2. A tyre which after undergoing the load/speed test does not exhibit any tread separation, ply separation, cord separation, chunking or broken cords shall be deemed to have passed the test.

6.2.3. The outer diameter of the tyre, measured at least six hours after the load/speed performance test, must not differ by more than ± 3.5 per cent from the outer diameter as measured before the test.

6.2.4. The overall width of the tyre measured at the end of the load/speed performance test must not exceed the value determined in paragraph 6.1.4.2.

6.3. *Dynamic growth of tyres*

The tyres indicated in paragraph 1.1 of annex 10 to this Regulation, which have passed the test for load/speed performance requirements in accordance with paragraph 6.2 above, shall be submitted to a dynamic growth test to be carried out in accordance with the procedure described in the said annex.

7. MODIFICATIONS OF THE TYPE OF PNEUMATIC TYRE AND EXTENSION OF APPROVAL

- 7.1. Every modification of the type of pneumatic tyre shall be notified to the administrative department which approved the type of pneumatic tyre. The department may then either:
 - 7.1.1. Consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case, the pneumatic tyre still complies with the requirements; or
 - 7.1.2. Require a further test report from the technical service responsible for conducting the tests.
- 7.2. Confirmation or refusal of approval, specifying the alterations, shall be communicated by the procedure specified in paragraph 5.3 above to the Parties to the Agreement which apply this Regulation.
- 7.3. The competent authority granting the extension of approval shall assign a series number to each communication form drawn up for such an extension.

8. CONFORMITY OF PRODUCTION

- 8.1. Every tyre bearing an approval mark as prescribed by this Regulation shall be so manufactured as to conform to the tyre type approved, by meeting the requirements set forth in paragraph 6 above.
- 8.2. In order to verify that the requirements of paragraph 8.1 are met, suitable controls of the production shall be carried out. In this case suitable controls means checking the dimensions of the product as well as the existence of procedures for the effective control of the quality of products.
- 8.3. The holder of the approval shall in particular:
 - 8.3.1. Have access to control equipment necessary for checking the conformity to each approved type,
 - 8.3.2. Ensure that data of test results are recorded and that annexed documents shall remain available for a period to be determined in accordance with the administrative service,
 - 8.3.3. Analyse the results of each type of test, in order to verify and ensure the stability of the product characteristics, making allowance for variation of an industrial production.
- 8.4. The competent authority which has granted type-approval may at any time verify the conformity control methods applicable to each production unit.
- 8.5. The normal frequency of inspections authorized by the competent authority shall be one per year. Where negative results are recorded during one of these inspections, the competent authority shall ensure that all necessary steps are taken to re-establish the conformity of production as rapidly as possible.

9. PENALTIES FOR NON-CONFORMITY OF PRODUCTION

- 9.1. The approval granted in respect of a type of pneumatic tyre pursuant to this Regulation may be withdrawn if the requirements laid down in paragraph 8.1 above are not complied with or if the tyres taken from the series have failed to pass the tests prescribed in that paragraph.
- 9.2. If a Party to the Agreement applying this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation, by means of a copy of the approval form bearing at the end, in large letters, the signed and dated annotation "APPROVAL WITHDRAWN".

