

## **Public consultation on outline proposals for a new regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

This document contains the contributions received in reply to the [Stakeholder Consultation](#). All contributions are published complete and unedited.

Contributions (in alphabetical order)

- A.S.D. Volante Amico
- Accident Research of German Insurers
- ACEA (European Automobile Manufacturers Association)
- ADAC (German Automobile Club)
- AFCAR (Alliance for the Freedom of Car Repair in the EU)
- ANEC - The European consumer voice in standardisation
- Autorités françaises
- Bandvulc Group
- Boons, Erik Frank
- Bundesverband Güterkraftverkehr Logistik und Entsorgung (BGL) e.V
- Bundesverband Reifenhandel und Vulkaniseur-Handwerk e.V. (BRV e.V.)
- Caspar, Christian
- CEA (Comisariado Europeo del Automóvil)
- CENTRO ZARAGOZA
- Citoyens de la route
- CLEPA (The European Association of Automotive Suppliers)
- CLEPA Light.Sight.Safety-Initiative
- CONFEDERTAAI (Confederazione Titolari Autoscuole e Agenzie d'Italia)
- Consorzio Nazionale Guida Difensiva
- Continental AG
- Daimler AG
- Danish EPA
- DEKRA Automobil GmbH
- Department for Transport (DfT), UK
- Dorado Centro Internazionale Guida Sicura S.p.A
- Drive & Survive UK Ltd
- Dutch Noise Abatement Society (NSG)
- Environmental Protection UK
- Estonian Road Administration and Estonian Motor Vehicle Registration Centre
- ETRMA (European Tyre & Rubber Manufacturers' Association)
- Evonik Industries
- Federal Ministry of Transport, Building and Urban Affairs, Germany
- FIA (Fédération Internationale de l'Automobile)
- Ford Motor Company
- General Motors Europe
- German Road Safety Council / Deutscher Verkehrssicherheitsrat e.V.
- Government of the Netherlands
- Hagleitner, Walter

- IEE S.A.
- IPO, the association of the 12 Dutch provinces
- IRU (International Road Transport Union)
- JAMA Europe (Japan Automobile Manufacturers Association European Office)
- JATMA (Japan Automobile Tyre Manufacturers Association)
- Kihlman, Tor - Division of applied acoustics, Chalmers University of Technology, Sweden
- Knorr-Bremse Systeme für Nutzfahrzeuge GmbH
- KTI Institute for Transport Sciences
- M+P - consulting engineers
- Mayor of London, the Greater London Authority and Transport for London
- Ministry of Defence (MoD), UK
- Ministry of Land, Infrastructure and Transport, Japan
- Ministry of Transport and Communications, Norway
- Ministry of Transport, Italy
- National Institute of Public Health and Environment (RIVM)
- Noise Steering Group of the Coordinating Committee for International Environmental Policy (CCIEP)
- Norwegian Pollution Control Authority (SFT)
- Norwegian Public Road Administration
- NRA (National Roads Authority)
- Océ-Technologies B.V.
- OMRON - Automotive Electronics Technology GmbH
- Philips Automotive Lighting
- Prévention Routière
- Retread Manufacturers Association
- Rieglmayerl, Wolfgang
- Road Haulage Association (RHA)
- Road Safety and Transport Agency, Denmark
- Robert Bosch GmbH
- Royal Automobile Club Foundation for Motoring
- The Royal Society for the Prevention of Accidents (RoSPA)
- Roza, Dinand
- SaperexGuidare
- Schrader Electronics Ltd
- STA (Sociedad de Tecnicos de Automocion)
- Swedish Road Administration
- T&E (European Federation for Transport and Environment) I and II
- Thatcham (The Motor Insurance Repair Research Centre)
- VCD (Verkehrsclub Deutschland)
- VDA (Verband der Automobilindustrie)
- VTI (Swedish National Road and Transport Research Institute)
- wdk - Wirtschaftsverband der deutschen Kautschukindustrie e.V.
- WG-Noise EUROCITIES
- Zimmermeyer, Gunter



Italy-Bari, October 10, 2007

Subject: Contribution to the public consultation

With this document, we would like to give our contribution for what concerns the security of vehicles and passengers, as written here down:

1. We are in favour of installing the active safety system ESP device as standard on all vehicles, even before the year 2011;
2. We are in support of the reduction of emissions of CO<sub>2</sub> in the atmosphere;
3. We are in favour for the installation of ESP system in all cars and commercial vehicles (Light and Heavy Duty over 3.5 tons).

Best regards.

The President

A.S.D. Volante Amico  
Forte Antonietta

## **Public Consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

### **Statement of the Accident Research of the German Insurers**

#### **Tyres**

***Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?***

The design of tyres is a very complex task, and a lot of requirements have to be fulfilled. If new requirements are considered, the safety of tyres always has to be paramount.

***Should tyre pressure monitoring systems be made mandatory?***

We recommend the mandatory introduction of tyre pressure monitoring systems for safety and environmental reasons.

#### **Electronic Stability Control (ESC)**

***Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)?***

We support the mandatory installation of ESC for all vehicle categories mentioned above.

***Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?***

We consider 2011 as a reasonable target for new car models to be fitted with ESC.

If it is considered to introduce mandatory requirements for ESC in 2011, an adequate lead-time for OEMs and suppliers has to be assured by the Commission.

Today there are a lot of national and international studies that show the high safety benefit of ESC. According to the activities of the German Insurers' Accident Research, 25% of all car accidents with personal injuries, and 35 to 40% of all car accidents with fatalities can be positively influenced by ESC. Thus – if all cars were fitted with ESC – approximately 37,000 accidents with personal injuries, and 1,100 accidents with fatalities could be prevented in Germany each year or the accident outcome could be mitigated.

A 2006 survey of the German Insurers concerning the availability of ESC in 257 models of 38 car manufacturers showed that ESC is standard fit in 58% of all new models in Germany only. In 20% of all models ESC is not available at all, in further 20% only some derivatives are fitted with ESC (standard or option).

These figures clearly show that it is essential to increase ESC fitting rates. That is why the Accident Research of the German Insurers supports the mandatory installation of ESC. The mandatory introduction of ESC would come along with the development of a Global Technical Regulation (GTR) for ESC, and with the US regulation "FMVSS 126" which is in force already.



## **Other Advanced Safety Systems**

***What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?***

The introduction of Advanced Safety Systems may be considered, if they fulfil the following requirements:

- The systems have to be clearly defined, and
- it must be proofed that the systems are able to improve road safety significantly, namely to reduce the number of fatalities and severely injured people.

Today's LDW systems do not seem to fulfil these requirements.

# **Commission's Consultation on future type-approval legislation**

## **ACEA position - 10 October 07**

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### **1. & 2. Objective and Background of the Regulation - General remarks:**

The Vehicle Industry, here represented by ACEA, is surprised that soon after the CARS 21 initiative a new initiative has been taken to update and simplify type approval legislation for various safety related components and systems for passenger and goods vehicles.

The purpose of CARS 21 has been to update and simplify type approval legislation, not only for safety related items, and CARS 21 developed a road map for the introduction of new safety regulations to ensure a stable and reliable future for the vehicle industry.

Any proposals that will effectively contribute to the application of the principles agreed upon in CARS 21 are of course fully supported by the Industry.

### **3. The proposed Regulatory Approach:**

- ACEA strongly supports the Commission goal to replace EC directives by ECE regulations.
- In cases where the ECE regulations have additional or more stringent requirements than existing EC directives adequate lead-time should be provided.
- There is no full understanding why the regulatory approach of the EC WVTa has to be amended.
- The proposal to install a safety regulation sandwiched between the whole vehicle type approval (WVTa) and the regulations for the various vehicle systems is seen as potentially complicating the regulatory landscape. ACEA recommend incorporating the reference to ECE regulations directly into annex IV of the EC-WVTa framework Directive.
  - This can be done while taking care of all coexistence, scope and timing aspects between directives and ECE regulations.
  - Changes to annex IV could then be performed using the comitology procedure, so that only the adoption of entirely new ECE regulations would have to undergo the co-decision process.
  - The split-level approach would not even be necessary. The split approach has not demonstrated, so far, a high level of transparency, takes a rather long time and provides unexpected and unrealistic decisions.

### **4. Proposed Scope of the new Regulation:**

The approach to collect “almost all the separate vehicle safety-related Directives” but not pedestrian protection does not appear logical.

Annex IV of the framework directive could also be restructured in a way to divide the areas of application as proposed in the consultation document.

## Commission's Consultation on future type-approval legislation

### ACEA position - 10 October 07

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#### 5. Particular Technical aspects:

The industry has no objection to meet specific performance requirements to the vehicle providing that these requirements have a demonstrated benefit for the safety of the road users or the environmental protection and that they do not remove any flexibility to the manufacturer to optimize the global performance of the vehicle. Most of the addressed technical items are studied in Geneva and other Expert Groups. Results of these studies should be taken into account.

#### 5.1 Requirements relating to tires.

The Commission recognizes that the overall performance of tires is a result from a careful balance of conflicting requirements. (Noise, handling, vehicle stability, durability, rolling resistance, wet grip). The Commission concludes that the pursuit of more energy-efficient, quieter tires should not compromise safety. The Industry agrees to this statement and stresses that environmental concerns should be added to this consideration.

##### 5.1.5 Discussion on tyre requirements.

*Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?*

- The proposed noise limits are not realistic.
  - The proposal is based on the "FEHRL-Study". This study claims that it is possible (with low costs) to reduce the rolling noise significantly without degrading safety and performance. The automotive industry considers some key points in this study as highly questionable. This study needs to be reviewed carefully before a decision is taken concerning limits. ACEA opposes to the proposed limits.
  - According to information from our suppliers rolling noise limit reductions between 1 and 2 dB(A) may be feasible, but may have adverse effects on safety requirements.
- According to information from our suppliers the requirements on Rolling Resistance seem to be feasible

*Should tyre pressure monitoring systems be made mandatory?*

- The question if tire pressure monitoring systems should be made mandatory requires a scientific and neutral impact analysis, which is still missing. We do not know the scientific and statistical basis of values cited in the consultation document. This should be thoroughly analyzed using the experience of stakeholders such that realistic estimates for the benefit as well as for the necessary performance requirements can be established. Adverse effects of overtly stringent requirements need to be considered in order to find practical compromises.
- Alternative solutions to enhance driving with the correct tire pressure should also be examined.

## **Commission's Consultation on future type-approval legislation**

### **ACEA position - 10 October 07**

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*What degree of accuracy is necessary for them to be effective in maintaining optimum tyre pressure?*

- Safety aspects have been extensively discussed during the rulemaking in the USA. From the safety perspective, we consider the requirements of the resulting standard FMVSS 138 as appropriate.
- From a fuel efficiency perspective it may appear attractive to leave the requirements concerning detection time unchanged from FMVSS 138 (faster detection is not relevant for fuel efficiency, as the slow pressure loss due to diffusion shall be detected), but to lower the tolerance for the warning threshold.
- However, the effect of such a lower threshold in real world performance needs to be carefully evaluated. Very small tolerances for the pressure loss, at which a warning has to be issued may lead to frequent nuisance warnings which would likely lead to customer complaints and might even result in ignoring the warning at all (thus inverting the prospected benefit). The reason for such unnecessary warnings is that during normal operation the pressure in a tire changes significantly depending on temperature and driving conditions. If the tolerance for warnings is within this range of “regular variation” (as opposed to that caused by pressure loss), then false warning will occur.
- Today there are two kinds of TPMS on the market. Direct measuring systems using sensors in the wheels with radio transmitters are currently more precise than indirect TPMS which function on the basis of an analysis of the wheel rpm. However, in their real world performance indirect systems have significant advantages:
  - They are independent of battery lifetime
  - They reduce compatibility problems with aftermarket wheels and tires

Therefore performance requirements should be chosen such that they can also be achieved with future developments of indirect systems.

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

- In general, every kind of “special purpose tires” should be excluded from this kind of requirement.
- In case of a realistic proposal concerning noise and rolling resistance limits, tires for e.g. off-road use and armoured vehicles should be exempted.
- In addition, an allowance of 1 dB(A) for tyres marked M+S should be given.

### **5.2 Advanced Vehicle Safety Systems.**

Continuously adding new regulation to the already overregulated vehicle Industry should be avoided. The Industry is opposing the mandatory installation of further technical features (except ESC) as standard equipment throughout the model range and the different markets. The Industry prefers performance criteria in regulations and any new requirements should be supported by an impact analysis.

## **Commission's Consultation on future type-approval legislation**

### **ACEA position - 10 October 07**

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#### **5.2.3 Discussion on Advanced Vehicle Safety Systems**

*Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?*

- ACEA sees ESC as a system with safety potential and therefore supports the goal of the Commission to promote ESC.
- Mandatory installation for heavy commercial vehicles as defined in document TRANS/WP29/2007/100 /Add. 1 is acceptable as long as vehicle configurations for which development of such a system is technically or economically not feasible are exempted.
- Mandatory installation for M1 and N1 vehicles is acceptable as long as the requirements are globally harmonized.

*Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

- For new types of vehicles of categories M1 and N1 a target date 09/2011 for the mandatory installation is realistic provided that the technical requirements are finalised 3 years before that date.

*What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?*

- Automatic emergency braking and lane departure warning are systems, which have been introduced on the market rather recently. They are available in few vehicles lines only. We think any discussion about mandating these systems is very premature. Any mandate would necessitate agreement on a standardized functionality and corresponding requirements. Currently, we are still in the phase where different implementations compete with each other, and also manufacturers are integrating crash mitigation and warning functionalities in different ways. Trying to define standardized requirements at this point would be rather detrimental in limiting the creative competition for the best solution.

## Comment on the public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres

### ESC:

The German Automobile Club ADAC, representing 16 Mio members supports the equipment of all vehicles with ESC if technical possible. This should be realised as soon as possible. The ADAC counts on a voluntary self commitment of the Industry. In case this does not lead to the introduction of ESC without exception for passenger cars, commercial vehicles including trailers and busses the mandatory equipment with ESC is reasonable and necessary from 2011 on.

The mandatory introduction of further safety relevant systems is not possible earlier than these systems are clearly further developed than today. Before a mandatory introduction furthermore the benefit has to be proven definitely. Nevertheless the ADAC favours the further development of safety relevant driver assistance systems as well as its use.

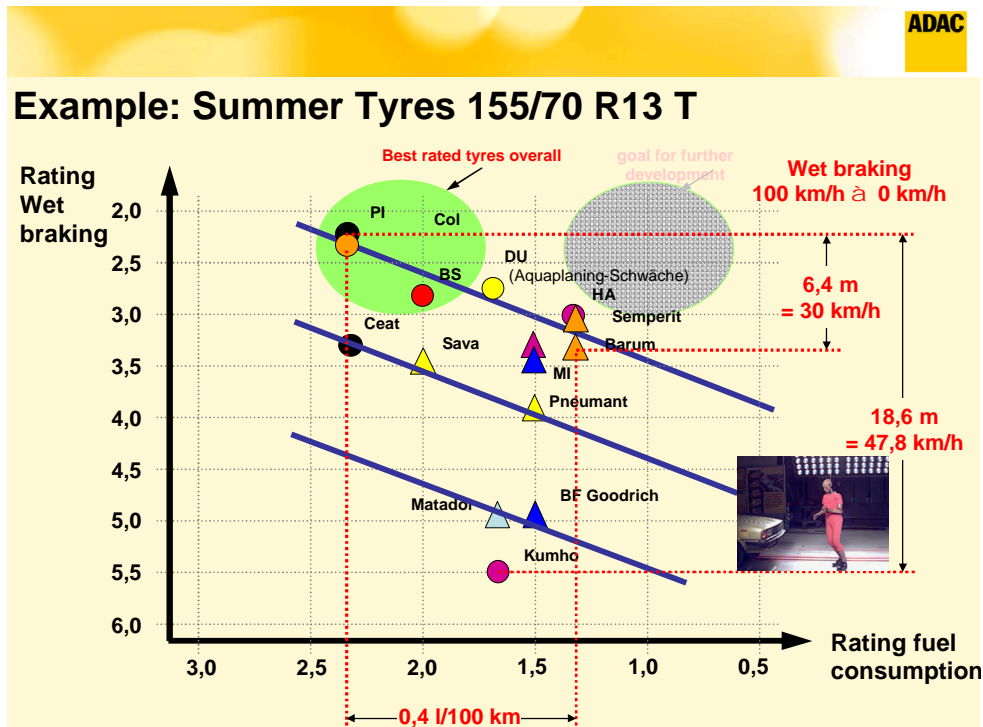
### Tyres:

Tyres for passenger cars, commercial vehicles and busses are a compromise in terms of its specifications. The complexity of the requirements from safety, comfort and environment as well as the different conditions of use like wet and dry roads, snow and ice need to balance the development objectives.

The ADAC is testing tyres for the European Automobile Clubs and the consumer protection organisations. The extensive tests include all conditions of use, which are of importance for the consumer. Over the 30 years of test experience important improvements on all aspects of tyre specifications have happened. Not least by this development the number of fatalities in Europe and especially in Germany developed as positively as it happened.

### Low Rolling Resistance Tyres LRRT:

In general the ADAC favours the development and use of LRRT. But top priority has safety. As the rolling resistance and especially the wet grip are opposite specifications in the development of tyres, Fig. 1, a one-sided labelling of only one tyre property – the labelling of the rolling resistance is proposed – may not happen. The labelling of the competing properties rolling resistance and wet grip (shown as braking distance on wet) at the same time and in the same way is indispensable. The consumer needs to be able to recognise AT THE SAME TIME the quality of the tyre rolling resistance AND the wet grip of the tyre to be able to decide the kind of compromise he wants to choose.



**Fig. 1:** The trade-off between rolling resistance (=fuel consumption) and wet braking is clearly given. The increase in braking distance means a tremendous increase in collision speed.

As there is no standardised test procedure at this time, only the ADAC test conducted in charge for the automobile clubs and the ICRT is available. Here all tyre specifications are investigated and assessed. A comprehensive and realistic picture of the tyre is formed.

Thus the ADAC rejects the proposed one-sided forming of four rolling resistance performance bands (A to D). A classification of the rolling resistance can only be introduced at the same time with the equal classification of wet braking distance. The alternative introduction of a minimum requirement for wet braking or wet grip is insufficient. In general the reduction of the complexity of the tyre to only two dimensions (rolling resistance vs. wet grip) is a problem.

#### Rolling noise emissions:

Noise from traffic is an important source for noise pollution. The track-tyre-noise dominates from 40 to 50 kph on the other vehicle based sound sources. A reduction of the track-tyre-noise is possible and needs to be aspired.

Investigations of the TÜV Süd on behalf of the ADAC show, that the tyre-noise measured according to ISO-standard have poor relevance on realistic pavements. The differences due to the pavement exceed the tyre based differences considerably. Even changes in ranking are possible which means a gentle tyre according to ISO-standard performs louder than a noisy tyre according to ISO-standard on specific pavements. Against the background of this it is to be feared that a tightening of the noise emission requirements for tyres does not have the intended success. In contrast the application of adequate pavements shows clear improvements.

Nevertheless the tyre needs to contribute to reduce the noise pollution. The ADAC claims for tighter noise emission requirements. Furthermore it is essential to realise noise reducing measures with the most efficient potential so that in fact a reduction of noise pollution can be recognized. A further necessary measure is to use praxis rele-

vante pavement for the ISO 10844 based measurement procedure and thus to give the tyre development realistic guidelines.

#### Tyre pressure monitoring systems TPMS

At the moment two different systems to control the tyre pressure are available. Direct measuring systems measure the actual tyre inflation pressure in each individual tyre as well as the temperature. A possible loss of pressure can be detected for each single tyre. The expense of the sensors is considerable, the change of tyres (e.g. summer to winter tyres) means the backfitting of the sensors or to buy another set of four.

Indirect measuring systems detect a difference in wheel speed which occurs due to different tyre inflation pressure. Uniform loss of pressure at all wheels can not be detected by indirect measuring systems at this time. The expense is limited because the sensors used for ABS system can be used.

The use of TPMS has two reasons.

Possible damages of tyres due to creeping loss of pressure can be detected in time and the driver can be warned. With this the risk of tyre damages during the ride is reduced which means a higher safety level. This goal can be reached with both the direct and the indirect measuring systems.

To less tyre pressure means an increase of tyre rolling resistance and thus a higher fuel consumption. Due to diffusion tyres loss up to 0.1 bar of tyre pressure per month. A uniform loss of pressure on all wheels can only be detected by direct measuring systems at this time.

The ADAC claims for safety reasons for the installation of TPMS. As indirect measuring systems can be realised at low costs such systems need to be used extensively.

To achieve the set goal of reducing **CO<sub>2</sub>**-emissions from road traffic only the use of direct measuring systems is sufficient. The goal must be to detect also the uniform loss of pressure on all wheels and to inform the driver. Technical design specifications should not be introduced because they have been proven to repress innovations.

#### **Contact:**

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## Alliance for the Freedom of CAR Repair in the EU

European Commission  
Directorate General Enterprise and Industry  
Automotive Industry Unit  
BE-1049 Brussels

Brussels, 18<sup>th</sup> October 2007

### Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres

#### - Contribution of AFCAR -

#### To whom it may concern

AFCAR<sup>1</sup> welcomes this and any initiative which will reduce deaths and injuries on Europe's roads and contributes to a better environment.

It is our position to support technological advancement which has these aims, whilst making sure that these new technologies do not raise barriers for the servicing, maintenance or repair of vehicles.

We are not in a position to address the specific questions of the Commission posed in the consultation document. However, we invite the Commission to consider that whenever such Regulations are being formulated, attention should be given to the aftermarket reparability of the vehicles fitted with the new systems so that consumers will always have a choice in the aftermarket care of their vehicles and that aftermarket operators are not isolated from the technology.

These principles are enshrined in the Block Exemption Regulation (EC) 1400/2002 and in the 'Euro 5' Regulation (EC) 715/2007. However, it is important to note that whilst 'Euro 5' references ISO standards to regulate communication from off-board diagnostic test equipment to the on-board-diagnostic system for *emissions-related faults*, there is no such control of the communications which will be necessary for the intended Regulation on Safety systems. This would render the systems hard to repair in an independent multi-brand repair shop, inconveniencing the user and possibly jeopardising the maintenance and hence the effectiveness of the systems subject to the Regulation.

It might be the intention of the Commission to make reference to the requirements for the aftermarket as the Regulation nears completion, but the purpose of our input at this time is to request the Commission to require ISO to extend the provisions for emission-related standards to encompass the needs of this Regulation and indeed other non-emission-related systems in the expectation that such standards might be ready for implementation in 2011.

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**AIRC - CECRA - EGEA - FIA - FIGIEFA**

The standards concerned are:

Road vehicles – Communication between vehicle and external equipment for emission-related diagnostics

ISO 15031-1 - Part 1: General

ISO 15031-2 - Part 2: Terms, definitions, abbreviations and acronyms.

ISO 15031-3 – Part 3: Diagnostic connector and related electrical circuits

ISO 15031-4 – Part 4: External Test Equipment

ISO 15031-5 – Part 5: Emissions-related diagnostic services

ISO 15031-6 – Part 6: Diagnostic trouble code definitions

This proposal will have the effect that:

By Part 2 the terms used to describe components of new systems will be standardised across the industry making the implementation of the OASIS format or any equivalent metadata based search for the retrieval of information from manufacturer's web sites more efficient.

By Part 3 a requirement to use the standard diagnostic connector will apply for all systems. This connector is normally used but manufacturers are not under any obligation to use it for other than emission-related communications. The use of other non-standard connectors would pose serious barriers to the aftermarket

By Part 4 the necessary requirements for a diagnostic tester to communicate with the new systems will be documented for implementation by the makers of generic diagnostic test tools.

By Part 5 the diagnostic services required for the new systems will be documented.

By Part 6 the trouble codes for other than emission-related faults will be specified and thereby standardised. At present manufacturers are under no obligation to use common fault codes for common faults for non-emission-related problems.

It may be the intention of the Commission to reference the UN Regulations in particular the GTR for Heavy Duty Vehicles which references ISO PAS 27145 for communication between an off-board diagnostic tester and on-board systems. It is appropriate to require ISO, in this case through the UN, to ensure that this standard, which is also currently specific to emission-related diagnostics, also addresses diagnostics on all vehicle systems.

Vehicle manufacturers may propose to adopt other communication protocols (e.g Bluetooth, WLAN) for the new technologies referred to in the consultation document. Again we request that early consideration is given to the aspect of aftermarket repair so that where it is appropriate to standardise such protocols, the relevant standardisation body may be so tasked in good time.

AFCAR co-ordination secretariat



<sup>1</sup> **AFCAR** (Alliance for the Freedom of Car Repair in the EU). Members of AFCAR are Airc (Vehicle Body Repairers), CECRA (Motor Traders and Repairers), EGEA (Garage Equipment and Diagnostic Tools Producers), FIA (Tourism and Motorist Clubs) and FIGIEFA (Independent Automotive Aftermarket Distributors)

**ANEC Response:****Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

ANEC welcomes the opportunity to contribute to this public consultation regarding a new regulation on advanced safety features and tyres. In the past, we have expressed disappointment at the lack of transparency and restricted consultation for Commission activity in the area of transport and traffic safety. This public consultation exercise is thus welcomed.

In principle we support legislation on safety measures and requirements that will contribute to road casualty reductions and reductions in CO<sub>2</sub> emissions. This is in the interest of all consumers.

Simplification of regulatory regime is also a good goal, with potential benefits for manufacturers and consumers alike. By shifting all rule making to Geneva (UNECE level), processes are simplified. However, by the time a common European position reaches discussion in Geneva, it is often too late for European consumers to have any input or influence on the block European view or vote. This makes it even more important that consumers are involved in the pre-Geneva consensus process in Brussels (EU level).

We agree in principle that tyre improvements to reduce CO<sub>2</sub> emissions suggested in the consultation document should not compromise on minimum safety requirements.

In terms of the specific safety measures discussed in the consultation document, ANEC strongly supports making Electronic Stability Control (ESC) mandatory for light and heavy commercial vehicles. The safety benefits of ESC have been proven in accident studies all over the world. We moreover believe that there is relatively little extra effort required for manufacturers to equip their vehicle fleet with this technology. Thus, we support the mandatory installation of ESC for all categories of M and N class vehicles without any exemptions.

From the consumer point of view, implementation of ESC technology is already taking a long time. Given that equipping new car fleets with this technology is relatively straightforward, and that the Global Technical Regulation (GTR) on ESC

will be adopted in 2008, 2011 as a target for new car models to be fitted with ESC is definitely achievable. In fact, ANEC would prefer the deadline to be earlier, more in line with the timeframe of the Commission co-sponsored GTR.

The consultation document also describes other advanced safety systems, such as automatic emergency braking and lane departure warning systems. The assumption is made that there is a favourable cost-benefit analysis for both systems. ANEC is reluctant to propose a time scale for the mandatory introduction on such systems. These are two different technologies, and not comparable to ESC, thus without any underlying cost-benefit information or accident data, supporting these proposed long term measures is not prudent.

In summary, ANEC is supportive of the Commission's proposal for a Regulation on advanced safety features and tyres, with the goal of increasing safety and improving environmental efficiency.



**NOTE DES AUTORITES FRANÇAISES**  
**SUR LA CONSULTATION DE LA COMMISSION EUROPEENNE RELATIVE A UNE REGLEMENTATION DU**  
**PARLEMENT EUROPEEN ET DU CONSEIL SUR LES PNEUMATIQUES**

**A. EMISSIONS DE BRUIT DE ROULEMENT**

Le rapport FEHRL consiste en une étude approfondie de la situation en matière d'homologation des pneus vis-à-vis du bruit de roulement. Il propose beaucoup de modifications à la directive 2001/43/EC, visant à améliorer son efficacité en terme de baisse du bruit de roulement émis par la circulation et d'exposition de la population au bruit.

Dans la présente note, certaines des propositions (visées avec leur numéro de référence tel qu'au chapitre 8 du rapport FEHRL) sont brièvement décrites, et des commentaires y sont apportés avec autant de justification que possible. **Les autorités françaises sont favorables aux conclusions du rapport FEHRL**, et cette note tente de compléter les arguments du FEHRL avec quelques données externes (sans répéter celles déjà discutées dans le rapport).

Remarque préliminaire :

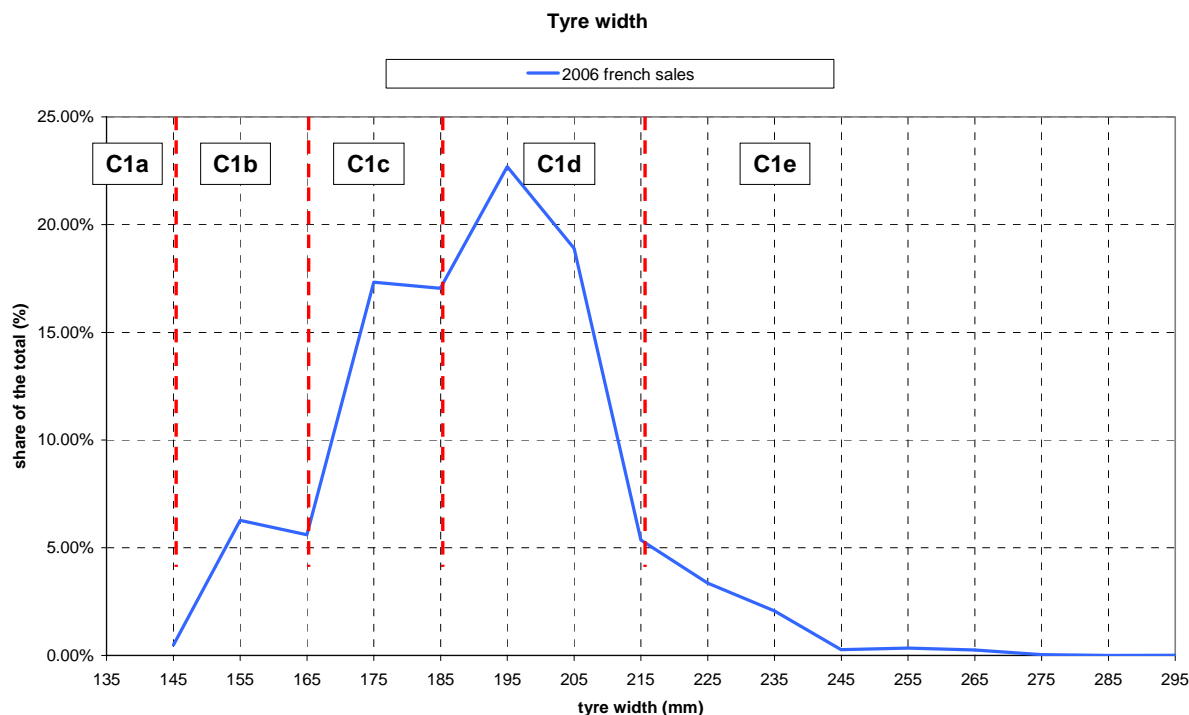
Il est rappelé que selon la littérature (par exemple Michelin, "Acoustique et techniques" 2003), le bruit de roulement peut être attribué au pneu (40%), au revêtement routier (47%) et au couplage des deux à raison de 13%. Par conséquent, **travailler séparément sur le pneu améliore globalement le niveau de bruit de roulement, indépendamment des caractéristiques des revêtements routiers.**

- **article n°5 : "environ 50% de pneus actuels montrent des niveaux de bruit qui se situent au moins 3dB(A) en-dessous des limites en vigueur" :**

Ce résultat démontre que le niveau d'exigence actuel de la directive ne constitue pas une contrainte significative pour le développement d'un pneu. Cet aspect paraît tout à fait cohérent avec les insuffisances de la diminution du bruit de circulation. Néanmoins, il conviendrait de garder à l'esprit que la directive vise tous les types de pneus neufs, mais que deux effets modifient les émissions de bruit des pneus pendant leur vie : le vieillissement conduit à une plus grande rigidité de structure, ce qui rend le pneu plus bruyant, tandis que l'usure tend à réduire le niveau de bruit pour un pneu donné.

- **article n°8 : modification de classification des largeurs de pneus.**

Cette proposition semble correspondre à l'évolution actuelle du marché, car les pneus s'élargissent notamment avec le développement de voitures plus grandes, plus lourdes et plus puissantes. A titre d'illustration, le graphique suivant montre la distribution des largeurs de pneus dans les ventes françaises de voitures en 2006 :



Ce graphique prouve que les anciennes classes C1a, b et c représentent maintenant moins d'un tiers du marché français. Ces classes peuvent donc être regroupées, comme proposé dans le rapport.

Il conviendrait d'observer que si le niveau de bruit réellement mesuré augmente globalement avec la largeur de pneu (d'après le rapport FEHRL mais également d'après la littérature), le rapport FEHRL n'apporte pas la preuve que la pression technologique due aux différents seuils de bruit de roulement est identique sur les pneus étroits et larges.

Il ne démontre pas non plus que les pneus larges ont une moindre contribution dans le bruit du trafic. Cette question est d'une grande importance en ce qui concerne la justification de maintenir des classes de largeur dans la directive (pour pneus C1 au moins) : pourquoi pas une limite unique à respecter pour toute largeur de pneu... ?

**- articles n°9 et 22 : réduction des seuils de niveau de bruit (valeurs limites et méthode d'essai) :**

Il est proposé deux modifications : simplifier la règle d'arrondi des chiffres bruts mesurés et diminuer le niveau de bruit maximum. La première se justifie par les améliorations apportées dans la fiabilité et la précision des appareils de mesure et est en conformité avec la directive révisée relative à l'émission sonore des véhicules à moteur. La seconde vise à faire progresser le développement de pneus silencieux. Le rapport FEHRL indique que 68% des pneus « dernier cri » mesurés respectent déjà les valeurs proposées pour 2008, et 25 à 41% les valeurs proposées pour 2012.

Par ailleurs, les autorités françaises ne disposent d'aucune donnée valable au sujet de l'approche coûts-bénéfices en matière de bruit de roulement émis par les pneus. Toutefois, l'effet attendu d'une réduction des seuils par pneu est évalué dans le rapport FERHL, en terme d'exposition de la population, aux abords des infrastructures ; ces évaluations montrent un bénéfice intéressant.

- **article n°10 : application des valeurs limites proposées aux pneus rechappés et de remplacement**

Vu les différences dans la durée de vie entre les véhicules et les pneus, ceci semble nécessaire pour atteindre l'efficacité de la réduction de bruit. Par conséquent, les exigences portant sur les pneus de première monte doivent obligatoirement porter aussi sur les pneus utilisés au cours de la vie des véhicules, c'est-à-dire les pneus rechappés et autres pneus de remplacement.

- **article n°11 : la définition des pneus "spéciaux" doit être clarifiée**

Comme il est proposé d'augmenter la limite de bruit pour les pneus spéciaux, certaines mesures doivent être prises pour s'assurer que l'utilisation sur-route de tels pneus est limitée à une part négligeable du trafic.

- **articles n°12 et 13 : la suppression des classes spécifiques pour pneu « hiver » ou « renforcé »**

La base de données de mesures examinée pour l'étude FEHRL n'a pas montré de différence significative des niveaux de bruit entre les pneus « hiver », « été » et « renforcés ».

De plus, une part croissante des voitures à grand volume (monospaces, SUV), qui sont souvent utilisées quotidiennement, nécessite aussi d'être équipée de pneus renforcés en raison de leur poids élevé. Ceci ne semble justifier aucune autorisation particulière à émettre plus de bruit et conduit donc à approuver la suppression de ces spécificités.

- **points 18 et 19 : l'introduction d'essais "garde-fou" pour vérifier que les pneus restent bons en terme de sûreté et de résistance au roulement**

Le rapport FEHRL montre que les émissions du bruit de roulement des pneus peuvent être réduites sans inconvénient pour la sécurité et pour la consommation d'énergie. Cependant, le rapport propose d'introduire des essais « garde-fous » sur ces performances.

En fait, il convient d'observer que ces préoccupations ne sont pas toujours de la même nature. Tout d'abord, pour les pneus de « première monte », la sécurité (comportement routier) est une performance sur laquelle la concurrence s'exerce déjà naturellement à partir du seul point de vue de fabricant de voiture, tandis que l'émission de bruit dans l'environnement ne peut être limitée que par la réglementation (le niveau de bruit à l'intérieur de la voiture est une performance concurrentielle, mais n'est certainement pas conditionnée par les mêmes paramètres). Comme le comportement routier est étroitement surveillé par le fabricant de véhicules, il y a peu de risque pour que le fabricant de pneus développe des pneus silencieux mais dangereux.

Cela étant, la vérification des prestations « tenue de route » sur les pneus de remplacement ne présente sans doute pas le même enjeu pour les seuls fabricants de pneus, bien que de tels pneus soient souvent fabriqués de la même manière que ceux de « première monte ». Ainsi, ce sujet pourrait mériter une étude complémentaire pour conclure.

Quant à la résistance au roulement, des garde-fous ne sont vraisemblablement pas nécessaires car les réglementations sur le bruit et la résistance au roulement ne sont pas antagonistes.

- **articles n°20 et 28 : le marquage des pneus**

Cette proposition semble être une bonne manière de sensibiliser les consommateurs à leur impact sonore sur l'environnement. En particulier, à l'occasion du choix de pneus de

remplacement, cela ajouterait quelques données informatives aux paramètres de choix. La question d'un surcoût dû à ce marquage semble un peu étonnante, si l'on considère que la directive s'applique aux nouveaux pneus à commercialiser, qui font justement l'objet de divers marquages, dans tous les cas. Cependant, un marquage sur l'émission sonore exigerait une méthode d'essai solide (il faut garder à l'esprit l'actuelle variabilité forte des résultats selon les sites d'essai...). Le marquage avec un niveau absolu (au lieu d'un simple étiquetage pour « faible émission sonore ») semble plus significatif car il accentuerait tout effort fait par des fabricants de pneu vers des produits encore plus silencieux. Une simplification pourrait cependant être trouvée sous la forme d'un code compréhensible par tous les usagers.

- **points 22 et 23 : modification de la méthode d'essai :**

Cette proposition s'ajoutant à la méthode d'arrondi des chiffres mesurés, il est proposé de définir avec plus de précision le véhicule d'essai et la surface d'essai (censés être responsables d'une partie de la dispersion des mesures).

Cette proposition a du sens si elle vise bien la dispersion des résultats (d'un site d'essai à l'autre, par exemple, celle-ci est supposée atteindre 7dB(A) d'après une communication Michelin de février 2007), mais ne serait pas justifiée pour seulement mieux représenter les revêtements routiers des pays européens, car le revêtement moyen varie fortement d'un pays à l'autre (et dans un pays donné, entre les différents réseaux : autoroutes / routes principales ou secondaires / réseaux urbains...).

Il est également suggéré que la méthode d'essai inclue une mise à jour du modèle de correction de la température, en prenant en compte la température de l'air au lieu de la température de couche de surface : ceci semble contribuer à la réduction de dispersion, étant plus près des phénomènes physiques.

La proposition inclut également :

- l'essai de pneus usagés : ceci semble se rapprocher de l'utilisation en « situation réelle » (les pneus utilisés pourraient être plus bruyants que les neufs – cf. point évoqué plus haut sur l'antagonisme entre l'usure de la sculpture et la rigidité en vieillissant)
- l'utilisation d'essais sur rouleaux ou de mesures rapprochées : de telles méthodes devraient être approfondies, s'éloignant de la situation "réelle" mais permettant une caractérisation plus fine du pneu lui-même (la méthode de la directive actuelle restant sous l'influence du choix du véhicule et de la configuration d'essai, de la surface d'essai, ou du modèle de correction de la température, comme mentionné ci-avant)
- la prise en compte des vitesses inférieures : avant d'ajouter à la réglementation actuelle des mesures à plus faibles vitesses, il conviendrait de justifier le besoin (y a-t-il des risques que la comparaison des performances sonores entre pneus dépende de la vitesse ?), et d'évaluer le bénéfice attendu.

## **B. EMISSIONS DE CO2**

Question 1 : les valeurs limites de bruit et de résistance au roulement proposées aux annexes 1 et 2 sont elles a) suffisante b) réaliste ? Existe-t-il une approche alternative viable ?

Sur la base des données présentées lors de la conférence organisée par l'Agence Internationale de l'Energie en 2005 sur les pneumatiques efficaces en termes d'énergie ([http://www.iea.org/Textbase/work/workshopdetail.asp?WS\\_ID=227](http://www.iea.org/Textbase/work/workshopdetail.asp?WS_ID=227)) et de notre propre



expérience, les limites de résistance au roulement présentées en Annexe II ne semblent pas suffisamment ambitieuses dans le cadre de l'approche intégrée.

Concernant les valeurs limites d'émission, 13.5 kg/t signifierait qu'une part très faible des types de pneumatiques ne pourraient plus être approuvés, essentiellement dans le segment des pneumatiques de faible diamètre, où l'offre est très importante, et tout spécialement pour les pneumatiques STH. En conséquence, les autorités françaises pourraient soutenir une valeur limite de résistance au roulement de 12 kg/t mais contestent les deux ans de délais supplémentaires accordés.

De plus, il apparaît que plus le pneumatique est large, plus faible est sa résistance au roulement. Une valeur limite de résistance au roulement unique pour tous les types de pneumatique favoriserait donc les pneumatiques larges, sans justification économique ou environnementale. **En conséquence, les autorités françaises soutiennent fermement une modulation de la valeur limite dépendant du diamètre extérieur du pneumatique**, la valeur de 12 kg/t étant réservée par exemple pour les pneumatiques dont le diamètre extérieur est inférieur à 600 mm.

Concernant l'étiquetage des pneumatiques en fonction de leur résistance au roulement, le segment D est apparemment inutile et devrait en conséquence être défini en fonction de la tendance que le marché devrait adopter. En effet, cet étiquetage devrait favoriser les pneumatiques les plus écologiques et non être basé sur la répartition actuelle des types de pneumatiques, afin d'assurer une pérennité au dispositif. La définition de segment AA et AA+ dans le domaine de l'électroménager est une preuve de cette nécessité de pérennité. De plus, de même que pour la valeur limite de résistance au roulement, l'étiquetage devrait dépendre du diamètre extérieur du pneumatique, de manière à ne pas favoriser les pneumatiques larges sans justification. Enfin, il n'y a aucune justification pour que ce système ne contienne que 4 segments, le public étant habitué à des étiquetages à 7 segments, même dans le domaine de l'étiquetage des véhicules. Un étiquetage à 7 segments résoudrait de plus le premier problème soulevé concernant l'évolution du marché.

**En conséquence, les autorités françaises soutiennent la définition d'un système d'étiquetage plus ambitieux, à 7 segments, et prenant en compte le diamètre extérieur du pneumatique.**

Question 2 : existe-t-il une justification pour une exemption partielle ou totale de certaines catégories de pneumatiques ?

Les exemptions sont souvent nécessaires dans ce type de réglementation du fait de besoin spéciaux ou d'utilisation spécifique. Néanmoins, les critères d'exemption proposés n'ont pas encore pu être étudiés.

Question 3 : les TPMS devraient-ils être rendus obligatoires ? Quel degré de précision est nécessaire afin qu'ils soient efficace dans le maintien de la pression du pneumatique optimale ?

**Les autorités françaises soutiennent l'introduction obligatoire des TPMS pour les nouveaux véhicules**, avec un degré de précision minimum de 20 % comme proposé.

## Traduction de courtoisie

### **French authorities' comments on Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

#### **A. ROLLING NOISE EMISSIONS**

The FEHRL report consists in an in depth study about the situation of tyres rolling noise homologation. It proposes many modifications to directive 2001/43/EC, aiming at improving its efficiency in terms of decreasing traffic rolling noise and public noise exposure.

In the following note, some of the proposals (referred to with their reference number in chapter 8 of FEHRL report) are shortly described, and comments are given with as many justifications as possible. **French authorities are in favour of the conclusions of the FEHRL report**, and this note tries to complete the FEHRL arguments with external data (without repeating those already discussed in the report).

