

Transmitted by the expert from India

Informal Document No. **GRRF-62-38**

(62nd GRRF, 25 - 28 September 2007

agenda item 9(a))

**Comments from India on the GTR for Passenger Vehicle Tyres
under formulation by the Working Group on Tyres**

A. Scope of the GTR:

Proposal:

The simplification proposal of the working group was to have only radial tyres and tubeless type of tyres included in the scope of the GTR.

Comments / Justification :

India has large number of Bias tyres still manufactured. The total tyre production (including commercial, passenger, scooter/motor cycle and agricultural vehicles) is estimated to be about 74 million. Out of which, 57 million are Bias ply tyres for the Indian tyre production estimated for the year 2006-07. In passenger segment (which includes LT category also for less than 1250 kg load capacity), the Bias production is about 1.0 million and Radial 15.6 million. The production of Bias tyres is likely to continue for many years (and may even slightly grow in certain applications like non -highway tyres). Bias tyres also constitute a significant part of tyre exports originating from India.

Among the 15.6 million radial tyres produced in the passenger category, only about 3.2 million are in the tubeless category and remaining 12.4 million in tube type. The tubeless production is growing, but complete changeover would take time.

As Bias tyre production and Tube type tyre production is expected to continue in India for more than a decade, these categories need to be addressed in the GTR. This will also help in including some other specific items pertaining to Bias tyres.

Fig. 1

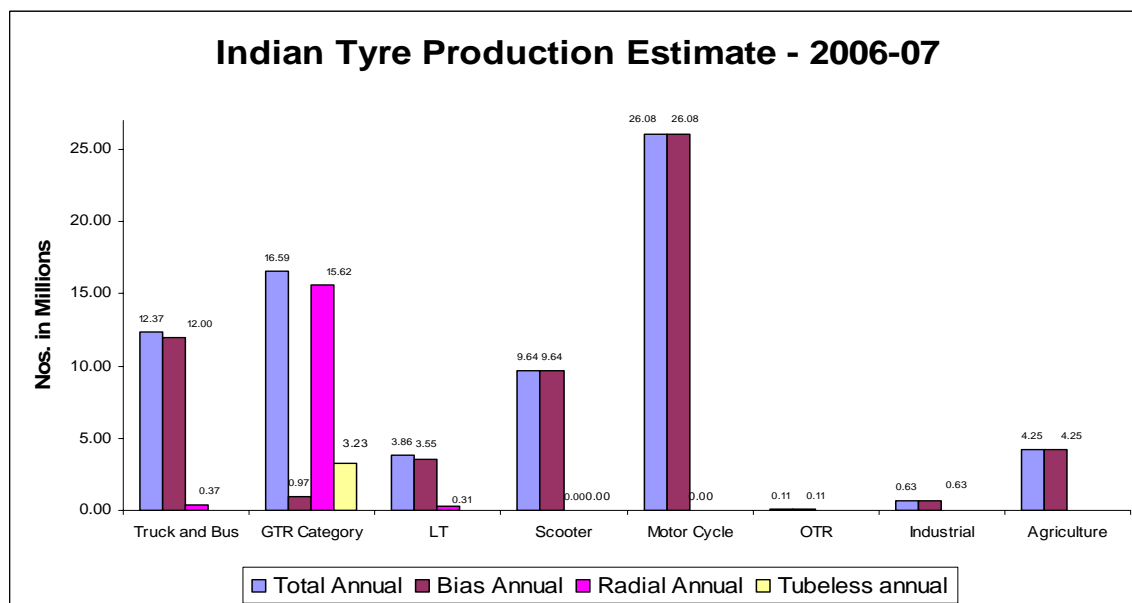


Table 1

Indian Tyre Production Estimate - Year 2006-07 (in nos million)					
SI No	Category	Total	Bias	Radial	Tubeless
1	Truck and Bus	12.37	12.00	0.37	negligible
4	GTR Category	16.59	0.97	15.62	3.23
5	LT	3.86	3.55	0.31	0.00
6	Scooter	9.64	9.64	0.00	0.00
7	Motor Cycle	26.08	26.08	0.00	0.00
8	OTR	0.11	0.11	0.00	0.00
9	Industrial	0.63	0.63	0.00	0.00
8	Agriculture	4.25	4.25		0.00
	Total	73.53	57.23	16.30	3.23

