

**Minutes for UNECE gtr for Tyres Ad-Hoc Working Group
Meeting
September 24, 2010 (9:30 – 17:30)
Geneva**

1. Welcome and organisational matters
The Chairman, Mr. I. Yarnold welcomed all the participants.
2. Approval of the Agenda
The agenda as shown in document TYREGTR-09-04 was adopted.
Agreement to review the document GRRF-68-15 from India under item 7.
3. Approval of the minutes of last meeting
The minutes of the 8th meeting on February 5th, 2010 were agreed.
4. Outcome of the March and June 2010 WP29 meeting.
The Chairman reported that WP29 is following the activities of the working group and is following progress, it is also aware of the workload this project is generating. WP29 is familiar with the 2 step approach that was endorsed during the March meeting. In June, the European Commission proposed to include a rolling resistance test in the core (mandatory) or in the optional module. USA felt that it will be difficult to change the module content at this stage of the project. The Chairman also reminded the group that some Contracting Parties expressed their wish to move the wet grip test from the core module to an optional module.
5. The Chairman reminded the group that AC.3 is familiar with the proposal of the tyre industry for a global mark. However, he indicated that global marking was a wider issue for the 1998 Agreement rather than just for the tyre GTR. With this in mind, he indicated the best way forward would be for a special committee of AC.3. to consider nit further. He hoped to make progress at the November session where decisions would be taken on this difficult topic.
6. GRRF reviewed the draft GTR technical document TYREGTR-09-02 to discuss, and agree where possible the issues which were raised at the previous meeting following the discussion of document TYREGTR-08-01. .
7. The outstanding points from last meeting are listed below:
 - Paragraph 2 – Scope: Need to add a list of exclusions to the scope such as T-type temporary spare tyres.
Most of the CP's agreed that if those tyres are not global and are not tested at 160 km/h, there is no need to keep them in the scope. This will

avoid further need for harmonization and could be covered by regional/national specific requirements..

Decision: Agreement from the CP's. Consequently, definition of T-type temporary spare tyres has to be removed from the gtr (page 9) as well as other references.

- Paragraph 3 – Definitions:
Decision: Agreement to add the following definition of Maximum Permissible Inflation Pressure, but without specifying any limit as per FMVSS 109: *“Maximum permissible inflation pressure means the maximum cold inflation pressure to which the tyre may be inflated.”*
- Paragraph 3 - Definition of PSI Index:
Decision: Agreement from CP's to include *“as shown in Appendix 4”* after definition of PSI Index.
- Paragraph 3 - Add definition of CP tyres:
Decision: Agreement to add the following definition: *“CP tyres” are Commercial Vehicle tyres for service on motor caravans.*
- Paragraph 3, Definitions, page 9, Snow tyre for use in severe snow conditions:
Decision: Agreement to add ASTM reference as *“ASTM E1136-93 (2003)”*
- Paragraph 3, Definitions; there are two definitions for “tyre size designation” listed. Which should we keep?
Decision: Agreement to keep the second definition with the addition of a sentence indicating that tyre size designation can be found in standards referred to in § 4.4.5.4.
- Paragraph 4.1.1: administrative procedure - presence of an authorized representative in the US for the non -US companies (document GRRF-68-15 from India).
US clarified it is needed in case of complaint (Tread Act) but it should not be an issue for plant identification. Nevertheless the US delegate will check for the minimum requirement by next meeting.
- § 4.2 Marking: do we need to add a “G” mark as a place holder for the future global mark?
The expert from Russian Federation indicated his support to the proposal of the tyre industry. He added that when a tyre complies with all the requirements, this tyre should be accepted everywhere.
Some CP proposed to move this paragraph in part A for the justification to avoid any precedent with other gtr's.
Decision: Agreement to remove the “G” mark from the text and to move the paragraph in the justification section.
- § 4.2.1 TIN number: do we have to keep the type approval number? This gtr is a technical standard and therefore reference to type approval or self certification should be avoided or should remain optional. Tyre industry

reminded that initial scheme was to have a tyre identification number, which currently is defined by NHTSA that would be combined with the global tyre regulation marking which would include presumably some sort of type approval number. If the tyre would be approved under self certification, the series of “X” would be replaced by “O”.

The CP agreed there is more than one type approval system and if the global mark is removed, there is no need for this type approval number. Moreover, when this gtr will be transposed in the regulations of the 1958 Agreement, there would be a duplicate with the administrative requirements already in these regulations.