#### Preliminary remark

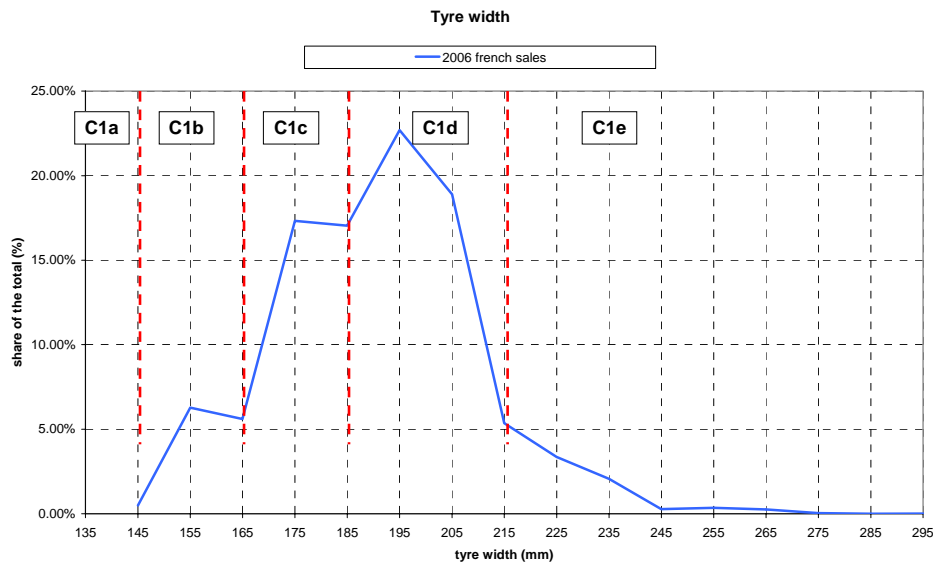
It is reminded that according to literature (e.g. Michelin, "Acoustique et Techniques" 2003), the rolling noise can be attributed to the tyre (40%), to the road surface (47%), and to the coupling between both at 13%. Therefore, **working separately on the tyre does improve globally the rolling noise level, independently of the road surface characteristics.**

- **Item n°5: "about 50% of present tyres show noise levels 3dB(A) or more below current limits":**

This result demonstrates that the current level of the directive is not a dimensioning constraint for tyre development. This appears to be in line with the lack of noise decrease of the traffic. Nevertheless, it should be kept in mind that the directive addresses all types of new tyres, but that two effects modify tyres noise emissions during its life: aging leads to higher structural stiffness making the tyre noisier, whereas wear tends to reducing noise level for a given tyre.

- **Item n°8 : modification of tyre width classification :**

This proposal appears to be corresponding to present evolution of the market, as tyres are getting wider as cars grow in size, weight, and powertrain performances. As an illustration the following graph shows tyre width distribution in French car sales in 2006:



This graph shows that the former classes C1a, b and c are now aiming at less than one third of the French market. These classes can therefore be gathered, as proposed in the report.

It should be noticed that if the actually measured noise level is globally increasing with tyre width (from FEHRL report but also from literature), the FEHRL report does not bring evidence that the technological pressure due to different rolling noise thresholds is the same upon narrow and wide tyres.

Nor does it demonstrate that wide tyres are of lower contribution in traffic noise...This question is of great importance regarding the justification of maintaining width classes in the directive (for C1 tyres at least): why not a single threshold to be reached for any tyre width...?

**- Items n°9 and 22: reducing noise level thresholds (limit values and test procedure):**

Two modifications are proposed: simplifying the rounding of the raw measured figures, and decreasing the maximum noise level. The former is justified by the improvements made in the robustness and accuracy of measuring devices and is in line with the revised directive for motor vehicle noise emission. The latter is aiming at inducing progress in the silent tyre development. The FEHRL report indicates that 68% of measured state-of-the-art tyres already respect the proposed values for 2008, and 25 to 41% the proposed values for 2012.

Moreover, French authorities do not have any valuable data concerning the benefits and costs approach for tyres rolling noise. However the expected benefice of a threshold abatement on tyres was assessed in FEHRL report. This assessment of the evaluation of public noise exposure with Harmonoise and TraNECam prediction models shows an interesting benefit.

**- Item n°10: applying the proposed limit values to retreated and replacement tyres :**

Considering the differences in lifespan between vehicles and tyres, this appears to be necessary to reach expected noise reduction efficiency. Consequently, the requirements relating to original tyres also have to apply to the tires used during the whole lifespan of the vehicles, i.e. the retreated tyres and other replacement tyres.

**- Item n°11: definition of “special” tyres needs to be clarified**

As an increased noise threshold is proposed for special tyres, measures are to be taken to ensure that on-road use of such tyres is limited to a negligible share of the traffic.

- **Items n°12 and 13: suppressing the specific “winter” or “reinforced” tyre class**

The measure database examined during FEHRL study did not show significant difference in noise level between winter, summer and reinforced tyres.

Moreover, an increasing share of high volume cars (monospaces, SUV), which are commonly used on a daily basis, need to be equipped with reinforced tyres because of their high weight. This does not seem to justify any allowance for being noisier and therefore leads to approve the suppression of these specificities.

- **Items 18 and 19: introducing “safeguard” tests to check that tyres remain good for safety and rolling resistance**

FEHRL report shows that rolling noise emission on tyres can be reduced without inconvenient on safety and energy consumption. However this report proposed to introduce “safeguard” tests on these performances.

In fact, we have to note that these concerns are not always of the same nature. Safety (car handling) is a performance that is competitive from the car manufacturer point of view, whereas noise emission towards environment is only limited by regulation (noise level inside the car is a competitive performance, but is definitely not driven by the same parameters). As car handling is closely monitored by the car manufacturer, there are only a few risks for tyres manufacturer to develop silent but dangerous tyres.

However, about replacement tyres, this question may not represent the same stake for the tyres manufacturers, although such tyres are often manufactured the same way as original ones. So this issue might deserve a complementary study to conclude here.

As for rolling resistance, safeguards may not be necessary as regulations on noise and rolling resistance do not oppose.

- **Items n°20 and 28 : labelling of tyres**

This proposal appears to be a good way to sensitize customers to their noise impact to the environment. In particular, when choosing replacement tyres, this would add some meaningful data to the choice parameters. The question of over-cost due to this labelling appears to be surprising, considering the fact that the directive apply to new tyres to market, which must precisely show various information, in any case. However, a noise level labelling would require a robust test procedure (keeping in mind the actual unsatisfactory situation on the topic of test site results dependency...). A labelling with absolute level (instead of a “low noise” flag) seems more meaningful as it would highlight every effort made by tyre manufacturers towards even more silent products. A simplification can however be found by using a code understandable by common users.

- **Items 22 and 23 : modifying the test procedure:**

Added to the measured figure rounding method, it's proposed to specify more precisely the test vehicle and test surface (supposed to be responsible for part of measurements dispersion).

This is meaningful if addressing the results dispersion (from a test site to another for

example, said to reach 7dB(A) according to a Michelin publication in February 2007), but shall not be justified only to better represent the road surface of European countries, as the average road surface is strongly varying from one country to another (and between areas in a given country: highways / roads / urban streets...).

It's also suggested that the test procedure includes up-to-date temperature correction model, taking into account the air temperature instead of road surface temperature: this appears to be contributing to dispersion reduction, being closer to the physical phenomena.

The proposal also includes:

- Testing of worn tyres: this seems to get closer to “real-world” situation (worn tyres might be noisier than brand new ones, see above the contradiction between wear and stiffness when aging)
- Use of test drums or close proximity measurements : such methods should be further investigated, getting away from “real-world” situation but allowing specific characterization of the tyre itself (the present directive method being influenced by the choice of test vehicle and configuration, the test surface, or the temperature correction model, as mentioned before)
- Including lower speeds: before adding lower speed measures to actual regulation, it would be necessary to justify the need (are there risks that the noise comparison between tyres is speed-dependant?), and to assess the expected benefit (if the public exposure to traffic noise is driven by tyre rolling noise at low speeds, the motor vehicle noise regulation should be examined in accordance: at present the latter is driven by powertrain noise at speeds lower than tyre rolling noise).

## B. CO<sub>2</sub> EMISSIONS

Question 1: are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient b) realistic? Is there a viable alternative approach, for example, trading off noise requirements for rolling resistance requirements under certain circumstances?

Based on some data discussed during the International Energy Agency's workshop on energy efficient tyres in 2005 ([http://www.iea.org/Textbase/work/workshopdetail.asp?WS\\_ID=227](http://www.iea.org/Textbase/work/workshopdetail.asp?WS_ID=227)) and on our own experience, the rolling resistance limits in Annex 2 do not seem ambitious enough in the framework of the integrated approach.

Concerning the issue of maximum values, 13,5 kg/t would mean that a really low percentage of tyre types would not be approved any more, mainly in the low diameter range where offer is numerous, and especially for STH tyres. In consequence, the French authorities could support the introduction of a 12 kg/t limit value but do question the two years lead time granted.

Moreover, it appears that the wider the tyre is, the lower is its rolling resistance. A unique limit value for all types of tyre would reward wide tyres, without any economic or environmental justification. **As a consequence, the French authorities strongly support a modulation of the limit value, depending on the external diameter of the tyre**, the 12 kg/t limit value being only for the less than 600 mm tyre types for example.

Concerning the RR labelling, the D band is obviously useless and should therefore be designed in a more representative way of the way the market should evolve towards. As a matter of fact, this labelling should reward the green tyres and not be based on the current repartition of tyre types, to ensure a long term perspective. The design of AA and AA+ bands in the household sector is a piece of evidence of this long term perspective need. Moreover, as for the limit value, the grading should depend on the external diameter of the tyre, in order not to reward wide tyres without any justification. Last, there is no justification for a specific 4 band labelling in this sector, the public

being used to 7 bands labelling, even in cars labelling. A 7 bands labelling would solve the first issue raised on the evolution of the market.

**In consequence, the French authorities support the definition of a more ambitious 7 bands labelling scheme, taking into account the external diameter of the tyre.**

Question 2: is there any justification for partial or complete exemption for particular categories of tyre from the noise or rolling resistance requirements?

Loopholes are often needed in that kind of regulation because of special needs and specific use. However, the exemption criteria proposed have not been studied yet.

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 French authorities support the mandatory introduction in new vehicles of TPMS, with a degree of accuracy of, at least, 20 % as proposed.**

## **Contribution to the public consultation**

### **1. The way forward**

*To save CO<sup>2</sup>, retreading of tyres should be promoted. 45% of the tyres on commercial vehicle market are Retreads. On average, every retread manufactured saves 68 litres of Oil and 44 Kilograms of rubber compound. To achieve a high level of recycling tyres must pass the same specifications as that of new tyres and be used in the same applications. The present anomalies such as retreaded tyres can be fitted to new vehicles at present, after the introduction of the "Whole Vehicle Type Approval" and no provision being made for the inclusion of retreads, retreads will not be able to be fitted and would have to be removed. It is not possible to say on one hand that a retread is equivalent to a new tyre and then constrain its use. Customer choice has/will be removed by only allowing new tyres to be fitted as original equipment. The consumer has the right to choose an environmentally, fuel efficient product.*

### **2. Specification criteria**

- a. *Physical testing of the integrity of the tyre.  
This is currently covered by ECE108 and 109 which have proved effective in its present use.*
- b. *Noise regulations  
Remoulded tyres should pass the same specification for noise as new tyres.*
- c. *Rolling Resistance  
All tyres should be marked with a number indicating rolling resistance for the customer to choose. Some customers may prefer deeper, more aggressive treads which will sacrifice fuel usage; others may see fuel usage as their priority. This is for customer choice in a very similar manner to refrigerators (household "White" goods).*
- d. *Wet grip  
This applies much more to passenger tyres than truck tyres. There is with modern trucks very little problem with road holding.*
- e. *Pressure regulation and indication  
With commercial vehicles tyres running under inflated greatly increases the tyre wear and the fuel consumption so any technology to improve this would be welcome.*

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The Commission should speed up the process of decision making about the noise requirements of tyres, and not wait till the requirements for the other issues are operational and ready for adoption into new regulation.

1. I agree with the Commission that the advances in tyre technology are sufficient for a significant tightening of the noise limits for tyres. In general the limits proposed by FEHRL are sufficient. For the tyres in the higher width range (like for SUV's) however they seem to be too liberal.

There is no alternative approach to lower the noise of the traffic because tyres are the dominant noise source by vehicle speeds above 30-40 km/h. This applies to traffic on main streets and highways where the severe noise problems occur.

The local authorities can use silent road surfaces, but the benefit of those surfaces alone is often not enough to reach an acceptable noise quality. I remind that with the present weak limits the Commission share responsibility for unnecessary health effects and costs for noise abatement which are made by the governments and the local authorities. Because noise is highly related with health the governments must protect their citizens, including the European Union which is responsible for the requirements for vehicles and tyres. All the available studies show there is no trade off between rolling resistance and noise. So there is not any justification for a scientific argument for a trade off.

2. In general there is no justification for exemptions.

Yours sincerely,

Erik Boons



**Stellungnahme Bundesverband Güterkraftverkehr Logistik und Entsorgung (BGL) e.V., Frankfurt am Main, zum Consultation Paper „on Advanced Safety Features and Tyres“**

**"Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres"**

Der Bundesverband Güterkraftverkehr Logistik und Entsorgung (BGL) e.V. vertritt als größter Branchenverband in Deutschland ca. 11.000 Transport- und Logistikunternehmen, die in 18 Landesverbänden organisiert sind. Insofern ist das Consultations-Papier „on Advanced Safety Features and Tyres“ für uns von großem Interesse.

Das Konsultationspapier widmet sich den Kernthemen „Typgenehmigungen“ und „Sicherheitsausstattung von Fahrzeugen“.

Der Teil „Typgenehmigungen“ betrifft vornehmlich Fahrzeug- und Komponentenhersteller. Daher möchten wir uns in unserer Stellungnahme auf die Thematik „Sicherheitsausstattung von Fahrzeugen“ beschränken.

Für Nutzfahrzeuge werden im Konsultationspapier konkrete Ausstattungskomponenten zur Erhöhung der Verkehrssicherheit und zur Reduktion des CO<sub>2</sub>-Ausstoßes empfohlen. Diese Zielsetzung sollte auch nach Auffassung des BGL mit oberster Priorität weiter vorangetrieben werden.

Der BGL begrüßt, dass die Kommission eine zentrale Forderung des deutschen Güterkraftgewerbes aufgreift. Bereits zu Beginn der deutschen Ratspräsidentschaft, die einen Schwerpunkt auf die Verbesserung der Verkehrssicherheit gelegt hatte, hat der BGL die obligatorische Einführung neuer, erfolgreich erprobter Sicherheitstechniken für schwere Nutzfahrzeuge gefordert. Nach unserer Auffassung ist nur mit gesetzlich vorgegebenen Standards das Ziel einer möglichst schnellen Verbreitung neuer Sicherheitstechniken zu erreichen. Kleine und mittelständische Unternehmen können im europäischen Wettbewerb diese Sicherheitstechnik nicht „gegen den Markt“ bei immer noch zu hohen Preisen für sicherheitstechnische Sonderausstattungen für schwere Nutzfahrzeuge durchsetzen.

Der BGL ist jedoch davon überzeugt, dass bei einer gesetzlich vorgeschriebenen serienmäßigen Ausstattung schwerer Nutzfahrzeuge mit neuen Sicherheitssystemen die Kosten auf Seiten der Hersteller drastisch gesenkt werden können. Auf diese Weise könnten die Fahrzeugindustrie und die Transportunternehmen im Interesse der Verkehrssicherheit eine „Win-Win-Situation“ schaffen.

Zu den im Dokument unter 5.1 genannten Anforderungen für Reifen möchten wir an eine ganzheitliche Betrachtung appellieren. Aus unserer Sicht darf eine Optimierung bestimmter Reifeneigenschaften nicht zu Lasten anderer erfolgen. Sicherheitsaspekte müssen weiterhin höchste Priorität erhalten.

Zu „5.1.1 Abrollgeräusche / Rolling Noise Emissions“ möchten wir anmerken, dass es sicherlich wichtig ist Geräuschemissionen zu reduzieren. Eine Typprüfung erfolgt auf einem definierten Fahrbahnbelag und basiert somit auf einer ganz bestimmten „Materialpaarung“. Betrachtet man jedoch die Tatsache, dass in der Praxis unterschiedlichste Fahrbahnbeläge bzw. Oberflächenbeschaffenheiten gegeben sind, stellt sich die Frage, wie repräsentativ und praxistauglich solche Maßnahmen sein können.

Die in den Punkten „5.1.2 Rollwiderstand / Rolling Resistance“ und „5.1.3 Reifendrucküberwachungssysteme / Tyre Pressure Monitoring Systems“ aufgeführten Inhalte können einen wesentlichen Beitrag zur Senkung des Kraftstoffverbrauches leisten. Zusätzlich sehen wir durch die Reifendrucküberwachungssysteme eine gute Möglichkeit, dem Fahrer zu signalisieren, dass sich sein Fahrzeug in einem auch unter Verkehrssicherheitsgesichtspunkten nicht einwandfreiem Zustand befindet. Kritischen Verkehrssituationen, z.B. hervorgerufen als Folge eines Reifenplatzens, könnte dadurch nachhaltig entgegengewirkt werden. Wichtig ist hierbei jedoch, für einheitliche Wirk- und Bedienvorschriften zu sorgen.

Zu Punkt „5.2 Hochentwickelte Fahrzeugsicherheitssysteme / Advanced Vehicle Safety Systems“ möchten wir nochmals unterstreichen, dass wir die darin formulierte Intention sehr begrüßen.

Welche Ausstattungskomponenten / Maßnahmen für welche Fahrzeugkategorien am effektivsten geeignet sind bedarf einer gesonderten Betrachtung. Auch ist zu prüfen, ob es Sinn macht, pauschal immer alle Fahrzeuge der Kategorien M, N und O (O mit einer zulässigen Gesamtmasse größer 3,5 t) in Betracht zu ziehen.

Es gibt spezielle Fahrzeuge und insbesondere Nutzfahrzeuge, deren spezifische Einsatzart ebenso spezifische Ausstattungen erfordert. Diese sind nicht immer oder noch nicht in Einklang mit neu entwickelten Sicherheitsfeatures zu bringen.

Der BGL unterstützt effektive Maßnahmen, um die Belastung des Verkehrs für Mensch und Umwelt zu verringern. Wesentliche Voraussetzungen hierfür sind einheitliche und verlässliche Vorschriften für Fahrzeugtypgenehmigungen, um für Hersteller und Betreiber planbare Rahmenbedingungen vorzugeben.

Frankfurt am Main, 15.10.2007

## Stellungnahme zum Consultation Document der EU-Kommission

Der Bundesverband Reifenhandel und Vulkaniseur-Handwerk e.V. (BRV e.V.) als legitimer Vertreter der Reifenfachhandels- und Vulkaniseurbetriebe in der Bundesrepublik Deutschland und damit des Reiferersatzgeschäftes in der Bundesrepublik Deutschland nimmt wie folgt Stellung:

Der BRV e.V. begrüßt den Vorschlag der EU-Kommission, das Reifen-Fahrbahn-Geräusch zu reduzieren und den Rollwiderstand von Reifen zu minimieren. Allerdings scheint uns bei der Fokussierung auf überwiegend umweltrelevante Eigenschaften von Reifen der Aspekt der Sicherheit zu kurz zu kommen. Darüber hinaus fehlen unseres Erachtens gänzlich Betrachtungen/Darstellungen von Zusammenhängen zwischen den umweltrelevanten Eigenschaften der Reifen, wie das Reifen-Fahrbahn-Geräusch und der Rollwiderstand, aber auch der Nasshaftung und den Fahrbahnbelägen, die einen maßgeblichen Einfluss auf diese haben.

Die FERL-Studie, die als Grundlage für das Konsultations-Dokument dient, kommt zu dem Ergebnis, dass keine Abhängigkeit zwischen umweltrelevanten und sicherheitsrelevanten Reifeneigenschaften bestehen.

Dies steht im deutlichen Widerspruch zu unseren Erfahrungen im Reiferersatzgeschäft und deren unserer Kunden, also unserer Marktbeobachtung und zu den europaweit in der Fachpresse veröffentlichten Testberichten zu Reifen. Reifentests in den vergangenen Jahren zeigen eindrucksvoll und immer wieder deutliche Unterschiede in den einzelnen Reifeneigenschaften der verglichenen Fabrikate. Offensichtlich und für uns aus unseren praktischen Erfahrungen im Markt eindeutig nachvollziehbar, bestehen unabhängig vom Fabrikat Zielkonflikte bei der Auslegung von Reifen, so zum Beispiel auch insbesondere hinsichtlich Rollwiderstand, Nassbremsen und Geräusch.

### Absenkung der Reifen-Fahrbahn-Geräusche

Die vorgeschlagene Absenkung der bis dato gültigen Grenzwerte um 2,5 bis 5,5 dB(A) bei Pkw-Reifen und um 5,5 bis 6,5 dB(A) bei Lkw-Reifen erachten wir aus unseren Erfahrungen im Reiferersatzgeschäft heraus als unrealistisch, zumal - wie eingangs schon betont - insbesondere zu dieser Reifeneigenschaft die Darstellung des Zusammenhangs mit den in der Praxis existenten, vielfältigen Fahrbahnbelägen und deren signifikanten Einflüsse - getrennt auf Pkw-Reifen und Lkw-Reifen - völlig fehlt. Darüber hinaus sehen wir im Zielkonflikt zwischen der Absenkung der Abrollgeräusche von Reifen auf der Fahrbahn und der Nasshaftung, insbesondere bei Lkw-Reifen, - hier Traktionsprofile auf der Antriebsachse - die Gefahr der Beeinträchtigung der Sicherheit von Nutzfahrzeugen im Straßenverkehr, besonders bei schwierigen Straßenverhältnissen, wie zum Beispiel Nässe und Schnee.

### Rollwiderstand von Reifen

Wie bereits eingangs dargelegt, sehen wir auf Grundlage unserer Marktbeobachtung und der Vielzahl der vorliegenden Testberichte zu Reifen, in der einseitigen Einführung eines Gradingystems für den Rollwiderstand eine Nichtbeachtung des existenten Zielkonfliktes mit sicherheitsrelevanten Reifeneigenschaften, hier der Nasshaftung. Insofern müssten unseres Erachtens, um unseren Kunden - den Verbrauchern - eine objektive Entscheidungshilfe an die Hand zu geben, zwingend beide Kriterien berücksichtigt werden, der Rollwiderstand und die Nasshaftung, auch um keine Kompromisse bei der Sicherheit zuzulassen.

Da aufgrund der bestehenden Zielkonflikte eine gleichzeitige Einstufung eines Reifen in die beste der vorgeschlagenen Klassen (A) bei beiden Kriterien - Rollwiderstand und Nasshaftung - eher unwahrscheinlich erscheint, bleibt unseres Erachtens und aufgrund unserer Erfahrungen jedoch offen, ob solche, dann vielfältigen und komplexen Informationen (zum Beispiel in einer Matrix), neben anderen

Kriterien für die Kaufentscheidung, wie etwa der Preis, wirklich eine Hilfe für den mündigen Verbraucher darstellen.

Mit freundlichen Grüßen  
Hans-Jürgen Drechsler

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Hans-Jürgen Drechsler  
Geschäftsführer  
Bundesverband Reifenhandel  
und Vulkaniseur-Handwerk e.V.

My personal experience is that the current Tyre Pressure Monitoring Systems on the market (direct and indirect) do not respond to the customers need.

If for instance, an alert is given and one hour later, it disappears, what should the driver do? Is there something wrong or not? In consequence, I do not trust the TPMS any more.

In addition, the majority of filling stations have not the possibility to control the tyre pressure. I do not want to search for hours in order to find a pressure control device.

Christian Caspar  
Berlin, Germany

**PUBLIC CONSULTATION ON OUTLINE PROPOSALS FOR A NEW  
REGULATION OF THE EUROPEAN PALIAMENT AND OF THE COUNCIL  
ON ADVANCED SAFETY FEATURES.**

**ELECTRONIC STABILITY CONTROL**

1.- From the viewpoint of the CEA, we understand that the Stability Control System (ESP) is a safety mechanism which has proved helpful in saving lives, which lead to believe that in spite of its high cost, its installation should be considered mandatory without exception in vehicles of the M class used for people transport (M1, M2 and M3), as well as, for class N vehicles dedicated to the transportation of merchandise (N1, N2 and N3).

2.- We believe that the implementation period of 2011, whereby all new vehicles come equipped with ESP as part of the original equipment, shoul be brought forward in time.

J. Leon/18.10.07



## **PUBLIC CONSULTATION ON OUTLINE PROPOSALS FOR A NEW REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON ADVANCED SAFETY FEATURES AND TYRES**

With regard to the topics of this consultation, the Spanish research institute ***CENTRO ZARAGOZA***, with a wide experience in the field of traffic accident investigation, would like to express our fully support to the mandatory installation of ESC for all categories of M and N class vehicles, plus trailers over 3.5 tonnes, without any exemption. This system has well proved its efficacy reducing 'loss of control' accidents, and so saving lives, and we do not see any reason for limiting its possibilities by reducing its beneficial effect on certain vehicles.

We also consider that 2011 is a reasonable target for a requirement for new car models to be fitted with ESC.

Regarding the mandatory introduction of systems such as automatic emergency braking and lane departure warning, despite we are also in favour of the maximum diffusion of any new safety system which has proved its efficacy reducing accidents, we still have not information enough to set a reasonable time scale for their mandatory introduction.

Similar to the previous position is Centro Zaragoza's opinion regarding noise and rolling resistance of tyres and tyre pressure monitoring systems (TPMS). We fully support TPMS should be made mandatory in a short time, as it is a low cost and high efficacy system, but we do not have information to set the required accuracy of the system.



Bonjour,

Je suis Bernard DARNICHE, président de l'association Citoyens de la route, une association française dont vous trouverez la présentation jointe.

Sur le sujet de l'ESP en particulier, et en général sur tout ce qui concerne la sécurité active et passive, nous militons pour que les constructeurs ne puissent plus proposer aux citoyens usagers de la route des options dites de sécurité.

Et de ce fait inclure de série l'ESP sur tous les véhicules quels que soit leur catégorie ou leur définition.

Pour moi et mon organisation, rendre l'ESP obligatoire est indispensable et 2011 semble une date raisonnable, mais le plus tôt serait le mieux.

En espérant que nous serons nombreux à faire avancer ce projet.

Bernard DARNICHE

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**CLEPA reply to the Consultation on the  
Outlines for an EC Regulation on Advanced Safety Features and Tyres**

CLEPA welcomes the initiative of the EC Commission to draft an EC Regulation on one side mandating safety-related components and systems, and on the other side modifying the EC procedures and enhancing the links with the UNECE, by repealing EC Directives and replacing them by references to UNECE Regulations.

This initiative will improve road safety in Europe, and will improve the Regulatory environment in line with the conclusions of the CARS21 High Level Group and the recommendations of the EC Commission Communication of February 2007.

More specifically:

The proposed regulatory approach and scope of new Regulation

CLEPA supports the proposed outline and scope. To have the full benefit of the references to UNECE Regulations, CLEPA suggests that “dynamic” references are established, i.e. when a UNECE Regulation is amended, the relevant parts of the implementing EC Regulations are automatically updated as well as the relevant parts of the EC co-decision Regulation.

On the other hand, CLEPA is concerned by the long procedure of the EC to adopt new ECE Regulations (1 to 2 years!). CLEPA will welcome initiatives to reduce this delay.

Particular technical aspects

CLEPA supports mandating TPMS, as this feature has proven to improve road safety and to contribute to CO2 emission reduction. Other ways for reducing CO2 have been identified like low rolling resistance tires or improved chassis and brake functions. But to be fully efficient, these functions require the tire pressure to be constantly monitored with an adequate accuracy. 20% of accuracy is a minimum to get significant results. Any decision for a more severe accuracy will only have positive effects on tire wear and fuel consumption. The actual direct TPMS systems ensure today without problems this performance increase.

CLEPA also supports mandating advanced vehicle safety systems such as ESC and Automatic Emergency Braking Systems. For Lane Departure Warning Systems, we think it is to-day premature to give an answer on mandatory fitment. We estimate that for passenger cars and light duty vehicles, validated systems to cover most of the car park should be ready by 2014.

ESC has proven beyond doubt to provide important improvement to road safety. Exemptions for mandatory ESC may be considered for vehicles that require individual approvals. Preliminary studies, as outlined by the EC Commission, have demonstrated the potential fatalities and injuries savings of Automatic Emergency Braking Systems. If a favourable cost-benefit case can be made, they should be mandated.

With regard to the introduction dates:

- ESC for heavy duty vehicles and trailers over 3.5 tonnes: CLEPA recommends to adopt the dates agreed by the UNECE.
- ESC for light duty vehicles: 2011 for new types, requiring a legislative decision is available by mid 2009 at the latest.
- Automatic Emergency Braking Systems:
  - M3 and N3: 2010 for new types
  - M2 and N2: 2012 for new types
  - M1 and N1: 2014 for new types



European Commission  
Directorate General for Enterprise and Industry  
Automotive Industry Sector  
e-mail: [entr-vehicle-safety@ec.europa.eu](mailto:entr-vehicle-safety@ec.europa.eu)

**Statement of the Light.Sight.Safety-Initiative on the “Public consultation on outline proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres”**

Dear Sir or Madam,

The CLEPA Light.Sight.Safety.-Initiative (manufacturers of automotive lighting products for the motor industry: Automotive Lighting, GE, Hella, Osram, Philips, Valeo, and Visteon) hereby submits comments on the above-identified consultation paper.

The Light.Sight.Safety.-Initiative appreciates the initiative of the Commission to draft a regulation that mandates safety-related components and systems. The project will definitely contribute to more road safety in Europe, consequently bringing down the number of fatalities.

The Light.Sight.Safety.-Initiative approves of all safety measures, which demonstrably lead to more traffic safety. Therefore we encourage all activities that help to get such technologies (like DRL, ESC, ...) earlier on the road.

The Light.Sight.Safety.-Initiative also wants to use this opportunity to point out that according to several studies there is significant safety potential of innovative lighting solutions.

Partly different to other advanced safety systems, lighting in general supports directly the most basic sense of drivers. Investigations [1] clearly show that drivers perceive the clear majority of information (85-90% !) via their visual channel.

As already investigated, DRL increases the conspicuity (“to be seen”) of oncoming traffic and has the potential to reduce clearly the number of accidents during daytime. Now, improved head lighting technologies (e.g. Xenon light, AFS) offer the opportunity to increase safety at night, due to a longer and wider light distribution and a light color similar to daylight. These features contribute to a better and earlier recognition of unlit obstacles (“to see”), which again gives the driver more time to react in addition to the fact that night driving becomes less stressful and therefore less tiring.

All these advantages clearly contribute to the safety and comfort of driving during nighttime and hence are predestined to reduce the excessive number and severity of accidents at night.

A first study for Germany [2], which indicates a significant safety potential of improved head lighting technologies, has to be verified for other European countries regarding the targets of the European Road Safety Charter.

Furthermore, innovative lighting solutions in general (dedicated DRL, Xenon head lighting, LED signaling) give a positive contribution to the CO<sub>2</sub> reduction targets. The range of CO<sub>2</sub> reduction can vary between 1,3 g/km up to maximum 5 g/km – and this is accompanied by a big gain in safety.

All above mentioned technologies (DRL, ESC, ... and Xenon light) are available and proven since several years. So, from a safety point of view the mandatory deployment is desirable as soon as realistic.

Lex Krzyzanowski  
Chairman of the Light.Sight.Safety.-Initiative.

#### References:

- [1] M. Eckert, "Lichttechnik und optische Wahrnehmungssicherheit im Strassenverkehr"; Verlag Technik GmbH, Germany, 1993
- [2] <http://www.tuv.com/tib/mediadatabase/30924.pdf> or:  
H. Schäbe, F. Schierge „Investigation on the influence of car lighting on nighttime accidents in Germany“; ISAL conference, Darmstadt, 2007

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The Light.Sight.Safety. is an initiative under the umbrella of CLEPA.  
The objective of the initiative is to create more awareness and understanding to the safety, comfort and environmental aspects of good quality car lighting at end users (car drivers), carmakers as well as at relevant decision-making authorities.

#### Members:

- Automotive Lighting Reutlingen GmbH
- GE Consumer & Industrial Lighting
- Hella KGaA Hueck & Co.
- Osram GmbH
- Philips Automotive Lighting
- Valeo S.A.
- Visteon Corp.



Il Presidente

Roma, 10/10/2007

La CONFEDERTA AI è un'associazione italiana che rappresenta 2500 autoscuole ed è riconosciuta come Ente di comprovata esperienza nell'ambito della sicurezza stradale.

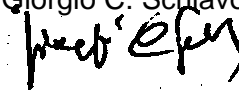
La Confedertaai, tramite alcune esperienze formative rivolte ai propri iscritti, ha potuto verificare l'importanza e l'utilità del sistema elettronico di controllo della sbandata ESP.

I test sono stati da noi effettuati su auto di piccola e media cilindrata ed anche su veicoli commerciali.

L'ESP permette di sostituire tutte quelle tecniche di guida e quegli automatismi che difficilmente un neopatentato può acquisire in breve tempo e metterebbe in condizione di miglior sicurezza anche automobilisti esperti.

Per noi si tratta di un sistema di sicurezza attiva che potrebbe permettere di evitare il prodursi di numerosi incidenti stradali anche mortali.

I titolari di autoscuola auspicano quindi un uso generalizzato dell'ESP su tutti i tipi di veicoli commerciali e non e ritengono fondamentale che entro il 2011 sia emanata una legge che ne renda obbligatoria l'installazione su tutti i veicoli di nuova costruzione.

Il Presidente  
Giorgio C. Schiavo  




Il Consorzio Nazionale Guida Difensiva rappresenta un gruppo di professionisti, esperti di educazione e sicurezza stradale, formatori e tecnici, scelti prevalentemente nel settore delle autoscuole.

Abbiamo messo insieme le nostre risorse professionali per dare il nostro contributo ad uno dei più drammatici problemi della società contemporanea: l'incidentalità stradale.

Il Consorzio Nazionale Guida Difensiva è la prima (al momento anche unica) realtà nazionale, nel campo delle autoscuole, in cui un gruppo così nutrito di imprenditori si consorzia per condividere obiettivi comuni e di particolare delicatezza.

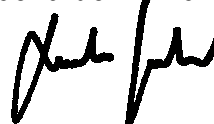
Una struttura che si propone, tra l'altro, come vera scuola di formazione, altamente specializzata in tecniche di guida e metodologie di istruzione.

La guida difensiva è una metodologia di istruzione alla guida rivolta ai neopatentati che gli fa acquisire, oltre alle corrette tecniche di guida, una mentalità più protesa alla prevenzione della situazione di pericolo. Inoltre, per la prima volta in Italia, questo gruppo di oltre 150 autoscuole, utilizza solo autovetture dotate di ESP ed ha inserito nel normale percorso formativo, alcune esercitazioni mirate ad evidenziare l'importanza di avere sull'auto tali dispositivi elettronici.

**Coerentemente a questa filosofia di lavoro, il Consorzio Nazionale Guida Difensiva spera che si possa arrivare quanto prima (entro il 2011) ad una disposizione di legge che imponga ai costruttori di veicoli leggeri (monovolumi, SUV, autovetture in genere) e di veicoli commerciali, l'installazione di serie dell'ESP.**

*Roma, 09.10.2007*

*Il Direttore Generale  
Leonardo Indiveri*





## **Contribution to the Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.**

The Continental Corporation is a leading automotive supplier of brake systems, chassis components, vehicle electronics, tires and technical elastomers with the aim of making individual mobility safer and more comfortable. In 2006 the corporation realized sales of EUR 14.9 billion. At present it has a worldwide workforce of around 89,000.

Continental is engaged in national and European research projects like SILENCE, Silent traffic, FORT and SAFE SPOT, just to name a few.

With the signature of the European Road Safety Charter in April 2007 by ETRMA - European Tyre and Rubber Manufacturers' Association - Continental committed as a member of this association to the Charter. At the end of October 2007, Continental will sign the European Road Safety Charter also as Company and provide new initiatives for reaching the ambitious goal of the European Commission.

Regarding the following questions on tyre issues we would like to refer in detail to the document sent by ETRMA (see corresponding contribution). Continental is fully in line with the comments made in that document as agreed by the European tyre industry.

Due to our company's product diversity and our target to increase safety by utilising the best technology available, we would also like to highlight some additional items in our contribution.

**Questions: *Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?***

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

As stated by ETRMA, we appreciate the intention of the European Commission and Parliament to reduce CO<sub>2</sub>-emissions by the combined efforts of the tyre and vehicle industry. Continental has been working in this direction for more than 25 years and today our tyres are among the leading products in tyre rolling resistance performance. We have committed ourselves to achieving further improvements in the next years.

There is however one significant concern we have with regard to the proposed regulation: Similar to many other technical products, the performance of tyres is influenced by many target conflicts. Concentrating on improving only one performance item like rolling resistance, will inevitably lead to a negative impact on one or more of the other performance criteria.

Promoting and creating awareness (e.g. by a tyre label) on a single performance criterion could lead to tyres being developed and placed in the market which, although fully fulfilling this one promoted criteria, may even be dangerous in another. Such tyres would be favoured, would distort the competition and could bring safety implications for the whole traffic situation in Europe. Recent experience with tyres imported into the EU support this point of view.

The main task of the tyre development is to achieve the best compromise in all performance criteria.

This leads me to another major item:

Although the investigations of FEHRL showed no correlation between the different tyre criteria - rolling resistance, wet grip and noise - we would like to emphasise again, that based on the laws of physics it is not possible to develop a tyre that has a maximum performance in all aspects. One of the main target conflicts in tyre development lies between rolling resistance and wet grip.

It's a technical fact that for good wet performance you need a high energy absorbing tread compound (means higher rolling resistance) while for lower fuel consumption / CO<sub>2</sub>-emissions, the energy consumption of the tread compound should be as low as possible (means lower rolling resistance, but reduced wet grip performance).

#### Example

A 15 % difference in rolling resistance results in a fuel saving of 0,15 l/100 km, but also to a loss of 15 % of wet grip performance. From an initial speed of 100 km/h, a 15 % difference in stopping distance in the wet results in a remaining speed of 40 km/h at the time the better tyre has already come to a stop. The braking distance will be seven to eight meters longer.

Recent investigations of PIARC on the relationship of surface grip coefficient on accident rate in several European countries support the need for good wet grip performance. Also the initiation of the ECE regulation on Wet grip (117.01) was based on the experience in the UK with weak wet grip performing tyres.

Continental therefore wants to emphasise and repeat the request of the Tyre industry for mandatory implementation of a grading system on wet grip in the same way and at the same time as for rolling resistance. It will help to promote the development of well balanced tyres optimized in both aspects. The performance level of the most important environmental and safety criteria will thus become obvious for all concerned parties.

**Question: *Should tyre pressure monitoring systems be made mandatory?***

Tyre pressure monitoring systems will increase safety and reduce CO<sub>2</sub> emissions. Therefore tyre pressure monitoring systems should be made mandatory.

**Question: *What degree of accuracy is necessary for them to be effective in maintaining optimum tyre pressure?***

OEMs are in the role of the system integrator for TPMS. Thus OEMs define with all the sub-suppliers what kind of accuracy is required for the components they deliver. The overall system performance must then result in a safe vehicle. Given the daily variations depending on driving style and ambient temperature, a threshold must consider the likelihood nuisance warnings. The thresholds to be defined should be compliant with OEM's current indirect and direct TPMSs on the market. Performance requirements should be technology neutral.

**Question: *Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?***

Yes, Continental supports the mandatory installation of ESC for all categories of M and N vehicles. As the technology is available and developed basically for all vehicles classes today and is applied to many variants already, a mandatory installation is feasible within a period of 2-3 years after legislation for new vehicle launches. For a running change of already in production vehicles, there should be also a reasonable timing of 3-4 years after legislation in order to be able to meet a mid-cycle update of the running vehicle production. Within the above timing restrictions, no exemptions are necessary from a technical perspective.

The existing experience in the market with ESC provides a proven benefit in the accident statistics and an excellent technology maturity, which allows and even demands a mandatory installation of ESC.

As in the US the FMVSS 126 demands a mandatory installation of ESC for all new light vehicles starting September 2011, a mandatory installation of ESC in Europe is reasonable and appropriate. The existing excellent cost/benefit ratio of ESC already today is allowing the realization of the mandatory installation of ESC to a reasonable cost effort in 2011.

**Question: *Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?***

Yes, it is reasonable, if the legislation is finished or announced bindingly 2-3 years before 2011, that means, that the car industry has enough time to do the necessary engineering work and production preparation in advance. So basically this means, that the bindingly announcement should be done already in 2008.

From the ESC supplier side, Continental is committing, that we can provide enough production facilities & capabilities to support a supply of ESC for a 100% equipment rate for new produced cars starting in 2011, if the legislation is bindingly announced 2-3 years before 2011.

**Question: *What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?***

In general, the technology, both sensors/actors and the functional development of the automatic emergency braking & lane departure warning, is available today for high-end vehicles already.

The technology development for the environmental sensors (Radar, Lidar, and Camera) is currently ongoing to support also high volume cars with a favourable cost-benefit case. These downscaled sensors for the most important predictive safety products like automatic emergency braking or lane departure warning target start of productions in early 2011. Therefore Continental recommends 2013 as a reasonable time for a mandatory introduction to provide enough preparation time for extending the production facilities.

2013 is feasible, because there will be then an experience of 14 years with Radar sensors and autonomous braking (started with adaptive cruise control) and 8 years of automatic emergency braking in the European market already. This is guaranteeing enough maturity for a large scale introduction and mandatory installation.

Dr. Hans-Joachim Nikolin  
Member of the Executive Board  
Continental AG  
Hannover, 17.10.2007

## **Position of Daimler AG concerning the Draft Limit Table for the Tyre Rolling Sound Emission according to ECE R 117 respective 2001/43/EEC Published in the “Public Consultation” of the EU-Commission**

### **Position:**

Daimler AG opposes the draft limit table, because some of the conclusions of the FEHRL study, which created the basis for this proposal, are in contradiction to the experience of the tyre and vehicle development. A limit enforcement of such a severity would mean a strong restriction of the range of original equipment tyres for vehicle manufacturers. This would lead to an unfair competition among the tyre manufacturers.

The proposed limit for class C3 M+S is of special concern as this class covers those tyres which are known as “traction tyres”. While it is known that these tyres can hardly pass even the actual limit values, they were not investigated at all in the FEHRL study.

### **Proposal for the further proceeding:**

Daimler AG as a vehicle manufacturer sees a potential for lower limit values in an interim step, however they shall be realistic and be introduced with enough lead time. Therefore Daimler AG proposes to further investigate the feasibility and time frame of FEHRL proposal for stage B in the directive. In addition a review of the classification for the tyre width is important.

It is pointed out, that an efficient reduction of the noise burden for the society can only be achieved in an integrated approach. As the FEHRL study emphasizes rolling noise reduction is strongly related to improvements and proper maintenance of roads.

Further and more severe steps must be prepared by a joint research program, e.g. as an EU research project, involving all parties to clarify the relationship of various tyre development parameters. This will then create a common basis for further discussion.

### **Justification:**

The draft proposal of the EU is based on the results of the EU research program SI2.408210, called FEHRL study, where it is concluded that such a reduction would provide a remarkable effect in real traffic, without degrading any other important parameters of safety and environment for the tyre. The cost benefit ratio is estimated to be extremely valuable for the society.

Comments of Daimler AG regarding important elements of the FEHRL study:

1. Older study concerning tyres must be questioned, because those tyres are no longer used in production and for actual tyres the optimization strategies have been changed.
2. The FEHRL conclusion that a limit reduction in a range of 5 dB to 6 dB would not jeopardize safety and environmental issues cannot be agreed and is in contradiction to the experiences of vehicle and tyre industry.

An OE-tyre is always a carefully designed component for one specific vehicle. The focus for optimization follows the marketing aspects of the whole vehicle and the individual overall

performance will differ from tyre to tyre. A random selection of tyre for research as is typically done by institutes will always cover a wide variety of tyre development strategies. Consequently those studies will hardly be able to elaborate any correlation between the various parameters.

A further drawback is seen in the circumstance that most studies consider only few performance parameters. Aspects as tyre wear, price and comfort are of high importance for customers and should not be neglected.

3. For the vehicle industry it is an additional burden that the rolling sound results from the tyre type approval has no meaning for the vehicle development. While the tyre alone is tested under rolling condition at a speed of 80 km/h, the overall vehicle has to fulfil its requirements at 50 km/h under high acceleration condition. This are conflicting development goals and it is not granted that a tyre with low rolling noise according to the tyre directive will automatically be a low noise tyre for the vehicle type approval.
4. The estimation of FEHRL for the effect of the limit reduction in real traffic seems to be too optimistic. Many parameters were not considered at all. Some assumptions are unclear and should be revised.
5. The monetary value for the society was given with 27€/dB/a/household. This can be accepted, however according to the source for this information [WG-HSEA; 2003] this value is only valid for households with a noise exposure higher than 50/55 dB Leq. Following the information of an EEA publication in 2001, this is the case for approx. 33% of all European households. It must be concluded that the estimated benefit is far too high.
6. Daimler AG opposes strongly the conclusion, that vehicle industry is gaining the benefit of the proposed limit reduction. As a consequence of a severe reduction of tyre selection and the negative impact for product optimization, industry has to expect increased product and development costs.