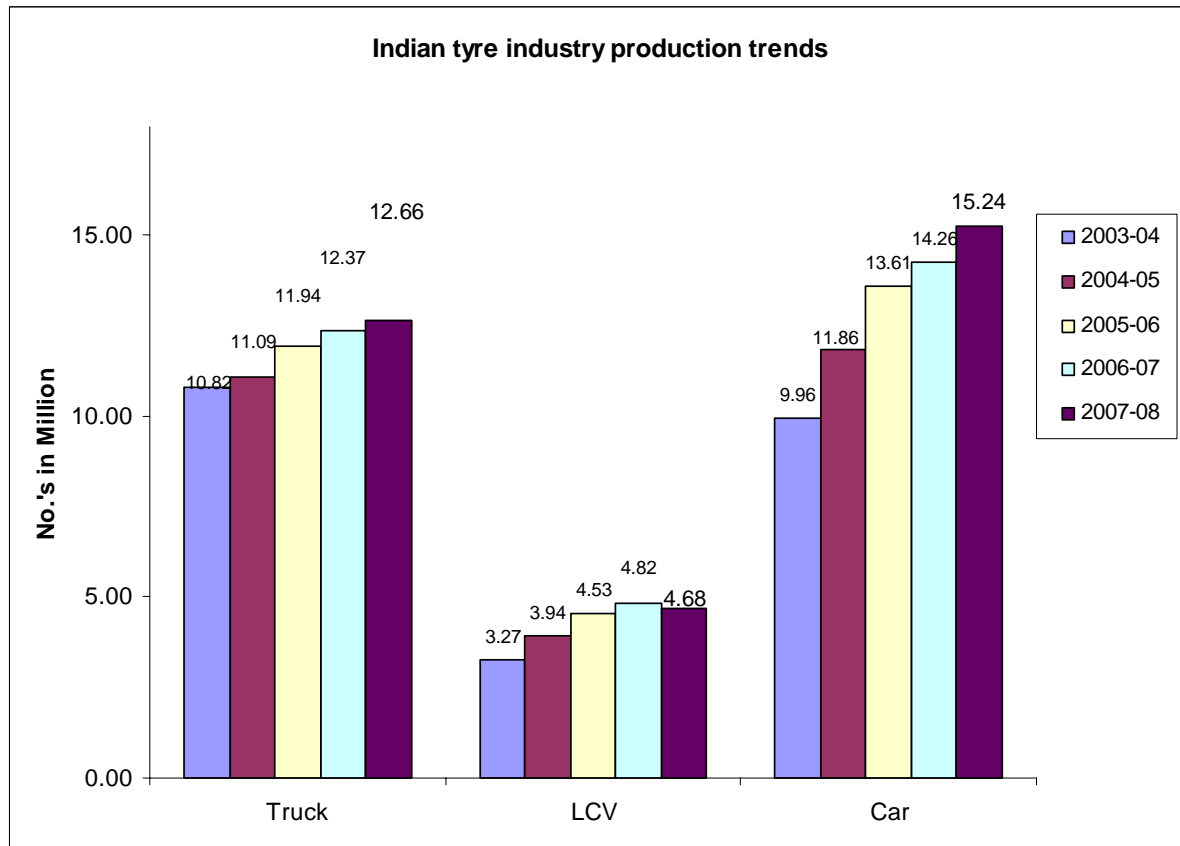
Table 2

Production Trends & CAGR of Indian Tyre Industries 2003-04 to 2007-08

Category	Industry Production (No.'s million)					
	2003-04	2004-05	2005-06	2006-07	2007-08	CAGR
Truck	10.82	11.09	11.94	12.37	12.66	3.2%
LCV	3.27	3.94	4.53	4.82	4.68	7.4%
Car	9.96	11.86	13.61	14.26	15.24	8.9%

***CAGR-** "Compounded Annual Growth Rate"

Fig. 2



* Source of data Automotive Tyre Manufacturers Association

B. Tyre Sidewall Markings (size designation, service description, tyre identification number, type approval markings, etc.)