Decision: Agreement to delete the type approval number.

- § 4.2.1 and 2: the text in blue is for explanatory reason and should not remain in the final text when approved.
Decision: it was agreed that this explanatory text will be moved to part A (justification) because we need that background and it should be preserved in the gtr.

- Presentation by OICA of the document reference Tyregtr 09-05: “Font for Tyre Identification Number in draft gtr”.
NHTSA is willing to consider this proposal in the frame of the existing USA regulation and to come back next meeting with observations. Tyre industry indicated that some trials are necessary to check whether this kind of marking remains legible. .

- § 4.2.2.9: Inscription on the sidewall of Extra load tyres.
At the last meeting, the Chinese delegation requested to add a pictogram “XL” to the words “Extra Load” or “Reinforced”. Unfortunately, the marking “XL” is covered by a Trade Mark from Michelin. India indicated that “XL” marking may create confusion with Brand names used in their country. Some Contracting Parties challenged the need for such marking. Experts from the tyre industry reminded that this marking aids end-users to mount the correct tyre on their vehicle. Additionally, without this identification it would not be possible to distinguish the correct test parameters for the tyre to be tested under UNECE Reg. 30 and FMVSS 139 (i.e. Type Approval and for verification authorities).
Decision: Agreement to retain the mandatory marking requirement for Extra Load, Reinforced and Light Load tyres subject to any observation from China or any other Contracting Parties. The proposal to add “EL” instead of “XL” has to be discussed with the Chinese delegation at the next meeting.

- Paragraph 4.2.2.13:
Decision: Agreement to add the reference to appendix 4.

- Paragraph 4.2.2.15:
Decision: Agreement to change the text to read *“The prefix “LT” before the tyre size designation or the suffix “C” or “LT”...*

- Paragraph 4.4.4.2:
Decision: Instead of “adjust the pressure to that specified by the manufacturer”, it should be specified, for example, as specified for tyre

strength testing in tabular format for Standard & Reinforced tyres. (e.g. Section 3.3 of ETRTO PC tyres).

“Pressure for radial PC tyres in dimensions test should be 180 kPa for Standard Load and 220 kPa for Extra Load.”

- Paragraph 4.4.5.4 –
Decision: Instead of including “Bureau of Indian Standards (BIS)”, to include “*Indian Tyre Technical Advisory Committee (ITTAC)*”
 Agreement to remove reference to South American standard ALAPA.
- Paragraph 4.5.1:
Decision: Agreement to add a reminder to add a table with LT/C limits and to remove the words PASSENGER CAR after STRENGTH TEST PROCEDURE

4.5.1 Each tyre shall meet the requirements for minimum breaking energy specified in the table below.

| Size Designation | | Maximum Permissible Inflation (kPa) | | | | |
|------------------|-----------------------|-------------------------------------|-------|-------|-------|-------|
| | | 240 | 280 | 300 | 340 | 350 |
| Below 160 mm | joules... | 220 | 441 | 220 | 441 | 220 |
| | in- lbs..... .. | 1,950 | 3,900 | 1,950 | 3,900 | 1,950 |
| 160 mm or above | Joules | 294 | 588 | 294 | 588 | 294 |
| | In- lbs..... . | 2,600 | 5,200 | 2,600 | 5,200 | 2,600 |

Note: A new table has to added with LT/C limits

STRENGTH TEST PROCEDURE - PASSENGER TYRES

- Paragraph 4.5.2. :
Decision: Agreement there is a need to harmonize the strength test and to add a note.

4.5.2 Mount the tyre on a test rim and inflate it to the test inflation pressure specified in the table below:

| | |
|-----------|-----------------|
| Test Type | Passenger Tyres |
| | kPa |

| | | | | | |
|---------------|-----|-----|-----|-----|-----|
| | 240 | 280 | 300 | 340 | 350 |
| Tyre Strength | 180 | 220 | 180 | 220 | 180 |

Note: Inflation pressures fro LT/C tyres have to be added (inflation being given according to load range, this test should be harmonized)

- Paragraph 4.5.2 - The pressures specified in the tables against size designation & “Test Type” are referring to which pressure?
 Decision: Agreement on the request from India to modify the tables of inflation pressure and test pressure for bead unseating and strength tests in the following way:

| Strength Test | Passenger Tyres | | | | |
|---------------------------------------|-----------------|-----|-----|-----|-----|
| | kPa | | | | |
| Inflation pressure marked on the tyre | 240 | 280 | 300 | 340 | 350 |
| Test inflation | 180 | 220 | 180 | 220 | 180 |