In the opinion of Daimler AG a limit reduction in the proposed range is not justified.

Ulrich Mellinghoff

Vice President  
Mercedes-Benz Cars Development  
Safety, NVH, Testing

Christoph Meier

Senior Manager  
Mercedes-Benz Cars Development  
Advanced NVh & Acoustics

Proposal for a Regulation of the European Parliament and of the Council on Climate Change & Eco  
Advanced Safety Features and Tyres Innovation

J.nr. MST-539-00022

Ref. Brk, JJ

October 15 2007

The Danish EPA welcomes the proposal from the Commission.

In response to the Commission's public consultation on outline proposals for a new regulation of the European Parliament and of the Council on advanced safety features and tyres, the Danish Environmental Protection Agency shall express its support to the proposal.

We find it very important that the present requirements for tyre noise are revised and tightened, and we regard the proposals of the FEHRL report very relevant to this measure. From the present situation we see no needs for exemptions from tyre noise requirements.

In addition, the Danish Environmental Protection Agency finds that a new regulation of rolling resistance of tyres is essential and that such regulation can yield a significant contribution to the efforts on CO<sub>2</sub> reductions from the transport sector.

Yours sincerely

Jørgen Jakobsen and Brian Kristensen  
Climate Change & Eco-innovation  
Danish EPA  
Ministry of the Environment

## DEKRA Automobil GmbH

### Statements to the questions concerning tire technology and new thresholds

#### Questions / Answers

##### Tires rolling resistance and noise reduction

- Noise and rolling resistance limits like shown in Annex 1 and 2 are sufficient, but it should be seriously evaluated not to run risks with the overall safety behaviour of the new tires; friction should not be lowered for the advantage of noise reduction and rolling resistance; this would be the trading –off for this issue.  
In the light of the available technology the limits are likely to be achievable.
- Generally not, only for very special vehicles it might be necessary to have exemptions
- A high number of accidents forced by technical defects are basically initiated by low tire pressure; therefore a mandatory regulation for this system is from our point very needed. The correct pressure threshold values should be higher than today, because to solve two problems;
  1. fuel consumption even 0,1 bar difference is measurable
  2. safety reasons request not such a high degree of accuracy
  3. dp/dt is important to be measured and evaluated

##### ESC and other Advanced Driver Assistance Systems

- We fully support a mandatory installation of ESC for all categories, M / N classes, exemptions only for a very small numbers of examples like special purpose vehicles
- 2011 is very likely to be a good target for this requirement; because technology is there for a long time available. From 2008 up to 2011 is enough time to prepare the application
- for all other systems there are clear time lines necessary, manufacturer as well as supplier have to have enough time to work on these system applications in correct and reliable framework of regulative framework. A phase in plane would be sufficient; to give clear conditions to the market.  
A timeline at 2010 up to 2015 seems to be sufficient. Incentive programs like for exhaust emissions (Euro IV – V ) would be a good starter for the business plan  
From upcoming FOT – Projects clear cost – benefit figures will be available.



# *Department for* **Transport**

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18 October 2007

Dear Dr Schulte-Braucks,

**Public consultation on outline proposals for a regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres - Consultation Document**

Please find attached the UK Department for Transport's initial response to the consultation on outline proposals for a regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.

As one of the building blocks of the integrated approach to reduce the emission of CO2 from transport, we support the Commission's initiative in addressing the issues of tyre rolling resistance and tyre pressure monitoring systems.

I wish to point out that our position may change after we have had an opportunity to review the definitive proposals resulting from this consultation that the Commission expects to publish later this year or early next.

Yours sincerely,

*Robert Falk*

Robert Falk

## **Public consultation on outline proposals for a regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres - Consultation Document**

1. The UK Department for Transport (UK DfT) has the following initial comments in response to the above consultation document.

### **Section 3: The proposed regulatory approach**

2. The UK DfT supports, in principle, simplification of the existing vehicle safety directives. We support aligning the Community technical standards with those contained in the United Nations ECE vehicle Regulatory system as proposed in the CARS21 report.
3. The Consultation suggests around 50 directives will need to be repealed and a key objective for the Commission will be ensuring a smooth transition from the current system to the new structure. The UK DfT, therefore, urges the Commission to implement a collaborative and transparent process, involving all stakeholders with an interest in the outcome at the earliest opportunity.

### **Section 5.1**

*Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, 'trading off' noise requirements for rolling resistance requirements under certain circumstances?*

4. The UK DfT is pleased that the Commission is considering reducing the tyre noise limits for light duty vehicles in category C1.
5. As an alternative to the limit values proposed by FEHRL, we would like to draw the Commission's attention to a report prepared by TRL on this subject<sup>1</sup>. The Commission may wish to consider the approach suggested by TRL of a single noise limit for all C1 tyres up to 245mm width, with a second limit value for those over that width. TRL's analysis suggests that this may yield up to 2dB(A) more reduction than that proposed by FEHRL, with a monetised benefit / cost ratio of at least 10:1. An advantage of the TRL proposal is that any trend towards wider tyres, up to the break point in width, would not lead to an increase in noise.
6. The UK DfT welcomes the Commission proposal to limit the maximum rolling resistance of tyres, and to categorise tyres in terms of their rolling resistance. This would enable Member States to help realise the benefits of lower rolling resistance tyres. Member States may wish to take measures to inform motorists, for example, via tyre fitters when tyres are replaced, of the benefits of fitting lower rolling resistance tyres giving lower fuel consumption, and therefore reduced CO2.
7. Given the limited quantity of data that is available on the rolling resistance performance of current tyres, we would also welcome any further information the

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<sup>1</sup> <http://www.dft.gov.uk/pgr/roads/environment/research/cqvcf/tyrenoise/tyreroadnoisereport>

Commission can provide on how the values in each rolling resistance band were derived.

8. We would encourage the Commission to consider a requirement to place an easily identifiable marking on the tyre to indicate which rolling resistance band the tyre falls into. This would help reinforce the approach by ensuring the information is permanently associated with the tyre. It would have the advantage that the consumer may make a considered choice of replacement tyre even where the consumer has not seen, or is unable to recall, the original label.
9. Given that the research carried out by FEHRL found there was no correlation between rolling resistance and noise generated by tyres, there is no trade-off between the two. We suggest that there is not, therefore, any trade-off to be considered.

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

10. Certain vehicles are already exempt from the Type Approval requirements under the framework directive, e.g. military and emergency service vehicles. Where relevant exemptions do not already exist in this or other headline legislation, some flexibility through a partial exemption from the noise or rolling resistance requirements for particular categories of tyre may be appropriate. These might, for example, include tyre types that are only fitted to a specialist vehicle such as wheeled forestry equipment rarely driven on roads, or military and emergency-response vehicles where considerations of safety may outweigh those of noise and rolling resistance.

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

11. Provided that a robust cost-benefit study presents a favourable case the UK DfT would support mandating tyre pressure monitoring systems. The technical requirements for such systems are currently under discussion in UN-ECE, and we ask the Commission to await the outcome of those discussions before mandating such a system.
12. Both 'normal' tyres and those with reduced rolling resistance need to be maintained at an appropriate inflation pressure if the claimed benefits are to be realised. Failure to do so would lead to an environmental disbenefit of increased CO<sub>2</sub>. Additionally, maintaining the correct tyre inflation pressure ensures tyre life is maximised, thus leading to a reduction in the number of tyres needed, and consequently a reduction in the use of raw materials, less energy used during tyre manufacture through having to produce less, and reduced consumer costs. A good tyre pressure monitoring system may also prevent premature failure.
13. Before any degree of accuracy is discussed, evidence is required to determine the level below the recommended pressure at which the driver needs to be alerted to deliver the environmental (noise + CO<sub>2</sub>) and safety benefits expected.

14. In addition, we would strongly urge the European Commission to bring forward a proposal to include technical/performance requirements for all tyres designed to be used in a deflated (Run-Flat) condition.
15. Currently, even though technical requirements exist within UNECE Regulation 30 to approve a tyre in the deflated condition, compliance with the regulation is not mandated. We understand that as a consequence very few tyre manufacturers seek an approval for these tyres in the deflated condition. If approval in the deflated condition is made mandatory, not only will a minimum level of safety be preserved, but consumers will also benefit with the assurance that all tyres designed for use in the deflated condition will be capable of a minimum performance over a given distance / time and at a given speed. Currently that performance has been set at 80 km (or 1 hour) at 80 km/h.

## **Section 5.2**

*Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?*

16. Yes.

### Passenger cars

17. An analysis of UK national road accident statistics suggested that if Electronic Stability Control (ESC) had been fitted to all passenger cars in the vehicle fleet that 380 fatal accidents would have been avoided, this equates to a 25% reduction in the risk of being involved in a fatal accident.
18. There is already an industry undertaking to fit anti-lock braking systems (ABS) to all passenger cars. The presence of ABS is an essential foundation for fitting ESC. The additional cost of ESC is estimated to be between about €80 and €120, which for the UK would deliver a benefit-cost ratio in the order of 5:1 to 3.5:1, which is significant.

### Large vehicles

19. A study of accidents in Germany in 2004 involving vehicles in categories N2, N3 and M3 estimated the number of accidents that could have been prevented or mitigated if ESC had been fitted. Based on this, it was estimated that the benefit of fitting ESC to large vehicles in Germany was €126,000,000 - taking into account injury and property damage costs.
20. The cost of an ESC system will be very variable, depending on factors such as the number of axles or whether the vehicle is articulated. For vehicles over 7.5 tonnes the estimated final cost to the customer for an ESC system is approximately €1,500 per vehicle. For vehicles weighing less than 7.5 tonnes and which are likely to fall into the two-axle rigid van category, costs will probably be much lower. The Commission have estimated these to be in the order of €500. Based on these costs for ESC, it is estimated that the total annual cost of fitting ESC to large vehicles in Germany will be €89,000,000. When compared with the likely saving of €126,000,000, this gives a benefit/cost ratio for Germany of 1.4:1.

21. This benefit/cost figure is a conservative estimate as it does not take into account savings in congestion costs and other costs to the economy, which could be considerable particularly with larger vehicles. In addition, the costs for ESC are likely to reduce considerably as systems become more widely available, and the benefits can be expected to increase due to the likely future growth in goods traffic in Europe.

#### Exemptions

22. The UK DfT is aware that the case may be put forward for certain categories of vehicles to be exempt from ESC requirements due to the technical difficulties associated with designing suitable systems, where the vehicles spend the majority of their life off road, or if the vehicles are produced in very low numbers. The UK DfT has the view that before any exemptions are accepted, the technical justification and the road safety risk associated with them should be carefully considered, and that the exemptions should be reviewed periodically.

*Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

23. Yes.

24. 2011 is a reasonable target for new car models, striking a balance between the manufacturing challenges of delivering products to the market quickly with the need to incorporate this important safety feature in all new cars. A key aspect in striking this balance will be the adoption during 2008 of the technical procedures for assessing and approving ESC systems. If agreement of the technical provisions is delayed beyond this date, an extension to the introduction date may be required.

*What would be a reasonable time scale for mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?*

25. The UK DfT believes it is too early to set a time scale for mandatory introduction of systems such as emergency braking and lane departure warning.

26. Such systems are currently in their infancy and practical experience needs to be gained in order to determine their potential benefits, as has been the case with ESC. The UK DfT would not support the mandating of such systems in the absence of a robust cost-benefit study that presents a favourable case, or in the absence of any harmonised technical requirements for such systems.

Dear Sirs,

Dorado Centro Internazionale Guida Sicura S.p.a. (**Dorado CIGS**),  
43040 Varano de' Melegari - Parma - Italy,  
[www.guidasicura.it](http://www.guidasicura.it)

is operating with success in his permanent Centre for Safety Driving Courses since 1991.

The activity is using:

- normal production cars (Alfa Romeo, Maserati, Ferrari),
- light commercial vehicles.

-Dorado CIGS is as well involved with Autostrade per l'Italia S.p.a. in the studies to improve safety for the drivers, and their personal quality-capacity at the steering wheel, of commercial vehicles (light and heavy duty over 3.5 tons).

-pupils guests attending Dorado CIGS courses in Italy, and abroad, are about 5.000 each year.

With the direct experience acquired by Dorado CIGS, working from 1991 in the Safety Driving Courses, we can confirm that:

1-ESC (Electronic Stability Control) mounted, by law, in all minivans and commercial vehicles (light and heavy duty) will improve in a sensational level the control/stability of the vehicle in active assistance to the driver, maintaining the balance in case of mistake-emergency-unforeseen situations. with much more effect when the dynamic driving problem is over the capacity-reaction limits of the driver himself.

2-obligation to mount ESC in all new registered vehicles starting in 2011 is a reasonable target.

But, in our opinion, each year lost before this date is representing a loss of human life; **especially life of young drivers generation**, due to the fact that ESC his helping much more an inexperience driver then a more experience one.

New young drivers, especially in the first road driving experiences after driving licence school, are lacking experience in the dynamic handling and balance of the car; ESC is giving them active back up and safety, maintaining the control of the vehicle over their limited experience.

For any further information, if required, please contact us at Dorado CIGS.

Best regards

Andrea de Adamich  
Chairman of  
Dorado Centro Internazionale Guida Sicura S.p.A.  
Località Autodromo  
sito : [www.guidasicura.it](http://www.guidasicura.it)

☐ *Do you support the mandatory installation of ESC for all categories of M and N class*

*vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?*

Broadly speaking, yes. Having been fully appraised of the workings and efficacy of ESC systems in cars for some years, Drive & Survive's position is that such systems should be fitted to all cars, light and medium sized vans at least.

With regard to the fitment to trailers, Drive & Survive would prefer to reserve judgment until such time as it could be demonstrated without doubt that this could not, under certain circumstances, actually contribute to the severity of a 'loss of control' situation.

## **Input to the public consultation on outline proposals for a new Regulation on Advanced Safety Features and Tyres**

As an NGO dealing with noise we like to react on two of the questions stated on page 6 of the consultation document.

1.

The NSG fully agree with the Commission that the advances in tyre technology is sufficient for a significant tightening of the noise limits for tyres.

In general the by FEHRL proposed limits are sufficient. Only for the tyres in the higher width range (like for SUV's) they seems to be too liberal.

There is no alternative approach to lower the noise of the traffic, because tyres are the dominant noise source by vehicle speeds above 30-40 km/h. This means on main streets and highways where the severe noise problems occur.

The local authorities can use silent road surfaces, but the benefit of those surfaces alone is not enough to reach an acceptable noise quality.

We remind that with the present weak limits the Commission is responsible for the unnecessary health effects and costs for noise abatement which are made by the governments and the local authorities.

Because noise is highly related with health, the governments must protect their people, including the European Union which is responsible for the requirements for vehicles and tyres.

So far the Dutch experts are aware: all the available studies (also a Dutch measurement campaign) show there is no trade off between rolling resistance and noise. So there is not any justification for a scientific argument for a trade off.

2.

In general there is no justification for exemptions.

Regarding to the severe and growing health problems due to traffic noise and the limited possibilities to reduce this problem we urge the Commission to hurry up with implementing the new proposals.

With Regards,

ir. J. Kuiper,

general manager of the Dutch Noise Abatement Society (NSG)

Nederlandse Stichting Geluidshinder (NSG)

[www.nsg.nl](http://www.nsg.nl)



Environmental Protection UK  
44 Grand Parade  
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17 October 2007



Dear Colleagues

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

Thank you for the opportunity to respond to this consultation. Environmental Protection UK<sup>1</sup> are pleased to see the (much delayed) review of the 2001/43/EC Tyre Noise Directive incorporated, along with the implementation of technologies related to the CO<sub>2</sub> reduction initiative. We urge the commission to take the opportunity that this offers to support work across states to comply with the Environmental Noise Directive 2002/49/EC, to raise awareness of the noise and emissions impacts of tyres through a comprehensive labelling package and to synchronise a programme for revision of values for tyre noise with the obligations of member states to manage the impact of noise on transport. With the health impacts of noise becoming increasingly clear, and aspirational new guidelines for night time noise expected imminently from WHO, these measures will all support work towards the objective of the Sixth Environmental Action Programme to “substantially reduce the number of people affected by long-term noise levels, particularly from traffic.”

If you have any questions about the comments of Environmental Protection UK, please do not hesitate to contact me

A handwritten signature in black ink, appearing to be 'Mary Stevens'.

Mary Stevens  
Policy and Communications, Environmental Protection UK  
+44 1273 878781 [mstevens@nsca.org.uk](mailto:mstevens@nsca.org.uk)

1. **Environmental Protection UK** (formerly NSCA) is the UK environmental protection charity supporting noise management professionals. We are working for a cleaner, quieter, healthier world.

# **Comment on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

## **5.1 Requirements Related to Tyres**

We hope that this consultation precipitates the early introduction of long awaited measures to contribute to the management and reduction of traffic noise and greenhouse gas emissions.

### **5.1.1 Rolling Noise Emissions**

The Environmental Protection UK Noise Committee<sup>1</sup> endorses the increasing body of research across EU member states, which indicates that rolling noise from tyre/road surfaces is a major source of environmental noise and the one that can most swiftly and economically be addressed. Research supporting this view includes work by TRL in the UK<sup>2</sup>, Eurocities<sup>3</sup>, and the Noise Innovation Programme in The Netherlands,<sup>4</sup> as well as the EU commissioned work by FEHRL.<sup>5</sup> The Netherlands in particular have found that use of quieter tyres is by far the most cost effective method of noise reduction.

### **Tyre Noise Limits**

Experts have for some time agreed that an urgent limit reduction of the order of 5 dB(A) under the test conditions is required, and that with manufacturers easily meeting the current limits, it will not be too onerous on the industry to meet limit values recommended by recent research. The 2006 report by the Transport Research Laboratory<sup>2</sup> recommended that the following are technically feasible without affecting safety, performance or fuel economy, and that these can and should be introduced in 2010.

*71 dB (A) for all tyres with a width less than 245 mm  
73 dB (A) mm for tyres wider than 245.*

Environmental Protection UK strongly endorse this view. In view of the repeated delays in revision of 2001/43/EC, we believe it is time to set targets that will support work at local, regional and national level towards these objectives. The Commission proposal to defer implementation of new standards until 2012 is extremely disappointing. However, a longer timescale for revision would present the EU with an opportunity to drive innovation further, by ensuring standards set are in line what is technically and commercially achievable according to ongoing research.

*A 2012 target should set lower limits still, as we do not want to find ourselves with another lax standard that merely legitimises current levels, without driving for improvement.*

### **Implementation**

The repeated delays in the review of Directive 2001/43/EC are denying the national and local agencies tasked with implementing noise action planning under the Environmental Noise Directive an essential tool in supporting their work towards reducing noise in cities. Therefore, we urge the Commission to accelerate implementation from 2012 to 2010, as recommended by TRL.

### **Tyre noise labelling**

We also believe that a system of tyre noise labelling must be put in place which would serve the dual functions of raising consumer awareness and influencing

consumer choice. Labelling is being recommended for rolling resistance, so a companion label for noise would make sense.

### **Fiscal Incentive**

As discussed in the TRL tyre noise report, an incentive to encourage the use of low noise tyres would be the introduction of some form of tax incentive. This can only be achieved if it is easy to see and compare tyre noise levels. Although we accept that this would take time to set up, labelling tyres with noise levels (or bands as proposed for CO<sub>2</sub>) would prepare the ground for implementation of a fiscal system.

### **Exemptions**

We question the need for any exemptions for tyres to be used on the road. Specialist off road or racing tyres are usually transported to an 'event' and then put on a vehicle (which is normally transported itself). We believe any exemption or partial exemption would be open to abuse, with the exception of the emergency services and some agricultural machinery.

### **5.1.2 Rolling Resistance**

We support mandatory testing and labeling of tyres for rolling resistance. Low rolling resistance tyres can significantly reduce all types of tailpipe emissions from vehicles, and labeling will be a useful way of allowing consumers to distinguish between different products.

We note that tyres currently on the market differ significantly in the rolling resistance, and that manufacturers tend to fit lower rolling resistance products to vehicles - to both reduce CO<sub>2</sub> ratings and improve fuel economy. However, in the aftermarket there is little way for consumers to tell the difference between models, or awareness of the overall lifecycle cost of tyres. Labelling will help to do this, 'locking in' the benefits of low rolling resistance tyres on new cars.

### **5.1.3 Tyre Monitors**

We support the concept of tyre pressure monitors to remind drivers when their tyres are under inflated - this could have significant safety and emission benefits.

### **Joined up approach?**

It may be more useful to consider these within the overall suite of 'green driving' aids put forward under EU new car CO<sub>2</sub> emission proposals, as introducing several new systems in isolation may have the effect of confusing drivers and inhibiting action.

## Consultation Questions

***Are the proposed noise and rolling resistance limits in Annexes 1 & 2 (a) sufficient and (b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?***

In the view of Environmental Protection UK, the proposals are realistic, but only sufficient as a belated first step towards effective noise regulation. The delayed revision of the Directive, and the pressing need for mechanisms in place to reduce transport noise to support implementation of the END leads us to question the further delay until 2012 for implementation. EU cities are mandated to work towards reducing city noise under their END obligations, and to implement effective noise action planning from July 2008. Four years should be ample time for lower targets to be achievable. The proposed limit values could be effective in helping meet the target of the Sixth Action Plan only if:

1. Noise labelling is introduced to raise awareness of purchasers and stimulate innovation towards quieter tyres
2. A regular review programme for review is introduced. Under the END competent authorities are mandated to review noise maps and regulations for identifying noise sources every five years – in 2011, 2016 and beyond. A parallel system should be adopted for reviewing noise from tyres.

We do not accept that noise reduction should be compromised as a trade off for reducing CO<sub>2</sub> emissions. The health and quality of life of citizens is at risk from noise as well as from global warming. Introduction of stringent limit values for both criteria to address the source of the emissions is the only viable approach.

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

There is no justification for allowances in noise limit values for extra-wide tyres intended for personal or commercial road use. The definition of "special use" tyres must be clarified to include those intended exclusively for off-road use. No exceptions should be made for "off-road" passenger vehicles such as sports utility vehicles and 4x4 vehicles. We accept exceptions only for specialised emergency vehicles and agricultural equipment.

## References

1. **Environmental Protection UK** (formerly NSCA) is the UK environmental protection charity supporting noise management professionals. We are working for a cleaner, quieter, healthier world.
2. Tyre/road noise – Assessment of the existing and proposed tyre noise limits by G R Watts, P M Nelson, P G Abbott, R E Stait and C Treleven TRL 2006  
<http://www.dft.gov.uk/pgr/roads/environment/research/cqvcf/tyrenoise/tyreroadnoisereport>
3. Report of M+ V Consulting Engineers for Eurocities, January 2007
4. Noise Innovation Programme for Road and Rail Traffic 2006 - 2007, Ministry of Transport, Public Work and Water Management, Passenger Transport
5. Study S12 408210 Tyre/Road Noise, Volume 1, Final Report  
<http://www.fehrl.org/index.php?m=27>

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Estonian Road Administration and Estonian Motor Vehicle Registration Centre inspected the proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres. We agree with the suggestion of the Executive Board of CEDR on the reduction of environmental noise pollution by setting new requirements for tyre rolling noise emissions.

As the application of low noise pavements in Estonia is very difficult and not profitable because of the climate conditions we consider that tightening limit values for tyre noise could be the best solution for in-source noise abatement in this region.

With best regards

Villu Lükk  
Chief specialist  
Estonian Road Administration  
Planning Department

Maris Kruuse  
Chief specialist  
Estonian Road Administration  
Planning Department

## 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.

11/10/2007

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.

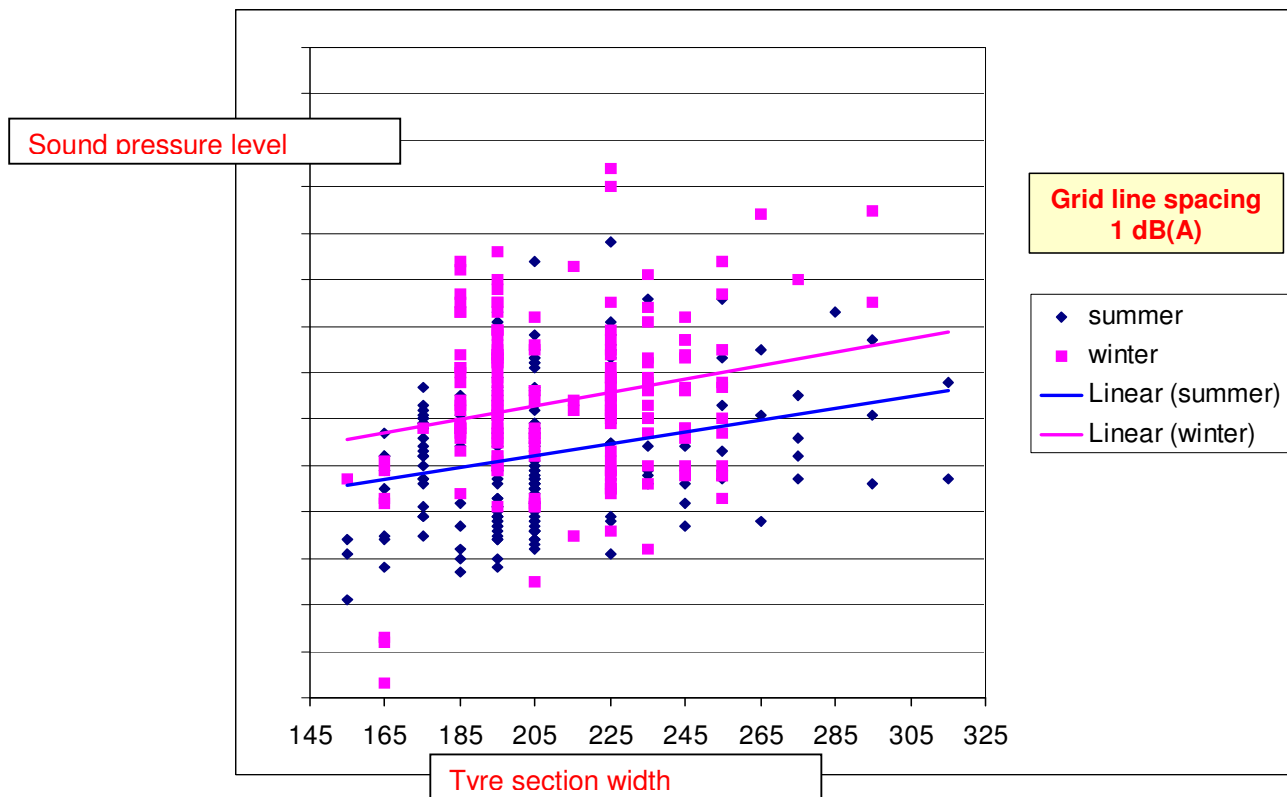
In addition, the Tyre Industry emphasizes the need to grant or maintain allowances for some categories of tyres, particularly when tightening the current limits. The following allowances for C1 are needed:

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.

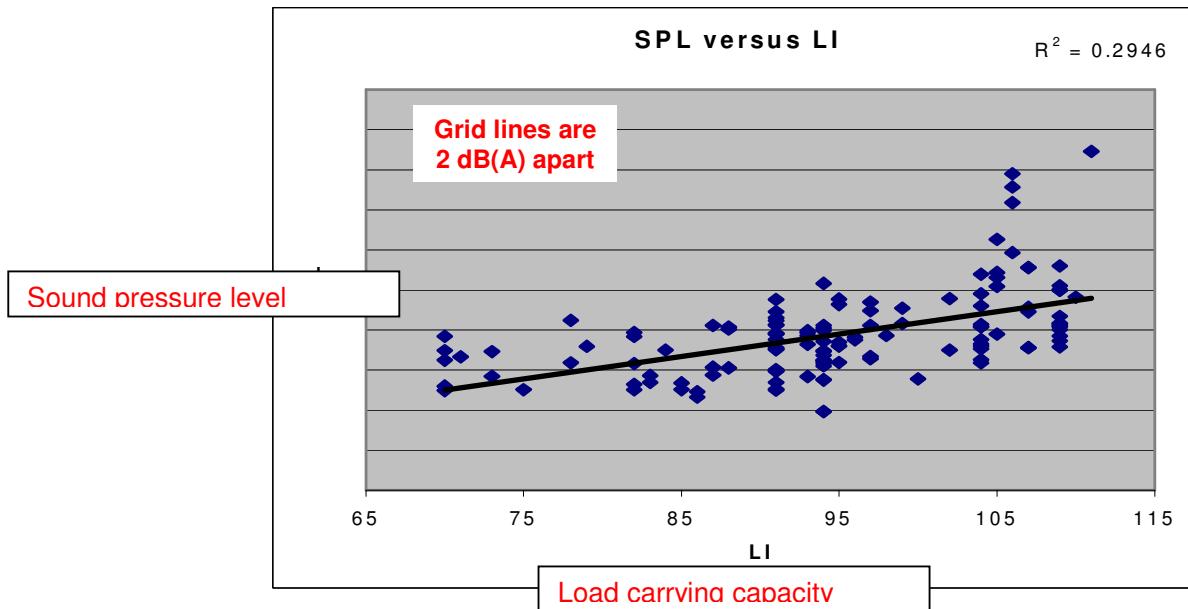




Concerning category 2: Tyres in the Special category require even more open tread patterns than M+S tyres and hence we need to maintain the current allowance given by the Directive 2001/43.

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**

**Preliminary Statement on new Rolling Resistance Requirements as outlined by the Proposal of the European Parliament and of the Council on Advanced Safety Features and Tires**

November 9, 2007

**Oliver Klockmann**  
Advanced Fillers & Pigments  
Applied Technology

Evonik Degussa GmbH supports the outlined proposal in its full range of rolling resistance requirements. Electronic stability controls, tire pressure monitoring systems and noise reduction regulations are excluded from this statement.

The needs to reduce CO<sub>2</sub> emissions and therefore improve fuel efficiency are evident and do not need any further clarification. Vehicle tires can contribute up to 25% to the total fuel consumption. Hence the use of low rolling resistance tires (LRRT) should be encouraged.

Up to now there is no clear definition of a low rolling resistance tire nor is it possible to conclude from existing labels on the tire about its fuel efficiency. Thus any market driven increase of the LRRT share is limited to a certain extent. The end user cannot obtain the right information necessary for a decision on the purchase of LRRTs. Here a legislative regulation is necessary. The establishing of a maximum value for the rolling resistance coefficient and the introduction of bands define LRRTs and inform about the fuel efficiency.

It is well-known that tire properties are interdependent. In general optimizing one characteristic results in a mutual impairment – improving one property means worsening another. It has to be guaranteed that under no circumstances safety aspects are sacrificed by an optimization of the rolling resistance. ECE regulation 117 (not part of this statement) should guarantee this by the introduction of proper limits for the wet grip.

In the past it has been shown that by using new material concepts a significant reduction of rolling resistance is possible without negatively affecting safety issues. In contrast the introduction of the silica-silane technology in the early 90's led to an improvement in wet grip by approx. 7%. Rolling resistance was reduced by 20 to 30%. Silica and

silane, developed by Evonik Degussa GmbH, relate to filler systems. Tire rubber mixtures comprise polymers and reinforcing fillers as major ingredients (~70%). With respect to material influences energy loss and consequently rolling resistance are mainly determined by these products. The silica-silane technology replaced carbon black in the tread compound of passenger car tires leading to the described improvements. Today the market penetration of silica-silane containing treads is nearly 100% inside the European Community. This proves that a significant reduction of rolling resistance is possible, that safety requirements can be guaranteed on a high level and that the market acceptance can be gained in a short period of time.

The proposed limits for the rolling resistance are based on actual tire technology. As research and development are going on it is to be expected and it has to be encouraged that new generations of tires will all fulfill these requirements and exhibit an even further reduced rolling resistance. New material concepts are already available and being introduced to the tire market by now. Compared to actual technology a new carbon black family, the Ecorax<sup>®</sup> concept, can improve the rolling resistance of commercial vehicle tires by up to 20%. The new silane Si 363<sup>®</sup> as a part of the silica-silane technology reduces rolling resistance of passenger car tires furthermore by up to 13%. Tire tests revealed that wet grip stays on a high level.

Taking all this into account it can be stated that from a filler system suppliers view setting limits for rolling resistance is justified. A reason for a partial or complete exemption for a particular tire category cannot be seen. Therefore, we support the outlined proposal in its full range of rolling resistance requirements.

**Mitteilung der Regierung der Bundesrepublik Deutschland  
an die Europäische Kommission  
vom 18. Oktober 2007**

**Stellungnahme im Rahmen des Konsultationsverfahrens zu Vorschlägen für eine  
Verordnung zu weiterentwickelten sicherheitstechnischen Einrichtungen und Reif-  
fen - Umweltrelevante Aspekte der Kommissionsvorschläge**

**I. Allgemeine Anmerkungen:**

Vorangestellt sei darauf hingewiesen, dass sich diese Stellungnahme ausschließlich auf die umweltrelevanten Aspekte und Vorschläge der Konsultation bezieht. Die Bundesregierung wird sich zu den sicherheitstechnischen Aspekten (ESP, automatische Notbremsung etc.) zu einem späteren Zeitpunkt äußern.

Der Ansatz der Europäischen Kommission sieht vor, in der neuen Verordnung (mit Ausnahme des Fußgängerschutzes) sämtliche sicherheitsrelevanten fahrzeugtechnischen Anforderungen in 12 Themengebieten zusammenzufassen. Wesentliche umweltrelevante Anforderungen, wie das Reifenrollgeräusch, der Reifenrollwiderstand und Reifendruckkontrollsysteme (TPMS), sind hierbei Unterpunkte eines dieser Themengebiete.

Die Bundesregierung steht diesem Verordnungsansatz grundsätzlich offen gegenüber. Für eine abschließende Bewertung ist allerdings noch eine genauere Erörterung der Vor- und Nachteile erforderlich. Eine umfassende Neugestaltung sollte insbesondere nicht dazu führen, dass wichtige umweltrelevante Anpassungen, die aktuell anstehen, verzögert werden.

Die Anpassung der Grenzwerte für das Reifenrollgeräusch der Richtlinie 2001/43/EG ist dringend erforderlich, um für die Reifenhersteller ein verbindliches Signal zur Entwicklung geräuscharmer Reifen zu setzen. Untersuchungen des Umweltbundesamtes zeigen, dass die im Handel erhältlichen Reifen die Grenzwerte der Richtlinie 2001/43/EG größtenteils deutlich unterschreiten und somit bereits heute ein erhebliches Potential zur Absenkung der Grenzwerte vorhanden ist. Die im Auftrag der Europäischen Kommission erstellte Studie des Forum of European Highway Research Laboratories (FEHRL) bestätigt diese Aussage. Die Bundesregierung begrüßt es daher ausdrücklich, dass mit dieser Internetkonsultation die Verhandlungen zur Absenkung der Reifengeräuschgrenzwerte auf europäischer Ebene beginnen.

Der Verkehrslärm stellt heute ein gravierendes Umweltproblem dar. Die Bevölkerung empfindet den Verkehrslärm zunehmend als deutliche Einschränkung der Lebensqualität, als Störung von Kommunikation und Konzentration und als Beeinträchtigung der Erholung und der Nachtruhe. Dass eine hohe Verkehrslärmbelastung - auch im Zusammenwirken mit anderen Stressfaktoren - das Risiko einer Herz-Kreislauf-Krankheit erhöht, unterstreicht die Notwendigkeit den Verkehrslärm zu mindern. Die Bundesregierung strebt daher eine Trendwende bei der Verkehrslärmbelastung der Bevölkerung an. Verkehrslärmschutz gehört zu den zentralen Aufgaben einer nachhaltigen Verkehrspolitik.

Die Geräuschreduzierung an der Quelle ist eine besonders wichtige Strategie des Lärmschutzes. Sie ist flächendeckend wirksam und macht aufwändige bauliche Lärmschutzmaßnahmen überflüssig. Hierdurch können erhebliche Kosten bei Maßnahmen der Lärmvorsorge und der Lärmsanierung eingespart werden.

Die Bundesregierung setzt sich für eine deutliche Verschärfung der Geräuschgrenzwerte auch für Reifen ein. Denn neben den Antriebsgeräuschen der Kraftfahrzeuge ist das Reifenrollgeräusch die Hauptlärmquelle des Straßenverkehrs, insbesondere beim Pkw ist das Reifengeräusch innerstädtisch zur dominierenden Quelle geworden. Da das Rollgeräusch in der Wechselwirkung zwischen Reifen und Fahrbahnoberfläche entsteht, darf neben der Geräuschoptimierung der Reifen allerdings auch die Weiterentwicklung der Fahrbahnbeläge nicht außer Acht gelassen werden. Die Bundesregierung geht davon aus, dass das Impact-Assessment der Europäischen Kommission in einem ganzheitlichen Ansatz auch eine Bewertung der unterschiedlichen Maßnahmen zur Geräuschreduzierung (Optimierung der Fahrzeuge, der Reifen, der Fahrbahnbeläge) hinsichtlich der zu erwartenden Kosten-Nutzen-Verhältnisse vornimmt.

Ergänzend weist die Bundesregierung darauf hin, dass Optimierungsbedarf beim Prüfbelag nach ISO 10 844 besteht. Hier wird begrüßt, dass in einem ersten Schritt die Fertigungstoleranzen der heutigen Prüfstrecke eingeengt werden sollen, so dass zukünftig eine bessere Reproduzierbarkeit der Ergebnisse auf verschiedenen Messstrecken zu erwarten ist. In einem zweiten Schritt sollte für die Zukunft ein repräsentativerer neuer ISO-Fahrbahnbelag entwickelt werden. Entsprechende Untersuchungen mit ersten vielversprechenden Ergebnissen laufen derzeit auf nationaler Ebene in Zusammenarbeit mit der Bundesanstalt für Straßenwesen.

Neben dem Rollgeräusch ist der Rollwiderstand von Reifen ein wichtiges umweltrelevantes und aktuelles Thema. Anreize zur Optimierung des Reifenrollwiderstandes sind angesichts



der klimapolitischen Herausforderungen eine begrüßenswerte Maßnahme zur Minderung der fahrzeugseitigen CO<sub>2</sub>-Emissionen. Die Bundesregierung unterstützt hier ausdrücklich den so genannten „integrierten Ansatz“ im CO<sub>2</sub>-Strategiepapier der Europäischen Gemeinschaft, der zur Erreichung des sehr anspruchsvollen EU-Zieles – 120 Gramm CO<sub>2</sub> pro Kilometer bis zum Jahr 2012 – unter anderem die Verminderung des Reifenrollwiderstandes und den Einsatz von Reifendruckkontrollsystemen vorsieht.

Die Festlegung eines Rollwiderstandgrenzwertes und die vorgeschlagene Zuordnung der Reifen in Klassen, die von der Höhe des Rollwiderstandes abhängig sind, werden als sinnvolle Instrumente angesehen. Bei der Festlegung der Rollwiderstandsklassen und Grenzwerte sollte beachtet werden, dass das System in der Lage ist, auch zukünftige Reifen, die aufgrund des technischen Fortschritts deutlich verbesserte Rollwiderstandswerte aufweisen, zu integrieren.

Bei der Optimierung der umweltrelevanten Reifeneigenschaften dürfen die Sicherheitsaspekte von Reifen nicht außer Acht gelassen werden. Die Bundesregierung begrüßt, dass der Nassgriff der Reifen zukünftig ebenfalls berücksichtigt werden soll. Hierdurch soll sichergestellt werden, dass keine einseitige Optimierung der Reifen hinsichtlich der Geräusche und/oder des Rollwiderstands stattfindet.

Die Information der Verbraucher über die jeweiligen Eigenschaften des Reifens sollte zukünftig verbessert werden. In welchen Formen diese Informationen an die Verbraucher weitergegeben werden sollten, muss noch geklärt werden. Dabei sollten unter anderem das Rollgeräusch, der Rollwiderstand und der Nassgriff berücksichtigt werden. Es ist darauf zu achten, dass eine verbraucherfreundliche Ausgestaltung der Produktinformation erfolgt.

## **II. Ergänzende Anmerkungen zu konkreten Fragen der Konsultation:**

### Reifenbezogene Fragen:

- Sind die vorgeschlagenen Geräusch- und Rollwiderstand-Grenzwerte in Annex 1 und 2a) ausreichend und realistisch?

Die Bundesregierung befürwortet bei der Festlegung der neuen Reifengeräusch-Grenzwerte grundsätzlich einen 2-stufigen Ansatz:

1. Eine kurzfristige „moderate“ Absenkung der Grenzwerte. Diese Absenkung soll der Tatsache Rechnung tragen, dass die meisten Reifen bereits heute deutlich unter den geltenden Grenzwerten liegen. Zumindest die Reifen, die heute nahe an den Grenzwerten liegen, sollen durch diese Anpassung vom Markt genommen werden.
2. Anschließend eine zeitnahe „anspruchsvolle“ Absenkung der Grenzwerte, wie sie grundsätzlich im FEHRL-Bericht der Europäischen Kommission vorgeschlagen worden ist. Hierdurch soll schon heute ein deutliches Signal für die Entwicklung geräuschoptimierter Reifen gegeben werden.

Die im Mai 2006 veröffentlichte FEHRL-Studie stellt hierbei eine gute Grundlage für die anstehende Diskussion der Reifengeräuschgrenzwerte dar. Weitere Vorschläge der FEHRL-Studie, wie z. B. die Neuklassifizierung der Reifen und Anpassungen der Auswerteprozedur, sollten ebenfalls berücksichtigt werden. Es sollte jedoch geprüft werden, ob eine Einteilung der Pkw-Reifen in vier Klassen (C1A bis E) wirklich erforderlich ist oder ob die Anzahl der Klassen reduziert werden kann.

Die Bundesregierung wird sich erst zu einem späteren Zeitpunkt, nach Abschluss der Internet-Konsultation und Vorlage des Impact-Assessments durch die Europäische Kommission, zu konkreten Zahlenwerten für die Geräusch- und Rollwiderstandsgrenzwerte sowie zu den Anwendungszeiten positionieren.

- Gibt es Gründe für den teilweisen oder vollständigen Ausschluss bestimmter Reifenarten von den Geräusch- oder Rollwiderstandsanforderungen?

Ausnahmen bzw. Grenzwertzuschläge für Spezialreifen, wie es der Vorschlag der Europäischen Kommission vorsieht, werden grundsätzlich als erforderlich angesehen. Eine Einarbeitung der vorgeschlagenen Definition hinsichtlich der Höchstgeschwindigkeit (120 km/h statt 160 km/h) erscheint sinnvoll, da es sich hierbei um Reifen handelt, die für den Off-Road-Einsatz konzipiert sind. Die Reifenindustrie sollte außerdem für die Verhandlungen konkrete Definitionen für Spezial-Lkw-Reifen vorlegen, da ansonsten die Gefahr besteht, dass künftig Traktionsreifen generell als Spezialreifen ausgewiesen werden.

- Sollen Reifendruckkontrollsysteme verbindlich vorgeschrieben werden? Welche Genauigkeit müssen diese Systeme aufweisen, um einen optimalen Luftdruck zu gewährleisten?

Die Bundesregierung begrüßt in Hinblick auf die CO<sub>2</sub>-Strategie der Europäischen Gemeinschaft grundsätzlich die Einführung solcher Systeme. Bevor eine verbindliche Einführung beschlossen wird, müssen aber zunächst die Ergebnisse der entsprechenden Expertengruppe der UN-ECE abgewartet werden.



The Eurocouncil of the Fédération Internationale de l'Automobile  
European Bureau

## **Response of the Fédération Internationale de l'Automobile (FIA) to the Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

The Eurocouncil of the Fédération Internationale de l'Automobile (FIA) represents through its affiliated members, national motoring and touring organisations in Europe, more than 34 million motorists in the European Union. Europe's motoring and touring organisations have as one of their highest priorities the improvement of road safety and the environment. In this respect they carry out vehicle and safety equipment consumer tests, offer driver training, run seat belt campaigns and assess the safety of mobility infrastructure. Europe's motoring organisations are partners in a number of safety assessment programmes like the European New Car Assessment Programme, Euro NCAP, the New Programme for the Assessment of Child restraint Systems NPACS, the European Road Assessment Programme EuroRAP, EuroTest and the European Tunnel Assessment Programme EuroTAP.

With regard to the 42000 road users who die each year on European roads and the objective of the European Union to reduce this number to 25000 by 2010, the FIA is of the opinion that all possible measures have to be investigated. In case feasibility and cost/effectiveness proof to be positive these measures should be implemented.