Proposal :

The simplification proposal of the working group (reference to TYREgr-03-05e, item no-5) is to remove 'radial' marking and use 'bias' marking only when necessary and removal of 'tubeless' marking and use 'tube type' only when necessary.

Comments / Justification :

India has a production of about 57 million bias tyres out of the total production of 72 Million tyres. The extent of tubeless tyres produced is only about 15% in the Passenger category. Under such a scenario, and in view of aspects of product 'awareness' and 'Safety' for the end-users, it would be desirable to have "Tubeless" and "Radial" marked on the tyre sidewall. Hence we propose that the current marking of "Radial" & "Tubeless" should continue.

C. Dimensions Test

Proposal :

ETRTO presented in detail a comparison table showing the different existing requirements on dimensional test and explained a possible proposal for harmonization although some points needs further clarifications within the tyre industry. (reference to working document TYREgtr 02-02 Rev.1 and 03 Rev.1.)

Justification :

More clarifications required in terms of:

1. Whether "OD" refers to section height because the ECE30 refers to section height?
2. Does it refers to "New" tyre only and/or refers to grown tyre in service?
3. Is it applicable to tyres/mold already running – how exactly the implementation will work if there is a change in tolerance ?

D. Harmonized High Speed Test

Proposal :

ETRTO reported on the activities of the sub-group since the last meeting. At the last meeting 3 different options were discussed. One of the options considered was to use the FMVSS 139 high speed test for tyres with a speed rating equivalent to symbol of "S" and below, and Regulation 30 for speeds above "S". At that meeting there was a general consensus by the CPs that due to the limited time scale this proposal could be considered as a starting point, but it would require significant further work (ref. TYREgtr 02-01, par.8.4).

ETRTO presented a theoretical method to find, for each speed symbol, the test which is the most severe and to validate that the equivalence point between the 2 tests is reached at a specific speed symbol (maybe S or T according to very preliminary studies). See more details in working document TYREgtr 03-04.

Comments / Justification :

FMVSS 139 Hi-Speed test (1.70 m drum) is having following steps for testing the tyres

- 120' @ 80 km/h (Break-in & cool-down)
- 30' @ 140 km/h
- 30' @ 150 km/h
- 30' @ 160 km/h

Based on the existing running sizes used in India, there is a group of sizes which have speed ratings from "L" to "Q" (which is 120km/h to 160km/h). This group has max. load capacity of less than 1250 kg, hence does qualify under category of tyres being covered under GTR.