- Paragraph 4.5.7:
 Decision: Agreement that the formula is to be corrected.
- Paragraph 4.6: New pictures for bead unseating test:
 ASTM has a copyright on the new standard and requests that we refer to their standard but cannot include the test or the pictures in the GTR. RMA will make a formal request to ASTM. Support from NHTSA is also needed. Other possibility would be to just to refer to the test. But then, check if the text and drawing are readable. Point to be followed at the next meeting.
- Paragraph 4.6.2.2: Bead unseating test needs to be harmonized
Decision: Agreement that there is a need to modify the existing table as table above and to add a note.

Inflate the tyre to the pressure specified in the table shown below:

| Test Type | Passenger Tyres | | | | |
|---------------------------|-----------------|-----|-----|-----|-----|
| | kPa | | | | |
| | 240 | 280 | 300 | 340 | 350 |
| Bead Unseat Test Pressure | 180 | 220 | 180 | 220 | 180 |

Note: add inflation pressure for LT/C tyres (inflation being given according to load range, this test should be harmonized).

- Paragraph 4.6.2.2 - The pressures specified in the tables against “Test Type” are referring to which pressure?
Decision: Agreement to modify the table as below:

| Bead Unseat Test | Passenger Tyres | | | | |
|---------------------------------------|-----------------|-----|-----|-----|-----|
| | kPa | | | | |
| Inflation pressure marked on the tyre | 240 | 280 | 300 | 340 | 350 |
| Test inflation | 180 | 220 | 180 | 220 | 180 |

- Paragraph 4.7.1: see request from EC in document TYREgtr 09-03.
Decision: Agreement that the sound limits of the second step have to be incorporated in the gtr.

- Paragraph 4.7.8: The Test report to be removed?

Some CP's underlined that it might be a help for continuity, clarity and harmonization for the report to remain in the text. The expert of USA questioned the need to have the report directly in the text. He suggested that an alternative would be to explain in part A (justification) that there is a report with a standard format and to explain it with an example.

Decision: Agreement to keep the test report in the text for harmonization purpose but to remove the words "technical service" or "type approval".

- Paragraph 4.8.1.3

Decision: Agreement to confirm the 60 min. (Timing to be rechecked with FMVSS139)

- Paragraph 4.8.3.1 drum diameter 1.7

Decision: Agreement from last meeting to adopt 1.7m diameter.

- Paragraphs 4.8.2.1 and 4.8.3.2, 4.9.2.1, 4.9.3.5, 4.10.3.6: During the test the ambient temperature shall be at least 38 deg C. No tolerance or max. limit specified.

Decision: Agreement that the temperature of the test should be changed to "not less than 32 °C and not more than 38 °C"

- Paragraphs 4.8.3.1, 4.9.3.2 & 4.10.3.1 – India request that we can also use 2.0 m drum on endurance, low pressure endurance and high speed tests.

Tyre industry proposed to add a section 5, including a statement that other tests can be used if equivalence is shown. See decision below.

- Paragraph 4.10.1.3 - proposal to eliminate the square brackets around 6 hours in section 4.10.1.3 and to add paragraph 4.10.1.4 to allow a study to be performed to show the equivalence of shorter periods than 6 hours.

Decision: Agreement to eliminate the square brackets around 6 hours in section 4.10.1.3

Paragraph 4.10.1.4 not accepted but Chair proposed to have some words in the preamble on this issue.