The FIA is the leading body in the eSafetyAware project which currently is supporting the fast implementation of ESC on (motor) vehicles.

The FIA welcomes the initiative of the Commission to update and simplify the Type Approval legislation on a variety of safety- and environmentally- related components in order to reduce the number of road casualties, the CO<sub>2</sub> emission of road transport and traffic noise pollution.

The proposed regulatory approach will definitely lead to much quicker approvals and therefore to the possibility of quicker implementation of new safety features and improved environmental technologies. In this respect the increasing cross reference to UNECE regulations is a positive development.

### **ESC**

The FIA believes that ESC must to be implemented on all motor vehicles (category M, N and O >3.5 tonnes GVW), as soon as possible. The FIA is pleased to note manufacturers who fit their cars with ESC on a voluntary basis especially on those in the cheaper market segments.

The FIA has proposed to set up a voluntary agreement between the Commission and industry within a year to fit new types of the above -mentioned (motor) vehicle



The Eurocouncil of the Fédération Internationale de l'Automobile  
European Bureau

categories with ESC as from 2012 with the caveat that if such an agreement is not forthcoming within a year or seen not to be effective a legislative solution would be needed.

***Questions***

*Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?*

Yes, we do, initially via a voluntary agreement between the Commission and the industry. Exemptions might be allowed for special vehicles.

*Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

The World Forum for the Harmonization of Vehicle Regulations (WP 29) is doing its utmost on having a draft GTR (Global Technical Regulation) on ESC for 2008. The requirements have to be implemented in ECE Regulation 13 H (Brakes). Therefore the FIA is of the opinion that 2011 will be a reasonable target for requiring ESC on new car models (MY 2012).

*What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?*

Further development and clear proof of the good performance of these systems is needed. If this further proof results in positive results of studies and validation of test methods as well as of cost-benefit calculations, the FIA is of the opinion that these systems should be introduced as soon as possible.

**Tyres**

The features of tyres for (motor) vehicles is a compromise between a complex set of requirements on safety, comfort and environment as well as of driving circumstances like dry, wet, mud, snow and ice.

The FIA club ADAC has more than 30 years of experience in tyre testing for the European automobile clubs.

**LRRT**

The FIA welcomes LRRT whilst emphasizing that these tyres should not have any negative effects on safety. In addition the FIA underlines the Commissions proposal for technical/performance requirements for tyres in four areas (rolling sound, rolling resistance, TPMS and wet grip). In particular the new wet-grip requirements might be copied from UNECE Regulation 117 (tyre rolling sound emission).



The Eurocouncil of the Fédération Internationale de l'Automobile  
European Bureau

The FIA urges that consumers are informed on the full nature of both rolling resistance and wet grip. There is a trade-off between these features and the FIA would find it regrettable when tyres, besides other markings, will be fitted with separate markings on rolling resistance.

The FIA Club ADAC will send also a reaction on this Consultation. The FIA asks that special attention is paid to the ADAC statements on the ISO 10844 measuring method for the rolling sound of tires.

Exemptions might be possible for “special use” tyres.

### TPMS

Currently there are both direct- and indirect measuring systems. The former is the more expensive system, it measures the inflation pressure and the temperature of each tyre. Individual pressure loss as well as steady pressure drop in all tyres can be detected. The latter recognises differences in wheel revolutions caused by pressure drops, it is not possible to detect steady pressure drop in all tires.

Because of diffusion tyres loose approximately till 0.1 bar pressure per month

Both systems may increase safety by warning drivers for possible tyre damage. Less inflation pressure will cause higher rolling resistance and as a consequence higher fuel consumption.

Initially the FIA is in favour of implementing indirect TPMS due to safety concerns and because of the minor extra costs. Research into relatively cheaper TPMS that also can detect steady pressure drops in all tires should continue. These systems must be implemented at a later stage.

The FIA remains at your disposal for any further discussion should you so wish.

Wil Botman

Director General  
Fédération Internationale de l'Automobile  
FIA European Bureau

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October 2007

## **Ford Motor Company response to the**

### **"Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres"**

#### Executive Summary:

We – Ford Motor Company – take note of the comments provided by ACEA, but would like to provide our own input on specific aspects of the consultation document.

We would like to comment on 3 specific areas.

#### 1) Overall comments

- We are firmly opposed to the proposed measure. It adds unnecessary administrative burden, proposes unique EU requirements, and attempts to mandate new safety features "through the back-door", without CARS 21 assessment.

#### 2) Type approval

- We are in favor of replacing EC directives by ECE regulations.
- However, the Commission Consultation document would cause the industry to conduct an additional step in the WVTA process since safety themes are to be covered under a new safety regulation (Pedestrian Protection is expressively out of the scope for this approach) before an overall vehicle approval can be obtained.  
This would increase overall administration and cost and is inconsistent with CARS21 principles.

#### 3) Tyre related aspects

- The final test procedure to determine the rolling resistance should be awaited to develop an appropriate ECE regulation.
- Wet grip requirements and noise requirements need to be considered separately, which could have a contradicting impact on LRR tyres. Contradicted later in the document see Q1.
- While TPMS systems need to be carefully considered, industry needs to ensure feasible systems to be available. In order to achieve this, a harmonization with FMVSS 138 is recommended if regulatory measures are to be taken.

#### 4) Advanced active safety systems

- We support the introduction of ESC for new vehicle types only, i.e. M1 beyond 09/2011.
- The systems other than ESC need to follow the CARS21 process. We are opposed to mandating them before a real-world safety and cost-benefit analysis.

More details regarding the above mentioned topics and all other aspects of the consultation document including the answers to the questions provided there can be found in the attached document.

## **Attachment**

### 1. Overall comments

We are firmly opposed to the proposed measure. It adds unnecessary administrative burden, proposes unique EU requirements, and attempts to mandate new safety features "through the back-door", without CARS 21 assessment.

### 2. Background

Replacement of EC directives should move forward as quickly as possible. Technical systems should not be mandated – just performance requirements.

Note: What is the justification (data, statistics) that these advanced safety systems are mandated through the type approval system? Is it required to develop test requirements for each system as well?

### 3. The proposed regulatory approach

- An additional step is added in the administrative process to obtain the vehicle approval – not appropriate as it causes additional efforts and cost. ECE system approvals would still be required for all export markets.
- Quicker implementation of new requirements is not desirable if this just means an accelerated process without providing sufficient time to follow the CARS 21 recommendations including a proper cost/benefit analysis and impact assessment as well as lead times for product development. Also market requirements should decide.
- Introduction of NEW technical features (currently possible under Art.8.2.c. regime only) should be made possible via a generic term in WVTA - might be easier to implement than the split level approach → fundamental requirements to be decided by EU parliament and council / detailed test requirements to be decided by committee).
- ESC, LDW etc are all feature based systems unlike most of the passive safety measures that have been legislated in the past. These technologies require substantial changes to the electrical infrastructure of a vehicle and sufficient package space. Both of these issues can best be addressed by following an ECE regulation approach preferably for new vehicle types only.
- The introduction of TPMS, LRRT and certain other complementary measures is a vehicle technology measure by the manufacturers that has to be credited against their CO2 targets and should be used to build the bridge between the overall target of achieving 120 g/km (125 g/km if considering the biofuels) and the individual CO2 target for the vehicles where applied. A simple overall industry approach is preferred that does not require additional tests but is based on fixed credits for the use of certain complementary measures. While TPMS is seen as reducing CO2 by 2.5% the cost-efficiency for other CO2 improvement measures can be higher looking at some vehicle segments due to the high costs of TPMS.

### 4. Proposed Scope of new Regulation

Note: We do not understand the advantage of dividing the cover regulation into these 12 themes. Why are not all safety related aspects covered ?

### 5. Particular Technical Aspects

#### 5.1 Requirements related to Tyres

##### 5.1.1 Rolling Noise Emissions

##### 5.1.2 Rolling Resistance

Low rolling resistance tyres for new vehicles and the after-market have a considerable CO2 improvement potential and their use should be counted against the vehicle CO2 target as described under section 3. A simplified credit system instead of a multi-band system is preferred that adds unnecessary complexity for CO2 legislation/compliance as well as confusion for the customers.

The test method for rolling resistance is now under discussion at ISO, and the development of a UN ECE Regulation, including specific regulation limits, should be started after the test procedure is established



### 5.1.3 Tyre Pressure Monitoring System

Tyre pressure warning system requirements should not be applied to all tyre types as potential pressure losses on "normal" tyres is recognizable compared to run-flat tyres (R64 has recently been updated to provide a warning for this group of tyres). The potential safety benefit from a mandatory TPMS fitment is regarded as relatively small.

From a CO<sub>2</sub> perspective, we agree that maintaining proper inflated tyres provides an important CO<sub>2</sub> benefit. Measures helping the customer to do so should be encouraged and credited as described under section 3. The technological details how to do so should be up to manufacturers.

As the safety and emission related requirements do not match easily we would suggest a detailed cost benefit analysis to be conducted also in order to establish the appropriate technical parameters. If at any time regulation on TPMS (direct or indirect systems) is considered over a voluntary approach that worked well in the past for e.g. ABS introduction, we would like to encourage a harmonization with the current NHTSA rule.

### 5.1.4. Wet Grip Requirements

ECE R117 has introduced additional wet grip tyre adhesion requirements. The performance measured will be based on a procedure that compares either peak brake force coefficient ("pbfc") or mean fully developed deceleration ("mfdd") against values achieved by a standard reference test tyre (SRTT). These requirements need to be maintained and adopted for the purpose of this consultation paper.

### 5.1.5 Discussion on tyre requirements

Maximum speed limitation would have hardly any environmental effect because in most EU countries a speed limit is in place. Even in Germany the average speed does not exceed 120 km/h, due to regionally enforced speed limits and traffic circumstances.

Furthermore, the large majority of kilometers in the EU are driven on local and regional roads where a much lower speed is subscribed. What would help to reduce carbon emissions, however, is removing bottlenecks, ensuring traffic flow, adopting an economic driving style and checking tyre pressure regularly. These issues are of relevance in the debate about CO<sub>2</sub> emissions. "

## Questions from EU regarding this section:

Q1. Are the noise and rolling resistance limits proposed by DG Enterprise sufficient and realistic?

FMC reply:

FMC understands the necessity of setting the limits on road noise and rolling resistance, but road noise, rolling resistance and wet grip performance must always be considered together because these three have a trade-off relationship with one another. The test method for rolling resistance is now under discussion at ISO, and the development of a UN ECE Regulation, including specific regulation limits, should be started after the test procedure is established.

Also the road surface conditions are as critical to these parameters as the tyre itself.

Q2. Is there any justification for partial or complete exemption for particular categories of tyre from the noise or rolling resistance requirements?

FMC reply:

For the reason given in the reply to Q1, we should not refer to this point at the present stage.

Q3. Should TPMS be made mandatory? What degree of accuracy is necessary for them to be effective in maintaining optimum tyre pressure?

FMC reply:

We oppose mandating TPMS systems, however, where installed, there should be CO<sub>2</sub> credit. Harmonization with the NHTSA FMVSS 138 is recommended if regulatory measures are to be taken. Therefore, the technical requirements for the following need to be fully discussed:

(a) Detection time / tyre pressure detected

Requirements as outlined in UN ECE Regulation No. 64/01 are technically inappropriate. It is recommended for harmonization reasons to align them with the requirements of FMVSS 138.

(b) Applicable vehicle categories

The following and other vehicles need to be taken into consideration:

- For trucks, mandatory installation of TPMS is too early because more technical development in dual wheels and radio wave transmissibility of tyres is necessary.
- For vehicles with small wheels, it is not easy to install TPMS.

(c) Sufficient lead time

A lead time of at least 3 years is necessary following the issuance of a Regulation. Longer lead time may be required depending on the level of technical difficulty specified in the Regulation.

(d) General

From a CO<sub>2</sub> perspective the use of TPMS or equivalent systems should be credited against the vehicle CO<sub>2</sub> target in a simplified overall-industry approach. The CO<sub>2</sub> cost-efficiency of the TPMS technology might question the mandatory use of this measure for some vehicle (segment)s. This should be analyzed more in detail in connection with the overall CO<sub>2</sub> legislation and the issues outlined in chapter 5.1.3 above.

## 5.2 Advanced Vehicle Safety Systems

For systems other than ESC we are firmly opposed at this stage: all systems need to follow the CARS21 process.

It is recommended that specifications for all future advanced vehicle safety systems will be based on UNECE regulations.

We also need to be mindful that mandating energy-consuming advanced electronic safety-systems will have a detrimental impact on CO<sub>2</sub>, via increased alternator-load and added mass to vehicle, and consequently in conflict with the reduction as expressed in the proposal.

The influences claimed re. accidents referred to in this section (see UNECE Consultation doc) is purely theoretical and can only be applicable on 100% penetration.

Note: Cost/benefit applicable for all M1 vehicles? Mandatory requirements of Safety Systems will have a huge cost-impact on low-cost vehicles, i.e. small vehicles.

### 5.2.1 Electronic Stability Control

We support the GTR ESC requirements outlined in the UNECE process. Timingwise dates after 2011 can be supported for new vehicle types only. However, we would recommend to maintain some flexibility when it comes to the roll out / coverage for all vehicles and recommend avoiding mandatory timing for existing vehicle type.

### 5.2.2 Advanced Safety System for possible longer term introduction

All new safety systems need to follow the requirements of CARS21. We are firmly opposed to mandatory introduction of these systems at this stage.

#### 5.2.2.1 Automatic Emergency Braking Systems

The current technologies have not proven to be robust enough to support the claims made in this section and require high penetration to create measurable benefits in in-traffic safety. Further research is necessary here.

#### 5.2.2.2 Lane Departure Warning Systems

Lane Departure Warning requires a substantial upgrade in terms of lane markings across the EU27. If these upgrades to the infrastructure can not be obtained any LDW system will be less effective. Even though research is trying to overcome some of these obstacles – as presented in the PREVENT project exhibition on September 18/19 – all involved researchers are very clear that these technologies can only support but not overcome the identified deficiencies.

Lane Change Assistant systems address accidents with relatively minor injury levels as the vehicles in question are travelling in the same direction. Approximately 4% of these types of accidents result in personal injury and < 1.0% result in fatal injuries. Based on this, the numbers used to illustrate the case for LDW and LCA can not be substantiated. The CARS21 requirements to conduct an impact as well as a cost/ benefit analysis needs to be followed.

#### 5.2.3 Discussion on Advanced Vehicle Safety Systems

While regulators may be inclined to develop regulation on the systems listed below and other active safety systems we would like to encourage also a voluntary MoU approach. In any case these technologies are developing at such a rapid pace that any regulatory action can only be technology restrictive.

#### **Questions from EU regarding this section:**

Q1. Do you support the mandatory installation of ESC for all categories of M and N class vehicles? Should any exemptions be allowed?

FMC reply:

We believe that ESC will ultimately be standard on all vehicles. A mandatory installation should for new types not apply before 2011 for passenger cars. The only exemption that needs to be considered is for vehicles equipped with a manual operated differential while operating in locked mode such as in SUV's. From an Off-Road Capability (ORC) point of view, deletion of diff. lock option in high range on such vehicles would have serious negative effects.

Q2. Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?

FMC reply:

2011 is acceptable for new homologations / new vehicle type approvals only. Inline with CARS21 principles to maintain stability we do not believe that ESC should be mandated on existing vehicle types.

Q3. What would be a reasonable time scale for mandatory introduction of systems such as automatic emergency braking and lane departure warning?

FMC reply:

We should not consider starting mandatory introduction of these systems at this point in time.

- Automatic Emergency Braking: already today too many systems in terms of functionality are available (e.g. frequency of the radar is different territory by territory with affects specifically export programs).
- Lane Departure Warning: integrated approach requires actions by road users and the infrastructure. If these requirements are not fulfilled there is limited benefit of LDW and therefore should not be regulated at all.



*GM Europe*

GM Europe  
Regulations, Environment & CO2 Strategy  
IPC 42-01  
65423 Ruesselsheim  
Germany

Ruesselsheim, October 17, 2007

Dear Sir or Madam,

General Motors Europe (GME), representing the brands Cadillac, Chevrolet, Opel, Saab and Vauxhall in Europe, highly appreciates to have the possibility to provide comments on the public consultation on our proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.

GME kindly requests the Commission to finally propose requirements that are proven to be feasible and acceptable for all parties. We strongly believe, that such requirements were proposed by the European Automobile Manufacturers' Association ACEA. GME therefore fully supports the ACEA proposal.

However GME would like to also comment the following issues:

### **1. & 2. Objective and Background of the Regulation - General Remarks:**

GME is surprised that soon after the CARS 21 initiative a new initiative has been started to update and simplify type approval legislation for various safety related components and systems for passenger and goods vehicles.

The purpose of CARS 21 has been to update and simplify type approval legislation, not only for safety related items, and CARS 21 developed a road map for the introduction of new safety Regulations to ensure a stable and reliable future for the vehicle industry.

Any proposals that will effectively contribute to the application of the principles agreed upon in CARS 21 are of course fully supported by the Industry.

### **3. The proposed Regulatory Approach:**

- GME strongly supports the Commission's goal to replace EC Directives by ECE Regulations.
- In cases where the ECE Regulations have additional or more stringent requirements than existing EC Directives adequate lead-time needs to be provided.
- There is no full understanding why the regulatory approach of the EC whole vehicle type approval (WVTA) has to be amended.
- The proposal to install a safety Regulation sandwiched between the whole vehicle type approval (WVTA) and the Regulations for the various vehicle systems is seen as potentially complicating the regulatory landscape. GME recommend incorporating the reference to ECE Regulations directly into annex IV of the EC WVTA Framework Directive.



- This can be done while taking care of all coexistence, scope and timing aspects between Directives and ECE Regulations.
- Changes to annex IV could then be performed using the comitology procedure, so that only the adoption of entirely new ECE Regulations would have to undergo the co-decision process.
- The split-level approach would not even be necessary. The split approach has, so far, not demonstrated a high level of transparency, takes a rather long time and provides unexpected and unrealistic decisions.

#### **4. Proposed Scope of the new Regulation:**

The approach to collect “almost all the separate vehicle-safety related Directives” but not pedestrian protection does not appear logical.

Annex IV of the Framework Directive could also be restructured in a way to divide the areas of application as proposed in the consultation document.

#### **5. Particular Technical Aspects:**

The industry has no objection to meet specific performance requirements to the vehicle providing that these requirements have a demonstrated benefit for the safety of the road users or the environmental protection and that they do not remove any flexibility to the manufacturer to optimize the global performance of the vehicle. Most of the addressed technical items are studied in Geneva and other Expert Groups. Results of these studies should be taken into account.

##### **5.1 Requirements relating to Tyres.**

The Commission recognizes that the overall performance of tyres is a result from a careful balance of conflicting requirements (noise, handling, vehicle stability, durability, rolling resistance, wet grip). The Commission concludes that the pursuit of more energy efficient, quieter tyres should not compromise safety. The Industry agrees to this statement and stresses that environmental concerns should be added to this consideration.

##### **5.1.5 Discussion on Tyre Requirements.**

*Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?*

- The proposed noise limits are not realistic.
  - The proposal is based on the “FEHRL-Study”. This study claims that it is possible (with low costs) to reduce the rolling noise significantly without degrading safety and performance. The Automotive Industry considers some key points in this study as highly questionable. This study needs to be reviewed carefully before a decision is taken concerning limits. GME opposes to the proposed limits.
  - According to the information from our suppliers, rolling noise limit reductions between 1 and 2 dB(A) may be feasible, but can have adverse effects on safety requirements.
- According to the information from our suppliers, the requirements on rolling resistance seem to be feasible.



Furthermore we would like to support the position about the tyre rolling sound emission as proposed by the German Association of Automobile Industry (Verband der Automobilindustrie – VDA):

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#### **Quote**

#### **Position of the VDA concerning the Draft Limit Table for the Tyre Rolling Sound Emission according to ECE R 117 respective 2001/43/EEC Published in the “Public Consultation“ of the EU-Commission**

##### **Position:**

The VDA opposes the draft limit table, because some of the conclusions of the FEHRL study, which created the basis for this proposal are in contradiction to the experience of the tyre and vehicle development. A limit enforcement of such a severity would mean a strong restriction of the range of original equipment tyres for vehicle manufacturers. This would lead to an unfair competition among the tyre manufacturers.

The proposed limit for class C3 M+S is of special concern as this class covers those tyres which are known as “traction tyres”. While it is known that these tyres can hardly pass even the actual limit values, they were not investigated at all in the FEHRL study.

##### **Proposal for the further proceeding:**

The VDA vehicle manufacturer see a potential for lower limit values in an interim step, however they shall be realistic and be introduced with enough lead time. Therefore the VDA proposes to further investigate the feasibility and time frame of FEHRL proposal for stage B in the directive. In addition a review of the classification for the tyre width is important.

It is pointed out, that an efficient reduction of the noise burden for the society can only be achieved in an integrated approach. As the FEHRL study emphasizes rolling noise reduction is strongly related to improvements and proper maintenance of roads.

Further and more severe steps must be prepared by a joint research program, e.g. as an EU research project, involving all parties to clarify the relationship of various tyre development parameters. This will then create a common basis for further discussion.

##### **Justification:**

The draft proposal of the EU is based on the results of the EU research program SI2.408210, called FEHRL study, where it is concluded that such a reduction would provide a remarkable effect in real traffic, without degrading any other important parameters of safety and environment for the tyre. The cost benefit ratio is estimated to be extremely valuable for the society.

Comments of the VDA regarding important elements of the FEHRL study:

1. Older study concerning tyres must be questioned, because those tyres are no longer used in production and for actual tyres the optimization strategies have been changed.
2. The FEHRL conclusion that a limit reduction in a range of 5 dB to 6 dB would not jeopardize safety and environmental issues cannot be agreed and is in contradiction to the experiences of vehicle and tyre industry.

An OE-tyre is always a carefully designed component for one specific vehicle. The focus for



optimization follows the marketing aspects of the whole vehicle and the individual overall performance will differ from tyre to tyre. A random selection of tyre for research as is typically done by institutes will always cover a wide variety of tyre development strategies. Consequently those studies will hardly be able to elaborate any correlation between the various parameters.

A further drawback is seen in the circumstance that most studies consider only few performance parameters. Aspects as tyre wear, price and comfort are of high importance for customers and should not be neglected.

3. For the vehicle industry it is an additional burden, that the rolling sound results from the tyre type approval has no meaning for the vehicle development. While the tyre alone is tested under rolling condition at a speed of 80 km/h, the overall vehicle has to fulfil its requirements at 50 km/h under high acceleration condition. This are conflicting development goals and it is not granted that a tyre with low rolling noise according to the tyre directive will automatically be a low noise tyre for the vehicle type approval.
4. The estimation of FEHRL for the effect of the limit reduction in real traffic seem to be too optimistic. Many parameters were not considered at all. Some assumptions are unclear and should be revised.
5. The monetary value for the society was given with 27€/dB/a/household. This can be accepted, however according to the source for this information [WG-HSEA; 2003] this value is only valid for households with a noise exposure higher than 50/55 dB Leq. Following the information of an EEA publication in 2001, this is the case for approx. 33% of all European households. It must be concluded that the estimated benefit is far too high.
6. The VDA opposes strongly the conclusion, that vehicle industry is gaining the benefit of the proposed limit reduction. As a consequence of a severe reduction of tyre selection and the negative impact for product optimization, industry has to expect increased product and development costs.

In the opinion of the VDA a limit reduction in the proposed range is not justified.

## Unquote

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*Should tyre pressure monitoring systems be made mandatory?*

- The question whether tyre pressure monitoring systems should be made mandatory requires a scientific and neutral impact analysis, which is still missing. We do not know the scientific and statistical basis of values cited in the consultation document. This should be thoroughly analyzed using the experience of stakeholders such that realistic estimates for the benefit as well as for the necessary performance requirements can be established. Adverse effects of too stringent requirements need to be considered in order to find practical compromises.
- Alternative solutions to enhance driving with the correct tyre pressure should also be examined.

*What degree of accuracy is necessary for them to be effective in maintaining optimum tyre pressure?*

- Safety aspects have been extensively discussed during the rulemaking in the USA. From the safety perspective, we consider the requirements of the resulting standard FMVSS 138 as appropriate.
- From a fuel efficiency perspective it may appear attractive to leave the requirements concerning detection time unchanged from FMVSS 138 but to lower the tolerance for the warning threshold. Faster detection is not relevant for fuel efficiency as the slow pressure loss due to diffusion shall be detected.



- However, the effect of such a lower threshold in real world performance needs to be carefully evaluated. Very small tolerances for the pressure loss, at which a warning has to be issued can lead to frequent nuisance warnings which would likely lead to customer complaints and could even result in ignoring the warning at all (thus inverting the prospected benefit). The reason for such unnecessary warnings is that during normal operation the pressure within a tyre changes significantly depending on temperature and driving conditions. If the tolerance for warnings is within a range of “regular variation” (as opposed to that caused by pressure loss), then false warning will occur.
- Today there are two kinds of TPMS on the market. Direct measuring systems using sensors in the wheels with radio transmitters are currently more precise than indirect TPMS which function on the basis of an analysis of the wheel rpm. However, in their real world performance indirect systems have significant advantages:
  - They are independent of battery lifetime
  - They reduce compatibility problems with aftermarket wheels and tyres.

Therefore performance requirements should be chosen such that they can also be achieved with future developments of indirect systems.

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

- In general, every kind of “special purpose tyres” should be excluded from this kind of requirement.
- In case of a realistic proposal concerning noise and rolling resistance limits, tyres for e.g. off-road use and armoured vehicles should be exempted.
- In addition, an allowance of 1 dB(A) for tyres marked M+S should be given.

## **5.2 Advanced Vehicle Safety Systems.**

Continuously adding new Regulation to the already overregulated vehicle Industry should be avoided. The Industry is opposing the mandatory installation of further technical features (except ESC) as standard equipment throughout the model range and the different markets. The Industry prefers performance criteria in Regulations and any new requirements should be supported by an impact analysis.

### **5.2.3 Discussion on Advanced Vehicle Safety Systems**

*Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?*

- GME sees ESC as a system with safety potential and therefore supports the goal of the Commission to promote ESC.
- Mandatory installation for heavy commercial vehicles as defined in document TRANS/WP29/2007/100 /Add. 1 is acceptable as long as vehicle configurations for which the development of such a system is technically or economically not feasible are exempted.
- Mandatory installation for M1 and N1 vehicles is acceptable as long as the requirements are globally harmonized.

*Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

- For new types of vehicles of categories M1 and N1 a target date 09/2011 for the mandatory installation is realistic provided that the technical requirements are finalized 3 years before that date. Earlier introduction could cause problems for global platform concepts because the discussion on the respective controls and telltales in the USA has not yet been finalised.





*What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favorable cost-benefit case can be made)?*

- Automatic emergency braking and lane departure warning are systems which have been introduced on the market rather recently. They are available in few vehicles models only. We are sure that any discussion about mandating these systems is very premature. Any mandate would necessitate agreement on a standardized functionality and corresponding requirements. Currently, we are still in the phase where different implementations compete with each other, and also manufacturers are integrating crash mitigation and warning functionalities in different ways. Definition of standardized requirements at this point would be rather detrimental in limiting the creative competition for the best solution.

GME has always provided important contributions to improving safety of vehicle occupants as well as of other vulnerable road users. We will continue to do so in the future.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "G. Corsini".

**Gherardo Corsini**

General Motors Europe

Director Regulations, Environment & CO2 Strategy

**Contribution from the German Road Safety Council DVR concerning the public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

**Answers to Questions 1 to 3:**

The questions of the Public Consultation issued by the EU regarding tyres bear environmental as well as safety relevant aspects. German Road Safety Council DVR explicitly underlines that safety aspects have absolute priority for DVR when it comes to developing tyres and monitoring criteria for tyres.

DVR supports the introduction of tyre pressure monitoring systems, although for a mandatory introduction there is still research needed with the aim to analyse negative outcomes and also technical alternatives.

When discussing noise behaviour and rolling resistance performance of tyres one must consider that an optimization of tyres related to the environment, must not be to the detriment of safety characteristics and elements.

Since the tyres are a vital element for driving safety, the Commission should encourage the consumers to meet the limits of vehicle & tyre combinations such as speed and load indexes which are specified by the vehicle and tyre manufacturers. The required information on permitted tyre combinations should be accessible to everybody on the basis of regulations concerning type approval.

Moreover, additional criteria for the performance of safe tyres such as wet-grip, cornering stability, aquaplaning or the necessary properties when used on ice and snow, and they need to be incorporated in the corresponding regulations. To provide an example for the interrelation of various tyre-related parameters, a lecture given by Prof. Dr. Egon-Christian von Glasner dealing with the "Influence of tyre characteristics on both the road and braking performance of vehicles" is annexed.

Introducing a progressive scale of critical values for noise and rolling resistance characteristics of tyres is therefore refused by DVR, unless the corresponding values for safety criteria are determined and introduced at the same time. Consumers need to be informed of all the respective values for each tyre.

And finally, the Commission has to take care that the consumers receive all the necessary information in the documentation needed for the registration of their

vehicles as well as in the COC papers. This document has to state clearly which are the appropriate tyres to be mounted on this particular vehicle.

**Answer to question 4:**

It is DVR's opinion that ESC represents an essential contribution to road safety and DVR therefore supports the Commission's aim to introduce ESC.

- The mandatory introduction of ESC in HGVs as described in document TRANS/WP29/2007/100/Add. 1 is supported by DVR, as far as the installation of ESC is economically and technically feasible in specific vehicle combinations.
- In case of a worldwide harmonized regulation concerning the fitting of ESC in category M1 and N1 vehicles, DVR will support a mandatory introduction.

**Answer to question 5:**

For the new vehicle types of the M1 and N1 categories a mandatory introduction in 2011 is realistic provided the technical regulation is finalised in time.

**Answer to question 6:**

1. For a mandatory introduction of driver assistance systems, it is necessary that the safety properties are sufficiently proven. Moreover, their mode of action needs to be sufficiently defined.
2. The legal requirements (responsibility according to the Vienna Convention) for the use of such systems need to be sufficiently clarified.
3. A number of driving assistance systems are already developed to a relatively high degree, others however still need to be further developed or improved. Therefore it is still too early to recommend a binding date for the mandatory introduction of one system or the other. To stimulate the introduction of driving assistance systems it is recommended to encourage bonus systems.
4. For HGVs, however, the automatic emergency braking system should be introduced rather soon on a mandatory basis, owing to the fact that they have a higher degree of accident risks because of the vehicle masses and dimensions. Here, however, the respective development stage of the different vehicle categories has to be taken into consideration. When asking for the mandatory introduction of automatic emergency braking systems one has to consider that these systems are not yet available or applicable by all HGV manufacturers.

## Nederlandse reactie op de openbare consultatie aangaande Advanced Safety Features and Tyres

**Subjectline:** "Contribution to the public consultation".

**Afzender:** government of The Netherlands

Nederland wil graag van de door de Europese Commissie geboden mogelijkheid gebruik maken om te reageren op de consultatie aangaande Advanced Safety Features and Tyres. Nederland acht de door de Commissie genoemde onderwerpen en voorstellen van groot belang. Hieronder wordt ingegaan op alle de door de Commissie in het consultatiedocument gestelde vragen.

### Hoofdpijn

Nederland verwelkomt en **steunt het initiatief** van de Commissie voor aanvullende en samenhangende regelgeving gericht op bronbeleid voor geluid, rolweerstand en veiligheid (grip) van banden. De noodzaak voor klimaatbeleid, de recente introductie op de Europese markt van zeer onveilige banden met slechte grip en toenemende gezondheidsschade door geluidsemissies van verkeer geven een grote urgentie aan de noodzaak om strengere normen onverwijld te implementeren. In dat licht hoopt Nederland dat de Commissie snel een concreet voorstel zal publiceren. Een geïntegreerde aanpak mag, gezien de urgentie, in geen geval leiden tot vertraging van implementatie van de voorgestelde normen voor geluid en grip.

Nederland is het met de Commissie eens dat de **huidige stand van de techniek voldoende** ruimte biedt voor scherpe normen. Nederland is bovendien van mening dat dit kan zonder dat tradeoffs en uitzonderingen noodzakelijk zijn. De door de Commissie voorgestelde normen voor rolweerstand zijn naar inzicht van Nederland niet scherp genoeg om een significante bijdrage leveren aan CO<sub>2</sub> reductie in het verkeer. De maatschappij en de consument rekenen op steeds betere producten en innovatievere producten van het bedrijfsleven dat op haar beurt hiermee haar internationale concurrentiepositie versterkt. De voorgestelde normen ondersteunen dit proces.

Nederland vraagt de Commissie daarom ook een voorstel te doen voor een **periodieke evaluatie**, om te bepalen of verdere aanscherping van de limietwaarden mogelijk is. Het is wenselijk tot een **integraal, op de consument gericht label** te komen dat aan alle relevante aspecten van de band refereert. Een noodzakelijke stap daarbij is een verplichting aan fabrikanten en verkopers tot **bekendmaking** aan het publiek van testgegevens over veiligheid, rolweerstand en geluid.

### Requirements Related to Tyres and Tyre Pressure Monitoring Systems

*Vraag Europese Commissie:*

*- Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?*

*Nederlandse reactie:*

Met betrekking tot de specifieke elementen uit de door de Commissie gestelde vragen wordt in de onderstaande opsomming ingegaan op: I.) de haalbaarheid van de limieten voor geluid, II.) het maatschappelijk belang van normen voor bandengeluid, III.) de haalbaarheid en wenselijkheid van normen voor rolweerstand en de vraag of de voorgestelde normen streng genoeg zijn, IV.) de afwezigheid van een noodzaak van een trade-off en V.) de noodzaak voor een integraal label en openbaarmaking gegevens.

- I.) de haalbaarheid van de limieten voor geluid  
Nederland acht de voorgestelde limieten en aanpassingen aan meetmethoden voor bandengeluid realistisch en haalbaar, zonder dat concessies worden gedaan aan veiligheid (wet grip) of energieverbruik (rolweerstand). In Nederland zijn de wetenschappelijke validiteit van het FEHRL onderzoek en de daaruitvolgende conclusies door TNO en M+P (een onderzoeksbureau) geaccepteerd. Ook komen de resultaten overeen met de uitkomsten van parallel uitgevoerd Nederlands onderzoek onder een grote groep banden. Met betrekking tot banden met bredere maten moet worden benadrukt dat de door de FEHRL geadviseerde limieten achterblijven bij de voortgang van de techniek en dat daarom strengere limieten mogelijk zijn. De voorgestelde aanpassing in limieten en meetmethoden voor bandengeluid vertegenwoordigen de minimumwaarden waarmee deze moeten worden aangepast om tot een reductie van geluidsproductie te komen.
- II.) het maatschappelijk belang van normen voor geluid  
Voor Nederland is het geluidsvoorstel voor bronbeleid van groot belang, omdat deze een grote gezondheidswinst oplevert voor burgers van de EU. Daarnaast levert het voorstel Nederland (en Europa) naar verwachting grote financiële besparingen op bij aanleg en onderhoud van infrastructuur (aan rijksinfrastructuur in totaal 200 miljoen euro tot 2020), naast grote maatschappelijke baten aan natuurcompensatie en hogere opbrengsten van onroerend goed. De aanscherping van de normen is noodzakelijk om lokale overheden te helpen goede resultaten te boeken in de 'actieplannen' die verplicht zijn gesteld onder de Europese richtlijn omgevingsgeluid (2002/49/EC). Tevens betekent dit voor hen een enorme kostenbesparing. In een maatschappelijke kostenbaten afweging berekent de FEHRL (Forum of European Highway Research Laboratories) dat aanscherping van de normen de EU tussen 48 en 123 miljard euro oplevert aan maatschappelijke baten (in totaal voor 2010-

2022). De FEHRL schatten de kosten voor industrie in op 1,2 miljard euro (in totaal tussen 2008 en 2012).

- III.) de haalbaarheid en wenselijkheid van normen voor rolweerstand en de vraag of de voorgestelde normen streng genoeg zijn  
Nederland is verheugd dat de Commissie voorstelt een limiet voor de maximale rolweerstand van banden te introduceren en, in ieder geval voor banden voor personenauto's (categorie C1), reeds spoedig na de introductie een aanscherping door te voeren. In het kader van de *Community strategy to reduce CO2 emissions from passenger cars and light commercial vehicles* heeft de Commissie aangegeven dat introductie van de limieten een kosteneffectieve maatregel is. Nederland deelt deze opvatting. Nederland is echter teleurgesteld in de voorgestelde limietwaarden, in ieder geval voor de categorieën C1 en C2. De limieten voor rolweerstand vormen onderdeel van de *Community strategy to reduce CO2 emissions from passenger cars and light commercial vehicles* en zouden hieraan een substantiële bijdrage moeten leveren. Dit betekent dat de limietwaarden zodanig zouden moeten zijn dat er een forse marktverschuiving naar banden met een lagere rolweerstand optreedt. Uit gegevens die Nederland beschikbaar heeft, blijkt dat op dit moment geen of nagenoeg geen enkele band een rolweerstand heeft die hoger ligt dan de initiële limietwaarde. Ook voor de aanscherping voor categorie C1, die wordt voorgesteld voor 2 jaar na inwerkingtreding, geldt dat slechts bij uitzondering een bestaande band hoeft te worden aangepast om aan de limietwaarde te voldoen. De omvang van deze groep wordt geschat op minder dan 5% van het marktvolume. Nederland vraagt de Commissie om de limietwaarden zodanig te kiezen, dat er wel degelijk een substantiële CO2 emissie reductie wordt gerealiseerd. Nederland is daarbij wel van mening dat de fabrikanten een aanpassingsperiode moet worden gegund. Daartoe moet reeds bij inwerkingtreding de limietwaarde voor categorie C1 op 12.0 kg/ton vastgesteld worden. Dit is gezien de eigenschappen van banden die nu op de markt zijn haalbaar. Binnen 2 jaar na inwerkingtreding zouden de limietwaarden voor de categorieën C1 én C2 moeten worden aangescherpt naar het huidige marktgemiddelde. Voor C1 lijkt dat marktgemiddelde tussen 10.0 en 10.5 kg/ton te liggen en voor C2 rond 9.0 kg/ton.
- IV.) de afwezigheid van een noodzaak van een trade-off  
De voorgestelde normen zijn het absolute minimum aan waarden die kunnen worden geïntroduceerd. Onderzoek heeft herhaaldelijk aangetoond dat de voorgestelde normen voor wet grip, rolweerstand en geluid in een band verenigbaar zijn en daarom zonder onderlinge

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negatieve gevolgen kunnen worden ingevoerd<sup>1</sup>. Een 'trade-off' tussen normen voor geluid en rolweerstand is daarom in het licht van de huidige stand van techniek niet te verantwoorden.

- V.) de noodzaak voor een integraal label en openbaarmaking gegevens  
De voorgestelde normen gebruiken slechts een klein deel van de mogelijkheden die de huidige stand van techniek biedt. Daarom is het wenselijk de consument de mogelijkheid te geven zelf voor veiliger, stiller en zuiniger banden te kiezen. Daartoe is nu nauwelijks informatie te vinden. Daarom moet de industrie de verplichting opgelegd krijgen alle informatie uit metingen over geluidsproductie, rolweerstand en grip openbaar te maken en vervolgens middels een integraal label naar de consument te communiceren. De door de Commissie voorgestelde indeling van het label voor rolweerstand is onvoldoende onderscheidend en daardoor ontoereikend als instrument om de consument te informeren. Ruim 75% van de personenautobanden (C1 banden) die momenteel op de markt zijn vallen in “*Band B*”. Nederland stelt de volgende “*Bands*” voor, voor categorie C1:
  - o “Band A” 8.0 kg/ton
  - o “Band B” 9.0 kg/ton
  - o “Band C” 10.0 kg/ton
  - o “Band D” maximum value 2 years introduction
  - o “Band E” initial maximum (12.0 kg/ton)Nederland stelt voor de “*Bands*” voor categorie C2 op vergelijkbare wijze aan te passen.

*Vraag Europese Commissie:*

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

*Nederlandse reactie:*

De voorgestelde normen bieden voldoende ruimte en doen voldoende concessies aan de verschillende typen banden om op de markt te kunnen worden toegelaten. Daarom is er geen rechtvaardiging voor uitzonderingscategorieën. Nederland is het met de Commissie eens dat indien uitzonderingscategorieën toch worden ingesteld, een maximum snelheidslimiet van 120 km/uur voor deze banden moet gelden om te voorkomen dat deze breed in gebruik zullen komen.

*Vraag Europese Commissie:*

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

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<sup>1</sup> O.a. door FEHRL, VTI, TRL, Volkswagen Studie.

*Nederlandse reactie:*

Nederland is voorstander van verplichtstelling van bandendrukmeters. Bandendrukmeters dragen niet alleen bij aan de vermindering van CO<sub>2</sub> uitstoot in het verkeer, maar hebben een groot potentieel voor het verbeteren van de verkeersveiligheid. Doordat banden die goed op spanning zijn minder snel slijten, dragen bandendrukmeters tevens bij aan een betere luchtkwaliteit. Een significant aandeel (9%) van de PM<sub>10</sub> is bandenstof, afkomstig van slijtende banden. Met de verbetering van motortechnieken zal dit aandeel verder toenemen. In het kader van de *Community Strategy to reduce CO<sub>2</sub> emissions from cars and light commercial vehicles* heeft de Commissie de introductie van bandenspanningsmeters als kosteneffectieve maatregel aangemerkt. Nederland deelt deze opvatting. De investering in een bandendrukmeter wordt door de consument snel terugverdiend door besparingen op brandstof (in +/- 3 jaar). Deze terugverdientijd is in werkelijkheid nog korter wanneer het levensduurverlengende effect van bandenspanningsmeters wordt meegenomen. Maatschappelijk gezien zijn er, naast een bijdrage aan vermindering van de klimaatverandering, baten te verwachten door een verbeterde luchtkwaliteit (gezondheidseffecten, verminderde kosten gezondheidszorg, etc.).



## **Advanced Vehicle Safety Systems.**

*Vraag Europese Commissie:*

*- Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?*

*Nederlandse reactie:*

ESC (Electronic Stability Control) is een van de meest effectieve nieuwe veiligheidssystemen die momenteel op de markt beschikbaar zijn. De mate van penetratie in de voertuigvloot van deze toepassing is echter niet naar tevredenheid. Wanneer dit verbeterd wordt, kunnen in de EU duizenden levens worden gespaard. Een verplichtstelling van installatie voor alle nieuwe voertuigen in de klassen M, N en O is haalbaar wanneer een pragmatische aanpak wordt gevolgd. Het voorstel zoals dat door de VS in Genève is neergelegd is een goed vertrekpunt, maar zal nog wel aangepast moeten worden teneinde dit in de EU effectief toepasbaar te maken.

*Vragen Europese Commissie:*

*- Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

*- What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?*

*Nederlandse reactie:*

Het is moeilijk om een tijdspad aan te geven voor de verplichte introductie van andere systemen. In de eerste plaats zijn veel van de nieuwe technologieën op dit moment al op de markt. Naast LDWA (Lane Departure Warning Systems) en noodremssystemen moeten ACC, Blind Spot Monitoring en speed alert worden genoemd. In de tweede plaats is het nog niet duidelijk welke functionele eisen moeten worden gevraagd, ook is de verwachte kosteneffectiviteit nog niet bepaald. Daarom is het nu te vroeg voor een discussie over verplichte installatie. Nederland stelt voor dat de EU zich daarom eerst op invoering van ESC concentreert. Wanneer een volgende technologie genoemd wordt voor verplichtstelling, is Speed Alert een goede kandidaat.

Response to:

**Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

ESC:

The mandatory installation of ESC in all types of vehicles is a must, due to the fact, that there is a significant and well proven safety benefit.

In the truck business, there is a request from fleet owner organisations (e.g. BGL), that ESC will be made mandatory. This allows the fleet owners to contribute to safer traffic, without running into a competitive disadvantage.

As ESC is a precondition for many of the advanced safety improving features like “collision mitigation brakes”, making it mandatory helps to prepare the market for those features.

2011 is a very reasonable date for the ESC requirement for new cars. The fact, that most of the vehicles are offered with ESC as an option today already, makes a mandatory installation possible in 2011.

An additional aspect which should be considered is, that this requirement helps the European automotive industry to stay competitive, because also imported vehicles have to be equipped with this feature.

*What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?*

The focus should be kept on longitudinal functions first, because of the high fatality reduction potential of approx. 30%, considering that all available longitudinal functions are installed in all vehicles. This includes Full Speedrange ACC, Forward Collision Warning and Collision Mitigation.