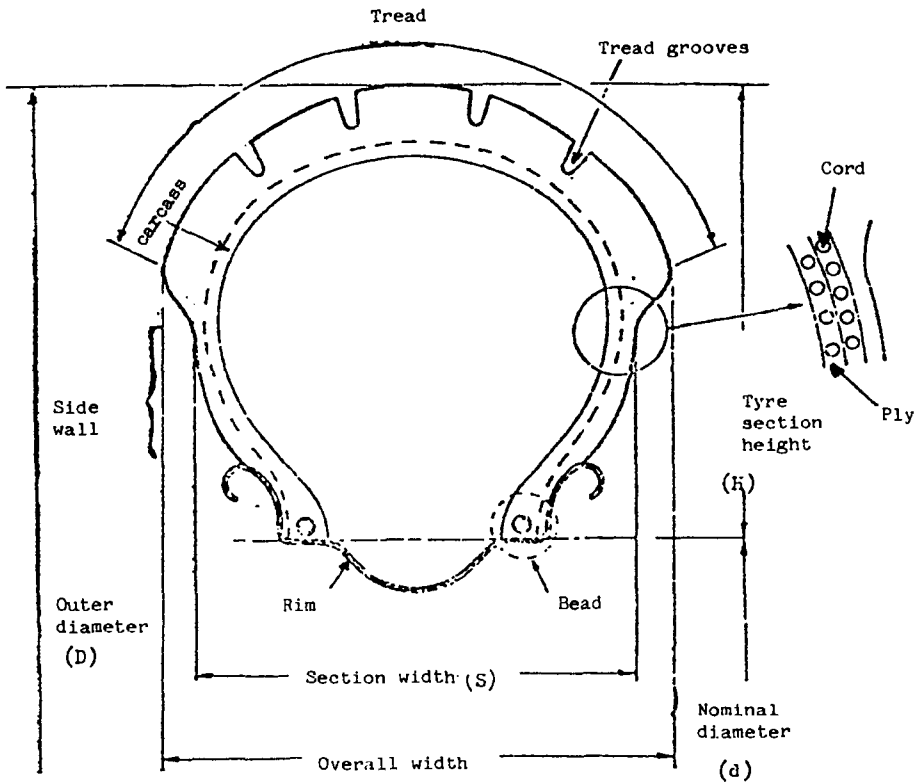
10. PRODUCTION DEFINITELY DISCONTINUED

If the holder of an approval completely ceases to manufacture a type of pneumatic tyre approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication that authority shall inform thereof the other Parties to the Agreement applying this Regulation by means of a copy of the approval form bearing at the end, in large letters, the signed and dated annotation "PRODUCTION DISCONTINUED".

- 11. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR APPROVAL TESTS, AND OF ADMINISTRATIVE DEPARTMENTS
- 11.1. The Parties to the Agreement which apply this Regulation shall communicate to the United Nations Secretariat the names and addresses of the technical services responsible for approval tests and of the administrative departments which grant approval and to which forms certifying approval, or refusal or extension or withdrawal of approval, issued in other countries, are to be sent.
- 11.2. The Parties to the Agreement which apply this Regulation may use laboratories of tyre manufacturers and may designate, as approved, test laboratories among those which are situated on their territory or on the territory of another Party to the Agreement, subject to a preliminary agreement to the procedure by the competent administrative department of the latter.
- 11.3. Where a Party to the Agreement applies paragraph 11.2 above, it may, if it so desires, be represented at the tests by one or more persons of its choice.

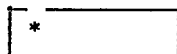
EXPLANATORY FIGURE

(See paragraph 2 of the Regulation)



ANNEX 1

(Maximum format: A 4 (210 x 297 mm))



Communication concerning: approval
refusal of approval
extension of approval
withdrawal of approval
production definitively
discontinued**

of a type of pneumatic tyre for motor cycles pursuant to Regulation No. 75.

Approval No. Extension No.

1. Manufacturer's name or trade mark on the tyre
2. Manufacturer's name and address
3. If applicable, name and address of manufacturer's representative
4. Size designation of tyre:
5. Category of use: normal/special/snow**
6. Overall dimensions:
 - 6.1. Overall width mm on measuring rim
 - 6.2. Outer diameter mm
7. Structure: diagonal (bias-ply)/bias-belted/radial**
8. Speed category:
9. Load-capacity index
10. Ply-rating number for motor cycle derivative tyres: 4/6/8**
11. Rims on which the tyre can be mounted
12. Measuring rim Test rims
13. Coefficient X (see paragraph 6.1.1.1)
- 14.1. Inflation pressure for measurement
- 14.2. Inflation pressure for testing
15. State whether tyre tubeless
16. State whether tyre reinforced
17. Date of submission of tyre for approval
18. Technical service and, where applicable, test laboratory approved for purposes of approval or of verification of conformity
19. Date of report issued by that service
20. Number of report issued by that service
21. Approval granted/refused/extended/withdrawn**
22. Reason(s) of extension (if applicable)
23. Place

* Name of administration.
** Strike out what does not apply.

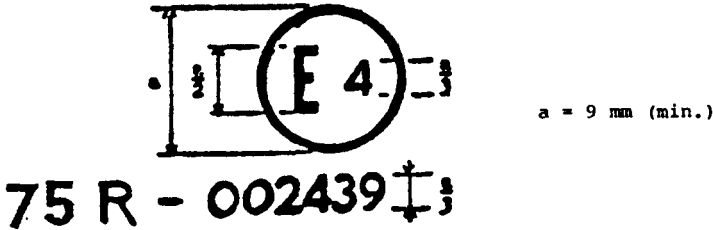
- 24. Date
- 25. Signature

Annexed to this communication:

A dimensional drawing of the cross-section of the pneumatic tyre.

ANNEX 2

ARRANGEMENT OF THE APPROVAL MARK



The above approval mark affixed to a pneumatic tyre shows that the type of tyre concerned for motor cycles has been approved in the Netherlands (E 4) pursuant to Regulation No. 75 under approval number 002439. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. 75 in its original form.