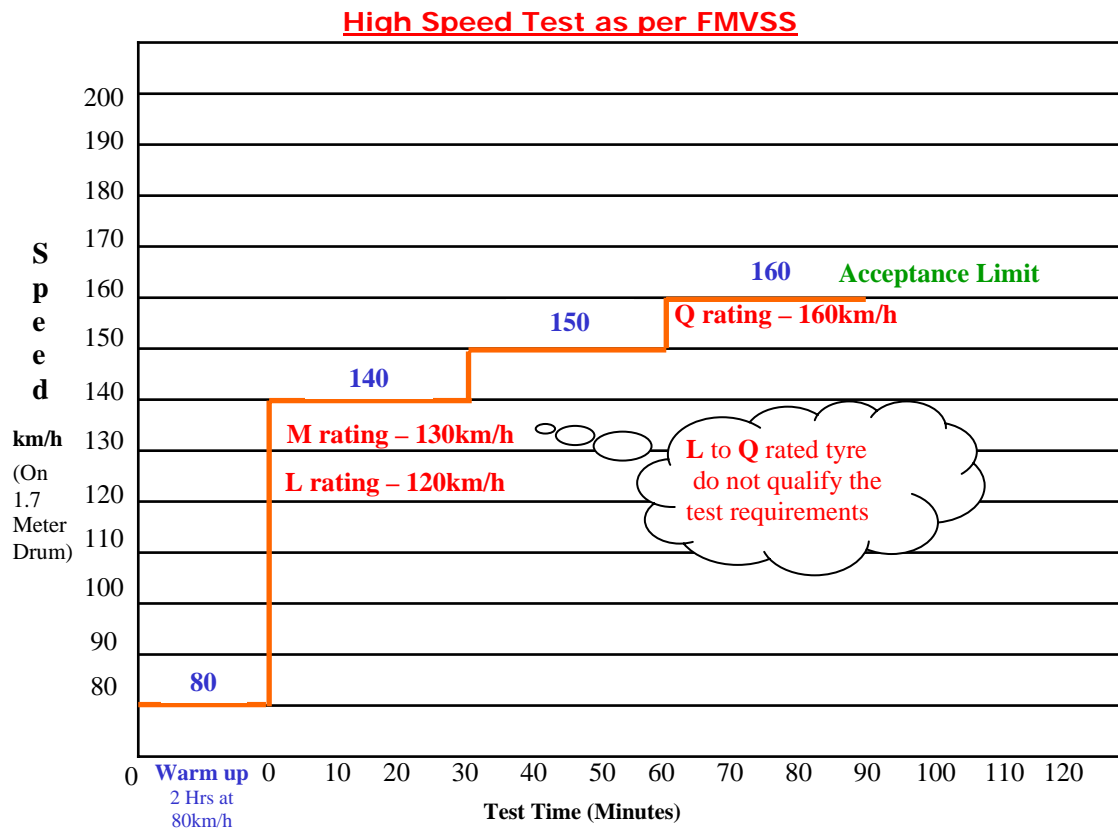
Examples of such tyres are :

- a) 7.00 R 16 12 PR LT, load capacity 1215 kg, speed rating M
- b) 7.00 R 15 10 PR LT, load capacity 1050 kg , speed rating M or Q
- c) 185/85 R16 8 PR LT, load capacity 925 kg, speed rating Q
- d) 185 R 14 8 PR LT, load capacity 850 kg, speed rating Q

This group, by virtue of its speed rating range, cannot be tested as per FMVSS 139.

The tests applicable to such types of LT tyres needs to be clearly defined and addressed . For example such tyres may not need a high speed test but can have step load test like ECE54.

Fig. 3



E. Endurance / Low Pressure Test

Proposal :

RMA reviewed the background of the test and it's recent developments through the FMVSS 139 (See details in working documents TYREgr 02-06 and TYREgr 03-02). The Expert from RMA explained that FMVSS 139 doesn't take into consideration the flat-curve drum surface correction factor (as considered by UNECE R30) and that research and investigation are being performed by ASTM (USA) to establish a correlation between the drum test curved surface and road flat surface and to consider other influencing parameters like airflow around the tyre (see details in TYREgr 03-01). The reason is that the failure modes during the FMVSS 139 test are not properly representing the real word failure modes. The work is in progress and results are expected by July 2007.

Comments / Justification :

India would await the findings on this subject. However, we suggest that the tests applicable to 'LT' tyres have to be separately designed.

F. Tyre / Road Sound Emission Test,

Proposal :

No update needed, test already harmonized (reference ISO or UNECE Regulation 117)
The Tyre/Road Sound Emission test being already harmonized at ISO level and adopted into UNECE Reg. 117.

Comments / Justification :

Indian Tyre Industry would require some more time for establishing the test facilities in India. This test may be made optional in the Tyre GTR .

G. Tyre Wet Grip Adhesion Test.

Proposal :

No update needed, test already harmonised (reference ISO or UNECE Regulation 117)Tyre Wet Grip Adhesion test being already harmonized at ISO level and adopted into UNECE Reg. 117.

Comments / Justification :

Indian tyre Industry would require some more time for establishing the test facilities This test may be made optional in the Tyre GTR.

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