A mandatory introduction of “automatic emergency braking” could be envisioned for 2014, if the function complies with already available collision mitigation systems and the “vienna convention”. A stepwise introduction - related to the vehicle segment – would make a lot of sense.

As a first step, a “Headway indicator” and a “Forward collision warning” should be made mandatory. This would help to motivate the market to have more “collision mitigation systems” and comfort oriented driver assistance installed voluntarily in a shorter time frame. It is well known, that most of the accidents are caused by inattention, or distraction of the driver. In such cases, even a warning system provides a big benefit already.

Pure warning systems can also be retrofitted in the existing vehicles and therefore allow a fast penetration of the entire European vehicle fleet.

Such a first step could be envisioned to be mandatory for all new vehicles from 2012 on.

For “lane departure warning”, a reasonable introduction date (mandatory for all new vehicles) could be 2014 also.

As we all know, that an incentive for the driver could speed up the market significantly, this should be considered as an accompanying measure, specifically for retrofit systems. Offering an incentive (tax, insurance, toll, ...) could be introduced extremely fast and therefore provide the public safety benefit much faster than the mandatory requirement only.

Oct. 15, 2007

Walter Hagleitner

# Public consultation

## Seat belt reminders: An advanced safety feature with tremendous life saving potential not to be ignored

IEE S.A., a European manufacturer of sensor systems which are used, among other applications, by the automotive industry in the domain of occupant detection, occupant classification (OC) and child-seat presence and orientation detection (CPOD), welcomes the opportunity to comment on the outline proposals for a regulation on “Advanced Safety Features and Tyres”.

IEE would like to comment especially on several statements (in *italics*) made in the consultation document:

*“There are some vehicle-related areas where the European Union may wish to take particular initiatives in order to meet important policy objectives; in particular those involving road casualty reduction, ....”*

The White Paper “European Transport policy for 2010”, published in 2001, set the ambitious target to reduce the number of road fatalities within the EU until 2010 by 50%. Recently published road safety statistics (1) indicate that this goal will not be achieved. Safety devices which have proven to reduce the number of traffic fatalities should therefore be taken into consideration for further actions in order to achieve the white paper targets as soon as possible.

*“Some advanced systems, such as vehicle stability control and tyre pressure monitoring systems, are already being offered by vehicle manufacturers. However, we believe that there is justification for mandating some of these systems on new vehicles by means of type-approval legislation.”*

IEE believes that the same rationale could apply to seat belt reminder (SBR) systems. Whereas advanced seat belt reminder systems are frequently available for the driver, the installation rates for the front passenger seat are significantly lower. The rear seats are only covered with less advanced systems and in a quite small number of car models. The rear seats, typically having much lower seat belt wearing rates than the front seats, could nowadays be covered by advanced SBR systems due to new technology concepts.

The benefit of seat belt reminder systems has been proven in a large number of studies. A recently published paper (2) studied the influence of advanced SBRs on seat belt wearing rates in seven EU countries. The total seat belt wearing rate was 97.5% in cars with SBR, while it was 85.8% in cars without. The study also found

# Public consultation

that the number of unbelted car occupants is decreased by 80%, independent of the general average wearing rate. This means that SBR systems could have a major benefit in reducing the number of road fatalities, especially in countries with low average seat belt wearing rates. The result of that study supports previous estimations that more than 7000 lives could be saved every year in the EU if all cars were fitted with SBRs.

Furthermore, seat belt reminder systems for the front seats have shown a very positive cost benefit ratio of 1:6 (3).

*“UNECE Regulations are widely accepted in countries inside and outside the EU, and the EU is itself a contracting party to many of these Regulations. Therefore there is little point in the EU retaining and constantly updating its own Directives, unless there are particular aspects which are not covered, or are insufficiently covered, by UNECE Regulations.”*

UNECE recently made a first step in regulating seat belt reminders, but IEE believes that from the European perspective, a higher level standard would be justified. The UNECE regulation 16 describes the provisions concerning the approval of a seat belt reminder system, but it does so only for the driver. The seat belt reminder provisions of this regulation could be used as a basis for a European regulation and should be extended in a first phase to front passenger seat and in a second phase to the rear seating positions.

While IEE acknowledges that promoting the implementation of new technologies, which undoubtedly help to reduce the number of accidents, is of course commendable, we nevertheless would like to point out that accidents will continue to happen, and that the full potential of “simple” life saving equipment like seat belt reminders has by far not yet been reached.

(1) ETSC PIN Flash 6, October 2007

(2) Intelligent seatbelt reminders: Do they change driver seat belt use in Europe  
Lie (SRA), Kullgren (Folksam) et al.; ESV conference paper 07-0388

(3) ETSC: Cost effective EU transport safety measures (2003)

## **EU Commission Consultation (Limits Tyre Noise Directive 2001/43/EC)**

Response of IPO, the association of the 12 Dutch provinces

*Question 1. Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?*

Tyre noise is the dominant noise source on regional roads. IPO fully agrees with the Commission that the advances in tyre technology is sufficient for a significant tightening of the noise limits for tyres. As regional authorities we invest in more quiet road surfaces on our roads. Investments in the reduction of tyre noise are very cost effective and are in our opinion a precondition for our own investments. Especially in combination a great reduction is possible. The commission can't expect regional authorities to make further investments in this field if the opportunities for the reduction of tyre noise is missed!

Efforts of all parties are necessary for a better noise quality around regional roads and for the reduction of health effects caused by road noise.

We don't think there is a trade off between rolling resistance and noise. The FEHRL study is clear on that point.

*Question 2. Is there any justification for partial or complete exemption for particular categories of tyre from the noise or rolling resistance requirements?*

We don't think there is a need for exemptions, at least not on the Dutch regional roads.

*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?*

We would welcome such systems, but we ask the Commission to avoid any delay in the decision process regarding the important issues of safety and noise.

AD/G8142/JMA

Geneva, 18 October 2007

## **IRU OBSERVATIONS ON THE PUBLIC CONSULTATION ON ADVANCED SAFETY FEATURES AND TYRES**

**Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.**

### **I. BACKGROUND**

- In 2006, the CARS 21 group (Competitive Automotive Regulatory System for the 21<sup>st</sup> Century) recommended that 38 EC Directives should be replaced by equivalent UNECE Regulations.
- This consultation also fits into the European strategy to promote air purity which sets 2020 as the date for achieving atmospheric pollution reduction goals in Europe. This strategy focused on reducing CO<sub>2</sub> emissions by influencing fuel consumption, a factor of interest to the road transport sector.
- On 24 August 2007, the European Commission launched a public consultation on possible scenarios for a proposal for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.
- The IRU consulted its Member Associations in the road freight and road passenger transport sector on 26 September 2007. This document contains the observations of the IRU and its Member Associations on advanced safety features and tyres.

### **II. IRU OBSERVATIONS**

- The IRU favours a Community approach oriented towards reducing toxic emissions and non-toxic emissions such as CO<sub>2</sub>, given that commercial transport accounts for only 3% of all CO<sub>2</sub> emitted in the territory of the European Union. It seems more relevant to act at Community level on CO<sub>2</sub> reduction by establishing strict technical measures. The IRU has made the goal of sustainable development one of its statutory obligations and has defined the three 'i' strategy as the most solidly advantageous one in terms of the cost/profitability ratio:
  - **Innovation:** at-source technical measures and operating practices are the best way to reduce the environmental impact of road transport, such as new rolling resistance requirements, new grip requirement and tyre pressure monitoring systems.
  - **Incentives:** to encourage faster introduction by transport operators of best available technology and practices.

➤ **Infrastructure:** without free-flowing traffic, the above measures are useless. Adequate investments in new infrastructure to remove bottlenecks and missing links, plus fullest use of existing infrastructure, are essential.

- The IRU welcomes the initiative to replace the technical Directives with equivalent existing UNECE Regulations.
- The IRU welcomes and supports the initiative making mandatory the tyre pressure monitoring systems, for environmental and economical reasons, but most of all for safety reasons, especially since it will have no cost impact on the prices of vehicles.
- The IRU welcomes the proposal about rolling resistance, as it is important to consider the grip of tyres and the level of noise. The noise and rolling resistance limits need to be in the range limits of what tyre manufacturers can do in collaboration with truck and coach manufacturers. This does not necessarily imply penalising the grip or the durability of a tyre by working on only one technical aspect such as noise level or rolling resistance. The noise is an environmental issue for vehicles. Not only the tyres, but also the pavement, are responsible for noise. The capacity of reduction for pavements is 7 or 8 decibels (as opposed to 3 or 4 decibels for tyres). It should not be forgotten that tyre manufacturers are working on a compromise between grip and durability for the performance of tyres. In this aspect, a global regulation would be very important.
- For special purpose vehicles, the noise and the rolling resistance requirements should have an acceptable tolerance without penalising the performance those vehicles are entitled to.
- The IRU supports and recommends installation of the Electronic Stability Control (ESC) on different vehicle categories (M, N and O), with the possibility to disconnect it for special purpose vehicles. The vehicle stability function shall include at least roll-over control and directional control.
- The reasonable timing of introducing all those advanced technologies for the different combinations vehicles should be carefully evaluated with all involved parties without penalising one or the other sectors, in order to find durable systems, which function trouble-free.
- The IRU and its Members agreed on new technologies to monitor systems, but these need to be reliable. The industry mentioned that technology to monitor does exist, but there is no norm or standard for it.

\* \* \* \* \*



## **JAMA's Comment on the EU Consultation Document**

### **1. Commission's policy on EU Directives/UN ECE Regulations**

JAMA agrees with the EU Commission's basic policy that certain EU Directives should be replaced by equivalent UN ECE Regulations. JAMA also considers that the governments of non-EU countries should refer to UN ECE Regulations directly, but should not add their own requirements to the UN ECE Regulations that will replace their equivalent national standards.

It is therefore desirable to have worldwide discussions at WP29 on the provisions that each government considers necessary and to develop UN ECE Regulations incorporating reasonable and effective technical standards and test procedures based on professional expertise and data. Moreover, each government must be allowed some room for discretion on the adoption of a UN ECE Regulation to ensure the application of the most appropriate regulatory levels or technical requirements according to the needs of their country or region.

In particular, the application of certain requirements for advanced safety systems may be premature or inappropriate for some countries depending on the different circumstances, road environment, and accident patterns. For instance, different safety measures may be given top priority according to the accident patterns of each country. For technologically in-developing countries, such mandatory installation of advanced safety systems can even reduce the safety of the vehicle due to insufficient maintenance. Each technical requirement of a UN ECE Regulation must therefore be provided such that each contracting party to the 1958 Agreement can decide whether to adopt it or not according to their domestic situation. The adoption of mandatory requirements for advanced safety systems should be left to the discretion of each member country.

### **2. Tyre noise, low rolling resistance tyres, and wet grip performance**

JAMA agrees with the Commission's recognition that tyre rolling noise is the dominant component of road traffic noise at a vehicle speed of over 40 to 50 km/h. Strengthened control on tyre noise is an effective way of reducing road traffic noise and early legislation is expected. However, JAMA cannot determine the technical feasibility for the regulatory levels proposed by the Commission as the test procedure for rolling resistance has not been established yet.

JAMA also recognizes the effectiveness of low rolling resistance tyres in reducing CO<sub>2</sub> emissions. However, as the test procedure for rolling resistance is still under discussion at ISO, full discussions on low rolling resistance tyres, including specific regulation values, must be started at WP29 after the test procedure is established.

Questions from EU:

Q1. Are the noise and rolling resistance limits proposed by DG Enterprise sufficient and realistic?

JAMA's reply:

JAMA understands the necessity of setting the limits on road noise and rolling resistance, but

road noise, rolling resistance and wet grip performance must always be considered together because these three have a trade-off relationship with one another. The test method for rolling resistance is now under discussion at ISO, and the development of a UN ECE Regulation, including specific regulation limits, should be started after the test procedure is established.

Q2. Is there any justification for partial or complete exemption for particular categories of tyre from the noise or rolling resistance requirements?

JAMA's reply:

For the reason given in the reply to Q1, we should not refer to this point at the present stage.

### **3. TPMS (Tyre Pressure Monitoring Systems)**

JAMA considers TPMS as an effective solution in terms of achieving the CO<sub>2</sub> reduction target. However, the requirements for the run flat malfunction detection time, run flat mode detection time and detection speed conditions stipulated in UN ECE Regulation No. 64/01 are technically inappropriate. The technical requirements for TPMS should, also from the perspective of international harmonization, be aligned with the requirements of FMVSS No. 138.

As for the applicable vehicle categories for TPMS installation, careful consideration of its technical feasibility is needed. In the relevant UN ECE Regulation, the requirement for TPMS installation should be made optional, because whether a vehicle is required to be fitted with TPMS or not must be appropriately determined based on the accident patterns of each country.

Questions from EU:

Q3. Should TPMS be made mandatory? What degree of accuracy is necessary for them to be effective in maintaining optimum tyre pressure?

JAMA's reply:

JAMA does not disagree with the Commission on the mandatory TPMS in EU region. However, the technical requirements for the following need to be fully discussed:

(1) Detection time speed / tyre pressure detected

The requirements stipulated in UN ECE Regulation No. 64/01 are technically inappropriate. It is reasonable to align them with the requirements of FMVSS No. 138.

(2) Applicable vehicle categories

The following and other vehicles need to be taken into consideration:

- For trucks, mandatory installation of TPMS is too early because more technical development in dual wheels and radio wave transmissibility of tyres is necessary.
- For vehicles with small wheels, it is not easy to install TPMS.

### (3) Sufficient lead time

A lead time of at least 3 years is necessary following the issuance of this Regulation. Longer lead time may be required depending on the level of technical difficulty specified in the Regulation.

### **4. ESC (Electronic Stability Control), automatic emergency braking, and lane departure warning**

JAMA agrees that ESC is an effective system for safe driving and ensures general safety of the vehicle. However, the mandatory installation of ESC must be comprehensively discussed taking into consideration the different accident patterns among regions, as well as economic losses.

In particular, the development of technical standards for the ESC intended for small vehicles to establish a GTR is ongoing at present based on the US standards. Although it is proposed that the established GTR be added to an Annex of UN ECE Regulation No. 13H, the adoption of mandatory installation of ESC should be left to the discretion of each country.

Automatic emergency braking and lane departure warning systems are still in the development stage and therefore we should not start full discussions on mandatory installation at the present stage.

Questions from EU:

Q4. Do you support the mandatory installation of ESC for all categories of M and N class vehicles? Should any exemptions be allowed?

JAMA's reply:

JAMA does not disagree with the Commission's intention to make the technical standards of the prospective GTR mandatory within the EU region as regards the ESC intended for vehicles of categories M1 and N1.

For the ESC intended for categories other than M1 and N1 (EVSC), mandatory installation should first be limited to the categories where great economic losses are anticipated based on the EU's study on accident patterns and economic effect (i.e. vehicles covered by ADR and long-distance coaches). Extension to other categories should be considered after the test procedure is established, with the possibility of exemptions according to the actual usage and accident patterns.

However, if the mandatory installation of EVSC is immediately needed in EU region because of specific accident patterns, this mandatory requirement must be made optional for the other contracting parties.

Q5. Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?

JAMA's reply:

A lead time of 3 years for new car models and 5 years for existing car models following to the

establishment of the Regulation is necessary for the ESC intended for categories M1 and N1.

For the ESC (or EVSC) intended for categories other than M1 and N1, a lead time of 3 years for new car models and 5 years for existing car models following to the establishment of the Regulation is necessary for vehicles covered by ADR and long-distance coaches. For other vehicles, as stated above, the timing of the application should be decided after the test procedure is established, based on the accident patterns and the brake type.

Q6. What would be a reasonable time scale for mandatory introduction of systems such as automatic emergency braking and lane departure warning?

JAMA's reply:

We should not start full discussions on mandatory introduction of these systems at the present stage. As technological improvements for these systems are still underway and expected to continue, it is too early to give a timetable for mandatory introduction.

# **JATMA**

## **JAPAN AUTOMOBILE TYRE MANUFACTURERS ASSOCIATION, INC.**

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October 18, 2007

### **EUROPEAN COMMISSION ENTERPRISE INDUSTRY SECTORS AUTOMOTIVE INDUSTRY SAFETY**

To Whom concern

Subject : JATMA PETITION ON PUBLIC CONSULTATION ON OUTLINE  
PROPOSALS FOR A REGULATION OF EUROPEAN PARLIAMENT  
AND OF THE COUNCIL ON ADVANCED SAFETY FUTURES AND  
TYRES.

The Japan Automobile Tyre Manufacturers Association Inc. (JATMA) is the organization representing the tire manufacturers of Japan. The JATMA members include Bridgestone Corporation, Sumitomo Rubber Industries Ltd., The Yokohama Rubber Co., Ltd., Toyo Tire & Rubber Co., Ltd., and Nihon Michelin Tire Co., Ltd.

Regarding the captioned Public consultation proposed by European Enterprise Industry sectors Automotive industry Safety on Aug.22nd 2007, we, JATMA submit the following petition as one of stakeholders.

#### **1. Summary**

Since tyre is the only vehicle part which contacts road surface, on a tyre it is required to keep well balanced performances relevant to environment and safety.

Accordingly, with regard to tyre performance included in the public consultation we, JATMA as a representative of the tyre manufacturers of JAPAN hope that the appropriate and well balanced regulation will be made.

At this moment we, JATMA supports the petition of EUROPEAN TYRE & RUBBER MANUFACTURERS' ASSOCIATION (ETRMA) on the limit value of each performance such as rolling resistance, Tyre road noise, Tyre Wet Grip etc., included in the Public consultation.

Also we, JATMA surely requests to establish the relevant test methods and UN ECE/WP29 expert group to fix the limit values reviewing them precisely.

## 2. Regarding specific requirement on a tyre

### ① Tyre Road Noise

Although we, JATMA agrees to tighten tyre noise limits, the limit values proposed in the appendix tables of the Public consultation are not realistic, considering the incompatibility with other performance factors. They should be determined with comprehensive evaluation of tyre performance including rolling resistance, wet grip, etc.

### ② Rolling Resistance

JATMA supports the EU position that lowering rolling resistance is effective in CO2 reduction. However, since ISO is studying a test method related to rolling resistance test, after establishing the test method the limit values should be reviewed precisely and its reasonability should be discussed.

### ③ Tyre Wet Grip

Limit values of wet grip should be same as ECE Reg.117 for passenger tyre. For LT and T/B tyre, limit values should be determined after ISO decision which is still under consideration.

### ④ TPMS (Tyre Pressure Monitoring System)

Tyre inflation pressure plays an important role in our environmental measures such as CO2 reduction as well as in maximizing tyre performance and ensuring safety driving. Therefore it is necessary for the government and automobile/tyre industry to promote further education for users to maintain their tyre inflation pressure, in cooperative relationship.

We, JATMA supports the EC intention to mandate TPMS fitting to complement this activity.

Best Regards,



Motoharu Shinohara

Secretary General

Japan Automobile Tyre Manufacturers Association Inc.

CC : Ms. Fazilet Cinaralp

Secretary General

European Tyre and Rubber Manufacturers Association (ETRMA)

CC : Mr. Jean-Claude Noirhomme

Secretary General

European Tyre and Rim Technical Organization (ETRTO)

## **Contribution to the public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features of Tyres**

### **Comments on Rolling Noise Emissions**

#### **General remarks**

The traffic noise pollution affects a high percentage of the European population. The problem is still increasing. The adverse effects and thereby the costs to the society are very high. This has been well documented, so further comments are unnecessary here.

Pollution problems can be decreased by measures on the emission side and/or the immission side. In the case of environmental noise from road traffic, both the emission side and the immission side need to be tackled as the problems cannot be solved neither solely on the emission side, nor on the immission side. There is a substantial gap between the present demands on the emission side for vehicles and tyres (UNECE reg. 51 resp reg. 117) and the possibilities to achieve an acceptable environment using reasonable measures on the immission side (town and traffic planning, building design). This gap is of the order of at least 10 dB. This means that the noise emissions from vehicles in ordinary traffic need to be reduced by at least 10 dB. This demands measures both on the tyres and the road surfaces and the vehicles, [1]. The proposition in the consultation document represents a step in one of the three parts.

The effect of a noise emission regulation upon resulting effects in noise immissions depends on several conditions such as the composition of the market with different types of tyres, composition of the vehicle fleet, how rapidly old tyres are shifted out, etc.

The formulation in the consultation document “...Reducing the level of the tyre/road noise thus represents an effective approach for protecting the population from noise...” is an underestimation of the seriousness of the traffic noise problem. It is necessary but not at all sufficient to reduce the tyre/road noise in order to protect the population from noise.

In this context, it is important to point at the coupling between measures towards lower noise emissions from individual vehicles and measures for better use of land, less fuel consumption and better traffic safety. A common local measure against traffic noise – increased distance between





roads and dwellings – contribute to urban sprawl. Substantially quieter vehicles would facilitate building compact cities with good environment. Therefore, quieter vehicles is one way of reducing fuel consumption and save land – an important part of a sustainable development, [1].

The proposed stricter limits – if adopted and enforced – will decrease the environmental noise somewhat provided some other important conditions are fulfilled. See below. The effect will be higher on maximum levels than on equivalent levels. The effect will be smaller in Sweden than in most other countries in Europe, due to the rough structure of the common Swedish road surfaces.

### Answers to the questions

The proposed noise limits are not sufficient! See [1] for a detailed discussion.

The proposed limits appear realistic. However, observe important conditions described in next paragraph and next section!

There seem to be no target conflicts between tyre noise emission and other tyre properties like rolling resistance, wet grip, price etc. There is, however, a trade-off between tyre noise emission and very high speed performance for car tyres. If car speeds were limited to the order of 130 – 150 km/h this would open for a development of quieter car tyres. Such a speed limitation would also have a substantial positive influence on fuel consumption and traffic safety and thereby contribute to a sustainable development. This is a clear win/win situation.

### Important parts of a noise regulation on tyres

Very important in the context of this proposed regulation, is the coupling between the limit values and the test method. The system must be such that it leads to substantially lower noise emissions from ordinary traffic on common road surfaces so that noise immissions decrease.

The limits in Annex 1 are those proposed by FEHRL as step 2. The noise emission limits for tyres are based on a test set-up according to ISO standard 362 with the vehicle at coast-by with the engine switched-off. The test surface shall comply with ISO 10844. The standard has originally been developed to measure the noise emission from road vehicles under maximum acceleration with a minimum of contribution of tyre/road noise. Therefore, the specified road surface, ISO 10844, is comparatively smooth and has high absorption. It is not well representative for real road surfaces used in Europe.

Tyre noise is generated through a number of quite different mechanisms. One important of these is tyre vibration excited by the unevenness of the road surface. If choosing the smoothest possible test surface within the allowances for the surface ISO 10844, the tyre vibration part of the emission mechanisms may be much underestimated and the test result an irrelevant measure of the tyre's noise properties on ordinary roads. Strict noise limits might then be fulfilled but without any positive effect on the environment.

This situation must be avoided. Tyres, to be approved, must fulfil the limits in Annex 1 to the Consultation document when tested on any test surface within the present allowances for the test surface ISO 10844.

There is now an ongoing work in the ISO TC1/WG 42 to revise the specification of the test surface. It is essential that this work is driven with the scope to specify a test surface representative for real road surfaces and that the limit values according to Annex 1 is linked to tests on such a road surface.

### Additional recommendations

Develop and demand a noise labelling of tyres.

Demand that the tyre noise regulation also applies to the aftermarket and re-treaded tyres.

Speed up the work on the ISO standardization of test surface with the demand to standardize a test surface representative for common real road surfaces.

Introduce already now technology driving stricter tyre noise limits than those in Annex 1, to be fulfilled in a second step a few years after 2012. If this would only be feasible with lower top speed limits the better. It would be a win/win situation for a sustainable development.

### References

- [1] W. Kropp, T. Kihlman, J. Forssén and L. Ivarsson, "Reduction potential of road traffic noise", Royal Swedish Academy of Engineering Sciences, report 2007. <http://www.iva.se/templates/page.aspx?id=4354>

2007-10-18

Tor Kihlman

## **Public consultation on outline proposals for a Regulation of the European Parliament and the Council on Advanced Safety Features and Tyres**

### **Knorr-Bremse Contribution**

Knorr-Bremse Systeme für Nutzfahrzeuge GmbH which is part of Knorr-Bremse AG, a leading global manufacturer of braking systems for rail and commercial road vehicles is supporting type-approval legislation for various safety-related components and systems for passenger and goods vehicles, and the introduction of new requirements to contribute to road casualty reductions and reductions in CO<sub>2</sub> emissions.

Knorr-Bremse as a manufacturer of active vehicle safety products for commercial vehicles in particular supports the introduction of:

- Electronic Stability Control (ESP)
- Automatic Emergency Braking (Collision Warning / Mitigation)
- Lane Departure Warning (LDW)
- Lane Keeping Support (LKS)
- Night Vision
- Tyre Pressure Monitoring

In general it can be stated that mandating such systems would significantly reduce road fatalities, injuries and other accident related costs as well as CO<sub>2</sub> emissions with a clear positive impact on economy and society.

European study examples for justification:

- For the period between 2000 and 2020, forecasts establish the average annual GDP growth rate at 2.1% (52% for the whole period). Freight transport is expected to grow at roughly similar rates (50% for the whole period) whereas passenger transport growth is expected to be lower at the order of 1.5% on average annually (35% over the whole period).
- The largest share of intra - EU transport is carried by road, which accounts for 44% of freight and around 85% of passenger transport.
- > 85% of truck accidents are linked to human error.

- The EU targeted to halve the number of deaths on the road by 2010. The mid-term review of the programme revealed, that the number of deaths had only decreased from 50,000 in 2001 to 42,000 in 2005.  
The target for 2010 will be likely not achieved.
- Reducing vehicle emissions is part of a larger strategy to tackle the negative health and environmental effects of air pollution created by all sectors.
- Trucks are expected to overtake passenger cars as the largest single producers of CO<sub>2</sub> in the EU - 30 by 2030.

## **KNORR - BREMSE comments with regard to:**

- **Electronic Stability Control**

Informal Document No. GRRF-61-32 gives a conservative benefit/cost ratio of 1.4.

- **KNORR - BREMSE supports the mandatory installation of ESC for all commercial vehicles of categories M and N and trailers > 3.5t.**
- **The system is available for all commercial vehicle classes.**

- **Automatic Emergency Braking (Collision Warning / Mitigation)**

With regard to commercial vehicles, preliminary studies suggest that such systems could save around 20% of the fatalities and injuries.

- **KNORR - BREMSE time scale for the mandatory introduction:**  
Latest 3 years after mandatory introduction of ESP in commercial vehicles.

- **Lane Departure Warning, Lane Keeping Support**

Preliminary studies suggest that LDW systems fitted in commercial vehicles could save around 5% - 10% of the fatalities and injuries.

- **KNORR - BREMSE time scale for the mandatory introduction:**  
1 year after mandatory introduction of ESP in commercial vehicles.

- **Night Vision**

40 % of all fatalities in traffic occur at night, but only 20 % of the overall traffic amount takes place at night.

- **KNORR - BREMSE time scale for the mandatory introduction:**  
3 years after mandatory introduction of ESP in commercial vehicles.

- **Tyre Pressure Monitoring**

TPMS is a clear benefit in terms of safety, CO<sub>2</sub> emissions and tyre wear through maintaining correct tyre pressure.

The initiative should cover all road vehicles as the environmental benefits could be particularly valid for commercial\* vehicles.

In order to optimise the environmental benefits, the system should be as accurate as possible whilst minimising the potential for false outputs / consumer annoyance. To achieve this, it is feasible that a warning should be given with a pressure loss in the range of 10%. To accept an accuracy level significantly different to this, e.g. 25% as in NA, would be somewhat contradictory to the objective of the regulation.

A tyre management system which automatically keeps tyres inflated to the correct pressure may be a more suitable system for certain commercial vehicle types, e.g. trailers, and should be further investigated.

- **KNORR - BREMSE supports the mandatory installation of tyre pressure monitoring systems for all categories of vehicle classes.**
- **A warning should be given with a pressure loss in the range of 10%.**

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\* Commercial vehicles: M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub>, O<sub>3</sub> and O<sub>4</sub>

## **Contribution to the public consultation**

### **Consultation document regarding vehicle safety**

Answers to the questions at the end of the document.

1. yes
2. 2011 seems to be reasonable target for mandatory introduction of ESC for new car models. The only problem is, that in the Central and Eastern European countries, there is a very high demand for entry-level cars with low equipment, and the ESC could increase the price of such cars to a level, which would be not affordable for a lot of these customers. Suggestion: the Commission and the countries should find out a possibility of giving some taxation advantage or other type of support to the customers.
3. Assuming the favorable cost-benefit case, the reasonable timescale would be:  
Emergency braking: 2015  
Lane departure system: 2018,

but with step-wise introduction by categories of M, N and in case of cars by size of the car.

### **Remark**

**The mandatory equipment of any vehicle with advanced electronic safety systems is only acceptable, when the regulations will include requirements regarding the easy and simple possibility for checking of the proper functions of these systems at the mandatory periodical checking to be made at the checking stations authorized by MOT. Therefore, the required checking procedures should be able to be integrated into the technology followed by this authorized checking “stations”. The producers should be required to develop and announce this kind of relatively simple and not time-consuming checking procedures.**

**Our institution has already developed similar methods for checking of ABS and ASR systems, which have been integrated into the official checking technology, and the biggest problem by this was also to gain the data necessary from the vehicle makers.**

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## Public Consultation on modification of 2001/43/EC tyre/road noise, contribution of M+P consulting engineers

Prepared for	Report No.	Authors
EC DG Enterprise and Industry	M+P.MVM.05.1.C.2	Dr. G.J. van Blokland
	Revision	Ir. D.F. de Graaff
	1	
	Date	
	17 October 2007	
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## 1 Problem analysis and summarized recommendation

The EU has initiated a public consultation on an outline proposal for a *Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres* [1]. Amongst others this publication announces a proposal to tighten the tyre noise limits as currently defined in the tyre noise regulation 2001/43/EC [2].

When studying a regulation the following three components shall be taken into account:

- 1 the administrative definition
- 2 the test method
- 3 the set of limit values,

In this consultation we address all three.

The objective of this proposal is to improve the efficiency of the regulations without jeopardizing safety, sustainability and economy.

We have performed an additional study to the relation of sound level, wet grip, rolling resistance and costs of several C1, C2 and C3 tyres and come to the conclusion that tightening of the limit values is feasible without loss of the other relevant properties.

We anticipate however a decreasing efficiency of the regulation with the proposed tightening of the limit values, due to the limited representativity of the test surface and due to the exclusion of retreaded tyres.

We recommend the following approach:

- **Restore the two phase approach of tightening the limits as proposed by FEHRL**
- **Include a tighter description of the test track surface in the first phase**
- **Shift to a more representative test surface (SMA 0/8) in the second phase and incorporate the effect of this shift in the definition of the limit values in the second phase**
- **Label the observed sound level of the tyre on the side wall by means of a noise index**
- **Expand the requirements to retreaded tyres**



## **2 Background information**

We refer to our study of M+P background data [4]. This study comprises data of 238 tyres assessed in several measurement programs in the Netherlands. We additionally refer to the study performed by FEHRL contracted by the commission [3].

Further background know-how used in this contribution originate from the extensive work that M+P has done on the subject of tyre/road noise over the last 20 years. M+P studies modulating of tyre/road interaction noise, develops low noise road surfacings and classification procedures for the acoustical properties. M+P is active in standardization of vehicle tyre and road surface acoustics such as ISO TC 43 working groups, 27, 33, 38 and 42, and is scientific officer of the WG 42 test track sub group. M+P supports the Netherlands delegation in EU and ECE vehicle noise working groups and has lead ad-hoc groups on test procedures for tyres. M+P has done studies on transport noise assessment for the European Environmental agency and is work package leader for the new European harmonized road vehicle emission model (see [5])

### **2.1 Margin to limit values**

Data from eight additional studies has been analyzed in order to determine a possible gap between the present limit values and the acoustic performance of modern tyres [4]. On base of this data set we conclude that the 50 percentile value of the most common tyre classes in category C1 is about 4 dB below the related limit value and only a very small fraction of about 1% exceeds it. For the categories C2 and C3 the margin towards the limit value is smaller; in the range of 2 to 3 dB. The proposed limit values in the consultation documents will reject about 70% of the C1 tyres currently on the market. For C2 and C3 tyres, except C3-normal tyres, this percentage is expected to be higher. The available datasets on C2 and C3 tyres are too small to give more precise figures here.

### **2.2 Relation with emission and safety**

Possible adverse effects of controlling rolling sound properties on safety and emission properties has not been found [4]. No significant correlation could be noticed between the rolling sound level, the wet grip and the rolling resistance of the tyre.

### **2.3 Cost-benefit ratio**

We did not observe a significant relation between the cost of the tyre and its rolling sound level [4]. We found that the cost of the tyre could be explained by the marketing positioning such as rim size, aspect ratio and speed category.

The cost benefit ratio of applying low noise tyres to improve environmental quality is superior to that of other measures such as barriers and façade insulation. It is comparable or better to application of low noise road surfacings.

Cost-effective control of environmental traffic noise annoyance in urban areas requires addressing all relevant parameters. The background report present a chain approach, taking care of all properties of traffic from source to the larger environment. We conclude that low noise tyres are cost-effective both directly and through the improved efficiency of low noise road surfacings.

### **3 Administrative regulatory properties**

#### **3.1 Retreaded tyres**

The efficiency of the present regulation is limited due to the exclusion of retreaded tyres. More than 50% of the truck tyres in use are retreaded. We are aware of the technical difficulties of including them. We propose separate COP testing of the carcass and the tread band.

#### **3.2 Communication of sound levels**

It is suggested to communicate the measured sound levels of the tyres, both in the type approval communication form and on the side wall of the tyre. Such communication is already common with other important environmental noise sources like vehicles and mobile machinery. This information will enable parties to maintain or improve the noise emission of their vehicle/tyre on a voluntary base. Objective information of this kind is currently not available.

#### **3.3 Quicker implementation of regulatory requirements on after market tyres.**

The efficiency of the present regulation has been worsened by the delayed implementation of the requirements for after market tyres. The completed implementation of the present regulation is expected only in 2011. The quick developing tyre technology allows a much faster implementation. We recommend implementation of the amended regulation for after market tyres within a period of 2 years. Most of the sound level measurements are already performed and the family concept allows quick processing of the administrative procedure.

## 4 Testing methods

### 4.1 Test track surface standardization

#### 4.1.1 Present ISO 10844 surface

The tyre rolling sound levels originate from a tyre/road interaction process. In order to obtain unambiguous tyre sound levels, the road influence has been standardized. The present ISO 10844 description gives a spread of more than 5 dB, jeopardizing any effect of sharpening limit values. The results of the present work of the standardization working group ISO TC43/WG42-TT, that develops surface specification with a less than 2 dB spread shall already be implemented in the first phase of shift of limit values.

#### 4.1.2 Improved regulatory efficiency by new test track surface

We expect that the 2<sup>nd</sup> phase of sharpening of limit values will exhibit a lower efficiency in the reduction of real life rolling sound levels of tyres [4]. The properties of the present test surface will lead to artificial optimization of the tyres due to the lower representativity of the test surface. The efficiency of the 2<sup>nd</sup> phase has to be restored by shifting towards a more representative surface like SMA 0/8. The increased rolling levels found on this surface type can be counterbalanced by a reduced limit reduction in the 2<sup>nd</sup> phase.

We propose the following specification for the test surface:

**Material:**

Stone Mastic Asphalt with 8 mm max. grading

**Target texture:**

Wavelength [mm]	100	80	62,5	50	40	32	25	20	5
Texture level [dB re 10 <sup>-6</sup> m]	41	42	43	44	45	46	47	48	46

**Acoustic absorption:**

≤ 5% in each 1/3<sup>rd</sup> octave band between 400 and 1600 Hz

**Mechanical mobility:**

≤ 1,0.10<sup>-8</sup> mm/Pa

p.s.: the definition of these requirements follows the expected revised ISO 10844 standard.

### 4.2 Data processing

We fully support the FEHRL proposal to abolish the correction for measurement uncertainty and to apply a regular rounding off procedure.

## 5 Limit values

### 5.1 general

Our data corroborate the finding of FEHRL that the sound levels found with present tyres enable a significant reduction of the limit values. We make an exception for C2 and C3 snow tyres where we observe less margin between observed levels and limit values. We recommend for these tyres a slightly less severe limit change.

### 5.2 Recommended limit values

We recommend the following set of limit values.

tyre class	subclass	2001/43 current	Prop. EU Consultation document	Proposal M+P	
				1st step	2nd step
				introduction 2009 No 1 dB subtraction Regular rounding Test track ISO 10844	introduction 2013 No 1 dB subtraction Regular rounding Test track SMA 0/8
C1	< 145	72	71	72	72
	145-165	73	71	73	73
	165-185	74	71	73	73
	185-215	75	72	74	74
	215-245	76	72	74	74
	245-275	76	73	74	74
	>275	76	75	75	75
C2	normal	75	71	74	73
	snow	77	72	76	75
	special	78	74	77	76
C3	normal	76	71	74	71
	snow	78	73	77	73
	special	79	75	78	75

The limits are defined such that 70% of the current tyres will pass the requirements of the 1<sup>st</sup> phase and 30% will pass the requirements of the 2<sup>nd</sup> phase. In these values the effect of the amended processing (no measurement uncertainty correction, regular rounding off) and the effect of the increased rolling noise levels on SMA 0/8 are incorporated. The effect of application of SMA 0/8 instead of the present ISO 10844 surface is found to be

1,5 dB for C1 tyres

1,0 dB for C2 and C3 tyres

-1,0 dB for SNOW type C2 and C3 tyres

## 6

### References

- [1] EU, "Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres", Consultation document, 2007
- [2] Directive 2001/43/EC, amending Council directive 92/23/EEC, "tyres for motor vehicles and their trailers and to their fitting; Journal of the European commission L211, August 8th, 2001.
- [3] FEHRL, Study SI2.408210 "tyre/road noise", 2006
- [4] D.F. de Graaff, G.J. van Blokland; "Public Consultation on modification of 2001/43/EC tyre/road noise Contribution to the consultation with data from Netherlands R&D projects"; report M+P.MVM.05.1.C.1; October 2007
- [5] M+P et al. "The Noise Emission Model for European Road traffic", IMAGINE report nr. IMA55TR-060821-MP10, date: January 11th, 2007.

# Public Consultation on outline proposals for a new Regulation on Advanced Safety Features and Tyres

## Response from the Mayor of London, The Greater London Authority and Transport for London

1. The Mayor of London welcomes the opportunity to respond to the Commission's consultation on the outline proposals for a new Regulation on advanced safety features and tyres.
2. Examining the noise impacts of transport is an important policy area, since quieter products (such as tyres or road surfaces) will become increasingly necessary for the success of the more sustainable, higher density urban development that is important in tackling climate change<sup>1</sup>.
3. Climate change is one of the biggest challenges facing humanity and the highest priority for the Mayor of London<sup>2</sup>.
4. The Mayor of London welcomes the Commission's identification of tyres as a potential source for improvements in fuel economy (and therefore reductions in CO<sub>2</sub> emissions) in its background paper on the Regulation on advanced safety features and tyres and in the Commission's strategy to reduce CO<sub>2</sub> from passenger cars and light-commercial vehicles<sup>3</sup>.

### **The Commission's consultation questions**

**Are the proposed noise and rolling resistance limits in the tables sufficient and realistic? Is there a viable alternative approach, for example "trading off" noise requirements for oiling resistance requirements under certain circumstances?**

5. Tougher noise limits would have been preferred, however, given the delays in Community action on noise, the Mayor of London considers it realistic to proceed with the proposed limits. It is hoped that the next round of requirements can be expedited.
6. Consumer labelling of tyre noise should be introduced as soon as possible, with a clear "Quiet Tyre" category (similar to other EU consumer labelling requirements such as the EU energy label).
7. Given the evidence<sup>4</sup>, that quieter tyres do not compromise wet grip, aquaplaning or rolling resistance, any "trading off" should only be allowed in the most exceptional circumstances and only when every effort has been made to reach specified limits under each topic heading. Clear evidence would be required to demonstrate that, for example,

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<sup>1</sup> For more information please see the Mayor of London's Strategy on Noise:

<http://www.london.gov.uk/mayor/strategies/noise/downloads.jsp>

<sup>2</sup> The Mayor of London launched his Climate Change Action Plan in February 2007:

<http://www.london.gov.uk/mayor/environment/climate-change/ccap/index.jsp>

<sup>3</sup> Please see the Mayor of London's consultation response on CO<sub>2</sub> from cars:

[http://www.london.gov.uk/london\\_house/docs/response-cars-consultation.pdf](http://www.london.gov.uk/london_house/docs/response-cars-consultation.pdf)

<sup>4</sup> Study SI2.408210, Tyre/Road noise, FEHRL 2006:

[http://ec.europa.eu/enterprise/automotive/projects/report\\_tyre\\_road\\_noise1.pdf](http://ec.europa.eu/enterprise/automotive/projects/report_tyre_road_noise1.pdf)

significant additional energy savings could be obtained from an acceptable reduction in another criterion.

8. Trends towards wider tyres, associated with increases in overall vehicle weight and stylistic choices have been reducing the potential traffic noise reduction, as well as affecting fuel economy. Overall EU vehicle policy should seek to counter trends towards wider tyres.

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

9. There may be some justification for partial or complete exemption for particular categories of tyres from the noise or rolling resistance requirements, but only when it applies to specified categories representing small and stable market segments (the Sports Utility Vehicle – SUV – market is not included in this description). It is important that partial or complete exemptions are kept to an absolute minimum and do not create loopholes or the wrong incentives.
10. In particular, exemptions should be limited to applications where off-road capabilities are genuinely required, to avoid further expansion of off-road vehicles in urban areas, where they rarely go off-road. It is recognised that this may require some further provision, but the cost-benefit of using such an incentive to limit unnecessary noise and fuel consumption should be assessed.

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

11. The introduction of mandatory tyre pressure monitoring systems is supported in principle.

**Do you support the mandatory installation of Electronic Stability Control for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?**

12. Improving safety for vehicle occupants is important, but for many urban areas more injuries are incurred by people outside the vehicle (pedestrians, cyclists and motor-cyclists). In London over two-thirds of deaths and serious injuries occur to people outside the vehicle, and this proportion is true for many other large cities.
13. The Mayor of London recognises that more needs to be done on advanced safety features both in-vehicle and outside the vehicle, such as by making the vehicle more pedestrian friendly.
14. The Mayor of London hopes that the Commission takes this opportunity to address advanced safety features in a more holistic way.



**Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC? What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?**

15. Any new technology needs to be cost effective, thoroughly trialled and tested and the results widely published in the professional arena.

**October 2007**

Subject: Advanced Safety Features & Tyres' Consultation Document

The Ministry of Defence (MoD) wishes to respond to the consultation paper with regard to the above subject.

Section 2 'Background'

1. The proposal for mandating some of these systems on new vehicles is noted; the MoD's main concern relates to possible retrospective requirement on legacy vehicles which is strongly resisted. Even where new vehicles are concerned, problems can arise when MOD projects feature an extended procurement phase as the effective date of new legislation can fall within this period. If this occurs, the MOD is faced with the choice of either having to manage a mixed fleet to different build standards, or retro-fitting the new item or system to existing in-service vehicles. Both of these approaches are expensive and undesirable in terms of maintaining continuity of capability. The MOD seeks an exemption for vehicle fleets where the first of that type is already in service.

2. Similarly where tyres are concerned there should be no attempt to introduce the change retrospectively. The MoD has already experienced difficulty in obtaining suitable re-supply of replacement tyres for our small fleets, and hold some stocks expected to be life-time for the fleet.

Section 5.1 'Requirements Related to Tyres'

3. Tyre performance, particularly grip in the wet, should not be sacrificed in favour of noise emissions and/or rolling resistance.

4. Although the possible need for exemption for 'off road' tyres is recognised in the document, there is no detail as to their definition. The MoD will need to ensure close consultation on this aspect so that the designation "special tyres designed for off-road use" is, for example, not limited simply to tractor tyres. The type of tyres used on the MoD fleets are such that an exemption is certainly required as the proposed 1 dB(A) relaxation may be insufficient to satisfy the MoD's requirements. The MoD's case for exemption emphasises the need for our vehicles to have good off road capability and highlight the fact that the MOD fleet forms a very small proportion of the LGVs on UK roads, and covers a relatively modest mileage each year. In short, Military tyres should be treated as a special category due to their off-road design, and be covered by exemption. A speed restriction of 160km/hr would not be an issue.