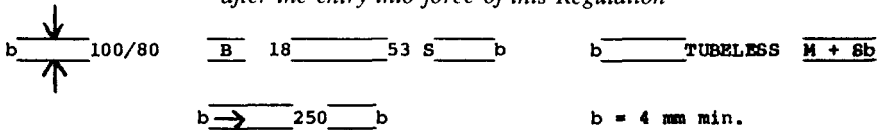
Note:

The approval number must be placed close to the circle and either above or below the “E” or to the 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

ARRANGEMENT OF TYRE MARKINGS

Example of the markings to be borne by types of tyres placed on the market after the entry into force of this Regulation



These markings define a pneumatic tyre:

- having a nominal section width of 100;
- having a nominal aspect ratio of 80;
- having a bias-belted structure;
- having a nominal rim diameter of 457 mm, for which the code is 18;
- having a load capacity of 206 kg, corresponding to load index 53 in annex 4 to this Regulation;
- of speed category S (maximum speed 180 km/h);
- for fitting without an inner tube (“tubeless”);
- snow tyre manufactured in the twenty-fifth week of the year 1980.

The positioning and order of the markings constituting the tyre designation shall be the following:

(a) the size designation, comprising the nominal section width, the nominal aspect ratio, the type-of-structure symbol (where applicable) and the nominal rim diameter shall be grouped as shown in the above example: 100/80B18;

(b) the load index and the speed-category symbol shall be placed together near the size designation. They may either follow it or be placed above or below it;

(c) the markings "TUBELESS" and "REINFORCED" or "REINF" and "M + S" may be at a distance from the size designation symbol.

ANNEX 4

LOAD CAPACITY INDEX/MAXIMUM MASS CORRESPONDENCE

A = Load capacity index

B = Maximum corresponding mass (kg)

A	B	A	B
30	106	62	265
31	109	63	272
32	112	64	280
33	115	65	290
34	118	66	300
35	121	67	307
36	125	68	315
37	128	69	325
38	132	70	335
39	136	71	345
40	140	72	355
41	145	73	365
42	150	74	375
43	155	75	387
44	160	76	400
45	165	77	412
46	170	78	425
47	175	79	437
48	180	80	450
49	185	81	462
50	190	82	475
51	195	83	487
52	200	84	500
53	206	85	515
54	212	86	530
55	218	87	545
56	224	88	560
57	230	89	580
58	236	90	600
59	243		
60	250		
61	257		

ANNEX 5

TYRE SIZE DESIGNATION AND DIMENSIONS

TABLE 1. TYRES FOR MOTOR CYCLES

Sizes with rim diameter code 12 and below

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)			Section Width (mm)	Max. Overall Width (mm)
		D.min	D	D.max		
2.50- 8		328	338	352		
2.50- 9		354	364	378		
2.50-10	1.50	379	389	403	65	70
2.50-12		430	440	451		

(Continued on page 312)

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)			Section Width (mm)	Max. Overall Width (mm)
		D.min	D	D.max		
2.75- 8		338	348	363		
2.75- 9		364	374	383		
2.75-10	1.75	389	399	408	71	77
2.75-12		440	450	462		
3.00- 4		241	251	264		
3.00- 5		266	276	291		
3.00- 6		291	301	314		
3.00- 7		317	327	342		
3.00- 8	2.10	352	362	378	80	86
3.00- 9		378	388	401		
3.00-10		403	413	422		
3.00-12		454	464	473		
3.25- 8		362	372	386		
3.25- 9		388	398	412		
3.25-10	2.50	414	424	441	88	95
3.25-12		465	475	492		
3.50- 4		264	274	291		
3.50- 5		289	299	316		
3.50- 6		314	324	341		
3.50- 7		340	350	367		
3.50- 8	2.50	376	386	397	92	99
3.50- 9		402	412	430		
3.50-10		427	438	448		
3.50-12		478	488	506		
4.00- 5		314	326	346		
4.00- 6		339	351	368		
4.00- 7		365	377	394		
4.00- 8	2.50	401	415	436	105	113
4.00-10		452	466	[387] ¹		
4.00-12		505	517	538		
4.50- 6		364	376	398		
4.50- 7		490	402	424		
4.50- 8		430	442	464		
4.50- 9	3.00	456	468	490	120	130
4.50-10		481	493	515		
4.50-12		532	544	568		
5.00- 8		453	465	481		
5.00-10	3.50	504	516	532	134	145
5.00-12		555	567	583		
6.00- 6		424	436	464		
6.00- 7		450	462	490		
6.00- 8	4.00	494	506	534	154	166
6.00- 9		520	532	562		

¹ Reads as "487" in the authentic French text.

