European Tyre Industry Response to DG ENTR

Public Consultation on outline proposals for a Regulation of the EP and of the Council on Advanced Safety Features and Tyres

October 16 2007

Need for Tyre Performances Integrated Approach to achieve the objectives of the proposed regulation

General Remarks:

The EC recognises that the overall performance of tyres is a result from a careful balance of conflicting requirements and that it is essential that existing safety standards are not compromised. The European tyre industry agrees to this statement.

The Industry insists that it is only through integrated policies relating to tyre performances that measurable benefits will be drawn for the legislator, the consumers and the industry. In other words, legislation on any tyre performance characteristic must always consider the effects of any new isolated regulatory prescriptions on the tyre's other performance characteristics.

In addition, it is essential that appropriate controls be implemented to establish fair global competition within the EU market.

Specific requirements relating to tyres:

Question 1:
Are the proposed noise limits in Annexes 1 and 2 a) sufficient and b) realistic?

The Tyre Industry disagrees completely with the FEHRL Study and regrets that its comments, made during the meetings of January and July 2007 with the European Commission, were not taken into account (see Annex 1 to this document for a summary of the Industry proposal).

The **noise limits** proposed in Annex 1 of the Consultation Document are **unrealistic** and simply **cannot be achieved** by the Tyre Industry. Tightening the limits more than suggested by the industry in its proposal (see Annex 1), in order to be more environmentally friendly, will make it impossible to keep tyre performances well balanced and to maintain safety performance. If one tyre performance is emphasized in preference to the others the overall balance of tyre performances becomes unachievable.

The database used by FEHRL to generate their proposal contains a limited number of tyre samples, especially for C2 and C3 tyre categories. It can not be considered as representative of the entire tyre population, and can generate wrong interpretations. For C1 tyres, FEHRL used a total of 171 tyres in their study, whereas in the European market there are literally thousands of passenger car tyre. For C2, FEHRL had data on only 19 tyres, while there are most likely over a thousand tyres on the market. In C3, FEHRL used 98 tyres to draw their conclusions. Again, there are most likely several hundred different heavy truck tyres on the market

The tyre industry has proposed an achievable target (see annex 1). Additionally, we propose to limit the C1e class to a maximum width of 245 and create 2 new classes (C1f and C1g) for wider tyres with appropriate limits. It should be noted that these last 2 classes of tyres represent less than 2% of the market population (see

Annex 1). We must not forget that wider tyres are improving braking capabilities and adherence and are essential for a certain category of vehicles.

Definition of new limits should be independent from calculation method, and new limits must be compared to previous limits with the same calculation method. Our proposal does not take into account any change to the method of calculating the reported noise value. If the method is changed, the overall reduction seen by the tyre will still be 2 dB(A). In other words, the effect on the tyre as proposed by the industry is 2 dB(A) less noise. It does not matter to us if this effect is accomplished through a change to the calculation method or a change to the limits.

We support the commission indications for complementary measures concerning improvements in road surface technology. Road surfaces have been identified as having higher potential for rolling noise reduction, up to 10 dB(A), therefore we urge the European Commission to initiate the road-related measures **simultaneously** to tyre noise requirements. The Commission should consider the higher potential societal benefits derived from silent pavement technology, noise grading for roads, and other parameters affecting traffic noise, with immediate effect of noisy areas which is not the case for tyres. Complete effect for tyres will be reached after 10 to 15 years.

Are the proposed rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic?

The **rolling resistance limits** proposed in Annex 2 of the Consultation Document do not consider the interaction of different tyre performance criteria as articulated in the integrated approach.

Our comments to the EC proposal are as follows:

1. The limit values in both tables (max values and grading) should be increased by 1 kg/t for all the M+S tyres of each tyre category: C1, C2, C3, and not only for the special tyres, as indicated.
2. The maximum value for the C1 tyre category (footnote 7) should not be reduced from 13.5 to 12 kg/t before at least 4 years and an impact assessment of further reduction has been performed. As a result of that, the grading system cannot be reduced to 3 classes.

Providing those two points above are taken into account in the future, we agree with the limits proposed.

Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?

The Industry's proposal for a Tyre Performance Integrated Approach considers the maximum possibilities in trading-off tyre performances; It is the only viable approach. Therefore "Trading off noise requirements for rolling resistance requirements under certain circumstances" is **not** a viable alternative approach.

