

gtr for Tyres: Update (of last WP29-146-29)

March 2009



The GTR objective (3y working programme)

For GTR Compliance at least the mandatory requirement plus either module 1 or 2 are required. (Compliance with both modules is permitted.)

Mandatory Minimum Requirement

- 1.1 Marking
- 1.2 Dimensions
- 1.3 Harmonised High Speed Safety Test
- 1.4 Endurance/Low Pressure Test
- 1.5 Tyre Wet Grip Adhesion

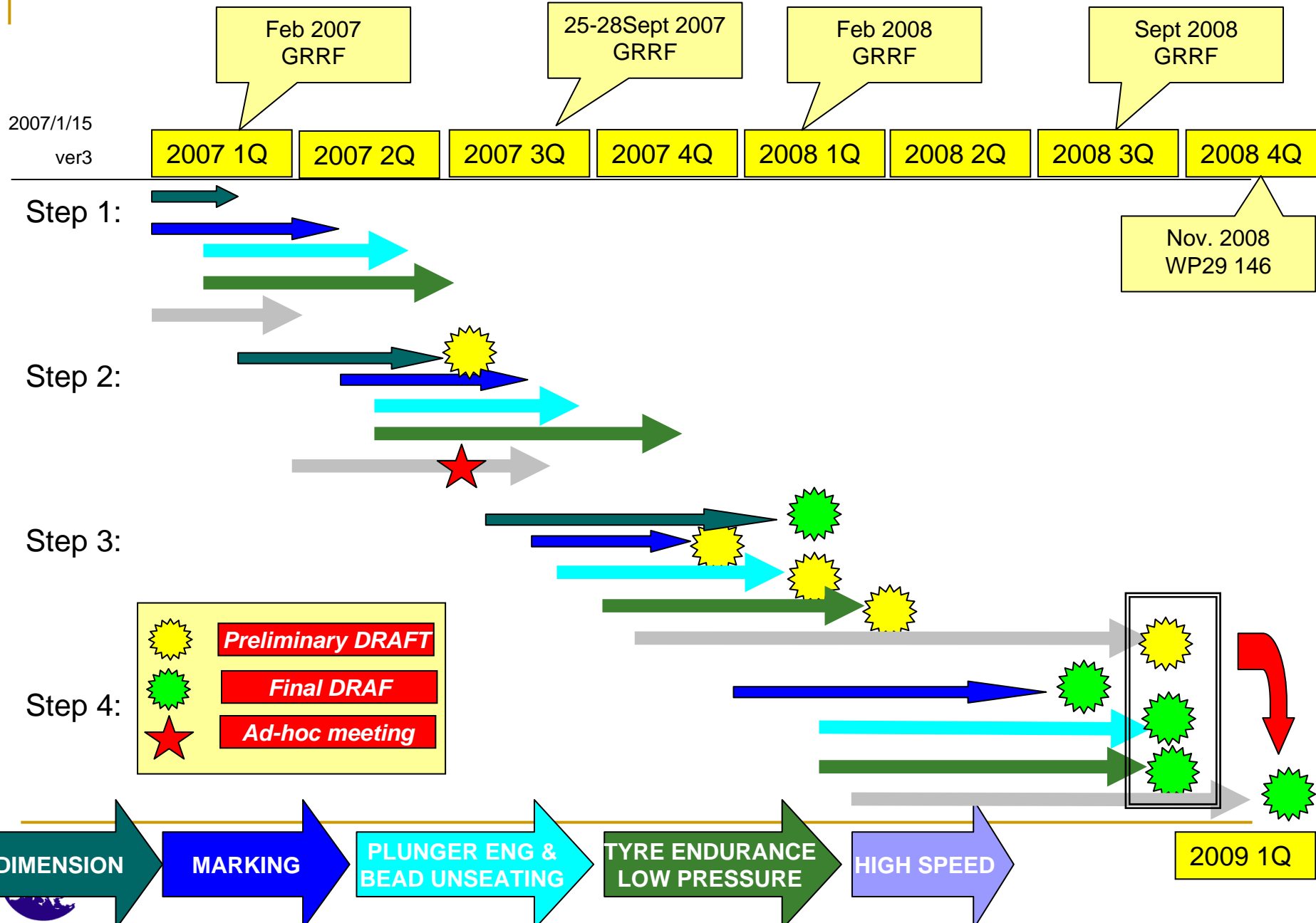
Module 1 – Permissive Requirement

- 2.1 Plunger Energy Test
- 2.2 Bead Unseating test

Module 2 – Permissive Requirement

- 3.1 Tyre rolling sound

Road map for TYRE GTR – Technical Programme - PC tyres (base line Jan15'07)



Summary of Global Passenger Car Tyre Type Regulations

(Updated 2007)