TABLE 2. TYRES FOR MOTOR CYCLES

Normal section size

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)				Section Width (mm)	Max. Overall Width (mm)	
		<i>D.min</i>	<i>D</i>	<i>D.max*</i>	<i>D.max**</i>		*	**
1 3/4-19	1.20	582	589	597	605	50	54	58
2 -14		461	468	477	484			
2 -15		486	493	501	509			
2 -16		511	518	526	534			
2 -17		537	544	552	560			
2 -18	1.35	562	569	577	585	55	58	63
2 -19		588	595	603	611			
2 -20		613	620	628	636			
2 -21		638	645	653	661			
2 -22		663	670	680	686			
2 1/4-14		474	482	492	500			
2 1/4-15		499	507	517	525			
2 1/4-16		524	532	540	550			
2 1/4-17		550	558	566	576			
2 1/4-18	1.50	575	583	591	601	62	66	71
2 1/4-19		601	609	617	627			
2 1/4-20		626	634	642	652			
2 1/4-21		651	659	667	677			
2 1/4-22		677	685	695	703			
2 1/2-14		489	498	508	520			
2 1/2-15		514	523	533	545			
2 1/2-16		539	548	558	570			
2 1/2-17		565	574	584	596			
2 1/2-18	1.60	590	599	609	621	68	72	78
2 1/2-19		616	625	635	647			
2 1/2-20		641	650	660	672			
2 1/2-21		666	675	685	697			
2 1/2-22		692	701	711	723			
2 3/4-14		499	508	518	530			
2 3/4-15		524	533	545	555			
2 3/4-16		549	558	568	580			
2 3/4-17		575	584	594	606			
2 3/4-18	1.85	600	609	621	631	75	80	86
2 3/4-19		626	635	645	657			
2 3/4-20		651	660	670	682			
2 3/4-21		676	685	695	707			
2 3/4-22		702	711	721	733			
3 -16		560	570	582	594			
3 -17		586	596	608	620			
3 -18	1.85	611	621	633	645	81	86	93
3 -19		637	647	659	671			
3 1/4-16		575	586	598	614			
3 1/4-17		601	612	624	640			
3 1/4-18	2.15	626	637	651	665	89	94	102
3 1/4-19		652	663	675	691			

* Normal highway service.

** Special service and snow tyres.

TABLE 3. TYRES FOR MOTOR CYCLES

Normal section sizes

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)				Section Width (mm)	Max. Overall Width (mm)		
		<i>D.min</i>	<i>D</i>	<i>D.max</i> ⁽¹⁾	<i>D.max</i> ⁽²⁾		(3)	(4)	(5)
2.00-14		460	466	478					
2.00-15		485	491	503					
2.00-16		510	516	528					
2.00-17	1.20	536	542	554		52	57	60	65
2.00-18		561	567	579					
2.00-19		587	593	605					
2.25-14		474	480	492	496				
2.25-15		499	505	517	521				
2.25-16		524	530	542	546				
2.25-17	1.60	550	556	568	572	61	67	70	75
2.25-18		575	581	593	597				
2.25-19		601	607	619	623				
2.50-14		486	492	506	508				
2.50-15		511	517	531	533				
2.50-16		536	542	556	558				
2.50-17	1.60	562	568	582	584	65	72	75	79
2.50-18		587	593	607	609				
2.50-19		613	619	633	635				
2.50-21		663	669	683	685				
2.75-14		505	512	524	530				
2.75-15		530	537	549	555				
2.75-16		555	562	574	580				
2.75-17	1.85	581	588	600	606	75	83	86	91
2.75-18		606	613	625	631				
2.75-19		632	639	651	657				
2.75-19		682	689	701	707				
3.00-14		519	526	540	546				
3.00-15		546	551	565	571				
3.00-16		569	576	590	596				
3.00-17	1.85	595	602	616	622	80	88	92	97
3.00-18		618	627	641	647				
3.00-19		644	653	667	673				
3.00-21		694	703	717	723				
3.00-23		747	754	768	774				
3.25-14		531	538	552	560				
3.25-15		556	563	577	585				
3.25-16		581	588	602	610				
3.25-17	2.15	607	614	628	636	89	98	102	108
3.25-18		630	639	653	661				
3.25-19		656	665	679	687				
3.25-21		708	715	729	737				
3.50-14		539	548	564	572				
3.50-15		564	573	589	597				
3.50-16		591	598	614	622				
3.50-17	2.15	617	624	640	648	93	102	107	113
3.50-18		640	649	665	673				
3.50-19		666	675	691	699				
3.50-21		716	725	741	749				