The Commission mentions in the consultation document that "it is essential that existing safety standards are not compromised" and proposes that UN/ECE R117 "wet grip requirements are included in this Regulation".

The Tyre industry fully supports this proposal.

Recent investigations of PIARC on the relationship of surface grip coefficient on vehicle accident rate in several European countries support the need for good wet grip performance.

To enable consumers to make an informed choice taking into consideration environment and safety, the Tyre Industry requires a mandatory grading system on wet grip that will be implemented in parallel to RR grading for Passenger car and light-truck tyres. When available, the information on the grading will be shown on a label or similar way of consumer information.

Question 2:

Is there any justification for partial or complete exemption for particular categories of tyre from the noise or rolling resistance requirements?

Yes, there is a justification for a complete exemption for particular categories of tyre from the noise or rolling resistance requirements. In fact there is a particular tyre category our industry calls "Professional Off-Road".

- These tyres are designed for traction in mud and snow, with large tread blocks to give good grip in very adverse conditions. They are mainly used by fire brigades, electric line maintenance in remote areas, veterinarians and doctors on remote farms or villages, especially in mountainous regions. They are also used on construction sites, in mining applications, etc., but they rarely roll on public roads.
- This design, which is needed for the exceptional traction properties required of these tyres, also causes them to be noisy under the Directive's test conditions and they have a higher RR level.
- Redesigning the tyres for low noise will adversely affect the traction properties that make these tyres unique and appropriate for their use.
- Professional off-road tyres can be defined as those that meet the following criteria:
    - Concerns tyres of C1, C2 and C3 Classes.
    - Tread depth > or = 11 mm for C1/C2, 16 mm for C3.
    - Void to fill ratio > or = 35 %.
    - Speed symbol maximum Q (160 km/h) for C1/C2 and K (110 km/h) for C3.
    - M+S marked

This specific tyre category should be completely exempted from the tyre/road noise and rolling resistance requirements. Examples of these tyres and the vehicles that use them are shown in Annex 2 of this document.

The Consultation Document also mentions the possibility of lowering the maximum speed for these tyres from 160 km/h to 120 km/h (for C1 and C2, since C3 is already proposed to be limited to 110 km/h) as a way "to prevent widespread use of such tyres". While this is technically feasible, it would not impact the quantity of tyres exempted from the legislation, since for tyres marked M+S, it would be sufficient to put a sticker inside the vehicle which informs the driver that the maximum allowable speed is 120 km/h, no matter what the maximum vehicle speed is—to be noticed that Dir. 92/23 already address the use of stickers to inform the driver in case the tyre speed code is lower than the vehicle maximum speed.