Country/Region	Name/Ref No.	Identification mark on tire sidewall	Testing required
UN/ECE 1958 Agreement Contracting Parties	UN/ECE Regulation 30	E number	D - L/S
European Union Member Countries (EU25)	92/23 /CE 2001/43/CE	e number e number -s	D - L/S (UN/ECE Reg 30) Pass-by noise, outdoor test
Russian Federation	GOST	None	(UN/ECE Reg 30)
Canada	FMVSS 109 and 139 49 CFR 574	Maple leaf for local producers or DOT	D - RBU - BE - E - HS (FMVSS 109)
USA	FMVSS 109 and 139 49 CFR 574 49 CFR 575 - 105	DOT and plant code and tyre size code, UTQG grades	D - RBU - BE - E - HS - ILP
Mexico	NOM-086 - SCFI -1995	None	D - BE - L/S
Venezuela	NVC 663/96	None	D - RBU - BE - E - HS (FMVSS 109)
Brazil	INMETRO RTQ_041	INMETRO logo and producer number	D - L/S (UN/ECE R30)
Argentina	CHAS	None (Sticker)	D - L/S (INMETRO)
Uruguay	LATU	None (Sticker)	D - L/S (INMETRO)
Gulf Countries	GS 51/86	None	D - RBU - BE - E - HS (~FMVSS 109)
Saudi Arabia	SS 445/86	None	D - RBU - BE - E - HS (~FMVSS 109)
Kuwait	KSS 281/89	None	D - RBU - BE - E - HS (~FMVSS 109)
Jordan	1091/1998 and 638/2001	None	
India	AIS-044	ISI LOGO + number	D - RBU - BE - E - HS (~FMVSS 109+UN/ECE R30)
China	GB 9743-97 - GB 1191	CCC's logo + Factory Code	D - L/S - RBU - BE - E (~FMVSS 109+UN/ECE R30)
Indonesia	SNI 06-0098/2002	SNI logo on Sticker	D - RBU - BE - E - HS (~FMVSS 109+UN/ECE R30)
Philippines	PNS 25:1994		D - RBU - BE - E - HS (~FMVSS 109+UN/ECE R30)
Taiwan	CNS 1431		ISO 10191
Australia	ADR 23/01 ADR 71/01 (Temp. Tyres)+D34	None	D - RBU - BE - E - HS (~FMVSS 109+UN/ECE R30)
Nigeria	SON GROUP III - 04		(UN/ECE R30)
South Africa	SABS 1565-1992	None	
Korea	KSM 6751-1996		



Radial PC type tyres - Harmonisation

- Harmonisation established for:
 - The sidewalls' technical markings
 - The physical dimensions test method
 - The high speed test between (from 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 type tyres - status

- From UNECE R54 and USA FMVSS139
 - Two different High Speed tests - to be harmonized
 - Two different Endurance tests - to be harmonized
- Generally the test requirements (loads, inflation pressures and/or speeds applied to the tyre) are adjusted based on the tyre's technical parameters

Difficult issues:

- For C tyres, the UNECE Reg.54 is referring to Speed Symbol and Load Index (e.g. LI121 = 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 type 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 USA 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 was presented at last GRRF Feb.09

Issue for WP29 AC3 decision: scope

A) Harmonized prescriptions for radial PC tyre types ONLY (UNECE Reg30 and USA FMVSS139)

Delivery 2010

B) Harmonized prescriptions for radial PC tyre types PLUS non-harmonized prescriptions for Light Truck tyre types (C<) ((a) C type tyres as per UNECE Reg.54 and (b) LT type tyres as per USA FMVSS 139)

Delivery 2010

C) Fully harmonized prescriptions for radial PC tyre types AND for Light Truck tyre types (C<)

Delivery 2013

Scope – GRRF Chairman's compromise

Phase 1

- Harmonized prescriptions for radial PC tyre types
- Include non-harmonized prescriptions for Light Truck tyre types (C<) as Government option

Phase 2

- Commitment (3y project) from Tyre Industry to harmonize LT&C tyre prescriptions

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 at least 3years from [?]

Markings

- 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 modular GTR 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 to accommodate both self-certification and type approval

Markings

GTR Identification Format

XXXXXXX_G₄_YYY_MMMMMMMM_DDDD

XXXXXXX	Type Approval Number <i>[7 digits]</i>
G₄ (R₄)	New GTR Global or Regional Pictograms With optional country code subscript <i>[Actual pictograms TBD]</i>
YYY	Plant Code <i>[increased from 2 to 3 digits]</i>
MMMMMMMM	Manufacturer's Code <i>[Combines current size and type codes]</i>
DDDD	Four Digit Date Code
—	Space <i>[6mm – 19mm]</i>

GTR framework proposal – 1^o phase

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)
 - High Speed + Endurance (C – UNECE R54)
 - High Speed + Endurance (LT – USA FMVSS139)
 - Endurance (PC)
 - Low Pressure Endurance
 - Noise
 - Wet grip (PC)
 - Breaking Energy
 - Bead Unseating



Remaining Technical Tasks

- Include C and LT type 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 at least 3 years