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)				Section Width (mm)	Max. Overall Width (mm)		
		D.min	D	D.max ⁽¹⁾	D.max ⁽²⁾		(3)	(4)	(5)
3.75-16		601	610	626	634				
3.75-17		627	636	652	660				
3.75-18	2.15	652	661	677	685	99	109	114	121
3.75-19		678	687	703	711				
4.00-16		611	620	638	646				
4.00-17		637	646	664	672				
4.00-18	2.50	662	671	689	697	108	119	124	130
4.00-19		688	697	715	723				
4.25-16		623	632	650	660				
4.25-17		649	658	676	686				
4.25-18	2.50	674	683	701	711	112	123	129	137
4.25-19		700	709	727	737				
4.50-16		631	640	658	668				
4.50-17		657	666	684	694				
4.50-18	2.75	684	691	709	719	123	135	141	142
4.50-19		707	716	734	745				
5.00-16		657	666	686	698				
5.00-17		683	692	710	724				
5.00-18	3.00	708	717	735	749	129	142	148	157
5.00-19		734	743	761	775				

(1) Tyres for normal highway service.

(2) Tyres for special service and snow tyres.

(3) Tyres for normal highway service up to speed category P inclusive.

(4) Tyres for normal highway service above speed category P and snow tyres.

(5) Tyres for special service.

TABLE 4. TYRES FOR MOTOR CYCLES

Low section sizes

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)				Section Width (mm)	Max. Overall Width (mm)		
		D.min	D	D.max ⁽¹⁾	D.max ⁽²⁾		(3)	(4)	(5)
3.60-18	2.15	605	615	628	633	93	102	108	113
3.60-19		631	641	653	658				
4.10-18	2.50	629	641	654	663	108	119	124	130
4.10-19		655	667	679	688				
5.10-16		615	625	643	651				
5.10-17	3.00	641	651	670	677	129	142	150	157
5.10-18		666	676	694	702				
4.25/85-18	2.50	649	659	673	683	112	123	129	137
4.60-16		594	604	619	628				
4.60-17	2.75	619	630	642	654	117	129	136	142
4.60-18		644	654	670	678				

(1) Tyres for normal highway service.

(2) Tyres for special service and snow tyres.

(3) Tyres for normal highway service up to speed category P inclusive.

(4) Tyres for normal highway service above speed category P and snow tyres.

(5) Tyres for special service.

TABLE 5. TYRES FOR MOTOR CYCLE DERIVATIVES

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)			Section Width (mm)	Max. Overall Width (mm)
		D.min	D	D.max		
3.00- 8C	2.10	359	369	379	80	86
3.00-10C		410	420	430		
3.00-12C		459	469	479		
3.50- 8C	2.50	376	386	401	92	99
3.50-10C		427	437	452		
3.50-12C		478	488	503		
4.00- 8C	3.00	405	415	427	108	117
4.00-10C		456	466	478		
4.00-12C		507	517	529		
4.50- 8C	3.50	429	439	443	125	135
4.50-10C		480	490	504		
4.50-12C		531	541	555		
5.00- 8C	3.50	455	465	481	134	145
5.00-10C		506	516	532		
5.00-12C		555	565	581		

TABLE 6. MOTOR CYCLE TYRES

Low pressure sizes

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)			Section Width (mm)	Max. Overall Width (mm)
		D.min	D	D.max		
5.4-10	4.00	474	481	497	135	146
5.4-12		525	532	547		
5.4-14		576	582	598		
5.4-16		373	379	395		
6.7-10	5.00	532	541	561	170	184
6.7-12		583	592	612		
6.7-14		633	642	662		

TABLE 7. MOTOR CYCLE TYRES

Sizes and Dimensions of American Tyres

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)			Section Width (mm)	Max. Overall Width (mm)
		D.min	D	D.max		
MH90-21	1.85	682	686	700	80	89
MJ90-18	2.15	620	625	640	89	99
MJ90-19	2.15	645	650	665		
ML90-18	2.15	629	634	650	93	103
ML90-19	2.15	654	659	675		
MM90-19	2.15	663	669	685	95	106
MN90-18	2.15	656	662	681	104	116