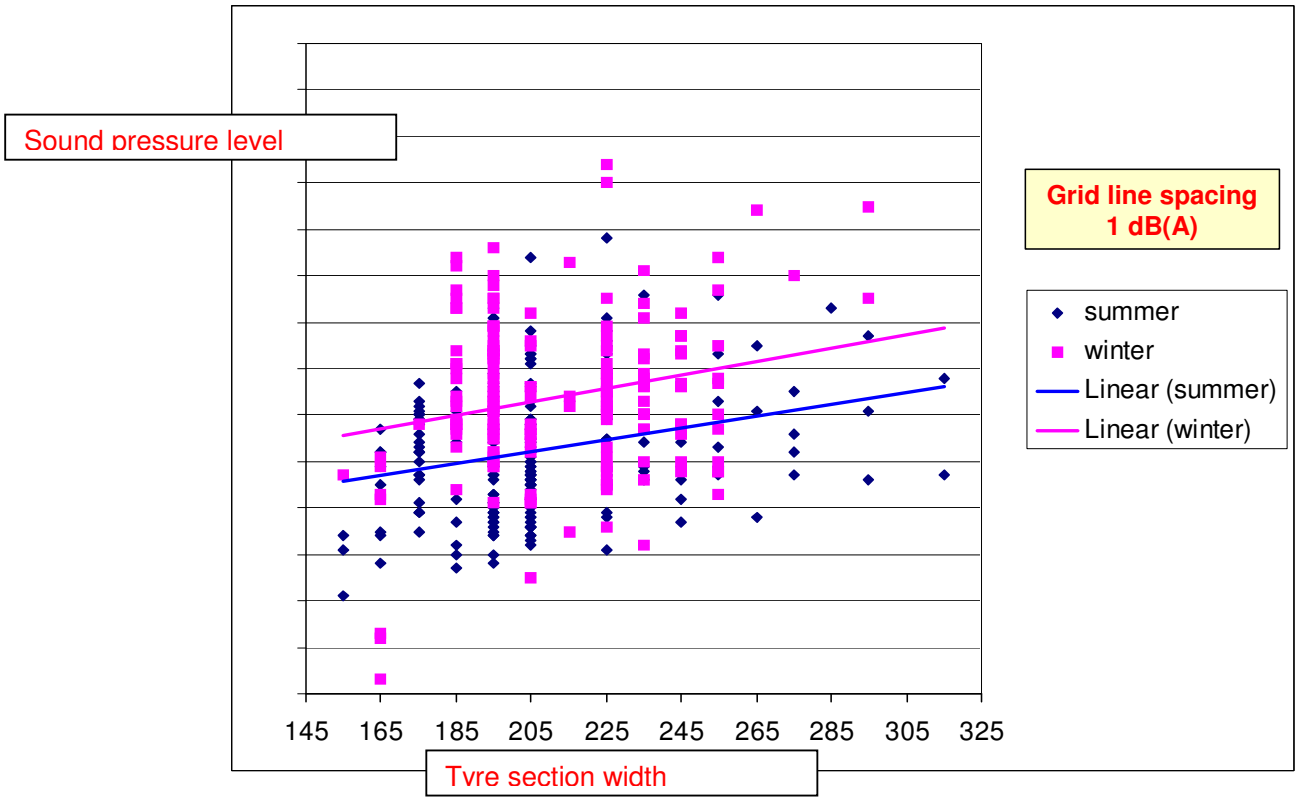
The quantity of tyres impacted by this proposal is estimated, for C1 and C2 tyres, to be less than 0.06% of the total EU market (about 210,000 tyres in a market of 350 million). Photographic examples of the tyres and the vehicles they are usually fitted to are shown in Annex 2.

This new category of professional off road tyres should not be confused with the current tyre category called "special" which should continue to exist as currently defined.

In addition, the Tyre Industry emphasizes the need to grant or maintain allowances for some categories of tyres, particularly when tightening the current limits. The following allowances for C1 are needed:

1. Introduce 1 dB(A) for M+S marked tyres
2. Maintain 2 dB(A) for Special as currently allowed by the Directive 2001/43
3. Maintain 1 dB(A) for XL as currently allowed by the Directive 2001/43

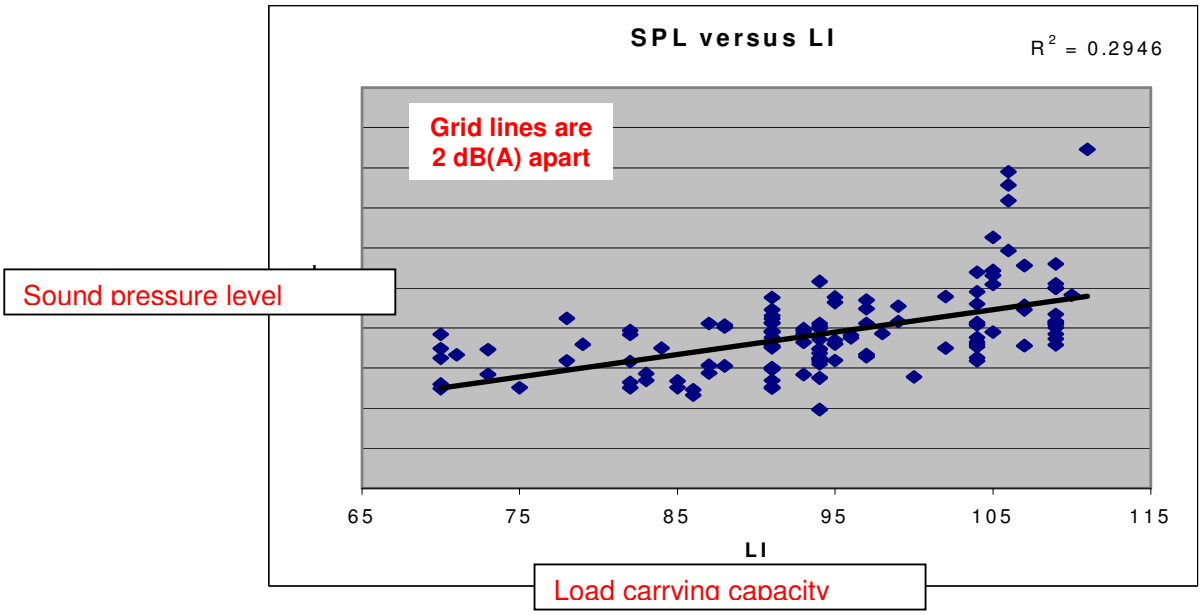
Concerning category 1: Tyres designed for use in mud and snow (marked M+S) have open tread patterns to allow for good traction and adherence properties. The open tread patterns cause more tyre/road noise to be generated. It is therefore necessary to consider an additional 1 dB(A) allowance for such tyres.
The graph below shows that there is approximately 1 dB(A) of difference between M+S and non M+S tyres.