5. Tyre pressure monitoring systems should not be made mandatory for Military vehicles. Due to the nature of Military use there is a requirement for varying tyre pressures according to terrain and usage. It is unlikely that a TPM system would cope with this. If TPM systems should be adopted, they will need to be not only accurate, but also robust and reliable.

Section 5.2, Advanced Vehicle Safety Systems

6. The benefits of Electronic Stability Control and other advanced vehicle safety systems are recognised (the new MAN ERF Support Vehicle has an Electronic Braking System, and Heavy Equipment Transporter now has 'VORAD', a forward looking radar warning and emergency braking system) but they are not a substitute for safe driver behaviour. Additionally, the MoD requires the option to disable some of these systems whilst on operations, which in itself could create a control management issue. Finally, consideration will need to be given to whether ESC and similar systems are compatible with ADR vehicles.

**G D PETTY**

Maj (Retd)

SO2 Defence Road Transport Legislation

Defence Movements & Transport Policy Division

DE&S Andover

October 17, 2007

## **Comments on the EC Consultation Document**

The Ministry of Land, Infrastructure and Transport of Japan welcomes the opportunity to provide comments on the EC consultation documents on outline proposals for a new regulation of the European Parliament and of the Council on advanced safety features and tyres. We hope our comments provided below would make contribution to future development of regulations under the framework of UN/ECE/WP.29.

### **1. For the proposed regulatory approach to replacing EC Directives with UNECE Regulations**

For the policy of replacing EC Directives with equivalent UNECE Regulations, we agree with its objectives because Japan is also trying to make direct quotations from them, recognizing that it is an effective way for the international harmonization of standards.

Recently, there is a noticeable trend that, based on this policy, EC increasingly makes proposals on provisions which are necessary for EC at the UN/ECE/WP29; however, the 1958 Agreement is an international agreement set under the United Nations and its contracting parties include many non-EU countries. Therefore, we would like to ask EC to re-acknowledge that technical aspects of UNECE Regulations should be fully examined by relevant GRs, keeping in mind that the Regulations also affect non-EU contracting parties whose legislative systems may be different from EC Directives.

### **2. For the proposal for new regulations on advanced safety features and tyres**

Conventionally, UNECE Regulations are specifically examined and discussed at WP29 and related GRs. Japan believes that the proposal for UNECE Regulations on advanced safety features and tyres should also be examined at these meetings.



**DET KONGELIGE  
SAMFERDSELSDEPARTEMENT**

*Ministry of Transport and Communications*

European Commission, DG Enterprise

Your ref

Our ref  
05/674- TAD

Date  
16.10.2007

**Public Consultation on outline proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

We refer to the consultation document produced by The Commission services on outline proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.

In Norway the Government has proposed a new national target of reducing noise annoyance by 10 percent within 2020. To be able to reach this target, it is of vital importance that the international regulation on noise from vehicles and tyres is tightened. The Ministry therefore welcomes the proposals of new tyre regulations on noise.

We note however that noise labelling of tyres is currently not included in the proposal for new Regulation. In order to achieve a practical effect of a new regulation it is important to set up a labelling scheme as to tyre noise to give information to the consumers and for the authorities to be able to use tax incentives to increase the sales of environmentally desirable tyres.

We support the proposal to make the FEHRL limits effective in 2012. Considering the limited time, it seems most sensible to leave out the first stage as proposed, and go directly to the second stage FEHRL limits. The fast development and short tyre model life indicate a good possibility for the industry to reach the new noise limits in a few years.

Our Directorate - "The Norwegian Public Road Administration" - will give a more comprehensive comment to the proposals.

Yours sincerely,

Anne Brendemoen

  
Torstein Arthur Dahl



*Ministero dei Trasporti*

DIPARTIMENTO PER I TRASPORTI TERRESTRI  
Direzione Generale per la Motorizzazione

prot. 95949 RU

Rome, 18 October 2007

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**Subject: Commission Public consultation on outline proposals for  
a Regulation on Advanced Safety Features and Tyres**

Dear Sirs,

The above-mentioned consultation poses two different proposals. The first one is related to the administration procedures to type-approve safety aspects of road vehicles and the second one is connected with advanced safety features.

These two topics have a different level of priority and should be dealt with separately. While advanced safety systems (such as EVSC, TPMS and tyres) are part of the strategy to improve safety performance of road vehicles, therefore their introduction into the EU Legislation is recommended by the Commission, the new Regulatory Approach has a different level of urgency. It requires more analysis and preliminary debates to identify the best modality to simplify the administrative procedure without generating negative effects.

#### **A – The proposed Regulatory Approach:**

The regulatory approach indicated by the Commission to group in a few Regulations several separated technical directives and regulations (already adopted in the case of Euro 5 & 6 - Regulation 715/2007 - which repealed 24 directives as well as in the proposal for Pedestrian protection, which incorporate 3 directives) risks to represent only a “cosmetic” simplification, if technical and administrative requirements are simply the sum of those mandated by all separated directives.

In particular the new proposed Regulation on safety seems to introduce an additional level between the Whole Vehicle Type Approval (WVTA) and the technical requirements presently covered by the separate directives. It will

generate a more frequent need for amending the regulation and the relative comitology regulation. This might even imply the risk of reducing artificially the period of validity of the certificates, with the result of increasing the bureaucratic burden. Also the management of application dates could become more complex, having to deal, at once, with several different requirements. Dates are part of the codecision regulations where it could not be easy to elaborate very complicated implementation calendar.

The proposed Regulation on safety, which is a sort of framework regulation, is also a concern in relation with the recasting of the WVTa (Directive 2007/46/EC), which introduce the European type-approval for all the road motor vehicles categories. The implementation of the WVTa for those vehicle categories requires considerable efforts from Type-Approval Authorities and Technical Services. If not appropriately matched with the WVTa the new Regulation on safety risks to create additional work.

To follow the CARS 21 recommendations concerning the “Better regulations” the effort should be concentrated on real simplifications:

- deletion of unnecessary separate directives and regulations,
- introduction of virtual testing,
- direct reference to UN/ECE Regulations.

In this context the Commission objective to replace EC directives by UN/ECE Regulations is fully supported. This can be done in the WVTa Directive with the direct reference to the ECE regulations in annex IV. The oncoming comitology Directive on whole vehicle type approval seems to be appropriate occasion to start this route.

## **B – Advanced Safety Features and Tyres**

### **Requirements relating to tires.**

The objective of promoting lower rolling resistance tyres goes in the right direction to contribute to the reduction of the CO<sub>2</sub> emissions. As indicated in the consultation paper this evolution should not compromise other tyre performances (noise, handling, durability, etc.) and particularly the safety aspects.

The proposed noise and rolling resistance limits reported in the consultation paper should be examined in the group of experts, specifically in the UN/ECE appropriated GRs (GRB, GRRF etc.). All the stakeholders and the various competences are represented there, ensuring the identification of the best compromise between conflicting requirements.

In this respect the role played by road surface should also be taken into account.

In particular, the proposed noise limit reduction seems to be quite ambitious and should be carefully weighed in order to keep unaltered tyre safety and its performance.

The proposal to make mandatory the Tyre Pressure Monitoring System (TPMS) needs a comprehensive and agreed impact assessment which is necessary for evaluating its possible introduction as a mandatory equipment.

With regard to the degree of accuracy of a TPMS, it must be fixed on the basis of the concern we would like to address, namely safety or fuel economy or both.

Also in this case the choice of performance required for TPMS should be considered by the relevant UNECE group of experts.

Therefore, at this stage is preferable keep open both the direct and indirect measuring systems as well as other alternatives solutions having the same effect.

It is reasonable to exempt from the mandatory application of TPMS the “special purpose tyres” and tyres for vehicles used off-road.

### **Advanced Vehicle Safety Systems**

Consistently with the CARS 21 principle to refer the EU Type-approval legislation to the UN/ECE Regulation the mandatory application of Electronic Vehicle Stability Control (EVSC) for heavy duty commercial vehicle has to be aligned to the prescriptions of UN/ECE document TRANS/WP29/2007/100 /Add. 1.

Analogously for M1 and N1 vehicles the prescriptions of EVSC should be coherent with the globally harmonized requirements under development in the UN/ECE. The application date should provide a sufficient delay (3 years) after that the technical requirements are finalised and adopted.

At this point in time the mandatory introduction of advanced safety systems such as automatic emergency braking and lane departure warning is very premature. It must be subject to an impact assessment and a reasonable lead time between the adoption and the application should be provided.

Antonio Erario

Head of Division



Comment of

The National Institute for Public Health and the Environment (RIVM)  
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On the EC-Consultation document on Advanced Safety Features and Tyres

1. RIVM supports the findings of the Commission that new technology developments allow for a tightening of the current noise limits for tyres.  
The tyre road noise is in most situations the dominant source and the surroundings of main roads and motorways will fully profit from every decibel of noise reduction that is obtained with regards to this type of noise. Reductions will be obtained most effectively by silencing the tyres as this will yield effect on the entire road network, whereas silencing the pavement reduces noise levels only locally  
Noise by road traffic noise currently is a major problem in the Netherlands that affects more than one third of the population. A study on valuation of noise measures (RIVM report 680300002, Benefits of Noise Measures) shows that in the Netherlands, silencing tyres by 2-3 dB will yield Benefits of approximately 4 Billion Euro
2. In general there is no justification for exemptions. This would most likely diminish positive effects from tightening noise limits

Timeframe

The Commission should speed up the process of decision making about the noise requirements of tyres, and not wait till the requirements for the other issues are operational and ready for adoption into new regulation.

## Contribution to

### Public consultation on outline proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres

on behalf of Coordinating Committee for International Environmental Policy (CCIEP)  
– Noise Steering Group (Belgium)

Contact:

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Environment, Nature and Energy Department, Flemish government

## Question 1

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

### A. Sufficient

The FEHRL-report demonstrates that the limit values it proposes have major beneficial consequences on the environmental noise level caused by road traffic. Because the current consultation document has adopted these limit values (at least in an numerical sense), the proposed limit values seem to be sufficient in order to achieve a significant reduction in traffic noise exposure throughout Europe.

However, the meaning of limit values is not only determined by their numerical value. Several other issues (e.g. test procedures) contribute strongly to their impact. The FEHRL-report indicates certain problems with regard to some of these issues, stating that these should be solved as well in the revised directive. The current consultation document, however, seems to have neglected some of these issues. When not handled properly, these issues could possibly have a negative effect on the sufficiency of the proposed limit values. The most important issues seem to be:

**1. Test surface.** Obviously, the meaning of the limit values is strongly influenced by the details of the test procedure used to determine the sound level. The FEHRL-report explicitly expresses some concern in the issue of the test surface. The very smooth ISO-test-surface that is currently used, doesn't seem to be representative for most commonly used road surfaces. The fact that designers and manufacturers will be optimizing the noise performance of the tyre on a test surface which has little relevance to real life conditions, possibly implies sub-optimalisation. This concern has led FEHRL to propose a different way to deal with the test surface, as expressed in paragraph 6.3 of the report.

By solely referring to UNECE Technical Regulations, the current consultation document is not clear whether or not it takes this concern into full account. When the test surface is to be redefined, this obviously can lead to major shifts in the meaning of the proposed limit values. Clarification on this issue would be appreciated.

**2. Rounding procedure.** Similarly, the FEHRL-report proposes an adapted rounding procedure to compare test values with limit values (cfr. p. 80). The current consultation

document is not clear on the rounding procedure to be used in the test procedure. Because it *seems* that the adapted rounding procedure proposed by FEHRL is accepted (e.g. the reductions calculated in Annex 1 seem to have incorporated the adapted rounding procedure), a clear reference to this adaptation would be appreciated.

**3. Interim limit values.** The current consultation document only covers the strengthening of the limit values in 2012. The FEHRL-study also proposed interim limit values to be met in 2008. These interim values seem to have been neglected in the present consultation document.

Nevertheless, there are some good reasons to implement interim values:

- they help to avoid sudden changes in limit values
- they help to gain already some reduction in noise level, without forcing manufacturers to take on certain infeasible limit values immediately

Moreover, the interim limit values that were proposed by the FEHRL-report, are regarded to be 'realistic' on a short term.

Due to some delay, the 2008-target as proposed by the FEHRL-report seems to be unrealistic. One could however easily shift the interim values to e.g. 2010 without having to reconsider their content. As incorporation of some transition provisions seems to be necessary, FEHRL discusses already a few possibilities on this topic (p. 98).

**4. Labelling.** The current consultation document doesn't discuss the possibility of introducing labels. However, the FEHRL-report recommended that

*"The directive should specify that tyres must be stamped (labelled) with the noise level achieved in the type approval test."* (Recommendation 28, p. 109).

Paragraph 6.2 (p. 65-66) points out that this labelling could be performed

- by stamping a number on the sidewall, indicating the noise achieved in the tyre noise test
- by stamping a "low noise" label on the tyre and/or the use this label in advertisements, in which "low noise" indicates that an agreed threshold below the noise limit is met

Labelling could improve the effectiveness and impact of the revised directive in three ways:

- It improves *consumer choice*. Certain consumers wish to demonstrate environmental responsibility. The possibility to demonstrate this by choosing a "low noise"-labelled tyre would increase the share of low noise tyres sold. This would reduce the average level of tyre noise, further reducing the total annoyance caused by road traffic throughout Europe.

Other customers would prefer low noise tyres because they reduce the noise level inside the car during driving, reducing the traffic noise in a similar way.

- An explicit indication of the noise level of a tyre could improve *public awareness* on the noise issue, which is an explicit objective of the European Directive on Environmental Noise (2002/49/EC) (art. 1.1.b).

- It would assist member states that are considering (e.g. financial) *incentive schemes* to create a market for low noise products. Such schemes could for example be considered when designing action plans to reduce noise annoyance, in accordance to the European Directive on Environmental Noise (2002/49/EC). The effectiveness of such schemes could be demonstrated with reference to
  - The fact that such *source-oriented measures* are highly effective and have a beneficial cost/benefit ratio. This has already been demonstrated in several studies, leading the Working Group on Health & Socio-Economic Aspects<sup>1</sup> to recommend source-oriented measures as a priority measure in their *Position Paper on the Effectiveness of Noise Measures*.
  - The fact that imposing more stringent limit values - by the nature of the limit values themselves – only has a *restricted impact on the average noise level of tyres*. More stringent limit values address only the maximum noise levels of the loudest tyres without affecting the level of the medium and quiet tyres which are already under the proposed limit values. The FEHRL-report points out that the proposed reduction in limit values will not lead to an equivalent reduction in average noise levels, because the distribution will not simply be shifted downwards by the change in limit values but instead will become more narrowly located close to the new limit value. The introduction of some kind of label could help to avoid this situation by favoring low noise tyres, even if these tyres are already below the proposed limit value and are not directly affected by the proposed changes. This point was e.g. also made by the *I-INCE Working Party on Noise Emissions of Road Vehicles* in its July 2001 study *Noise emissions of road vehicles effect of regulations*.<sup>2</sup>
  - The fact that the European Commission has repeatedly stressed that “it increasingly *favours economic and market-based instruments*”, acknowledging the fact that “they provide a flexible and cost-effective means for reaching given policy objectives” (Green paper on market-based instruments for environment and related policy purposes, COM(2007) 140 final). Assisting member states developing (financial) incentive schemes by introducing the possibility to label low noise tyres in the revised directive, would be in line with the position of the EC.

Therefore, specification on the issue of labelling would be appreciated.

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<sup>1</sup> The WGHSEA is a working group related to the EU noise Expert Network, which was created in 1998 by the European Commission.

<sup>2</sup> “It would be favourable if a means of affecting the noise levels of the vehicles that emit medium and low noise levels can be found and applied. Introduction of some means of commercial arguments for lower exterior noise emission would be beneficial. Means for encouraging the use of vehicles that are as quiet as possible may include tax incentives connected to noise levels, exemption from toll for low-noise vehicles, limitation of travel based on a quota system with “environment-affecting” points, as well as permits (connected with noise classification) to travel in restricted low-noise areas, on restricted roads or at restricted times.”

## **B. Realistic**

With respect to this question, one should distinguish between tyres of the category C1 on one hand and these of categories C2 and C3 on the other hand.

### **C1-tyres**

As the study by the FEHRL clearly demonstrates, practically all C1-tyres are well below the current limit values. Moreover, it can be seen that “68 to 70% of the tyres tested would meet the 2008 interim values, while 25 to 41% would meet the stiffer limit values proposed for 2012.” The fact that the technology for tyres meeting the new values already exists, implies that there is no real concern on the feasibility of the limits from a technological point of view.

### **C2/C3-tyres**

The FEHRL-report states that the proposed limit values are only to be regarded as “tentative suggestions” as “a larger sample is required to reach definite conclusions concerning the scope of the reduction in limit values.” It is not clear from the consultation document whether or not additional research is available that confirms these tentative suggestions in order to use them as definite limit values.

## Question 2

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

The FEHRL-study suggests that there is “no evidence on any significant relationship between tyre noise and rolling resistance”. The fact that the technology for tyres meeting the new limit values already exists, implies that there would be no use for trading-off noise requirements with rolling resistance requirements: both can be met at the same time.

However, it is not possible to speculate beyond the ranges provided by the survey-data. In order to ensure that future reductions in tyre noise don't compromise the desired rolling resistance behavior, the FEHRL recommends that a simple test to ensure that tyres conform to acceptable standards is included.

### Question 3

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

Because

- it is the objective of the revised directive to maximize impact on traffic noise levels
- the remaining noisy tyres, exempted from the revised directive, could have a major impact on noise levels
- no difference was found with regard to the *achievable* noise levels to the different categories of tyres, except one well-defined category of “special” tyres

the FEHRL-report states that no exemptions should be made concerning

- retreaded tyres
- replacement tyres
- winter/summer tyres (cat. C1)

This conclusion is in line with the results of other studies, e.g. the previously mentioned I-INCE-study *Noise emissions of road vehicles effect of regulations* stresses that “it is important that such [tyre noise] regulations do not exempt significant parts of the tire market, such as retreaded tires, since any remaining noisy tires will have a disproportionately large influence on noise levels.”

On the other hand, the FEHRL-report defines one category of “special” tyres for which the noise limits could be increased with 1 dB. We believe it to be justified that an exemption for such a category would be adopted in the revised directive. However, we would like to express some reservation with regard to the application of the word “special”. We believe that allowing vehicles used in “normal” circumstances (e.g. in an mainly on-road context) to be equipped with such “special” tyres could possibly undermine the impact of the revised directive. In order to avoid this, we would like to ensure that these “special” tyre limits will only be used with reference to *professional off-road* vehicles (e.g. the annex to the FEHRL report refers to medical emergency vehicles, fire-fighting vehicles, power line inspection vehicles etc.) and not with reference to off-road vehicles used for *particular and (mainly) on-road* purposes, like SUV’s.

<b>General remark</b>
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Paragraph 3 states the characteristics that the new Regulation is meant to contain. However, no reference is made at this stage to the noise theme, while the topic of rolling resistance and CO<sub>2</sub> reduction is explicitly mentioned. Because noise limits seem to be an important aspect of the proposed regulation, we believe that an explicit reference to the noise topic would be justified as well.



European Commission, DG Enterprise

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**Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

**Dear Sir or Madam,**

We have the following views on these outline proposals:

We think it is very important that the noise emission limits for tyres and vehicles become more effective as soon as possible. We strongly support your proposal to make the proposed second stage FEHRL-limits effective by 2012. We think the decision should be made as soon as possible, in order to give the manufacturers ample time to make their preparations. It may be wise, as you propose, to leave out the first stage of the FEHRL proposal. We support the proposal to skip the deduction of 1 dB for test measurement results and to round to the nearest integer (not always rounding down).

Your proposals concern much more than tyres. There may be a possibility that other parts of the proposal takes longer time to decide on. If this happens, we propose that the noise and rolling resistance parts of the proposals are implemented first in the existing directives.

We strongly support your proposal to establish rolling resistance performance bands for tyres, and to guide after-market consumers by means of a labelling scheme. Your outline proposal does not specify how to carry out the labelling. We think it is very important that this labelling scheme takes into account the information needs of the consumers but also of the tax authorities: The member states and the other states applying by treaty the EU directives should be able to use tax incentives to increase the sales of environmentally desirable tyres.

We strongly advice to include exterior noise in the labelling scheme. An ABCDEF type of labelling will probably work well. The last letter should be assigned to the highest permissible decibel level. A bandwidth of 1 dB for the noise bands should be employed.

Work is on-going on the ISO-surface used for noise measurements. It will be important to take care not to change the specification of this surface in a way that reduces the effect of the new noise limits for the tyres.

Yours sincerely

Hans Aasen (e.f.)  
Head of division

Jan Boe Kielland  
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## Norwegian Public Roads Administration

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U

### **Public consultation on outline proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres - Consideration from the Norwegian Public Road Administration**

#### **Background**

The EU Directive on tyre noise (Directive 2001/43/EC of June 2001 [1]) has been the basis for EC type approval procedures of new tyres which have been on sale in the EU market since February 2004. This Directive included some initial limit values on tyre noise. According to the Directive, the EU was required to produce a report within a three year timeframe on possibilities of defining new and tighter limit values for tyre noise. The Forum of European Highway Research Laboratories (FEHRL) won a contract to produce an EU report on this issue [2]. The deadline set for the amendment of the existing limit values is June 2008. The EU Commission services have in September 2007 launched a consultation procedure on Advanced Safety Features and Tyres [3] including a new tyre noise regulation. The deadline for comments to EU is 18 October 2007 [4].

In Norway we have a situation where approximately 30 % of the population are exposed to road traffic noise above  $L_{den}$  55 dB, which are over the recommended limit given by the WHO. Our national target is to reduce noise annoyance by 10 % within 2020. To reach this goal it is important that the international regulations on noise are tightened. It will be very positive if new tyre noise regulation can result in an up to 3 dB decrease in road traffic noise.

#### **The FEHRL report**

FEHRL produced a report for the EU in 2006, evaluating tyre noise and proposing new limit values [2]. A review of the existing data showed that practically all existing tyres fulfilled the EU limits stated in the Directive from 2001 [1]. The overall reduction potential for passenger car tyres was estimated to be 4 to 6 dB, using the best existing technology. There were practically no conflicts found in relation to wet braking performance, aquaplaning and low rolling resistance. On this background, the FEHRL report suggested a new definition of the passenger car tyre classes according to width. At the same time it suggested to skip the deduction of 1 dB for the uncertainty in measurement results and just round to the nearest integer only (not always rounding down). For passenger car tyres, this is a relative tightening

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of the limit values of 2 to 6 dB, to be introduced in 2012. For truck tyres, relative reductions of 5.5 to 6.5 dB are suggested to be introduced in 2012.

The effect on the average road traffic noise will be less than the suggested reductions, because some tyres, fulfilling the new limits are already on the market and the traffic noise is also influenced by engine noise etc. Calculations have shown that tightening only the limits for passenger car tyres will result in a general reduction of traffic noise of around 1.0 to 2.3 dB and if new limit values for truck tyres are also included the reduction will be 3.0 dB.

Today, there is no noise labelling on tyres so the consumer cannot be informed about the noise characteristics of a new set of tyres. The report suggests that a noise labelling system for tyres should be introduced so that the consumers can take noise into consideration when purchasing new tyres. This information should be available for all tyres on the market, based on the measured level from the type approval procedure.

A cost benefit analyses, covering the period 2010-2022, was also presented in the FEHRL report and the results for the EU area were as follows:

- For 1 dB reduction in road traffic noise, the benefit is € 48 billion.
- For 2.3 dB reduction in road traffic noise, the benefit is € 123 billion.
- For 3.0 dB reduction in road traffic noise, the benefit is € 160 billion.
- The cost for the tyre industry was estimated at € 2 billion per year.

#### **Future tyre design and road speeds**

The top speed of a vast majority of passenger cars today are in the range of 170-220 km/h, and thus the tyres must be designed to meet the top speed of the vehicle. However, there is only a few countries/areas in the world where this maximum speed are allowed. If the tyres could be designed to meet a lower maximum speed of, say 160 km/h, the tyre industry claims that the possibilities to design low noise tyres are much higher. Therefore, it should be a higher potential to make tyres quieter if a general maximum road speed of 120-130 km/h is introduced world wide. By doing so, both traffic noise and CO<sub>2</sub> emissions can be reduced, due to reduced tyre/road noise and fuel consumption. Transport stand for nearly 25 % of the global energy related to CO<sub>2</sub> emissions and small reductions in fuel consumption can make a considerable difference in the total amount of CO<sub>2</sub> emissions.

#### **The Norwegian Public Roads Administration consideration**

The new EU proposal has been discussed at a meeting of the CEDR noise group in Vienna on 7<sup>th</sup> September 2007. The statement given by the Norwegian Public Road Administration is based on the technical note presented by the CEDR noise group, with some supplements and emphasizing. Our views are listed below:

1. The new proposal will have a positive effect on reducing road traffic noise in Europe and therefore, improve the living conditions for people exposed to road traffic noise. This is an important step to achieve Norway's national noise targets, as well as noise targets set throughout Europe.
2. The recommended new limit values for tyre noise follow the FEHRL recommendation and seem to be clearly feasible. We support the proposal to leave out the first stage and make the second stage limits effective by 2012.
3. The new FEHRL definition on the subdivision of C1 passenger car tyres according to width seems to be included, which is essential for the application of the new limits.

4. The FEHRL proposal for a new evaluation procedure for the approval test results should be supported. This includes not subtracting 1 dB for measurement uncertainty and rounding to the nearest integer, instead of always rounding down.
5. Noise labelling of tyres is currently not included, meaning that the consumers cannot base their purchasing decisions on noise emission properties. This is considered very important for the promotion of low noise tyres.
6. There seem to be no target conflicts between tyre noise emission and other tyre properties like rolling resistance, wet grip, price etc. A trade-off between tyre noise emission and other tyre properties seems to be unnecessary and unsuitable.
7. The current limit values from 2001 do not provide any incentive to develop low noise tyres.
8. The current type approval test uses the ISO 10844 reference surface, which usually yields lower noise emission values than many common pavements used in Europe. An alternative second surface, representative of rougher surfaces, should be considered.
9. If tyres could be designed to meet a lower maximum speed, the potential to make tyres quieter is higher. By doing so, both traffic noise and CO<sub>2</sub> emissions can be reduced, due to reduced tyre/road noise and fuel consumption.

Roads and Traffic Department  
Yours sincerely

  
Ole Christian Torpp  
Director

Copy to: Ministry of Transport and Communications



## References

1. Commission of European Communities (2001). Directive 2001/43/EC of the European Parliament and of the Council 27<sup>th</sup> June 2001 amending Council Directive 92/23/EC relating to tyres for motor vehicles and their trailers and to their fitting. Official Journal of European Commission, L211, 04/08/2001.
2. FEHRL report. Final Report S12.408210 Tyre/Road Noise – Volume 1, see:  
[http://ec.europa.eu/enterprise/automotive/projects/report\\_tyre\\_road\\_noise1.pdf](http://ec.europa.eu/enterprise/automotive/projects/report_tyre_road_noise1.pdf)
3. Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres. Consultation document, see:  
<http://ec.europa.eu/enterprise/automotive/pagesbackground/safety/consultation/index.htm>
4. Comments to the Consultation Document can be sent to the following mail box:  
[entr-vehicle-safety@ec.europa.eu](mailto:entr-vehicle-safety@ec.europa.eu)

## **Public Consultation On Outline Proposals For A Regulation Of The European Parliament And Of The Council On Advanced Safety Features And Tyres.**

### **Contribution to the public consultation**

**National Road Authority, Dublin, Ireland.**

#### **Background:**

A consultation document has been prepared by the Commission Services on proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.

The consultation seeks to gather the views of interested parties on the overall proposal for an integrated Regulation and particularly, on the specific proposals concerning tyre noise and rolling resistance limits as well as on the timing and feasibility issues concerning the introduction of advanced vehicle systems. Stakeholders are invited to provide comments on the issues outlined in the consultation document.

#### **Comments on 5.1.1 Rolling Noise Emissions:**

Road traffic is now recognized as the one main contributor to human noise annoyance in Europe. Approaches used to mitigate such noise on existing and new roads are and will continue to be a significant challenge to most member state Governments. According to the European Commission's Green Paper on noise, approximately 20% of the Union's population or close to 80 million people are subjected to noise levels that scientists and health experts consider being unacceptable. Such high noise levels leads to annoyance, sleep disturbance and adverse health effects.

In addition to health and quality of life implications there is significant costs associated with road traffic noise. Examples of elements that contribute to the economic damage include a reduction in residential property prices, lost labour days due to illness associated with noise and reduced options for long term sustainable land use planning. While the problems from road traffic noise exposure continue to grow, it is evident that a unified and consistent approach is needed for the management and control of the problem.

Over the past decade, attempts have been made to reduce noise levels associated with traffic by imposing noise emission limits for new vehicles. This, however, has not resulted in lower noise levels along major roads. There is, therefore, an urgent requirement to reduce traffic noise by alternative methods. There is a wide range of practical measures available to mitigate road traffic noise, including restricting land use, source orientation (altering the orientation of the road to minimize traffic noise), traffic management, façade insulation and infrastructural measures. Measures such as façade insulation, noise barriers and low noise road surfaces are examples that can be cost-effective and realistic, but the reductions in noise are only felt locally. It is not economically viable to implement such measures as a widespread solution to reducing road traffic noise. Therefore, any measures to reduce noise at source e.g., reducing tyre noise, should be broadly welcomed. Rolling noise is mostly the dominant component of road traffic noise emissions, therefore, a reduction in tyre noise will bring widespread benefits to most communities.

The consultation document proposes an effective reduction of tyre noise limits of between 2.5 and 6.5 dB(A) from current values with an anticipated introduction date of 2012. This new proposal includes new and replacement tyres for cars and trucks (Class C1, C2 and C3), with the possibility of certain exemptions for particular tyre types. The effect on roadside noise will be less than the suggested reductions, because some of the current tyres on the market are already fulfilling these new limit values. Also, when engine noise is taken into consideration, these reductions will be further minimised.

At this stage, it is also important to highlight how the current test methodology could influence the level of noise reductions achieved with the new noise limits. With the current test methodology, 1 dB is subtracted for measurement uncertainty and then the final result is rounded down to the nearest integer. It is important that proposals to revise the test methodology are considered.

Tightening tyre noise limits are considered to be the most cost effective way to mitigate the negative effects of road traffic noise. Therefore, it is very important to adopt the proposed new noise limits because any delays will have implications for increased costs, hinder sustainable development and result in further unnecessary negative health effects and annoyance.

Since tyres meeting the new noise limits are currently on the market, the recommended new limit values for introduction in 2012 seem to be highly feasible.

As well as introducing new noise limits on tyres, it is equally important that noise labelling is introduced because this will provide consumers the opportunity to make purchasing decisions based on noise emission properties. This is considered important for the promotion of low noise tyres. Information on noise-measured results for all tyres on the market should be accessible in a common database and/or as a tyre label.

#### **Comments on 5.1.2 Rolling resistance and 5.1.3 Tyre Pressure Monitoring systems:**

Over recent years the effects of greenhouse gas (GHG) emissions on global warming are becoming very evident. In Ireland, GHG emissions from the transport sector increased by 160% from 5.182Mt CO<sub>2</sub>-equivalents in 1990 to 13.461Mt CO<sub>2</sub>-equivalents in 2005, while its sectoral share increased from 9.3% in 1990 to 19.4% in 2005, which illustrates the increasing contribution of transport emissions to total emissions in the economy. Therefore, any measure that could contribute to a reduction in CO<sub>2</sub> emissions from the transport sector should be welcomed. It is important to note that a significant share of the transport CO<sub>2</sub> emissions can be attributed to light duty vehicles, therefore, any measure that will improve energy efficiency and CO<sub>2</sub> emissions from this group of vehicles could lead to a significant reduction in transport emissions. Reducing the rolling resistance and especially introducing tyre pressure monitoring system has already been identified as cost efficient means to reduce CO<sub>2</sub> emissions from vehicles. This is an important component of the 10 g/km reduction required to achieve the 120 g/km goal for 2012.

Rolling resistance can account for 20-30% of the energy required to propel a vehicle. Difference between the worst and best tyre can influence the fuel consumption by as much as 10%. A 0.4 tyre pressure decrease is linked to a 2% increase in fuel consumption. According



to the referred TNO study<sup>1</sup> in the consultation a combination of low rolling resistance tyres and tyre pressure monitoring system can reduce the fuel consumption by 4-6%.

It is important to highlight that not only the type of tyre but also pavement type can influence rolling resistance. Pavement difference can nearly double the rolling resistance and thereby influence the fuel consumption by 10%<sup>2</sup>. As with tyres, choosing pavements is a balance between different noise properties, rolling resistance, friction and cost.

#### **Comments on 5.1.5 Discussion on tyre requirements - Answers to the questions:**

- *“Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, “trading-off” noise requirements for rolling resistance requirements under certain circumstances?”*

The proposed noise limits are not sufficient in the long run but it is a very important step and highly realistic. The proposed limits for maximum rolling resistance will only restrain the worst cases and not drive the technology towards more energy efficient tyres. The tool for driving the market is instead the rolling resistance bands. These represent the span of rolling resistance for tyres on the market fairly well. The definitions of the bands have to be gradually changed to reflect the development of tyres. Using these bands together with different incentives the market can be driven towards more energy efficient tyres in bands A and B.

There seem to be no conflicts between tyre noise emissions and other tyre properties like rolling resistance, wet grip, price etc. A trade-off between tyre noise emission and other tyre properties seems to be unnecessary and unsuitable.

In the consultation there lacks a discussion of incentives that can be used to drive the market towards tyres with low rolling resistance and low noise. The information about noise levels and rolling resistance should be easily available for consumers. Here the experience from the CO<sub>2</sub> information on cars can be seen as an example. We see that that the member states have an important role to play in this work. Member states should also be encouraged to implement economic incentives to drive the market towards tyres with lower noise and rolling resistance.

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

The FEHRL report recommended a 1 dB(A) allowance for ‘special’ category tyres which are designed for off-road use and meet certain conditions. It has been suggested that specialist off-road mud and slick tyres should be exempt for tyre noise type approval. In order to prevent the widespread of these tyres a speed restriction of 120km/hr, compared to 160km/hr, is proposed. However this limit is unlikely to have an impact in Ireland as the maximum speed limit on Irish roads is 120km/hr. In order to effectively prevent extensive use of such tyres another means of control would be necessary.

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<sup>1</sup> Review and analysis of the reduction potential and costs of technological and other measures to reduce CO<sub>2</sub>-emissions from passenger cars Final Report- TNO Contract nr. SI2.408212

<sup>2</sup> Danish Road Institute (2004) Rolling resistance, fuel consumption – a literature review, technical note 23

The consultation document states that it may be unfeasible for these ‘special’ category tyres to observe the proposed noise limits, although it does not give a reason for this. An exemption of this type may lead to a more lenient approach to the noise restrictions in general and consequently the benefits of the new limits may be compromised and not reach their full potential.

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

Tyre pressure monitoring systems has been identified as one of the most cost efficient ways to reduce CO<sub>2</sub> emissions from cars<sup>3</sup>. It is therefore a matter of course that these systems should be mandatory. A detection limit of 20% pressure drop is somewhat too large. 10% would be preferable but a cost benefit analysis is needed to find the best balance between accuracy and cost.

Email:entr-vehicle-safety@ec.europa.eu

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<sup>3</sup> Review and analysis of the reduction potential and costs of technological and other measures to reduce CO<sub>2</sub>-emissions from passenger cars Final Report- TNO Contract nr. SI2.408212

1. I fully agree with the Commission that the advances in tyre technology is sufficient for a significant tightening of the noise limits for tyres.

In general the by FEHRL proposed limits are sufficient. Only for the tyres in the higher width range (like for SUV's) they seems to be too liberal.

There is no alternative approach to lower the noise of the traffic because tyres are the dominant noise source by vehicle speeds above 30-40 km/h. This means on main streets and highways where the severe noise problems occur.

The local authorities can use silent road surfaces, but the benefit of those surfaces is alone not enough to reach an acceptable noise quality..

We remind that with the present weak limits the Commission is responsible for the unnecessary health effects and costs for noise abatement which are made by the governments and the local authorities.

Because noise is highly related with health the governments must protect their people, including the European Union which is responsible for the requirements for vehicles and tyres.

All the available studies show there is no trade off between rolling resistance and noise. So there is not any justification for a scientific argument for a trade off.

2. In general there is no justification for exemptions.

Timeframe

The Commission should speed up the process of decision making about the noise requirements of tyres, and not wait till the requirements for the other issues are operational and ready for adoption into new regulation.

<sup>1</sup>. Forum European Highway Research Laboratories

Met vriendelijke groet,

André H.P. Derksen  
Projectmanager

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Océ-Technologies B.V.  
Real Estate Services

European Commission  
Automotive Industry

2007-10-16

**Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

Question:

***What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?***

Dear Ladies and Gentlemen,

Both systems the automatic emergency braking and the lane departure warning are ready to start with implementation in vehicles. The current price development also enables the use of such systems in whole vehicle fleets - also in the medium and small segments.

The big advantage in traffic safety, especially the reduction of fatalities and injuries makes a most fast introduction more as appropriate. The method of an area wide introduction shall be supported and forced by authorities but no mandatory.

Weissensberg, 2007-Okt-16

**OMRON**  
**Automotive Electronics Technology GmbH**

European Commission  
Directorate General for Enterprise and Industry  
Automotive Industry Sector  
e-mail: [entr-vehicle-safety@ec.europa.eu](mailto:entr-vehicle-safety@ec.europa.eu)

**Statement of PHILIPS Automotive Lighting on the  
“Public consultation on outline proposals for a new Regulation of the  
European Parliament and of the Council on Advanced Safety Features  
and Tyres”  
presented by the sector Automotive Industry of the Directorate-General  
for Enterprise and Industry of the European Commission**

Dear Sir or Madam,

Philips Automotive Lighting hereby submits comments on the above-identified consultation paper.

It is our mission to create leading lighting technologies that continuously improve safety and comfort for drivers. As a subscriber of the European Road Safety Charter we appreciate the initiative of the Commission to draft a regulation that mandates safety-related components and systems. This will bring down the number of injuries and fatalities on European roads.

We advocate all safety measures, which demonstrably lead to more traffic safety. Therefore we give our support to get such technologies (like DRL, ESC, ...) earlier on the road.

In this context we want to direct the attention to the significant safety potential of innovative lighting solutions. Unlike many other advanced safety systems, lighting supports directly the most basic sense of drivers. It is known from several investigations [see e.g. 1] that human beings perceive the vast majority of information via their visual channel. Especially in traffic situation this fact can not be overemphasized.

As DRL improves the conspicuity of oncoming traffic during daytime, improved head lighting technologies (e.g. Xenon light) increase road safety at night. A longer and wider light distribution and a light color similar to daylight lead to a better and earlier recognition of unlit obstacles, which again gives the driver more time to react and makes the driving task at night less stressful and therefore less tiring.

This is becoming even more relevant regarding the fact that the risk of having an accident at night is clearly higher than during daytime. During night the accident rates (per driven kilometers) as well as the severity of the accidents are significantly increased [2].

The safety advantage of Xenon light for example has recently been proven by a Germany based study [3]. It comes to conclusion that this head lighting technology conceals a big safety potential.

Furthermore, we like to point out that innovative lighting solutions (dedicated DRL, Xenon head lighting, LED signaling) give a positive contribution to the CO2 reduction targets. The available and proven technologies can sum up to maximum 5 g/km.

Lex Krzyzanowski  
Philips Automotive Lighting

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#### References:

- [1] M. Eckert, "Lichttechnik und optische Wahrnehmungssicherheit im Strassenverkehr";  
Verlag Technik GmbH, Germany, 1993
  - [2] BASt report 1988
  - [3] <http://www.tuv.com/tib/mediadatabase/30924.pdf> or:  
H. Schäbe, F. Schierge „Investigation on the influence of car lighting on nighttime accidents in Germany"; ISAL conference, Darmstadt, 2007
-

Bonjour,

l'association Prévention Routière, association privée reconnue d'utilité publique en 1955, est favorable à la généralisation des dispositifs suivants:

- dispositifs de contrôle de trajectoire des véhicules automobiles (ESP...)
- dispositifs de détection de sous-gonflage

Les études spécifiques dont a connaissance l'association établissent en effet des gains potentiels importants sur la sécurité.

Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)?

---> We support

Should tyre pressure monitoring systems be made mandatory?

---> We agree

Je vous remercie de votre attention

Christophe Ramond

Directeur des études et recherches

[www.preventionroutiere.asso.fr](http://www.preventionroutiere.asso.fr)



Response from the Retread Manufacturers Association (UK)

The RMA welcome's the opportunity to provide input to the public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres. Our Association recognises and welcomes the aims of reducing CO2 emissions.

The tyre retreading industry in the UK has no major concerns with regards to meeting any proposed requirements relating to noise, rolling resistance or wet grip.

However, we believe that it imperative that retreaded tyres are included in the legislation and that the directive should make clear reference to the inclusion of both new and retreaded tyres.

We would appreciate the opportunity of continuing to be involved in this consultation

Yours sincerely

David Wilson  
Director  
Retread Manufacturers Association

Dear Madams, dear Sirs,

I do welcome very much your initiative for a regulation due to my very strange(!) experience out of funded projects to "bring ICT in the car/road", where I had evaluated projects and subjects (GST, ertico) for the DG InfoSoc before as an "Independent Expert".

Further I am ongoing since 20 years contributing now to (wired and wireless) standardization on European and global levels and I can actually report hopeless missusage of enabling technologies like IEEE 802 (WLAN) for Car-to-Car and Car-to-Roadside, ignoring experience from the industry automation and the furthcoming development with special respect to reliability, redundancies/backup and effectiveness.

For me it looks as a good chance (and what up to know I was missing) to bring on the way the absolute necassarity of professional design, "testing", certification, approval, and monitoring procedures to be specified with safety parameters and critical values against clear indicated objectives, performance and capabilitites scaling in reactiveness and movement awareness, all operating conditions and exceptions incl. malfunction scenarios and with respect to all legal aspects/liability, consequences incl. consumer protection.

Please also note, that categories have to be set up what, where and how (hardlining e.g. failure proofed) approvals differ(!) from (soft e.g. quality of service) certifications and compliance e.g. comfort and assisting functions. ("Best practise" is absolutely missleading.)

After quiet a money and time waste I have to state a competence problem of the car manufacturer and supplier industry with the complexity of ICT and still following "post hypes" in other areas. Some authorities, representative organisations and national bodies not minor. In a globally competing world it appears tragic reflecting other proofed progress before(!), like passive chassis safety, ABS, airbags, etc. (About "intelligent light" it appears confusing.)

ESC, TPM, etc. are very good examples of industry sustainable innovations to introduce new requirements as settled transparent regulation for safety-related components for vehicles and incorporatable to UN/ECE understanding and principles. Comparable examples from avionic, maritime or railways can be given.

I can only recommend to install and European Agency(!) for "Car&Road Safety and Environmental Protection". RFI- and air-unpolluted Scotland with huge test fields as former military airports would be appropriate.

Further info can be revealed.

Best Regards

W. Rm.

Dr.-Ing. Dipl.-Inform. Wolfgang P. Riegelmayr  
Member of IEEE (ComSoc & Vehicluar Techn. Soc.), ACM, IETF, VDE/IEC

Dear Sir

I am responding to the consultation on the European Commission consultation on advanced vehicle safety systems and tyres on behalf of the Road Haulage Association Ltd.

The Road Haulage Association (RHA) represents the spectrum of UK businesses whose main activity is operating commercial vehicles in the hire & reward sector. Our 9,500 members operate almost 100,000 vehicles and range from owner drivers to large fleets.

When considering the main proposals of the consultation on the improvements to tyre technologies to reduce noise emissions, rolling resistance, introducing tyre pressure monitoring systems and new wet grip requirements, obviously as operators many of these improvements are outside of our control. Noise, rolling resistance and wet grip are areas of concerns for tyre manufacturers and not for the haulage sector. Of course when these improvements are available in tyres then the haulage sector need to be committed to using the appropriate tyres that will meet these requirements. Each of the changes to the tyre technology are of benefit to operators in that improved wet grip is a vital factor in safety, with lower rolling resistance which we believe would lead to reduced noise, should help to improve fuel consumption leading to lower CO2 emissions.

The association would support these measures, however commercial viability for our members is important so we would expect any such improvements to be at minimal additional cost.

Tyre monitoring systems are available and in use at this time with accuracy of any such system considered to be acceptable in maintaining a constant tyre pressure. It is hoped that any additional cost of these systems is offset by improved tyre life and also improved fuel consumption, as under inflated tyres leads to increased rolling resistance and hence greater fuel usage.