Tyre Size	Measuring Rim Width Code	Overall Diameter (mm)			Section Width (mm)	Max. Overall Width (mm)
		<i>D.min</i>	<i>D</i>	<i>D.max</i>		
MP90-18	2.15	667	673	692	108	120
MR90-18	2.15	680	687	708	114	127
MS90-18	2.50	660	667	688	121	139
MT90-16	3.00	642	650	672	130	144
MT90-17	3.00	668	675	697		
MU90-15M/C	3.50	634	642	665	142	158
MU90-16	3.50	659	667	690		
MV90-15M/C	3.50	643	651	675	150	172
MP85-18	2.15	654	660	679	108	120
MR85-16	2.15	617	623	643	114	127
MS85-18	2.50	675	682	702	121	134
MT85-18	3.00	681	688	709	130	144
MV85-15M/C	3.50	627	635	658	150	172

ANNEX 6

METHOD OF MEASURING PNEUMATIC TYRES

1. The tyre is mounted on the measuring rim specified by the manufacturer pursuant to paragraph 4.1.12 of this Regulation and is inflated to a pressure specified by the manufacturer in item 14.1 of annex 1.*
2. The tyre fitted on its rim is conditioned to the ambient temperature of the laboratory for at least 24 hours.
3. The pressure is readjusted to the value specified in paragraph 1 above.
4. The overall width is measured by caliper at six equally-spaced points, account being taken of the thickness of the protective ribs or bands. The highest measurement so obtained is taken as the overall width.
5. The outer diameter is determined by measuring the maximum circumference and dividing the figure so obtained by π (3.1416).

* Note: As an alternative, inflation pressures could be specified as follows:

Tyre Version	Speed Category	Pressure		
		bar	kPa	
Standard	F,G,J,K,L	2.25	225	
	M,N,P,Q,R,S			
Reinforced	T,U,H	2.80	280	
	F to P			
Motor cycle Derivatives	4PR	3.50	350	
	6PR			F to M
	8PR			

For other tyre versions, inflate to the pressure specified by the tyre manufacturer pursuant to item 14.1 of annex 1 to this Regulation.

ANNEX 7

PROCEDURE FOR LOAD/SPEED PERFORMANCE TESTS

1. *Preparation of tyre*

- 1.1. Mount a new tyre on the test rim specified by the manufacturer pursuant to paragraph 4.1.12 of this Regulation.
- 1.2. Inflate the tyre to the appropriate pressure given in the following table:

TESTING INFLATION PRESSURE (bars)

Tyre Size	Speed Category	Inflation pressure	
		bar	kPa
Standard	F,G,J,K	2.50	250
	L,M,N,P	2.50	250
	Q,R,S	3.00	300
	T,U,H	3.50	350
Reinforced	F,G,J,K,L,M,N,P	3.30	330
	Q,R,S,T,U,H	3.90	390
Motor cycle	4PR	3.70	370
Derivatives	6PR	4.50	450
	8PR	5.20	520

For other types of tyre inflate to the pressure specified by the manufacturer in accordance with annex 1, item 14.2 of this Regulation.

- 1.3. The manufacturer may request, giving reasons, the use of test-inflation pressures differing from those given under paragraph 1.2 above. In such a case the tyre shall be inflated to that pressure.
 - 1.4. Condition the tyre-and-wheel assembly at test room temperature for not less than three hours.
 - 1.5. Readjust the tyre pressure to that specified in paragraphs 1.2 or 1.3 above.
2. *Test procedure*
- 2.1. Mount the tyre-and-wheel assembly on the test axle and press it against the outer face of a smooth test drum of 1.70 m \pm 1 per cent or 2.0 m \pm 1 per cent in diameter.
 - 2.2. Apply to the test axle a load equal to 65 per cent of the load capacity of the tyre shown in annex 4 to this Regulation corresponding to the load index on the tyre sidewall.
 - 2.3. The tyre pressure must not be corrected throughout the test and the test load must be kept constant.
 - 2.4. During the test the temperature in the test room must be maintained between 20°C and 30°C or at a higher temperature if the manufacturer so agrees.
 - 2.5. The test shall be run without interruption, in accordance with the following:
 - 2.5.1. Twenty minutes is allowed to build up from zero to the initial test speed;
 - 2.5.2. Initial test speed: 30 km/h less than the maximum rated speed of the tyre, if a 2.0 m diameter test drum is used, or 40 km/h less if a 1.7 m diameter test drum is used;
 - 2.5.3. Speed steps of 10 km/h;
 - 2.5.4. Test duration at each speed step: 10 minutes;
 - 2.5.5. Total duration of the test: 1 hour;
 - 2.5.6. Maximum test speed: the maximum rated speed of the type of tyre if the test is performed with a 2.0 m diameter test drum; maximum rated speed for the type of tyre less 10 km/h if the test is performed with a 1.7 m diameter test drum.