- Paragraph 4.10.4.2 remove the expression “of the load capacity index” from the table and change the heading to “Test Load as % of maximum load carrying capacity”
Decision: Agreement.
Same change in table 4.10.2.1
- Paragraph 14.11 should read 4.11.
Decision: Agreement.
- Paragraph 4.11. Use the same title as in R117, i.e. “Test for Adhesion Performance on Wet Surfaces”
Decision: Agreement.
- NHTSA was asking if this test method for adhesion performance on wet surface could also fit with self certification.
Decision: Text to be rechecked accordingly and to be sanitized.
- Japan was asking that the improved test method for C1, as developed by the European Commission for consumer information, is also included in the gtr.
Decision: Chair proposes to keep these 2 things in parallel.
- Paragraph 4.11.2.1: For wet grip test, correct formula should read “ $pbfc = pbfc(\text{measured}) + 0.0035(t-20)$ ”
Decision: Agreement.
- Also remove the dots in the formula 4.11.2.2.
Decision: Agreement.
- Paragraph 4.11.5: The test report to be deleted?
Decision: CP’s preferred to keep test reports.
- Add Paragraph “5. *Equivalent test methods*
5.1 *If methods other than those described in paragraph 4 above are used, their equivalence must be demonstrated.*”
Although this sentence is already in UNECE Reg. 30 paragraph 4, the Chairman considered that there is a risk as to give so much flexibility to tyre manufacturers that testing options could become large. This could be addressed by those CPs applying Type Approval when the GTR text were adopted into regional or national rules.
Decision: No agreement to add this paragraph in the gtr but some information will be put in the preamble.
- Need to add Appendix 4 for PSI table. ISO TR 29846 was approved by vote in 2007.
Decision: Agreement to include the following table in Appendix 4.

Table of PSI – kPa equivalences from ISO TR 29846

Assigned kPa values for psi increments

| kPa | psi | kPa | psi | kPa | psi | kPa | psi |
|-----|-----|-----|-----|-----|-----|-------|-----|
| 10 | 1 | 270 | 39 | 530 | 77 | 790 | 115 |
| 15 | 2 | 275 | 40 | 540 | 78 | 800 | 116 |
| 20 | 3 | 280 | 41 | 545 | 79 | 810 | 117 |
| 25 | 4 | 290 | 42 | 550 | 80 | 815 | 118 |
| 35 | 5 | 295 | 43 | 560 | 81 | 820 | 119 |
| 40 | 6 | 300 | 44 | 565 | 82 | 825 | 120 |
| 45 | 7 | 310 | 45 | 575 | 83 | 835 | 121 |
| 55 | 8 | 320 | 46 | 580 | 84 | 840 | 122 |
| 60 | 9 | 325 | 47 | 585 | 85 | 850 | 123 |
| 70 | 10 | 330 | 48 | 590 | 86 | 855 | 124 |
| 75 | 11 | 340 | 49 | 600 | 87 | 860 | 125 |
| 80 | 12 | 345 | 50 | 610 | 88 | 870 | 126 |
| 90 | 13 | 350 | 51 | 615 | 89 | 875 | 127 |
| 95 | 14 | 360 | 52 | 620 | 90 | 880 | 128 |
| 100 | 15 | 365 | 53 | 625 | 91 | 890 | 129 |
| 110 | 16 | 375 | 54 | 635 | 92 | 900 | 130 |
| 120 | 17 | 380 | 55 | 640 | 93 | 905 | 131 |
| 125 | 18 | 385 | 56 | 650 | 94 | 910 | 132 |
| 130 | 19 | 390 | 57 | 655 | 95 | 920 | 133 |
| 140 | 20 | 400 | 58 | 660 | 96 | 925 | 134 |
| 145 | 21 | 410 | 59 | 670 | 97 | 930 | 135 |
| 150 | 22 | 415 | 60 | 675 | 98 | 940 | 136 |
| 160 | 23 | 420 | 61 | 680 | 99 | 945 | 137 |
| 165 | 24 | 425 | 62 | 690 | 100 | 950 | 138 |
| 170 | 25 | 435 | 63 | 695 | 101 | 960 | 139 |
| 180 | 26 | 440 | 64 | 700 | 102 | 965 | 140 |
| 185 | 27 | 450 | 65 | 710 | 103 | 975 | 141 |
| 190 | 28 | 455 | 66 | 720 | 104 | 980 | 142 |
| 200 | 29 | 460 | 67 | 725 | 105 | 985 | 143 |
| 210 | 30 | 470 | 68 | 730 | 106 | 990 | 144 |
| 215 | 31 | 475 | 69 | 740 | 107 | 1 000 | 145 |
| 220 | 32 | 480 | 70 | 745 | 108 | 1 010 | 146 |
| 230 | 33 | 490 | 71 | 750 | 109 | 1 015 | 147 |
| 235 | 34 | 495 | 72 | 760 | 110 | 1 020 | 148 |
| 240 | 35 | 500 | 73 | 765 | 111 | 1 030 | 149 |
| 250 | 36 | 510 | 74 | 775 | 112 | 1 035 | 150 |
| 255 | 37 | 520 | 75 | 780 | 113 | 1 040 | 151 |
| 260 | 38 | 525 | 76 | 785 | 114 | 1 050 | 152 |

8. Proposal for a justification (preamble)

During the meeting, various descriptions were used like rationale, part A, preamble ... that are similar to justification.