GTR framework proposal – 2^o phase

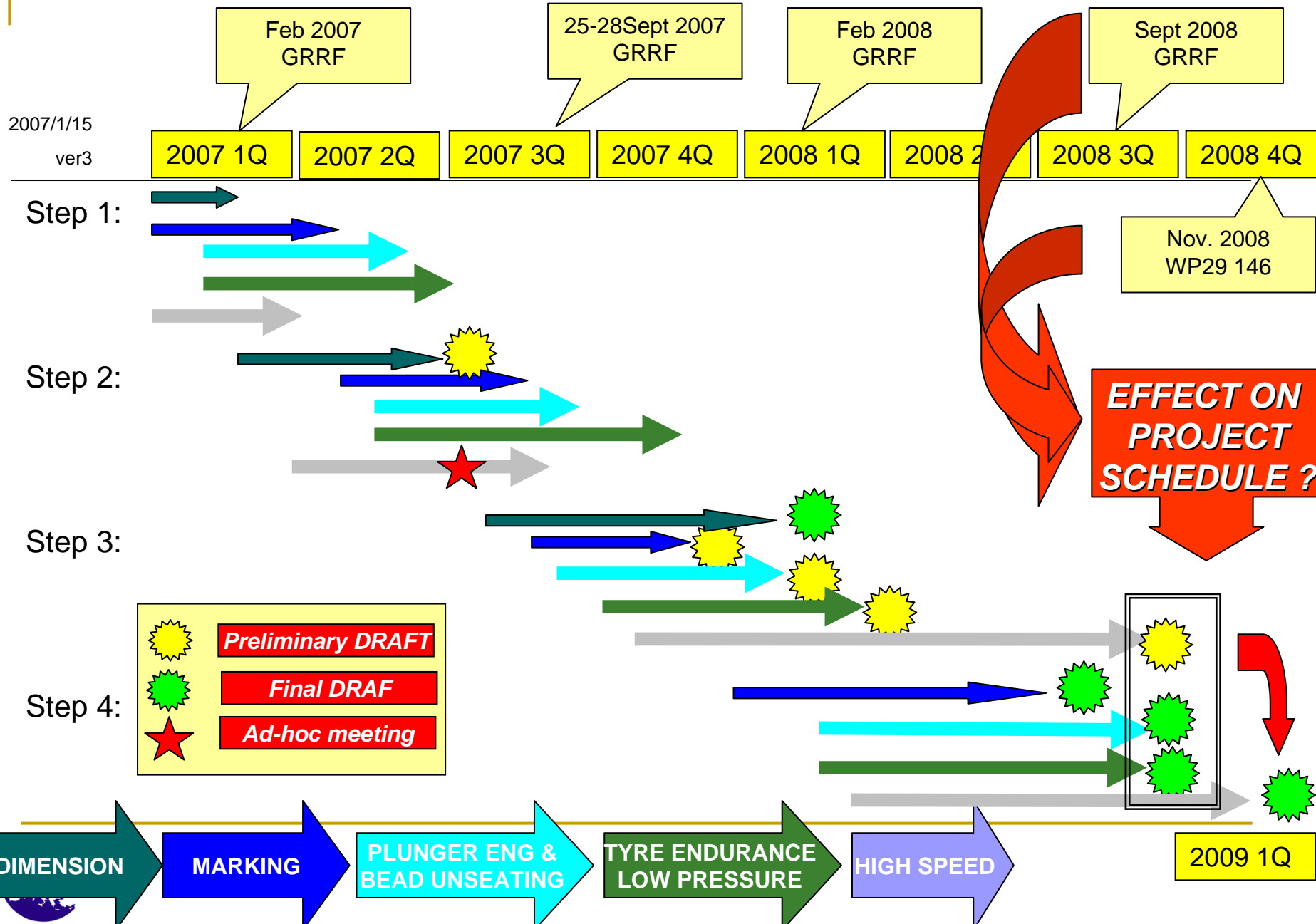
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- C tyres
 - R54, R117
 - Physical dimensions
 - High Speed
 - Endurance
 - Noise

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

Road map for TYRE GTR – Technical Programme - PC tyres (base line Jan15'07)



WP29 AC3 needed guidelines on:

- **Scope:** a) PC tyres or b) PC plus non-H. C/LT tyres or c) H. PC & C/LT
- **Structure:** 2 phases approach (for C/LT tyres - 1° phase with no harmonized provision; and 3y later - 2° phase with harmonized provisions for C/LT tyres)
- **Markings:** tyre identification marking and global GTR marking – ready to have a meeting in summer time to look on the decision from WP29
- **Modules and test content:** may need to be re-considered because at this very late stage 4 CP's have suggested changes. CPs need to think about flexibility within existing structure so that changes would not be needed.
- **Draft text (1° phase):** will be published in “word” in order to allow CP's to make comments easier and promptly.
- **Time table:** 1° phase by 2010; 2° phase by 2013
- **Impact assessment:** Hoping that in March or June we'll have clarity from WP29, then TI needs to work on it to sign off the GTR in 2010.



Thank you for your attention.