3. *Equivalent tests*

If a test other than that described above is used, its equivalence must be proved.

ANNEX 8

TYRE LOAD CAPACITIES AT VARIOUS SPEEDS

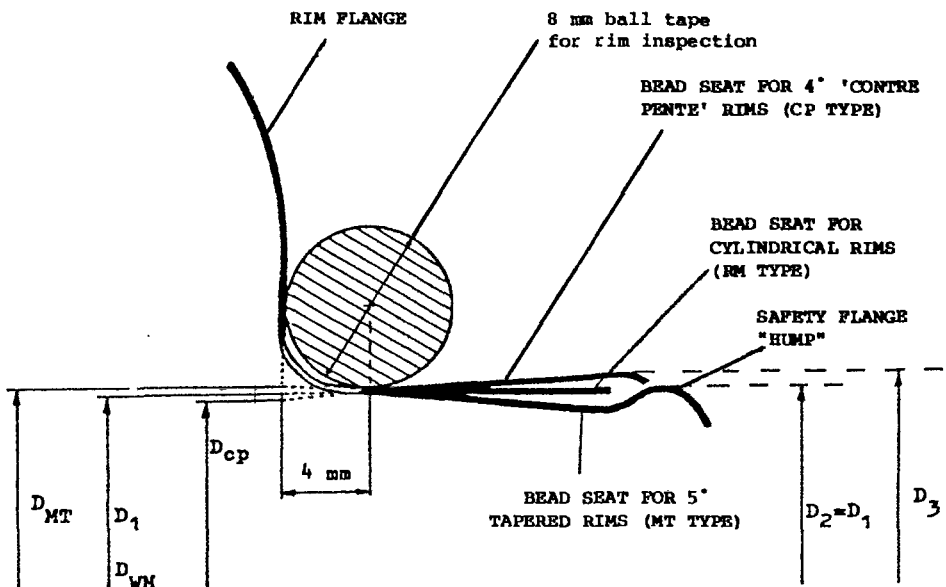
Maximum Speed (km/h)	Load Variation (%)					
	Rim Diameter $\leq 13''$			Rim Diameter $\geq 14''$		
	Speed Symbol					
	J	K	L	J and K	L, M and N	P and above
50	+ 30	See	See	+ 30	See	See
60	+ 23	Column J	Column J	+ 23	Column J	Column J
70	+ 16			+ 16		
80	+ 10			+ 10		+ 14
90	+ 5		+ 7.5	+ 5	+ 7.5	+ 12
100	□	0	+ 5	□	+ 5	+ 10
110	- 7	□	+ 2.5	□	+ 2.5	+ 8
120	- 15	- 6		/	□	+ 6
130	- 25	- 12	- 5	/	□	+ 4

Load variations are not allowed above 130 km/h.

ANNEX 9

RIM DIMENSIONS

Example of rim bead seat contours permitted for fitments of motor cycle tyres with nominal rim diameter expressed by a code



Nominal Rim Diameter Code	Measuring Rim Diameter D_1 (mm)*	Specified Rim Diameter (mm)		
		D_{WM}	D_{MT}	S_{CP}
...
17	433.3	433.3	434.0	432.7
18	458.7	458.7	459.4	458.1
19	484.1	484.1	484.8	483.5
...

* Tolerance on bead seat development $\pi D_1 =$
 $+ 2.0$ mm
 $- 0.5$ mm

Other types of tyres may admit different contours (or dimensions) of the bead set area of the rim.