Concerning category 2: Tyres in the Special category require even more open tread patterns than M+S tyres and hence we need to maintain the current allowance given by the Directive 2001/43.

Further tightening of the limits versus the Industry's proposal may require higher allowances for the categories M+S and Special.

Concerning category 3: Extra Load (or Reinforced) tyres, the current Directive 2001/43 gives a 1 dB(A) allowance for these tyres. Extra Load tyres are reinforced so that they can carry more load at a higher pressure. The higher load causes them to generate more noise. The allowance currently in place is based on sound physical principles of noise generation, and the graph below demonstrates that sound pressure level increases as the tyre load carrying capacity increases. We therefore request that the current allowance be extended beyond 2009.



Question 3:

Should tyre pressure monitoring systems be made mandatory? What degree of accuracy is necessary for them to be effective in maintaining optimum tyre pressure?

The tyre industry supports the idea of TPMS being fitted to all new cars. TPMS enhance tyre safety as well as contribute to the optimization of all tyre performances.

To be effective for pressure maintenance and also to bring significant benefits in terms of fuel economy and emissions, a TPMS should follow specifications of:

- accuracy: detection margin of 20 kPa (*),
- responsiveness: detection delay less than 5 minutes,
- comprehensive and relevant information displayed on the dashboard to the user, regardless of vehicle speed between 25 km/h and the vehicle maximum speed.

(*) when safety only is concerned, the detection margin can be larger.

The USA FMVSS138 prescriptions are considered as insufficient and inadequate for the European market driving conditions.

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Annex1

Proposal for future tyre/road noise limits

Passenger car tyres (Class C1)

Class	Tyre Section Width	New limits for 2011 (dB(A)) (1)(2)	Effective reduction from current limits (dB(A))	Market share (%, 2005)
C1a	≤145	70	-2	3.3
C1b	155 – 165	71	-2	16.6
C1c	175 – 185	72	-2	29.3
C1d	195 – 215	73	-2	41.3
C1e*	225 – 245	75	-1	8.0
C1f**	255 – 275	76	0	1.3
C1g**	≥285	77	+1	0.2

(1) Maintain current allowance for Extra Load (Reinforced) tyres of +1 dB(A)
Maintain current allowance for Special tyres of +2 dB(A)
Create new allowance of +1 dB(A) for tyres marked M+S
Create a new category of Professional Off Road tyres (see response to question 2 above for details and examples in Annex 2 below).

(2) The limit values shown here are based on the current calculation method of the Directive

(*) Limit current C1e width to a maximum of 245

(**) Create two new classes for very large tyres with very small market share

Light Truck Tyres (Class C2)

Category	New limits for 2014 (dB(A)) (1)	Effective reduction from current limits (dB(A))
Normal	73	-2
Snow	75	-2
Special	76	-2

(1) The limit values shown here are based on the current calculation method of the Directive.
Creation of a new category of Professional Off Road tyres, exactly as for C1 (see response to question 2 above for details and examples in Annex 2 below).

Heavy Truck Tyres (Class C3)

Category	New limits for 2014 (dB(A)) (1)	Effective reduction from current limits (dB(A))
Normal	74	-2
Snow	76	-2
Special	77	-2

(1) The limit values shown here are based on the current calculation method of the Directive.

Creation of a new category of Professional Off Road tyres (see response to question 2 above for details and examples in Annex 2 below).

Annex 2

Examples of Professional Off Road tyres (C1/C2)

Example of Professional Off Road tyre (C3)

Example of C1/C2 Vehicle fitted with Professional Off Road tyres

Example of C3 vehicle fitted with Professional Off Road tyres