gtr for Tyres: Update

November 2008
The GTR objective (3y working programme)

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<td>3.1 Tyre rolling sound</td>
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Road map for TYRE GTR – Technical Programme - PC tyres

Step 1:
- 2007 1Q: Preliminary Draft
- 2007 2Q: Final Draft
- 2007 3Q: Ad-hoc meeting
- 2007 4Q: 2008 1Q

Step 2:
- 2008 2Q: 2008 3Q
- 2008 3Q: 2008 4Q
- 2009 1Q: 2009 2Q

Marking
- Preliminary Draft
- Final Draft
- Ad-hoc meeting

Dimension
- Preliminary Draft
- Final Draft
- Ad-hoc meeting

Preliminary Draft
Final Draft
Ad-hoc meeting

2007/1/15
ver3
Scope – GRRF Chairman’s compromise

- Harmonization of radial PC tyres (UNECE Reg30 and USA FMVSS139)
- Include C type tyres (UNECE Reg.54) and LT tyres, exactly as in the present USA FMVSS 139 as Contracting Party option
- Covers tyres fitted to light vehicles of max mass 4536kg or 10,000 pounds, exactly as in the present USA FMVSS 139
Radial PC tyres - Harmonisation

- Harmonisation established for:
  - The physical dimensions test method
  - The high speed test between UNECE R30 and USA FMVSS 139

- All others tests are unique:
  - From USA FMVSS139: endurance/low pressure - breaking energy - bead unseating
  - From UNECE R117: noise and wet grip
C and LT tyres - status

- Two different High Speed tests and two different Endurance tests need to be harmonized (from UNECE R54 and USA FMVSS139)
- Generally the test requirements (tyre’s loads, inflations and/or speeds) are adjusted based on the tyre technical parameters

Difficult issues:
- For C tyres, the UNECE Reg.54 is referring to Speed Symbol and Load Index (e.g. 121 = 1450kg) for fixing testing conditions
- For LT tyres, the USA FMVSS 139 is referring to Load Range (letter C to E) for fixing testing conditions
C and LT tyres - status

- Load Index and Load Range: there is NO correlation between them and therefore they are NOT harmonized parameters.
- An ad-hoc Tyre Industry project will be developed to harmonise the Industry Standards (Load Range versus Load Index).
- Consequentially will be developed the harmonisation project of tests from UNECE R54 and FMVSS 139.
- Another 3 years of work is foreseen, with major resources to be dedicated to the tests’ harmonisation (high speed and endurance).
- Working plan will be presented at next GRRF Feb.09.
Scope

This Regulation covers new radial pneumatic tyres designed [primarily] for vehicles in category 1-1, 1-2 and 2*, all with a mass limit of 4.536 kg.

*As defined in Special Resolution Number 1.

- This regulation will include harmonized requirements for new radial pneumatic passenger car tyres.
- The regulation will also include non-harmonized provisions for light truck / commercial type tyres as a first step towards full harmonization. The time table for completing the harmonization of requirements for all tyres covered by this gtr is [three] years from [?]
Marking

- The wording “Tubeless” must remain
- The wording “Radial” will disappear
- UNECE Type Approval marking and USA DOT Tyre Identification markings will be combined in a unique global tyre type identification marking sequence
- GLOBAL marking (logotype) to identify a tyre in compliance to the gtr provisions is also proposed – need for further assessment
## GTR framework proposal – 1° step

<table>
<thead>
<tr>
<th>Current UNECE Reg.s</th>
<th>In the gtr</th>
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<tbody>
<tr>
<td><strong>PC tyres</strong></td>
<td><strong>PC and C + LT tyres</strong></td>
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<tr>
<td>▪ R30, R117</td>
<td>▪ Harm. Physical dimensions</td>
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<tr>
<td>▪ Physical dimensions</td>
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<td>▪ High Speed</td>
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<tr>
<td><strong>C tyres</strong></td>
<td>▪ Harm. High Speed (PC)</td>
</tr>
<tr>
<td>▪ R54, R117</td>
<td>▪ High Speed + Endurance (C – UNECE R54)</td>
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<tr>
<td>▪ Physical dimensions</td>
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<td>▪ Breaking Energy</td>
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Remaining Technical Tasks

- Include C and LT tyres
  - Define how to do it, taking into account Load Range and Load Index differences
  - Harmonise the tests (High Speed + Endurance)
    - No existing database
    - Considerable resources to be allocated
    - Estimated to take 3 years (to be confirmed)
# GTR framework proposal – 2º step

## Current UNECE Reg.s
- **PC tyres**
  - R30, R117
    - Physical dimensions
    - High Speed
    - Noise
    - Wet grip
- **C tyres**
  - R54, R117
    - Physical dimensions
    - High Speed
    - Endurance
    - Noise

## In the gtr
- **PC and C + LT tyres**
  - Harm. Physical dimensions
  - Harm. High Speed (PC)
  - *Harm. High Speed (C + LT)*
  - *Harm. Endurance (C+ LT)*
  - Endurance (PC)
  - Low Pressure Endurance
  - Noise
  - Wet grip (PC)
  - Breaking Energy
  - Bead Unseating
Thank you for your attention.