ANNEX 10

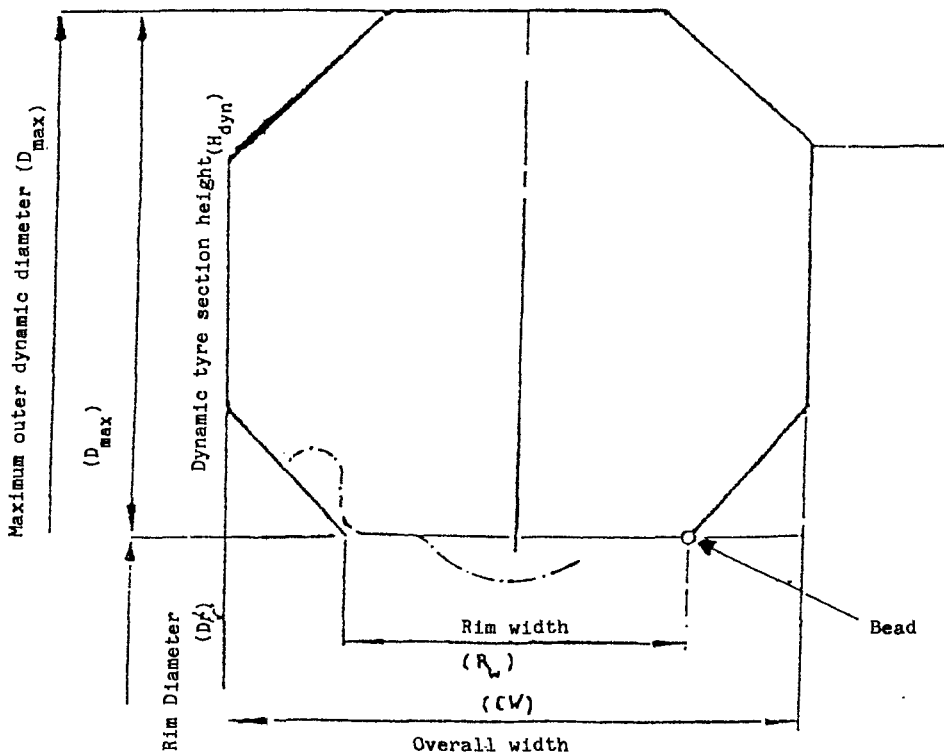
TEST PROCEDURE FOR THE DYNAMIC GROWTH OF TYRES

1. *Scope and range of application*
 - 1.1. This testing procedure is applicable for new motor cycle road tyres of the speed categories P, Q, R, S, T, U, H.
 - 1.2. It serves to determine the maximum tyre growth under the influence of centrifugal forces at the admissible maximum speed.
2. *Description of test procedure*
 - 2.1. The freely rotating tyre/wheel assembly is mounted on a driven testing axle equipped with speed control and surrounded by a light-tight box.
 - 2.2. The beam of a point source of light is directed upon the tyre to be tested and its silhouette is projected upon a grid, which permits direct reading of the measured value.
 - 2.3. The deviation of the tyre peripheral speed, measured with a stroboscope, from the corresponding maximum speed of the tyre may not exceed ± 2 per cent.
 - 2.4. If another test procedure is applied, it must be proved to be equivalent to the present procedure.
3. *Execution of test*
 - 3.1. The test shall be conducted at a test room temperature of $(25 \pm 5)^\circ\text{C}$. A higher ambient temperature may be agreed with the manufacturer.
 - 3.2. The tyres to be tested shall have passed the load speed performance test according to annex 7 of the Regulation, without showing any defect.
 - 3.3. The tyre to be tested shall be fitted to a wheel having a rim conforming to the applicable standard.
 - 3.4. The tyre inflation pressure (testing pressure) shall be adjusted to the values indicated in paragraph 3.4.1.
 - 3.4.1. Road tyres in bias and bias/belted construction.

Speed category	Tyre construction	Testing pressure	
		bar	kPa
P/Q/R/S	standard	2.5	250
T/U/H	standard	2.9	290

- 3.5. The tyre/wheel assembly shall be stored at the temperature of the testing room for a period of at least three hours.

- 3.6. After this conditioning storage period the inflation pressure shall be readjusted to the value indicated in paragraph 3.4.
- 3.7. The tyre shall be accelerated without interruption to its maximum admissible speed corresponding to its marking. The time for attaining the maximum speed shall not exceed five minutes.
- 3.8. The test duration at the admissible maximum speed shall be five minutes. The test shall be conducted without interruption. The testing air pressure shall not be readjusted during the test.
4. *Evaluation*
- 4.1. The limiting curve (enveloping curve) specified for the mounted tyre/wheel assembly shall be adjusted on the projection grid (see example below).



In accordance with paragraphs 6.1.4 and 6.1.5 of the Regulation, the following limit values have been established for the enveloping curve:

Tyre speed category	Maximum service width	H_{dyn} (mm)
P/Q/R/S	$S \times 1.15$	$H \times 1.10$
T/U/H	$S \times 1.15$	$H \times 1.13$

- 4.1.1. The main dimensions of the enveloping curve must be adjusted to take into account the possible distortion of the projected silhouette of the tyre upon the grid due to the system of lighting adopted.

- 4.2. The test shall be considered as passed if, during the test according to paragraph 3.8 of this annex, the contour does not exceed the limiting curve according to paragraph 4.1.
- 4.3. The tyre is not subjected to a further test.

Authentic texts: English and French.

Registered ex officio on 1 April 1988.