When this is presented to WP29 / AC3 for voting, we will have to report the history of the work, discussions and decisions taken in developing this proposal. The document will have 2 parts: one for the justification and the second for the regulatory text.

There are good examples in the 11 existing GTRs on the content and drafting of the justification part. It was suggested that France, as sponsor of this gtr, should take a leading role in this activity with the aim of completion by December 2010.

9. Proposal from the EU Commission to include Rolling Resistance (RR) test.

The European Commission indicated that Reg. 117.02 including rolling resistance prescriptions was approved at the WP29 of last June 2010. The implementation will be introduced in 2 stages to take account of the reduction in RR limits.

To agree a tyre gtr without provisions for RR will cause problems for tyres sold in Europe which is why EC indicated their wish to incorporate RR prescriptions in the gtr in 2008.

The question on which limit values should be adopted (1st or 2nd stage ones) in the gtr was discussed.

At the last WP29, USA indicated already that this might be difficult because it was not in line with the original road map and may delay the whole process of adoption of the gtr. Additionally, the test procedures and methods for rolling resistance will have to be suitable for both the TA and self certification process. NHTSA was asking if the RR test could not stay in Reg. 117 until the second phase of the gtr is completed.

India indicated that stage 2 RR limits are very ambitious and an impact assessment would be necessary.

ETRTO reminded the group that reduction of rolling resistance limits should not be considered in isolation and an integrated approach including noise, wet grip and rolling resistance performances is required

The Russian Federation supported the proposal to include RR prescriptions in gtr but the requirement could remain optional.

The Chair proposed to have stage one limits with the 1st phase of the gtr and the second stage limits with the second phase of this gtr.

USA asked once more why it is needed in the gtr and not only in R117 and what will be the justification to have it worldwide.

The Chairman suggested that one of the reasons for inclusion is that energy efficiency and the environment is an important issue. It is also important to encourage the tyre industry to produce more fuel efficient tyres to reduce vehicle fuel consumption and their CO₂ emissions. Various countries are also interested in tyre rolling resistance.

In conclusion, the Chair indicated that we probably need more evidence of the underlying justification from the European Commission why RR requirements should be added to the gtr at this late stage. Their justification should include addressing the questions raised by the USA, in particular, why it should come now and not later, especially given the agreement on the road map years ago on the content of the gtr. There are also wider issues in terms of development and test procedure in USA where considerations are taking place on other methods which are likely to deliver changes in the market place by means other than regulations.

The Chair reminded the group that a few meetings ago, some CPs expressed their wish to move the wet grip test requirement from the core module to an optional module and asked if this is still the case.

The Russian Federation indicated that their preference is to drop the concept of modules and keep flexibility when adopting technical requirements at the national level.

India confirmed their wish to see wet grip in an optional module.

The Chair proposed to clarify with China at the next meeting.

The Tyre industry made a proposal to review the table of content and create a simple list of requirements indicating its application to PC or LT/C or both, instead of having 3 sections in the document.

USA asked if the description of the modular concept will be included in the preamble, or will be in the table of contents when it is constructed with sub-paragraphs indicating core and optional module.

The proposal is to maintain the structure as proposed and to permit future new tests as appropriate (and not binding ourselves with specific groups within the numbering system was agreed for further considerations). It was suggested that instead of having the different tests as stand alone they should be grouped according to the modules that were agreed in the initial road map. This approach should be explained in the introduction of the regulatory text with supporting technical rationale - highlighting that this approach would have advantages for any future amendments.

Tyre Industry reported on the progress on the harmonization work for LT/C tyres. See TYREGTR-09-06- (ETRTO)

They were two questions raised in the presentation:

1. To include only LT/C tires with speed symbols of Q and above?
2. What to do about deep tread LT tyres, currently treated in US by FMVSS 109, not 139. See slides 7 and 8 of presentation.

These questions will be explicitly added in the agenda of the next meeting.

11. Next step: Tyre Industry will make a proposal to include parts from UNECE Reg. 54 and FMVSS 139 for LT/C tyres in the gtr.

12. Any other business

Nothing to report.

13. Close of the meeting

The next meeting of the informal WG on TYREgtr will take place on **February 1st 2011**.

The Chairman closed the meeting and thanked all the participants for their contribution during the discussion.