With regards to mandatory requirements for advanced vehicle safety features to include Electronic Stability Control (ESC), which is already widely used, and for longer term introduction of automatic emergency braking systems and lane departure warning systems, we would expect that these will be introduced once tried and tested by vehicle manufacturers. The RHA support any technology that offers increased safety to the haulage sector, however we are also concerned as to additional costs to operators, so would see mandatory fitment on new vehicles "only" at a time to be agreed and not as part of a retrofitment requirement to existing vehicles.

Regards

Steve Biddle  
Head of Technical Services  
Road Haulage Association

11 October 2007

European Commission  
Enterprise & Industry

**Our ref.:** FS712-000009

**Adm.:** Peter Dyrelund Jakobsen

**Your ref.:** Consultation

## **Proposal for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

The Road Safety and Transport Agency is very satisfied to see that the Commission put forward very constructive and forward-looking proposals.

We can support the proposals and have two more proposals which are mentioned in the following together with the answers on the specific questions.

As a matter of form we must tell that the answers are not (yet) the official Danish answers.

### **5.1 Tyres**

**Question 1:** The proposal is sufficient and realistic but it seems strange to choose different solutions for noise (only limits) and for rolling resistance (limits and band labeling for consumer information). Besides a marking, which identify “special tyres” which are allowed to have a higher noise and rolling resistance is needed.

**Question 2:** To our current knowledge there is no reason to give exemptions for particular categories of tyre.

**Question 3:** Yes, TPMS should be mandatory. The accuracy of the American systems (register only under-inflation above 25-30%) is not sufficient to reach the objective of lower rolling resistance in practice. The system should be able to register under-inflation of more than about 15%.

As a supplement we would like to draw the attention to the fact that the intension of Directive 2001/43/EC (tyre noise) is not followed. The intension was that all new cars should be fitted with tyres with noise-marking. The Commission has formerly promised

to correct the Directive with a Commission Directive to make sure that the original intention will be effective. We shall ask the Commission to come forward with a proposal soon. If the Commission wants it we will offer to prepare a text in English.

## **5.2 Advanced Vehicle Safety Systems**

**Question 1:** We support the mandatory fitting of ESC for all categories of M and N vehicles and trailers above 750 kg (not only above 3,5 tonnes – there are already systems on the market for trailers with mechanical brakes). No exemptions needed for normal size vehicles.

**Question 2:** 2011 would be the latest reasonable target for fitting ESC to new car models. In fact the manufacturer should be able to introduce ESC to new models by the year 2010. There should also be a date for ESC to be fitted to all new cars (including old types), and that should not be later than 2012. For other types of vehicles (e.g. lorries) there is a proposal on the table of WP29 in ECE. The dates there however are disappointingly late and includes some unnecessary exemptions, so EU should be able to do better.

There are two reasons for a rapid implementation:

- A German paper on the ESV conference in 2005 showed that ESC is even more important on small passenger cars than on bigger passenger cars. And the small cars will be later in a more general optional fitting with ESC because of the price sensitivity on small cars.
- When the vehicles are getting older and comes to the periodical inspection it will be easier to demand, that the ESC should still be functioning, if the fitment is mandatory.

**Question 3:** Introduction of other systems. We would suggest lane departure warning systems mandatory on all categories of motor vehicles from 2011 (new models) and 2012 (all new vehicles). Automatic emergency braking systems would probably have a favourable cost/benefit case only for trucks/lorries and buses, where we would suggest the same time table.

Additionally we would propose, that seatbelt reminders shall be mandatory (as fast as possible), because they have a very favourable benefit/cost ratio of 3,8 (based on the Danish rate of seatbelt wearing, and could be even better for other countries with current lower seatbelt wearing rates). If the Commission wants it we will offer to prepare a text in English.

Yours sincerely

Ib Rasmussen  
Head of office

# Statement

## Public Consultation on Advanced Safety Features and Tyres

17.10.2007



**BOSCH**  
Invented for life

### **1. Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3,5 tonnes)? Should any exemptions be allowed?**

There is already a mandatory regulation in the US and all the stakeholders have agreed to the process and the requirements of this regulation. Beyond that, the “big three” made a voluntary agreement to fulfil this regulation even earlier. In UNECE there is already a process ongoing in Geneva which is supported by Car manufacturers, suppliers and relevant associations.

### **2. Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?**

- a) The necessary extension of **ESC production capacities** is achievable. 2011 for mandatory ESC would require a mandatory/regulatory decision by the European Commission by mid 2009 latest.
- b) **ESC is technically available** since more than 10 years. Most of the vehicles from the compact up to premium segment have this system as series equipment. Many of the vehicles in the small car segment have it already at least optional.
- c) **ESC is a proven technology and justified in terms of projected casualty savings.** The potential of ESC to avoid or mitigate serious and fatal accidents under real driving conditions has been analysed and proven in several European and international studies. A recent impact analysis shows that 4 000 lives could be saved each year and 100 000 injuries could be avoided each year on European roads if all cars would be equipped with ESC. The ESC analysis shows that for every Euro invested in ESC cost savings of 3,5 – 5,8 Euro arise to society.
- d) The **ESC installation rate of the European car stock/vehicle population** stands at 16 % in 2006. A timely market deployment of ESC is reasonable as it allows for the maximisation of the safety benefits of ESC and accelerates full car stock penetration of ESC.
- e) **It is in line with the Global Technical Regulation (GTR) on ESC, recently initiated by the UNECE,** and the **FMVSS 126** already in force in the US.
- f) **ESC uses ABS components,** the economical impact of ESC is reduced by the already existing ABS self-commitment for all new car models in Europe.

### **3. What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?**

Assuming a high installation rate we expect that the costs of driver assistance systems based on Long Range Radar (LRR) and video cameras will fall to a level corresponding to the costs of ESC systems today which will certainly give a favourable cost-benefit.

Such systems could be

- Predictive Collision Warning (PCW),
- Extended Brake Assist (PBA/XBA) with warning and brake assist functions
- Lane Keeping Support (LKS)
- Passive pedestrian protection
- Emergency Braking

The necessary extension of production capacities will be achievable by:

- 2010: Heavy Trucks and Buses (Categories N3, M3)
- 2012: Light Trucks and Buses (Categories N2, M2)
- 2014: Transporters (Category N1) and Passenger cars (Category M1)

## **RAC Foundation response to public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

The RAC Foundation is an independent body established in 1991 to take on the role of protecting and promoting the interests of the responsible motorist. The Foundation welcomes the opportunity to respond to this important consultation and wishes to focus on the proposals relating to Advanced Safety Features.

*Do you support the mandatory installation of ESC for all categories of M and N class vehicles? Should any exemptions be allowed?*

In the UK it is estimated that if 90% of cars were fitted with ESC it would save 400 lives and prevent 3,000 serious injuries each year. However, ESC is not widely available in the UK. At present, on all cars sold in the UK, 55% have ESC as standard, 22% as an option and on 23% it is not available. This compares to Denmark which offers ESC as standard on 75% of cars, and Latvia where ESC is offered as standard on 65% of new cars on the market. We are particularly concerned that ESC is not available in over half of all super-minis bought in the UK. These smaller cars tend to be bought by the more vulnerable younger drivers who arguably need this protection most. The RAC Foundation believes that making the fitment of ESC on all new cars mandatory would improve the availability of ESC to the UK motorist.

The RAC Foundation is not persuaded of the merits of exemptions. All motorists are entitled to benefit from the protection offered by this life-saving technology.

In parallel with regulation, more needs to be done in terms of education to inform the consumer about why they must choose ESC when buying a new car.

*Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

As a supporter of the "Choose ESC" campaign, the RAC Foundation has called for ESC to be available on 100% of new cars by 2012.

*What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made?)*

The RAC Foundation believes that a judgement on time-scales cannot yet be made given the information available on costs and benefits.

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18 October 2007



**THE ROYAL SOCIETY FOR THE PREVENTION OF ACCIDENTS  
RoSPA**

**RESPONSE TO THE EC CONSULTATION**

**“PUBLIC CONSULTATION ON OUTLINE PROPOSALS FOR A REGULATION  
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON  
ADVANCED SAFETY FEATURES AND TYRES”**

**October 2007**

This is the response of the Royal Society for the Prevention of Accidents (RoSPA) to the European Commission's consultation entitled "Public consultation on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres".

RoSPA welcomes the opportunity to comment on the consultation paper.

### **General Comments**

In future consultations, RoSPA believes that it would be advantageous if the results of any new statistics or research were referenced.

For example, RoSPA is not familiar with the quoted statistics showing the number of lives that would be saved due to Automatic Emergency Braking Systems, or Lane Departure Warning Systems.

### **Requirements related to tyres**

*Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?*

#### **RoSPA Response**

RoSPA has no comments on this issue

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

#### **RoSPA Response**

RoSPA has no comments on this issue

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

## **RoSPA Response**

RoSPA believes that vehicle technology can be used to encourage drivers to regularly check their tyre pressures, and would support the mandatory introduction of Tyre Pressure Monitoring Systems (TPMS).

A report conducted for the EC recommended, "A 15-20% deflation should be the maximum limit at which these systems should warn the driver".<sup>1</sup>

RoSPA supports this recommendation, as it would encourage manufacturers to fit direct TPMS systems (accurate to +/- 0.1 bar) rather than indirect TPMS systems (which can detect a 30% difference from a pre set value).<sup>2</sup> Direct TPMS also gives a more immediate warning of tyre deflation.

Direct TPMS are also accurate enough to warn drivers of any inflation pressures that deviate from the manufacturer's recommended pressure. There is no reason why drivers should not be given this up to date information on the state of their tyres, as well as a warning when a tyre has deflated by a preset amount.

Indirect TPMS still require drivers to check the vehicle's tyre pressure regularly, as they are not accurate enough to detect slight variations in pressure that may compromise a tyre's safety, durability, and mileage. If there is a difference between when a driver believes a system will alert them to a low pressure and when the system actually does, then this results in some vehicles being driven for long periods with inflation pressures below the recommended level.

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<sup>1</sup> **Review and Analysis of the Reduction Potential and Costs of Technological and other measures to Reduce CO<sub>2</sub>-emissions from Passenger Cars.** Smokers, R. et al  
TNO Science and Industry, October 2006.  
[http://ec.europa.eu/enterprise/automotive/projects/report\\_co2\\_reduction.pdf](http://ec.europa.eu/enterprise/automotive/projects/report_co2_reduction.pdf)

<sup>2</sup> **Motor Vehicle Tyres and Related Aspects.** Reithmaier, W and Salzinger, T. TÜV  
Automotive GmbH, 2003.  
[http://ec.europa.eu/enterprise/automotive/projects/report\\_motor\\_vehicle\\_tyres.pdf](http://ec.europa.eu/enterprise/automotive/projects/report_motor_vehicle_tyres.pdf)

## **Advanced Vehicle Safety Systems**

*Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?*

### **RoSPA Response**

RoSPA supports the mandatory installation of ESC on new vehicles. There is evidence that shows that ESC has great potential to prevent a large number of accidents on the roads of Europe.

It does this by improving the dynamics of a vehicle to prevent skidding, and doesn't require much driver interaction beyond purchasing the system - a driver's actions on a vehicle with and without ESC should be the same. This reduces the potential for human error or misuse that we see with systems such as LDWS.

The EC needs to consider how the mandatory requirement for ESC is built into the Regulation. The hardware is similar between ESC systems but there is potential for variance in software that controls how and when systems respond after a loss of control is detected, meaning there is potential for ESC systems to differ in effectiveness.

If the requirement is for all cars to be fitted with ESC in 2011 then the EC can set a technical specification and a test method for ESC systems, including performance standards.

The advantage with a standards based approach is that it ensures that all ESC perform to give a consistent level of safety, it also allows for future innovations.

This is analogous with the current standards for crashworthiness that do not specify that vehicles have to be fitted with airbags, but instead specify protection standards that vehicles must meet, and airbags are currently the best way to meet the standards.

So that a driver's knowledge and use of ESC systems can be transferred between vehicles of different models, there needs to be a standard system developed to display different operating conditions of the ESC, for example

- alerting drivers of ESC activation,
- ESC malfunction, to give a clear and understandable warning that the system is not active, and
- ESC has been turned off.

RoSPA is also concerned by how simple it is in some vehicles to turn the ESC off by a button on the dashboard. Drivers may be unaware of what the ESC does and absentmindedly switch it off, or may switch it off for genuine reasons and forget to switch it back on.

The Society would therefore encourage the regulation to specify that the ESC system be turned on automatically when the vehicle is started, even if a driver had selected to switch the system off during the last journey.

*Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

#### **RoSPA Response**

RoSPA believes this to be a reasonable timescale, and similar to the one already set in the US, which requires all new light vehicles to be fitted with ESC by 2011.

However, in order to encourage a quicker rate of fitment up to 2011, there could be a defined phasing in of ESC systems. This would involve specifying that a percentage of vehicles by each manufacturer should be fitted with ESC systems

This is not without precedent as NHTSA are using this method of introduction in the US<sup>3</sup>. NHTSA found that the benefits of quickly introducing ESC via a phase in outweighed the advantages of any reason for delaying the introduction.

*What would a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit can be made)?*

#### **RoSPA Response**

An effective approach to safety involves having an overarching strategy to manage the risk, and introducing the most relevant solutions. Risk management is as important as the risk control measures.

RoSPA therefore urges the EC to systematically review the costs and benefits of all different emerging and future technologies, so that focus can be placed on quickly introducing those that have the most potential to save lives.

One of the biggest risks to road users in Europe is inappropriate or excessive speed. In Britain, excessive speed contributes to 12% of all injury collisions, 18% of crashes resulting in a serious injury and 28% of all collisions that result in a fatality.<sup>4</sup> This means that around 1,000 people are killed each year on Britain's roads, and over 6,000 are seriously injured, because drivers and riders travel too fast.

RoSPA believes that emphasis must be put on helping drivers and riders choose slower speeds and one method of doing this is the introduction of Intelligent Speed Adaptation (ISA) systems.

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<sup>3</sup> See <http://www.nhtsa.dot.gov/cars/testing/ncap/esc/rule.pdf> for details about NHTSA's final rule on ESC including comments on the consultation they conducted.

<sup>4</sup> Road Casualties Great Britain, 2003: The Casualty Report, DfT, 2003

There have already been estimates conducted of the number of lives that ISA could save. In the UK alone,

- *A speed warning system which displays the speed limit in vehicle and alerts the driver to changes in the posted limit has been predicted to prevent 10% of all injuries in accidents, 14% of serious and fatal injuries and 18% of fatal injuries.<sup>5</sup>*
- *A mandatory system which controls the speed of a vehicle to the posted limit, would save 20% of injury accidents and 37% of fatal accidents.<sup>6</sup>*
- *A mandatory system which controls the speed of a vehicle to the posted limit, and slows a vehicle in dangerous conditions such as fog, rain, has been predicted to prevent 36% of all injuries in accidents, 48% of serious and fatal injuries and 59% of fatal injuries.<sup>5</sup>*

Timescales for two different methods of introduction have already been predicted as part of the PROSPER, a market driven scenario, and an authority driven scenario. In which early adoption of ISA is encouraged by incentives. The authority driven scenario predicts a quicker take up of ISA.<sup>7</sup> RoSPA believes that there is a clear need for a strong lead on ISA from the EC and there is certainly the need for the ISA specifications and standards to be set at a European level.

ISA is not a speculative technology in that analysis already shows high benefit-cost ratios, which range from 7.9 to 15.4 (i.e. the payback for the system could be up to 15 times the cost of implementing it and running it).<sup>6</sup>

In the context of this consultation, technology that helps drivers to reduce their speed also reduces a vehicles fuel use and may have an environmental benefit due to the decrease in emissions.

RoSPA thanks the EC for the opportunity to comment on this consultation. We have no objection to the contents of RoSPA's response being reproduced or attributed.

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<sup>5</sup> **Intelligent Speed Adaptation: The Best Collision Avoidance System?** Carsten, O. Tate, F. The 17th International Technical Conference on the Enhanced Safety of Vehicles (ESV), 2001, Paper 324.

<sup>6</sup> **Intelligent Speed Adaptation: Accident Savings and cost-benefit analysis.** Carsten, O.M.J. and Tate, F.N. (2005). Accident Analysis and Prevention, 37(3), pp. 407-416

<sup>7</sup> [http://www.rws-avv.nl/prosper/PROSPER\\_D4.3.pdf](http://www.rws-avv.nl/prosper/PROSPER_D4.3.pdf)

1. I fully agree with the Commission that the advances in tyre technology is sufficient for a significant tightening of the noise limits for tyres.

In general the by FEHRL proposed limits are sufficient. Only for the tyres in the higher width range (like for SUV's) they seems to be too liberal.

There is no alternative approach to lower the noise of the traffic because tyres are the dominant noise source by vehicle speeds above 30-40 km/h. This means on main streets and highways where the severe noise problems occur.

The local authorities can use silent road surfaces, but the benefit of those surfaces is alone not enough to reach an acceptable noise quality..

We remind that with the present weak limits the Commission is responsible for the unnecessary health effects and costs for noise abatement which are made by the governments and the local authorities.

Because noise is highly related with health the governments must protect their people, including the European Union which is responsible for the requirements for vehicles and tyres.

All the available studies show there is no trade off between rolling resistance and noise. So there is not any justification for a scientific argument for a trade off.

2. In general there is no justification for exemptions.

Timeframe

The Commission should speed up the process of decision making about the noise requirements of tyres, and not wait till the requirements for the other issues are operational and ready for adoption into new regulation.

with kind regards,

Dinand Roza  
Beleidsmedewerker Milieuzaken  
Gemeente Sliedrecht  
Afdeling ROBM

We believe ESC (Electronic Stability Control) is an important system to save life around Europe. A recent report about ESC in Europe (Autobild - August 2007 – Germany) show how in many markets more than 60% of new cars are already fitted with ESC (Sweden and Germany), but there is still a big gap between those countries, and other countries like Italy. It is clear how ESC is a revolutionary system in the field of safety driving, and prevention of car's accidents, we do believe is now time to have a European Regulation about ESC, and we believe in both the following points:

- 1) Is necessary ESC is supported to be fitted in all light and heavy commercial vehicles.
- 2) Is necessary ESC to be fitted in all new cars since 2011

Giovanni Calì  
Presidente  
SaperexGuidare



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Organisation : Schrader Electronics Ltd

Representative : Stephen McClelland

Position : Managing Director

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Subject:

Contribution of Schrader Electronics Ltd to the Public Consultation on outline proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres

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Organisation Background:

Schrader Electronics Ltd., part of the engineering company, Tomkins PLC, is a leading manufacturer of Automotive and Industrial Electronics and in particular the market leader in the design and manufacture of Remote Tyre Pressure Monitoring (RTPMS) products.

We supply Tyre Pressure Monitoring systems to most Automotive Manufacturers in the world including Daimler, Chrysler, BMW, General Motors, Renault-Nissan, Ford, Volvo and others.

Our systems are compliant with every applicable international standard such as NHTSA FMVSS No. 138 and all International regulations that may affect our products.

We have an R&D team of over 100 engineers dedicated to TPMS and we are capable of supporting all aspects of the design process, from single component selection to overall system performance.

Either directly or through sister companies of the same group we are currently members of ETRTO and CLEPA, and some of our team members represent the UK as subject experts in the ISO group 21750, writing a standard for Tyre Pressure Monitoring Systems

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Comments:

Schrader Electronics strongly supports the European Commission intent to introduce new legislation requirements to contribute to road casualty reductions and reductions in CO2 emissions, and in the area of Tyre Pressure Monitoring Systems we would like to offer our expert opinion of the minimal system requirements necessary to achieve such intent:

Tyre Pressure Monitoring (TPM) Systems Suggested Minimal Performance Standard:

1. In order to prevent unsafe driving conditions the TPM system should be able to alert the driver with an alarm indicating unsafe driving condition, a "hard warning" as often described within the industry, when one or more tyres are under-inflated of lower than 20% of the Manufacturers' Recommended Cold Inflation Pressure written on the Pressure Placard of the vehicle for light loading conditions. Such alarm should be delivered within 3 minutes of cumulative driving in such under-inflated condition for speeds above 25km/h.

2. In order to prevent waste of fuel, unnecessary production of CO<sub>2</sub> and premature wear-out of tyres the TPM system should be able to alert the driver with a warning instructing of adding air in their tyres, a “soft warning” as often described within the industry, when one or more tyres are under-inflated of lower than 15% of the Manufacturers’ Recommended Cold Inflation Pressure written on the Pressure Placard of the vehicle for light loading conditions. Such warning should be delivered within 20 minutes of cumulative driving in such under-inflated condition for speeds above 25km/h.
3. In order to prevent erroneous perception of safety, if a malfunction is detected the system should be able to alert the driver with a “system fault” warning indicating unavailability of the system within 10 minutes of cumulative drive above 25km/h.
4. In order to prevent very dangerous false perception of safety, if a calibration button is used to allow variable thresholds for different load conditions, the system should never be allowed to lower its threshold detections levels with respect to what described in points 1 and 2.
5. The TPM system should comply with points 1,2,3 and 4 for all tyre sizes and types allowed for that particular model (winter, summer and run-flat).

Most systems currently available in the market comply very easily with such requirements and in particular all Schrader’s systems comply with these requirements, including the lowest cost systems with architectures resulting in total system cost of less than 30 Euro for the Vehicle Manufacturer.

We believe that this set of requirements represent a good compromise between the intent of the European Commission described in the consultation document and the practicalities of the industry, based upon our 15 years of experience working almost exclusively on this subject.

We believe that having a single alert requirement of 20% as suggested by the consultation document is insufficient for the purpose of CO<sub>2</sub> reduction (some studies show that a majority of the registered vehicles in Europe are currently being driven at inflation pressures between 15% and 20% lower than placard pressures).

A dual threshold strategy, already commercially used in the industry by manufacturers like Renault, BMW, Audi and Mercedes amongst others, provides maximum benefit of the technology because it avoids unnecessary safety alarms, but warns for prolonged conditions of under-inflation.

We hope our contribution can be of value for the European Commission and we are available for further clarifications.

Best Regards

Stephen McClelland

Comments to the public consultation related to item:

**2.1.2 Making ESC available in new cars** .document COM(2007) 541.

1.- We consider that the target proposal is suitable.

2.- Concerning Commercial vehicles: we propose to introduce ESC in all M and N class vehicles. Exception will be taken in consideration on Public work, Fire and Special vehicles, as is proposed in the Informal Document GRRF-62-41-Rev1.

3.- Special emphasis we would like to put into your consideration with vehicles class **N1** and **M1**. Those vehicles are at present excluded in this proposal as well as they are excluded to fit ABS and Speed limiters. It is difficult to understand and explain to the public society, why the most popular and unmatriculated commercial vehicles, are allowed to drive without these safety measures and moreover with passenger car driver licence.

Besides, the concept of these vehicles are close to passenger cars, so the safety systems hardware are easy to transfer to them.

Barcelona 18 Oct. 2007

Sociedad de Tecnicos de Automocion

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## **Contribution to the public consultation**

### **Background**

The Commission services have produced a consultation document on outline proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.

The consultation seeks to gather the views of all interested parties on the overall proposal for an integrated Regulation, on the specific proposals concerning tyre noise and rolling resistance limits, and on the timing and feasibility issues concerning the introduction of advanced vehicle systems. Stakeholders are invited to provide comments on the issues outlined in the consultation document.

### **Comments on 5.1.1 Rolling Noise Emissions**

Traffic noise pollution impact many people negative firstly regarding wellbeing and health, but also about learning and productivity. The problem is extensive. Only in Sweden the socio- economic costs of road traffic noise are estimated to 800 million € a year. The problem is increasing. In the future, the energy consumption and CO2 emissions must decrease. Building more compact cities is one important measure. It is then even more necessary to reduce traffic noise; otherwise increasing noise problems make this measure more difficult. Quieter traffic is thus an important part towards a sustainable society.

There are many possible measurements to reduce traffic noise. Façade-isolation, noise-screens and low -noise road surfaces are examples that can be cost-effective and realistic, but only locally. It's far too expensive as a wide-spread solution. The most effective way is to decrease emissions depending on the vehicles' - it will decrease noise everywhere, not only in locally spots. Rolling noise is mostly the dominant component of road traffic noise emissions. In the same time there are a lot of potential to lowering tyre noise.

The consultation document proposes an effective reduction of noise limits on tyres from current values of between 2.5 and 6.5 dB(A) anticipated for introduction in 2012. This new proposal include new and replacement tyres for cars and trucks (Class C1, C2 and C3), with the possibility of certain exemptions for particular tyre types. The effect on road side noise will be less than the suggested reductions,

because some tyres fulfilling the new limits are already on the market and the noise is also influenced by engine noise. Also wide allowances in test method, if taken advantage of, can give less real reductions. If the uncertainty in the test method is neglected and the conditions in Sweden is taken to account, the general reduction of road side noise in built-up areas can be estimated to about 2-3 dB(A) in maximum levels and 1-2 dB(A) in equivalent levels. The disturbing and negative health effects will be reduced by 20-30 percent and the socio-economic costs will be lowered by 150- 250 million €a year in Sweden. The new proposal will have a considerable positive effect on reducing the disturbing and negative health effects in Europe and therefore, improve the living conditions for people exposed to road traffic noise.

With the conditions in Sweden, every tyre can save about 50 €(socio-economic costs) under its life-time. The tyre industry development costs couldn't be other than much lower. Tightening tyre noise limits are the most cost- effective way to mitigate traffic road negative effects and costs. It is very important to adopt the proposed noise limits as soon as possible. Every delay will cost a huge lot of money, block sustainable society development and give unnecessary negative health effects and annoyance.

On the other hand, the tyre industry must be able to achieve the noise limits in an acceptable way. The fast development and short tyre model life indicates a good possibility for the industry to reach the new noise limits in a few years. The recommended new limit values for introduction in 2012 seem to be highly feasible.

Noise labelling is also very important. The noise properties are quite different among tyres and even after the new limits have been adopted a rather big difference can be expected. Common known tyre noise properties are very important. Unfortunately, noise labelling of tyres is currently not included, meaning that the consumers cannot base their purchasing decisions on noise emission properties. This is considered important for the promotion of low noise tyres. Information on noise measured results for all tyres on the market ought to be easily accessible in a common database and/or as tyre labelling.

### **Comments on 5.1.2 Rolling resistance and 5.1.3 Tyre Pressure Monitoring systems**

The effects of CO<sub>2</sub> emissions on global warming become more and more clear. The effects on environment and public health will be very large especially if we do not start to reduce emissions already now. Transports stand for nearly 25 percent of the global energy related CO<sub>2</sub> emissions. Nearly half of these emissions come from light duty vehicles. In 2005 there were 850 million vehicles in the world; of these 650

million were passenger cars. Without economic collapse or considerable changed view of the transport system and societies these numbers will continue to grow rapidly<sup>1</sup> with all its consequences. To reduce the effects of the transport system on the climate it is important to work with three types of measures<sup>2</sup>,

- reduce the demand of transport
- increase the share of renewable
- increase energy efficiency in the transport system

The last one can be done both by increase the share of transport in the most energy efficient modes and by increasing the energy efficiency within a transport mode. Having in mind the large share of CO<sub>2</sub> emissions from light duty vehicles it is easily understood that even small improvements of energy efficiency and CO<sub>2</sub> emissions from cars is important. Reducing the rolling resistance and especially introducing tyre pressure monitoring system has already in the work with the CO<sub>2</sub> strategy on cars been identified as cost efficient means to reduce CO<sub>2</sub> emissions from vehicles. They are an important part of the 10 g/km part of the goal 120 g/km for 2012.

Rolling resistance can account for 20-30 percent of the energy used for drive a vehicle. Difference between the worst and best tyre can influence the fuel consumption by as much as 10 percent. A 0.4 tyre pressure decrease is linked to a 2 percent increase in fuel consumption. According to the referred TNO study<sup>3</sup> in the consultation a combination of low rolling resistance tyres and tyre pressure monitoring system can reduce the fuel consumption by 4-6 percent.

#### **Comments on 5.1.5 Discussion on tyre requirements - Answers to the questions**

- *“Are the proposed noise and rolling resistance limits in Annexes 1 and 2 a) sufficient and b) realistic? Is there a viable alternative approach, for example, “trading-off” noise requirements for rolling resistance requirements under certain circumstances?”*

The proposed noise limits are not sufficient in the long run but it is a very important step and highly realistic. The proposed limits for maximum rolling resistance will only restrain the worst cases and not drive the technology towards more energy

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<sup>1</sup> IPCC (2007) Working Group III Report "Mitigation of Climate Change"

<sup>2</sup> Swedish Road Administration (2004) Climate strategy for the road transport sector, SRA report 2004:102 (in swedish)

<sup>3</sup> Review and analysis of the reduction potential and costs of technological and other measures to reduce CO<sub>2</sub>-emissions from passenger cars Final Report- TNO Contract nr. SI2.408212

efficient tyres. The tool for driving the market is instead the rolling resistance bands. These represent the span of rolling resistance for tyres on the market fairly well. The definitions of the bands have to be gradually changed to reflect the development of tyres. Using these bands together with different incentives the market can be driven towards more energy efficient tyres in bands A and B.

For a specific tyre there is a compromise between different wanted properties. Overall however, among existing tyres on the market, you can find a low – noise tyre with good other properties as good grip and low rolling resistance, etc. There seem to be no considerable target conflicts between tyre noise emission and rolling resistance. In Sweden research on tyre noise and rolling resistance is ongoing and results are expected within a month or two. Until further notice, trade-off between tyre noise emission and other tyre properties seems to be unnecessary and unsuitable.

In the consultation there lacks a discussion of incentives that can be used to drive the market towards tyres with low rolling resistance and low noise. The information about noise levels and rolling resistance should be easily available for consumers. Here the experience from the CO<sub>2</sub> information on cars can be seen as an example. We see that that the member states have an important role in this work. The member states should also be encouraged to implement economic incentives to drive the market towards tyres with lower noise and rolling resistance.

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

Tyre pressure monitoring systems has been identified as one of the most cost efficient ways to reduce CO<sub>2</sub> emissions from cars<sup>4</sup>. The TNO – report indicates that these systems should be mandatory. A detection limit of 20 percent pressure drop is somewhat too large. 10 percent would be preferable but a cost benefit analysis is needed to find the best balance between accuracy and cost.

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

A particular category of tyre in Scandinavia is studded winter tyres. They are widely used; about 70 % of all tyres are studded winter tyres under the winter (five) month. Typically, studded tyres are several dB louder than unstudded tyres. They can not be

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<sup>4</sup> Review and analysis of the reduction potential and costs of technological and other measures to reduce CO<sub>2</sub>-emissions from passenger cars Final Report- TNO Contract nr. SI2.408212

included in the regulation with the proposed limits. Preferably, studded winter tyres should have there's own noise limits and labelling.

**Comments on 5.2.3 Discussion on Advanced Vehicle Safety Systems - Answers to the questions**

- *Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3.5 tonnes)? Should any exemptions be allowed?*

Sweden supports the approach to make ESC mandatory in both M and N class vehicles. For our M1 sales the estimate is that 93% of the cars sold have ESC.

- *Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

For M vehicles, 2011 is a reasonable target.

- *What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?*

There is a full set of new technologies with claimed high potential to further increase the safety on European roads. It is evident that society and industry must make significant efficiency studies before deciding about mandatory introduction. The time scale for mandatory introduction is therefore depending on when valid and reliable efficiency data is available. EU should focus and concert action to do such studies on a pan-European basis. Systems that the Swedish Road Administration has as highest priority are, Informative Intelligent Speed Adaptation (Speed Alert), Alcohol starter interlocks and automatic emergency braking.

Decision about this statement has been done by acting Director- General Lena Erixon. Comments has been done by

- Kjell Strömmer ([kjell.strommer@vv.se](mailto:kjell.strommer@vv.se)) on rolling noise emissions
- Håkan Johansson ([hakan.johansson@vv.se](mailto:hakan.johansson@vv.se)) on rolling resistance and tyre pressure monitoring
- Anders Lie ([anders.lie@vv.se](mailto:anders.lie@vv.se)) on advanced vehicle safety systems



Lena Erixon



# **Quieter tyres: a cost effective way to protect public health**

Response to the public consultation of the European Commission on outline proposals for a new Regulation on Advanced Safety Features and Tyres

Part 1 of 2

**October 2007**



European Federation for  
TRANSPORT and ENVIRONMENT

**Quieter tyres: a cost effective way to protect public health**

Response to the public consultation of the European Commission on outline proposals for a new Regulation on Advanced Safety Features and Tyres

(Part 1 of 2)

**October 2007**

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Jos Dings, Director

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## Note

In the framework of the public consultation on a proposal from the European Commission on vehicle tyres (item h of the proposed Regulation, and section 5 of consultation document), T&E hereby submits a response addressing the limit values for noise emissions.

T&E has published a separate response concerning tyre rolling resistance and CO2 emissions.

This document is available to download from our website:

[www.transportenvironment.org](http://www.transportenvironment.org)

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## Summary

1. T&E urges the European Commission to propose, *without delay*, effective standards to cut noise emissions from passenger and commercial vehicle tyres.
2. Standards must be applied to original equipment, replacement and retreaded tyres.
3. Regarding the test methodology, the unnecessary 1dB allowance and practice of rounding down must be scrapped immediately upon entry into force of the regulation.
4. A flat 71 dB(A) noise limit value for all tyres (C1, C2, C3) must be introduced by 2012. The limit values are technically feasible and need not compromise other characteristics. [1]
5. The Commission proposes higher limit values for wider tyres. We are concerned about the trend in the market towards wider tyres and believe there is no justification to permit further allowances in noise limit values for extra-wide tyres intended for personal or commercial road use. This would constitute yet another exemption for sports utility vehicles (SUVs) used on Europe's roads. Only so-called 'special use tyres' as defined in the consultation document could be granted an exemption of 2 dB(A) provided the definition is clarified to include only those tyres intended exclusively for off-road use.
6. Outline limit values must be included for a subsequent phase of tightening by at least 2 dB(A) by 2016. A longer term outlook is preferable in order to give certainty to developers, designers and manufacturers, and further stimulate innovation.
7. To accompany the second phase of tightening in 2016, the Regulation should outline plans to improve the test methodology in order to more accurately reflect real-world driving behaviour and conditions, including test track specifications.
8. Tyre labelling must include a noise classification, as well as an energy efficiency rating. The labelling scheme must be compulsory from 2010, as a basis for Member States to introduce (fiscal) incentives in order to stimulate progress before 2012.
9. A procedure and timetable must be foreseen in the Regulation to regularly review the effectiveness of limit values. The review process should ensure that the limit values stimulate technological developments.
10. T&E insists that test data is made publicly available via the type approval authorities in a centralised and easily accessible and usable database. This should be a mandatory requirement of the regulation in order to enable further improvements to be made in future based on evidence from a larger data sample. Apart from that, the public has the right to know the levels of noise emissions from different tyres, in the same manner as it can already access information on CO<sub>2</sub> emissions from new cars.

## Background

### **Failure to address tyre noise is harming Europe's health and wasting public resources**

T&E argues that noise reduction should also be one of the central objectives of the Commission proposal. It must be kept in mind that road traffic noise is first and foremost a serious and widespread public health problem [2]. Noise is often at the top of the list of citizen's concerns over their quality of life and living environment. And with good reason: Over 200 million EU citizens are exposed to excessive road traffic noise levels which are potentially dangerous to health [3].

Road traffic is the major source of environmental noise in Europe. The introduction of more stringent noise standards is urgently necessary. The evidence base on the causal link between road noise and health impacts is increasingly solid. Research coordinated by the WHO has highlighted the potentially fatal impacts [2], and studies reveal the overwhelming number of Europeans who feel annoyed by road noise [4]. Quite simply, noise makes Europeans less productive and less healthy.

Traffic noise is costing Europe dearly: conservative estimates demonstrate social costs of traffic noise in the EU (excluding the Baltic States, Cyprus and Malta) of around €40billion per year. Almost all of these costs (90%) are caused by passenger cars and lorries. [3]

Action must be taken to reduce the environmental impact of all modes of transport, including the negative effects of traffic noise on human health and wellbeing and on ecosystems. Action is required at European level to achieve the objective to *"substantially reduce the number of people regularly affected by long-term average levels of noise, particularly from traffic"* as outlined in the Sixth Environmental Action Programme [5]. T&E actively supports this objective and believes that noise emission standards for products, including vehicles, tyres and road surfaces, are the key to reducing road noise.

T&E commends the simplified regulatory approach taken by the Commission, on the condition that environmental aspects remain amongst the top priorities. T&E also strongly agrees that more specific requirements are required at European level for tyres in order to meet environmental and safety objectives. Particularly in view of the many years of delays and failure to effectively tackle vehicle noise emissions at UN-ECE level, it is important that limit values for tyre/road noise standards remain determined at European Union level.

T&E welcomes the European Commission's recognition of road noise as the major source of environmental noise, and the intention to address the major role of vehicle tyres in overall road noise levels via the revision of directive 2001/43/EC [6]. The outline proposals in the public consultation document closely follow the recommendations of the FEHRL report [1], although there remain several aspects in need of clarification, which are discussed below.

## Effective regulatory approach to tyre noise long overdue

It is widely recognised that road noise is a major contributor to overall noise levels, and hence annoyance and health impacts. And yet, vehicle noise standards have effectively not changed for thirty years. Given increasing traffic levels throughout Europe, and despite technological advances in the automotive sector, our roads are getting noisier. We can easily change this.

T&E urges the European Commission to treat the introduction of effective noise emissions standards as a matter of urgency. In the context of the Environmental Noise Directive (2002/49/EC), it is clear that local measures alone will in many cases not enable administrations to meet noise exposure limits or protect citizens from harmful impacts [7]. In order for Member States to meet the requirements of the END, and the objective of the 6th Environmental Action Programme they will all need the continuing support of the Commission in driving the use of quieter options for vehicles that are available.

There are several identifiable sources of noise from road traffic. Tyre/road contact (rolling noise) is the dominant noise source above 40-50km/h on average for light vehicles, and is thus a major source of noise in both urban and interurban traffic [8,9,10]. In addition to the clear need to address this source, it should be encouraging that measures to reduce tyre noise can be swiftly addressed and offer astoundingly good value for money. Source measures offer a good possibility to achieve relatively fast results, as the average lifetime of car tyres is four years.

In recent years a solid consensus has emerged between experts that use of quieter tyres is by far the most cost-effective method of road noise reduction [11, 12, 13]. Experts agree that an urgent limit reduction of the order of 5 dB under the test conditions is required. Manufacturers easily meet the current limits, the majority of models are already at least 3dB quieter, and many substantially better.

Studies for the European Commission have identified measures to reduce noise emissions at source by means of stringent certification procedures to be the most efficient and cost-effective instruments available [1, 14]. Measures to tackle emissions at source, as promoted by the Treaty, ensure equal treatment of EU citizens and avoid distortion of the internal market. T&E fully agrees that;

*“EC’s most powerful instrument to reduce noise is in limiting noise at the source. Future noise certification standards must pursue ambitious goals to push industry to make efforts in reaching them.”* (Effnoise summary, p.5 [14])

To date, mitigation of traffic noise has been almost entirely based on measures to hinder the noise reaching the community and residents (receptors), via town or traffic planning measures, such as noise barriers, building insulation and soundscaped street design. These measures are extremely costly to the responsible administrations and do not offer value for money to taxpayers. Nevertheless, there is still an important discrepancy of 10dB between maximum possible reductions from immission measures alone and acceptable long-term average noise levels in residential areas [15]. Source measures therefore have a central role in a sustainable long-term solution.

The current Directive 2001/43/EC was ineffective even before coming into force [1,8,15]. It has therefore failed to achieve the aim of protecting the public from the

harmful health effects and costs of road noise. The limit values were set so low that almost no tyres were excluded from the market. It should be borne in mind that failure to act is costing Europeans €40billion per year. The current review is already several years overdue according to the Directive. The proposal from the Commission to bring new standards into force from 2012 represents yet another delay. The European Commission has not yet attempted to justify the inexplicable delay of over a decade to redress this failure.

Traffic noise is one of the most widespread environmental problems affecting the quality of life of Europeans and must be urgently addressed. This problem has got worse, not better, since introduction of the Directive.

Making our roads quieter will pay off: an overall reduction of 0.9dB – feasible with currently available designs – is estimated to offer benefits to the EU public worth at least €48billion over little more than a decade. The potential benefit to the public could be up to €160billion if the proposed limit values for commercial vehicle tyres were introduced [1]. This estimate does not even include additional benefits that would also accrue to national and regional authorities (and therefore taxpayers), vehicle manufacturers and non-EU Member States. Reduced road noise will reduce expenditure required from state authorities for noise barriers, noise insulation for buildings and healthcare. The savings could for example be spent on low-noise road surfaces to amplify the benefits of quieter tyres.

T&E also recognise that these benefits would be amplified by the use of these quieter tyres on quiet road surfaces. Addressing the tyres must however be first priority as it offers a very favourable cost-benefit ratio. The wider use of quiet tyres should then stimulate the market for low-noise road surfaces, by improving the cost-benefit ratio of their application.



## Proposed limit values are technically feasible

Whilst T&E recognises that tyres have to fulfil criteria for several functions, including safety, rolling resistance, handling, mileage, design, and interior noise, evidence provided to the Commission (and numerous other studies) conclusively proves that it is possible to produce tyres which are simultaneously quieter and more energy efficient without compromising safety performance.

The FEHRL study disproves the safety and fuel efficiency concerns about quieter tyres at the level of technology proposed:

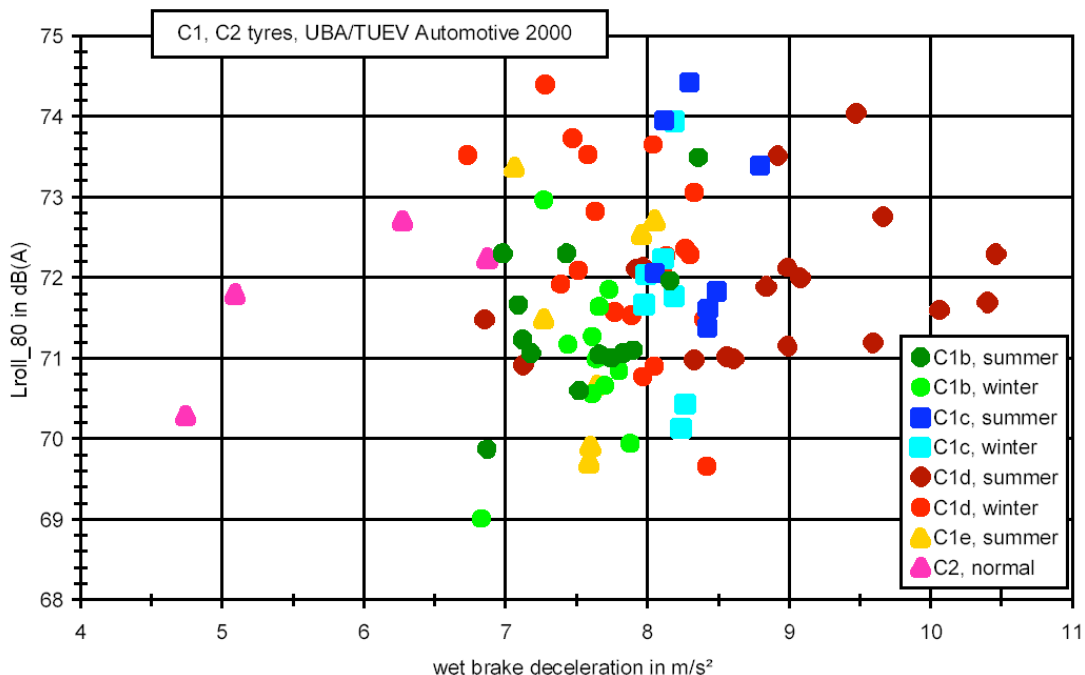
- No evidence is found in this study, nor in other investigations, of a significant relationship between tyre noise and safety performance (including wet grip, deceleration and aquaplaning performance).
- No evidence is found of a significant relationship between tyre noise and rolling resistance (= fuel economy / efficiency / exhaust emissions).
- Safety, durability and fuel efficiency performance constitute strong influences on consumer choice, but all are compatible with low-noise characteristics.

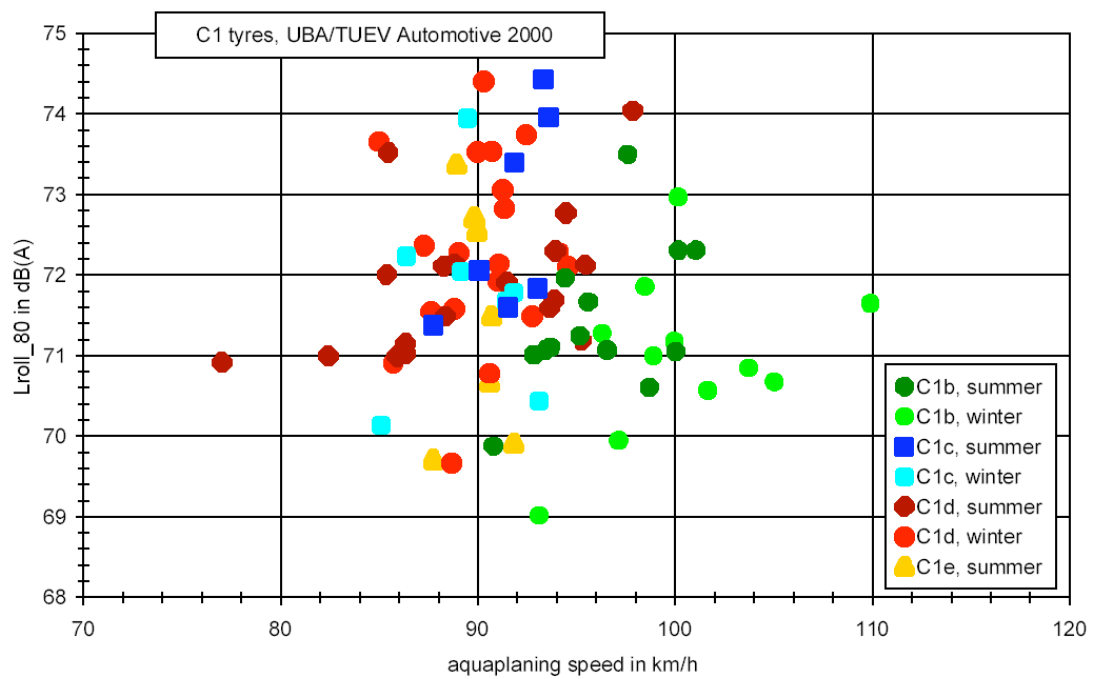
A study using new data not included in the FEHRL study carried out by consulting engineers M+P for the Dutch Innovation Programme for Noise confirms,

*"A significant relation between noise level and technical specifications of the tyres (such as dimensions and speed index) is not found. The correlation between the noise properties of the tested tyres and other parameters, such as wet grip, rolling resistance and market price is found to be negligible. The data presented here corroborate the conclusions in the FEHRL report."*

(M+P, 2007, p.1 [16])

Data from the German Environment Agency Umweltbundesamt (UBA) also show no correlation between tyre noise on the one hand, and wet grip or aquaplaning on the other. See the two graphs below that are taken from a presentation UBA gave to the Tyre Technology Expo on Cologne in March 2007.





adopted from "Determination of the state-of-the-art concerning rolling noise, rolling-resistance and safety properties of modern passenger car tyres, FB 201 54 112, Umweltbundesamt 2002

Kropp, Kihlman et al [15] also state that there is no correlation between noise emission and rolling resistance, handling, mileage, design, high speed performance, aquaplaning and braking performance, interior noise or costs.

## Quiet tyres are already on the market

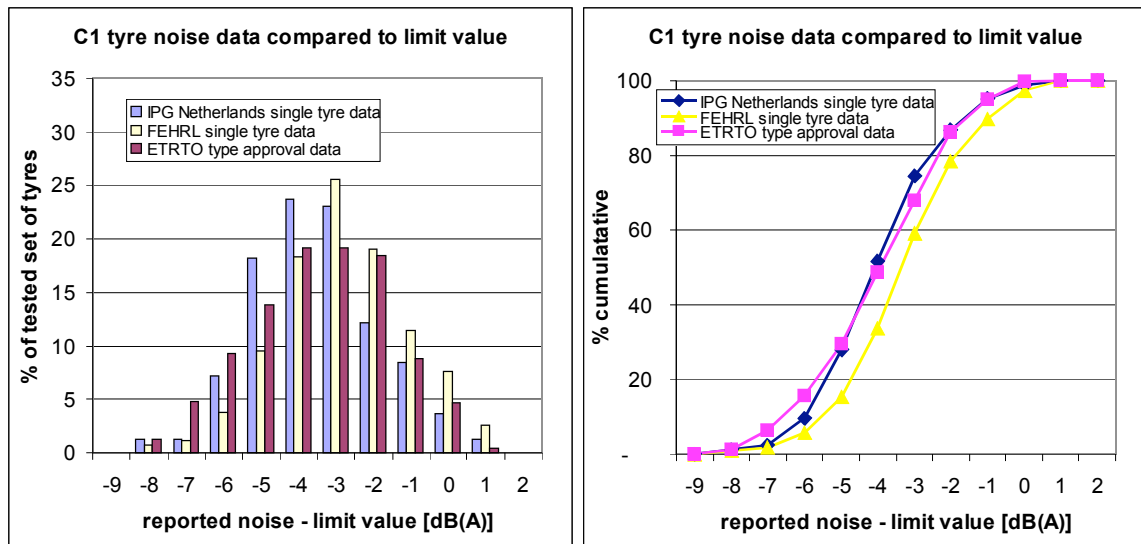
The FEHRL study demonstrates almost half of the tyres sold in 2004 were already 3dB below the limit values from 2001/43/EC [1]. The average noise emission value today is around 3.5dB below the limit value [16]. The new limit values, especially since they are not expected to come into force until 2012 must therefore be more challenging in order to have any effect on industry innovation, or more importantly, on overall road noise levels. The introduction of ineffective limit values must not be allowed to happen again!

New limit values must remove the noisiest models from the market, and stimulate further innovation. New technologies may be required to meet the proposed limit values, but these are already available and on the market. Several products are already available which meet the new noise and rolling resistance demands and conform to safety and consumer requirements [16]. Between 25-41% of C1 tyres (2004 sales) already meet limit values proposed for 2012. Between 6-60% of C2 and C3 tyres (2004 sales) would already meet 2012 limit values. [1]

*"[...] in the longer term a reduction in limit values of the order of 5dB(A) is feasible for all the categories listed (C1b, c, d, e, C2 & C3) as tyres are already available commercially which meet limit values 5dB(A) below current limits. It can also be concluded that commercially viable lower noise tyres can be produced which meet acceptable safety and rolling resistance standards as it has been established that there is no significant relationship between noise emission and wet braking and rolling resistance for existing tyres."* (FEHRL report, p.42 [1])

The fact that today's 'best available technology' tyres with noise levels 8dB below current limit values are already available and are therefore obviously commercially viable, should serve as inspiration to the rest of the market [16]. These quiet tyres are already sold in Europe, and therefore have fulfilled current safety standards. Research has shown that quiet tyres are not necessarily more expensive. Continued sales imply that they have proved their worth on the market in terms of durability and energy efficiency [15,17]. For truck tyres (C3) the range between noisiest and best available technology is around 10dB. Independent experts conclude that it is technically feasible to make very substantial progress towards meeting the standard set by the quietest tyres currently on the market [15, 16].

The graphs below demonstrate that the tyre models tested by M+P perform similarly to those tests reported by FEHRL and ETRTO:



Source: M+P, 2007 (fig. 2): Distribution of tyre noise data from three different sources: 1) IPG Netherlands with measurements on 165 single tyre sets as brought from the tyre shop, 2) FEHRL with measurements on 262 single tyre sets as bought from the tyre shop, 3) ETRTO with type approval data representing 536 tyre families.

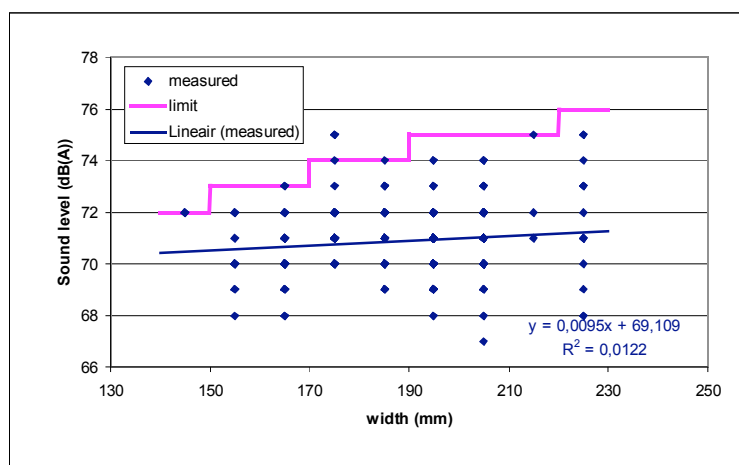
Directive 2001/43/EC comprehensively failed to reduce tyre noise as the standards were too lax and did not push manufacturers towards production of quieter tyres. The tyre industry has been forewarned since 2001 that more effective tyre rolling noise standards would be introduced. It is important to recognise that the proposed standards in this regulation will therefore represent the *first time* that the tyre industry will be faced with challenging requirements that will have an impact on product design. Tyre manufacturers have *never before* had any incentive to optimise noise performance of tyres at the same time as other characteristics which are demanded by regulation or the market: safety, durability, rolling resistance.

## Stop the trend towards wider tyres

Tyre noise emissions have increased over time, in part attributed to the use of wider tyres [18]. In general, wider tyres are also less energy efficient, giving a powerful reason to tackle this trend by means of effective regulation.

The trend towards wider tyres is continuing as demonstrated by the fact that over 70% of C1 tyre sales in 2004 were in classes C1a or C1b, meaning up to 215mm, whereas the class 215-245mm (C1c\_new) is expected to be most common category by 2010 [1].

M+P (2007) demonstrates that there is only a weak correlation between tyre width and noise emission, in the order of only 1dB per 100mm:



Source: M+P, 2007 (fig.3): Noise values of C1 tyres in relation to the tyre width. The pink line represents the limit curve. Noise values include 1dB subtraction and rounding down procedures.

T&E objects to weaker limit values for very wide tyres. The trend for wider tyres may be unsurprising, given that the wider classes are the most profitable and therefore most intensively marketed. Weaker standards for wider classes give a dangerous signal to manufacturers and serve to reinforce the trend towards noisier tyres. It is appropriate to address this in the directive.

The preferable method would be to set one effective limit value of 71dB(A); with which all widths must comply, as suggested by the German Federal Environment Agency [18]. Stakeholder input to the FEHRL report also demonstrated interest from municipal authorities in tackling the trend towards noisy tyres [1].

## Test method and real-world relevance

One of the key aspects of the proposal is the removal of allowances from the test method. This practice rendered 2001/43/EC totally ineffective, as even the worst performing tyres could get almost 2dB leeway. T&E fully supports the recommendation to scrap the practice of rounding down measurement values and giving a 1dB allowance. These practices are no longer technically justifiable as accurate measurement values are obtained by the test.

*“Clearly, the current test method is a relatively simple/low cost test to carry out and therefore offers considerable advantages in terms of reproducibility between the test centres and costs.” (FEHRL, 2006, p.76)*

T&E stresses at this point the need to ensure parity of standards between test centres, and the use of similar test tracks, to prevent some centres developing reputations for being ‘easier’ than others. Approvals should be compared between test houses. If there is any doubt about the standards at one test location, the Commission should demand verification of the type approval at another location.

To accompany the second phase of tightening in 2016, the Regulation should outline plans to improve the test methodology in order to more accurately reflect real-world driving behaviour and conditions, especially including test track specifications. The Commission must announce details and a deadline for introduction of a more representative test surface in the test procedure.

## Looking forward to quieter roads

The full noise reduction found under test conditions cannot be translated to the roads under normal driving conditions. The FEHRL report estimates that the overall noise reduction on the roads will be between 0.9-2.3dB for the new C1 tyre limits, and as high as 3dB including commercial tyres. Retreaded tyres as well as original and replacement models must be included in the regulation to achieve this result.<sup>1</sup>

For comparison, experts estimate that new tyres which comply with the new limit values would constitute the entire market by 2020. By then they calculate that tightening the EU tyre noise limits as proposed in the consultation paper (FEHRL report, phase 2) on a road surface of ISO 10844 quality, including retreaded tyres, would lead to a reduction in maximum noise levels from car tyres of 3dB and 4dB from truck tyres. This equates to a reduction in equivalent noise levels of 1.5dB from car tyres and 2dB from truck tyres ( $L_{den}$ ). Even if the most common road surface is rougher (noisier), such as SMA0/16 (as typical in Sweden), the reduction in equivalent noise levels from both car and truck tyres would still be 1.0dB  $L_{den}$ . [15].<sup>2</sup>

Due to this dilution effect, T&E demands future revisions of the directive, with quieter limit values already foreseen for 2016, followed by a steady reduction (- xdB every y years). This will provide certainty for the industry as well as ensure noticeable results for road users and residents.

For example, if limit values were set at the level of the best available technology currently available, on a surface equivalent to ISO 10844, a reduction of maximum noise levels from car tyres of 5dB could be expected, and 7dB from truck tyres. This would equate to a reduced  $L_{den}$  of 2.5dB from car tyres and of 3.5dB from truck tyres. Even on the noisier surface, the  $L_{den}$  would still be reduced by 1.5dB for car tyres and 2.0dB for truck tyres. [15]

Even though the overall noise reduction effect will be relatively modest at the first step, it is also urgently necessary to encourage technological development towards quieter tyres and increase the priority given to noise performance in tyre design. It is also clear that further research into lower noise road surfaces and incentives to apply them is vital to further progress.

T&E recognizes that to meet more stringent limit values (beyond the proposed limit values), new technologies will be required. However, there are already promising technologies under development that will shape the market in the longer term.

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<sup>1</sup> It is crucial to include retreaded tyres as these represent 50-70% of the market for truck tyres.

<sup>2</sup> These examples demonstrate that the limit values will also have an effect in the toughest conditions in the Nordic countries. Experts from the Nordic countries point out the particular dangers of studded tyres in terms of noise emission (3-5dB louder than other winter tyres), road surface damage (including noise performance), air pollution from particulates and poor energy efficiency. They also argue that studded tyres are often used unnecessarily and should be phased out [15,18].

## Noise labelling is vital

T&E maintains that energy efficiency labelling alone is insufficient to address the important environmental aspects. Noise emission information must be included in the label, as it is for some household products. In all market segments (and for all models including light and heavy vehicle tyres, and retreaded tyres), T&E advocates harmonised European labelling as a basis for national (fiscal) incentive schemes to promote environmentally-friendly products. The label should also serve as a basis for European or national awareness-raising campaigns on road noise.

It is important to note that, while there is currently no effective regulation, there is also no information available to consumers, OE (original equipment) purchasers or public procurement officers on differences between tyre noise levels (the only exception is the Nordic Swan label, however this only requires a minimum noise emission identical to 2001/43/EC and thus ineffective). Attempts to provide more information, for example the Dutch Kovenant scheme, have been challenged by the industry. The result is that on top of the lack of effective regulation, there is no opportunity to demonstrate consumer demand for the quieter models. For these reasons, the tyre manufacturers have never before been given an effective incentive to optimise noise performance as well as other criteria. As recognised by leading researchers, *“exterior noise has a minor priority in tyre development.”* (Kropp, Kihlman et al, 2007, p.31 [15]). Along with effective regulation, measures must therefore be taken at EU level to provide this information, and stimulate the market for the quietest tyres.

Consumers are more likely to be interested by interior noise levels than exterior noise, and may be deterred by higher prices for low-noise tyres. M+P studied both relationships and found little correlation between noise level and price [16]. Indeed, the most expensive tyres are often the widest on the market and therefore tend in general towards worse noise performance. The study also found a good correlation between interior and exterior noise at frequencies around 1000Hz. This relationship is reassuring, as it means that consumers are unlikely to be disappointed with the interior performance of quiet tyres.

To stimulate faster adoption of the quieter tyres within the type approved range, noise labelling is a crucial addition to the proposal. It is clear that the introduction of a low noise technology in a large population of vehicles will only become effective once a significant proportion of the population is affected. For example, when only 25% of the tyre population is of a 3 dB lower noise type, the average noise level drops by less than 0.5 dB [19].

There is consensus amongst independent experts of the need for better consumer information on tyre quality and performance characteristics. Labelling is also advocated by independent experts including: Amundsen and Klæbo (2005), Sandberg (2006), Kropp, Kihlman et al (2007), and TÜV Automotive (2003) [20].

In relation to aftermarket consumers: Labelling will stimulate consumer awareness and interest in the importance of tyre noise in overall road noise. At present, consumers tend towards the cheaper end of the market, due to lack of information. This can potentially have safety consequences. It is also in the interest of the highly competitive tyre industry to be able to differentiate models in consumers' minds on the basis of overall quality, including safety and environmental performance. A



labelling scheme including energy efficiency, noise and safety performance information could be most beneficial to European manufacturers.

In terms of OE (original equipment) purchasers: Some carmakers could be interested in the highly rated tyres, as a signal of their interest in minimising environmental impacts. Fiscal incentive schemes could also be particularly interesting in this segment.

For public procurement: harmonised European labelling would be a cornerstone (as EURO vehicle emissions standards) to introduce green public procurement guidelines for tyres.

All measured values should be made available to the European Commission and interested stakeholders in order to collect a larger data set for the setting of effective future limit values.

## Conclusion

With the aim of reducing health impacts and social costs at the core of EU action on environmental noise, it is clear that a holistic approach must be taken to address traffic noise. Technology available today could easily equate to a 5dB reduction in road noise levels, with a very positive benefit-cost ratio, which would benefit all citizens. [15]

T&E welcomes the Commission's proposal to tackle tyre rolling noise, as the dominant source of vehicle noise at medium to high speeds. Action on tyres, although necessary, will not suffice alone, which is why T&E also strongly advocates standards for low-noise road surfaces and continues to present the case for effective vehicle noise emission standards at UN-ECE. Targeting the noise performance of the road surface amplifies the benefits of quieter tyres.

Measures should also be taken at local level with regard to quiet road surfaces, traffic management, noise barriers and insulation to protect the public from dangerous and annoying noise levels, although it must be recognised that these measures are often more costly in relation to only limited benefits.

Continued research and development, notably supported by the European Commission under the Seventh Framework programme, is necessary in order to achieve the realistic target to reduce traffic noise by 10dB through source measures in the near future. The role of independent researchers and experts should be emphasised.<sup>3</sup>

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<sup>3</sup> It should be noted that also in the context of noise emission from tyres (along with safety, air pollution and greenhouse gas concerns) that the introduction of maximum speed limits on all EU roads would open up new possibilities to tyre manufacturers, to decrease both rolling resistance and noise (see: Kropp, Kihlman et al, 2007, p.4).

## Responses to consultation questions

***Are the proposed noise and rolling resistance limits in Annexes 1 & 2 (a) sufficient and (b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?***

The proposed limit values for C1, C2 and C3 tyres are definitely realistic as a first step, but they are not sufficient, given the severity of the problem and the fact that anticipated benefits exceed anticipated costs by more than an order of magnitude. Therefore T&E urges the Commission to set a target of 71 dB(A) for all width classes to reverse the unnecessary trend towards wider tyres.

Additionally, (i) noise labelling is also introduced to stimulate innovation towards quieter tyres, (ii) a regular review process for the limit values, with a next phase of tightening in 2016 (with at least a 2 dB(A) tightening for all tyres), is included in the directive.

After consulting independent experts on both tyres and acoustics (in addition to the extensive literature review conducted for the report for the Commission), T&E is convinced that the proposed standards are realistic. There is no doubt amongst independent tyre experts and acousticians regarding the feasibility of the proposed limit values.

T&E regrets that a first phase will not be brought in before 2012 as recommended. However, it is certainly more important to preliminarily designate a second phase for 2016, in order to drive innovation further. Nevertheless, given the relatively short development and production / renewal cycle for tyres of 6-8 years from design to market replacement for C1 tyres, bringing the limit values into force into 2012 still allows manufacturers more than enough time to adapt production if necessary.

T&E does not accept the suggestion of an alternative 'trading off' approach between noise and CO<sub>2</sub> emissions (please also see T&E position on rolling resistance). It is possible to maintain good safety performance whilst improving reducing noise and rolling resistance. Introduction of stringent limit values for both criteria to address the source of the emissions is the only viable approach.

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

T&E insists that values must apply to all original equipment, replacement and retreaded tyres (summer and winter models) in order to minimise road noise levels. An allowance of maximum 1dB could be envisaged for reinforced, including run-flat, models.

There is no justification to permit further allowances in noise limit values for extra-wide tyres intended for personal or commercial road use. We can accept an exemption of maximum 2 dB(A) for so-called "special use" tyres provided the definition is clarified to include those intended exclusively for off-road use. The only exceptions should be made for special emergency vehicles and agricultural equipment, which are designed for off-road use only. It must be ensured that so-

called “off-road” passenger vehicles (sports utility vehicles, 4x4 vehicles), must not fall into this category.

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# **Reducing car CO2 emissions through the use of low rolling resistance tyres**

Response to the public consultation of the European Commission on outline proposals for a new Regulation on Advanced Safety Features and Tyres

Part 2 of 2

**October 2007**

**Reducing car CO2 emissions through the use of low rolling resistance tyres**

Response to the public consultation of the European Commission on outline proposals for a new Regulation on Advanced Safety Features and Tyres

(Part 2 of 2)

**October 2007**

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## Note

In the framework of the public consultation on a proposal from the European Commission on vehicle tyres, T&E hereby submits a response addressing rolling resistance.

T&E has published a separate response concerning tyre noise.

This document is available to download from our website:  
[www.transportenvironment.org](http://www.transportenvironment.org)

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## Summary

1. T&E welcomes the fact that the Commission, albeit years too late, has finally stated its intention to regulate tyre rolling resistance and tyre pressure monitoring systems.
2. Effective standards must be urgently introduced applying to original equipment, replacement and retreaded tyres for all road vehicles (C1, C2 and C3 tyres).
3. T&E deplores the lack of ambition of the proposed standards. The limit values suggested are far from technology-forcing. They are insufficient to make a real difference in the marketplace.
4. A 10 kg/tonne standard for C1 and C2 tyres is much more adequate as this at least ensures that a significant part of the market has to improve its performance.
5. Standards for 2016 are also needed to push innovation. As current 'best practice' tyres have a rolling resistance of about 7 kg/tonne, a 2016 limit value should at least be in that range.
6. Supporting instruments are necessary, including labelling, provision of consumer information and purchase incentive programmes.
7. Labels should contain the usual seven instead of the arbitrary four bands the Commission proposes. They should be equipped with the usual red-green colour codes to ease decision making. They should apply to all tyres, be adjusted for technological progress, and include an estimate of fuel cost savings over the lifetime of the car compared with the 'worst' G label tyre in order to strengthen the incentive and forge a link with the interests of the consumer. Today's best tyres should qualify for a B label rather than an A label in order to ensure a strong innovation incentive;
8. There is no justification to permit further allowances in rolling resistance limit values for extra-wide tyres intended for personal or commercial use.
9. T&E requests that the Commission introduce mandatory energy efficiency labelling. The "most efficient" category in these prescriptions should be beyond the performance of the best tyres of today, in order to pose an innovation challenge to the industry.
10. T&E strongly supports the introduction of accurate tyre pressure monitoring systems (TPMS) that detect deflation much earlier than the systems in the US, that are primarily designed to prevent dangerous levels of deflation.

Our overall conclusion is that the detailed requirements of the rolling resistance draft proposals are highly disappointing in the light of the EU's climate and energy efficiency targets. The proposed standards and labelling scheme should be drastically improved.

## Background

The proposals on rolling resistance regulation and tyre pressure monitoring systems are considered part of the so-called 'integrated approach' to reducing the CO<sub>2</sub> emission levels of new cars, that was mentioned in the European Commission's Communication on CO<sub>2</sub> and Cars of February 2007<sup>1</sup>. In this 'approach' technical improvement of tyre rolling resistance is thought to be able to contribute, along with a wider use of biofuels, to the reduction of CO<sub>2</sub> emissions from new cars to the level of 120g/km CO<sub>2</sub> by the year 2012.

As noted in a report for the European Commission, so-called low rolling resistance tyres (LRRT) have been available and marketed as such for several years, and yet there has never been any official definition nor a standard for low rolling resistance.<sup>2</sup>

This contribution will be limited to a short presentation of our views on the contribution of low rolling resistance tyres (LRRT) to the reduction of CO<sub>2</sub> emissions.

## The need to improve rolling resistance

T&E believes that all sources of energy efficiency and CO<sub>2</sub> emission reduction from vehicles should be exploited if the EU is to realise its overall CO<sub>2</sub> emission reduction targets.

Rolling resistance is determined mainly by the tyres of a vehicle and is directly correlated with fuel consumption and emissions of carbon dioxide of the vehicle they are mounted on. Rolling resistance of tyres is responsible for approximately 25% of CO<sub>2</sub> emitted by cars.<sup>3</sup>

The CO<sub>2</sub> reduction potential from LRRT is upwards of 3%, with an additional 2.5% potential reduction to be achieved from the use of tyre pressure monitoring systems (TPMS). The potential for saving fuel by using LRRT is therefore considerable, as has been confirmed by estimates of the German Federal Environment Agency (UBA):<sup>4</sup>

City driving:	4-6%
Extra Urban:	3-5%
Motorway:	2-3%

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<sup>1</sup> Results of the review of the Community Strategy to reduce CO<sub>2</sub> emissions from passenger cars and light-commercial vehicles - COM(2007) 19 final  
[www.ec.europa.eu/environment/co2/pdf/com\\_2007\\_19\\_en.pdf](http://www.ec.europa.eu/environment/co2/pdf/com_2007_19_en.pdf)

<sup>2</sup> TNO, IEEP and LAT (2006): Review and analysis of the reduction potential and costs of technological and other measures to reduce CO<sub>2</sub>-emissions from passenger cars, Final report, contract nr. SI2.408212, Delft, October 31 2006.

<sup>3</sup> FEHRL (2006): Tyre/Road Noise, Volume 1, Final Report, Study S12 408210, report recently submitted to your Directorate-General by the Forum of European National Highway Research Laboratories (FEHRL study SI2.408210 Tyre/Road Noise)  
Report: [http://ec.europa.eu/enterprise/automotive/projects/report\\_tyre\\_road\\_noise1.pdf](http://ec.europa.eu/enterprise/automotive/projects/report_tyre_road_noise1.pdf)  
Annexes: [http://ec.europa.eu/enterprise/automotive/projects/report\\_tyre\\_road\\_noise2.pdf](http://ec.europa.eu/enterprise/automotive/projects/report_tyre_road_noise2.pdf)

<sup>4</sup> Dr Axel Friedrich, Umweltbundesamt Dessau, presentation to the 3<sup>rd</sup> Intelligent Tyre Technology conference, Frankfurt – 26-28 September 2007

European adoption of LRRT is estimated to equate to a reduction of 2.4 million tonnes per year of CO<sub>2</sub> by 2012 in the EU-15 alone, increasing to 5.3 million tonnes per year by 2020. This potential cannot be ignored.<sup>5</sup>

The rolling resistance of tyres can differ by as much as 50 percent. This implies there is great potential for a decrease in fuel consumption and CO<sub>2</sub> emissions by preventing the use of tyres with high rolling resistance and promoting LRRT through standards, labelling, consumer awareness actions and incentive schemes.

Real life examples analysed by MIT and a wealth of research undertaken by the car industry has shown that improved rolling resistance is also compatible with increased lifetime, noise reduction, and improved wet braking performance, and for no extra cost.<sup>6</sup>

## Consultation questions

***Are the proposed rolling resistance limits in Annex 2 (a) sufficient and (b) realistic? Is there a viable alternative approach, for example 'trading off' noise requirements for rolling resistance requirements under certain circumstances?***

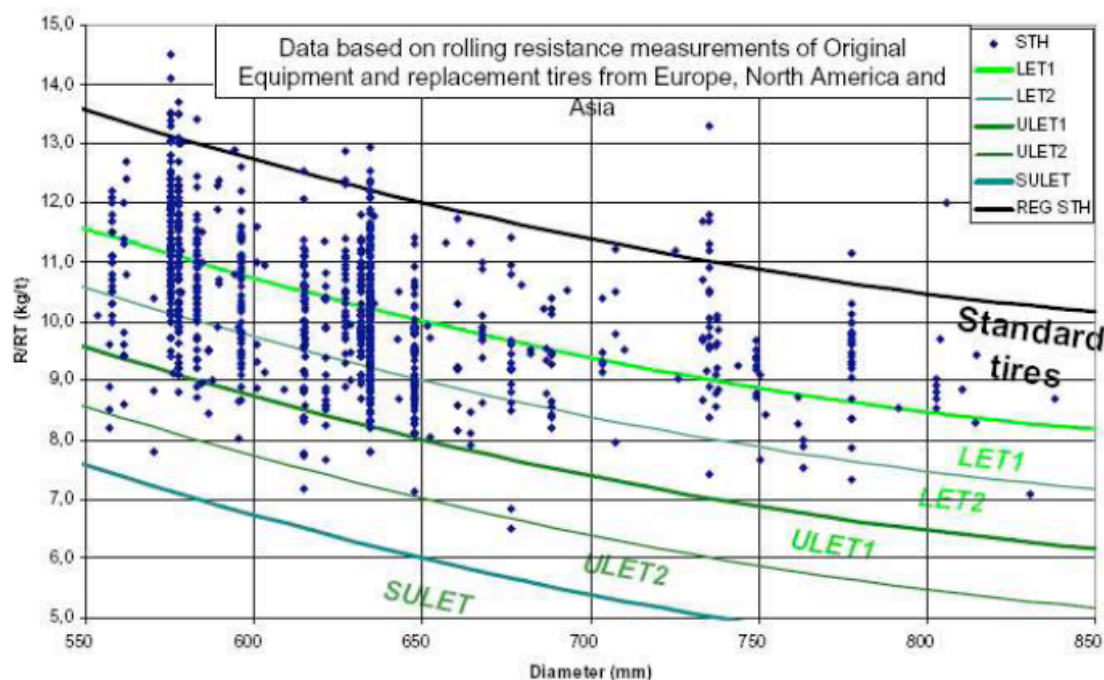
The proposed limit values are certainly realistic (there is no question that they cannot be achieved) but certainly not sufficient if the EU is taking seriously its commitment to reduce greenhouse gas emissions by 2020 by at least 20% and to improve energy efficiency by 20% in the same timeframe.

The graph below shows result from a comprehensive set of measurements performed by Michelin.

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<sup>5</sup> TNO et al, 2006, Review and analysis of the reduction potential and costs of technological and other measures to reduce CO<sub>2</sub>-emissions from passenger cars (Final report)

<sup>6</sup> MIT, 2000: On the road in 2020: A life-cycle analysis of new automobile technologies, Energy Laboratory Report, MIT EL 00-003, Massachusetts Institute of Technology



This graph shows that the proposed limit value of 13.5 kg/tonne for C1 (car) tyres would hardly remove any tyre from the market and be little more than a business-as-usual policy. If the Commission is serious about tackling CO<sub>2</sub> emissions from tyres and helping consumers to make fuel savings this is clearly not acceptable. A rolling resistance value of 10 kg/tonne by 2012 is also very feasible (it would be far from technology-forcing) and it would at least guarantee a significant improvement of the average performance of tyres over the next 5 to 10 years.

A set of second-stage limits that would enter into force by 2016 is also necessary in order to provide a long-term outlook. Given that tyres are coming to market with RR as low as 7 kg/tonne, a tightening to 8 kg/tonne by 2016 should be feasible.

However, a limit value alone is insufficient to stimulate real improvement, and so must be supported by a high-quality labelling scheme (see below).

Effective limit values are urgently needed for both rolling resistance and noise emissions (please see accompanying paper on tyre noise). Research has conclusively proven the technical feasibility to optimize both characteristics. Trade offs are not justifiable under any circumstances.

## Labelling

### Seven bands, all tyres, and fuel cost savings shown

The report for the Commission notes that, “*due to lack of information in the market, consumers are not aware about the LRRT characteristics*”<sup>7</sup>. It is a dangerous misconception amongst some consumers that LRRT perform worse in terms of safety or endurance. These misconceptions and the economic benefits to the driver

<sup>7</sup> TNO et al, 2006 pg 120

of using LRRT should be addressed in awareness campaigns, visually presented at the point of sale by an energy efficiency label (with information on fuel / money savings) and supported by national incentive schemes.

The regulation must require tyre manufacturers to publicly release information on rolling resistance performance, noise emissions and wet grip for every tyre model. This information should be presented in one label, to serve as an indicator of quality to all consumers.

Tyre purchasers also include public procurement officers, who are an important target market for environmentally friendly products, as are original equipment manufacturers (carmakers) who are increasingly urged to demonstrate environmental awareness.

The labelling scheme as outlined in the consultation paper is totally inadequate to achieve the objective of useful consumer information and we sincerely wonder why the Commission intends to choose such an ineffectual and inconsistent approach to labelling.

First, as outlined, over 75% of C1 tyres currently on the market would already fall into Band B. This demonstrates firstly that the standards are too lax to provide an incentive to innovate. The class boundaries outlined in the consultation paper appear, according to technical experts, to be based on the state of technology from the previous decade. The fact that the vast majority of today's models would already be in Band B conclusively proves that this classification is totally inadequate, and especially for 2012.

Second, clearly more than four bands will be necessary for an effective classification. That such a large proportion of the current market cluster into one band demonstrates that the band width is too generous, and that the classes must be further differentiated (1kg/t per band maximum).

If the energy (i.e. rolling resistance) part of the label were to be presented in bands, T&E strongly recommends using the seven-band A-G class energy efficiency labels that are also in use for white goods. There is really no justification for using four bands just for tyres and for no other consumer product. For many people this would represent an example of incomprehensible and inconsistent European policy.

Third, it is absolutely vital that the label contains an estimate of fuel cost savings that can be expected over the lifetime of the car, compared with a 'G label' (worst) tyre. A set of good tyres can easily save 5 per cent of fuel. Over a lifetime of approximately 50,000 km this implies that a set of good tyres can save some €200 on fuel compared to a set of bad tyres. This is convincing enough to deserve communication to the public.

Fourth, the system should encourage innovation. Many state-of-the-art tyres (tyres probably constructed at the beginning of this decade) already meet the requirements in the most advanced Band A. For any classification to be 'future proof' and have any hope of relevance in 2012, no tyre on the current market should meet the Band A standards. This will ensure that innovation is encouraged. Band A should therefore be in the order of 7kg/tonne for C1 and C2 vehicles. Technological development in relation to LRRT is rapid. The regulation should therefore foresee regular reviews to ensure standards and bands for the energy efficiency label are still relevant in terms of achieving overall CO2 emission reductions and stimulating further innovation.

Fifth, with regard to tyres for commercial use (C3), T&E insists that these are also subject to seven-band labelling, including an energy efficiency category and the measured rolling resistance value. Fleet owners or employees purchasing tyres for professional purposes should be made acutely aware of the money that can be saved by fitting LRRT.

## Exemptions

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

The exemption must be strictly limited to tyres for professional off-road use only. Yet another exemption for SUVs in environmental legislation (such as the one granted in the most recent EURO standard) must not be permitted under any circumstances.

## Tyre Pressure Monitoring Systems (TPMS)

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

T&E fully supports the proposal to make TPMS mandatory.

It is well known that deflated tyres can pose a safety risk, as well as increasing wear on the tyre, fuel consumption and CO<sub>2</sub> and noise emissions. Under-inflation of tyres is a widespread hazard throughout Europe<sup>8</sup> and information campaigns have not yielded convincing results. The potential CO<sub>2</sub> saving from the introduction of TPMS in the EU-15 alone is estimated to be 9.6million tonnes per year by 2020.<sup>9</sup>

According to that same report, introduction of TPMS is seen to be cost-effective in relation to the fuel savings. The extra costs of such systems are expected to be offset by savings from the improved fuel efficiency of the vehicle. The report does not even consider ancillary benefits due to better tyre safety and durability.

T&E would like to see a level of accuracy able to detect and alert the driver to deflation as soon as possible, and well before a pressure level is reached which is critical to safety. US-level TPMS accuracy is certainly insufficient as these systems are exclusively designed to detect dangerous levels of under-inflation. As stated in the Consultation document, the sensitivity and accuracy of such systems should be good enough to provide the desired improvement and the text of the Regulation should ensure this.

---

<sup>8</sup> International Energy Agency, vehicle efficiency workshop conclusions, November 2005

<sup>9</sup> TNO et al, 2006



Dear Sir

Thatcham, The Motor Insurer Repair Research Centre's position on the mandatory installation of ESP is unequivocal.

We support the mandatory installation of ESP for all categories of M and N class vehicles (plus trailers over 3.5 tonnes), no exemptions should be allowed. We have reviewed a range of data and it suggests that all vehicles would benefit from having ESP fitted.

We feel 2011 is a reasonable target for a requirement for new car models to be fitted with ESP.

We are conducting research on the availability of standard fit of ESP in the UK and are actively prompting the benefits of ESP to both the Fleet and Consumer market.

We are also members of the esafetyware group which promotes ESP throughout Europe.

About Thatcham

The Motor Insurance Repair Research Centre, or 'Thatcham' as it is widely known was formed in 1969 by British Insurers. The Centre is independently operated and has its own Board of Directors. Its main aim is to carry out research targeted at containing or reducing the cost of motor insurance claims, whilst maintaining safety standards. Thatcham provides products and services for a number of functional areas within the collision repair industry: Insurers; Motor Manufacturers; Equipment Manufacturers and Suppliers.

Employing over 130 members of staff, the Centre is well equipped with a range of collision repair equipment which is used for both Research and Training purposes. The Centre also has a vehicle impact testing laboratory and a sled facility for non-destructive testing.

Regards  
Lesley Upham  
Director of Communications

**Lesley Upham**  
**Director of Communications**

[www.thatcham.org](http://www.thatcham.org)

Europäische Kommission  
Vize Präsident Günther Verheugen  
Enterprise and Industry

## Stellungnahme des Verkehrsclubs Deutschland (VCD) e.V. zur Konsultation der EU Kommission zur Novelle der Reifenrichtlinie

Sehr geehrter Herr Vizepräsident Verheugen,

wir danken der Europäischen Kommission für die Möglichkeit, im Rahmen der Novellierung der Reifenrichtlinie zur Anpassung der Grenzwerte für das Reifengeräusch, der Einführung von Grenzwerten für den Reifenrollwiderstand und für die Einführung von Reifendrucküberwachungssystemen Stellung zu nehmen. Die damit verbundene Verringerung der Lärmemissionen sowie die Reduzierung klimaschädlicher Emissionen im Straßenverkehr ist dem VCD ein großes Anliegen.

Der Straßenverkehr gilt als die störendste Lärmquelle – alleine in Deutschland fühlen sich über 60 Prozent aller Menschen von Straßenverkehrslärm belästigt. In bezug auf die Umgebungslärmrichtlinie (2002/49/EC) wird deutlich, dass lokale Maßnahmen zur Verringerung von Lärm alleine nicht ausreichen, um die geforderten Lärm-Immissionsgrenzwerte zu erreichen und die Bevölkerung vor schädlichen Belastungen zu schützen. Notwendig ist vor allem eine deutliche Verringerung der Lärmemissionen an der Quelle. Da bei Geschwindigkeiten ab 40 bis 50 km/h das Reifengeräusch dominiert, ist die Verwendung von rollwiderstands- und lärmarmen Reifen eine effektive Maßnahme, um Lärmemissionen von Kraftfahrzeugen zu verringern. Gleichzeitig hat der Rollwiderstand einen direkten Einfluss auf den Kraftstoffverbrauch und damit auf den CO<sub>2</sub>-Ausstoß von Fahrzeugen. Entsprechend tragen rollwiderstandsarme Reifen auch zur Reduzierung der CO<sub>2</sub>-Emissionen bei und leisten damit einen Beitrag zur Reduzierung der klimaschädlichen Emissionen des Verkehrs. Darüber hinaus ist die Verwendung rollwiderstands- und lärmarmen Reifen die bei weitem kosteneffizienteste Maßnahme.

Um die größtmöglichen positiven Effekte im Hinblick auf den Lärm- und Klimaschutz zu erzielen, sind ambitionierte Grenzwerte für das Reifengeräusch und für den Reifenrollwiderstand einerseits sowie die verpflichtende Kennzeichnung andererseits unumgänglich.

Zu den im Konsultationsdokument der EU-Kommission gestellten Fragen nimmt der Verkehrsclub Deutschland (VCD) wie folgt Stellung:

Zu Frage 1, Geräuschgrenzwerte:

Die Anpassung der Geräuschgrenzwerte an den Stand der Technik wird in Artikel 3 Absatz (2) der Richtlinie 2001/43/EG für das Jahr 2004 gefordert und ist somit lange überfällig. In einer von der Kommission beauftragten Studie zur Novelle der Reifenrichtlinie<sup>1</sup> kommt das FEHRL<sup>2</sup> unter anderem zu folgenden Ergebnissen:

1. Die in der Richtlinie 2001/43/EG enthaltenen **Grenzwerte** spiegeln nicht den Stand der Technik wider. Sie sollten daher **schnell und deutlich gesenkt werden**. Das FEHRL macht hierzu einen konkreten Vorschlag (s.u.).
2. Es kann **kein Zusammenhang zwischen dem Bremsverhalten** (Bremsverzögerung auf nasser Fahrbahn, Aquaplaning-Verhalten) **und dem Abrollgeräusch** eines Reifens nachgewiesen werden. Diese Aussage basiert auf einer umfangreichen Literaturrecherche öffentlich zugänglicher Studien.
3. Eine **Kennzeichnung jedes Reifens mit seinem Geräuschverhalten** sollte verpflichtend eingeführt werden.
4. **Runderneuerte Reifen** sollten in den Anwendungsbereich der Richtlinie mit **einbezogen werden**.

Der VCD unterstützt diese Forderungen des FEHRL. Besonders betont werden muss die Notwendigkeit der Einführung einer **Kennzeichnungspflicht jedes Reifens mit seinem Geräusch-Typprüfwert**. Da mit der Novelle der Typprüfvorschriften für Kfz (UNECE-R51) der Beitrag des Reifens zum Typprüfergebnis des Fahrzeugs wächst, kann die Einhaltung des Geräuschgrenzwerts für das Gesamtfahrzeug nur mit Reifen gewährleistet werden, die nicht lauter als die bei der Typprüfung verwendeten Reifen sind. Daher ist eine Regelung einzuführen, die verhindert, dass Fahrzeuge mit lauterem als den bei der Typprüfung verwendeten Reifen betrieben werden. Für eine solche Regelung ist die Kennzeichnung jedes Reifens mit seinem Typprüfwert zwingende Voraussetzung. Bei der Einführung einer Kennzeichnungspflicht muss gewährleistet sein, dass die Conformity of Production (COP) in Zukunft gegen den Typprüfwert und nicht mehr wie bisher gegen den Grenzwert durchgeführt wird.

Abweichend vom Vorschlag des FEHRL fordert der VCD eine stärkere Senkung der Geräuschgrenzwerte für Pkw-Reifen (Reifenklasse C1) insbesondere für extrem breite Reifen.

---

<sup>1</sup> Study SI2.408210, [http://ec.europa.eu/enterprise/automotive/projects/report\\_tyre\\_road\\_noise1.pdf](http://ec.europa.eu/enterprise/automotive/projects/report_tyre_road_noise1.pdf)

<sup>2</sup> Forum of European National Highway Research Laboratories

Angesichts mangelnder technischer Zwänge zur Verwendung extrem breiter Reifen müssen diese als umweltschädliche Modeerscheinung angesehen werden, die nicht durch höhere Geräuschgrenzwerte legitimiert werden sollte. Verschiedene Messungen haben ergeben, dass nur eine geringe Breitenabhängigkeit des Rollgeräuschs von weniger als 1 dB(A) pro 100 mm Reifenbreite besteht. Wir schlagen daher von der Reifenbreite unabhängige Grenzwerte vor, die in Tabelle 1 den gültigen und den vom FEHRL vorgeschlagenen Grenzwerten gegenübergestellt sind.

Für die Reifenklassen C2 und C3 unterstützen wir mangels uns bekannter Messungen die Grenzwertvorschläge des FEHRL.

Reifenbreite R (mm)	2001/43/EG		FEHRL		VCD		
	aktuell	Stufe 1	2008	2012	2008	2012	2016
R ≤ 145	72	71	71,5	69,5	71	70	69
145 < R ≤ 165	73	72					
165 < R ≤ 185	74	73					
185 < R ≤ 215	75	74	72,5	70,5			
215 < R ≤ 245	76	75	73,5	71,5			
245 < R ≤ 275							
R > 275							

**Tabelle 1: Grenzwerte<sup>3</sup> in dB(A) für Pkw-Reifen (Klasse C1)**

Mit Inkrafttreten der Regulierung sollte die bisherige Praxis bei der Ermittlung der Geräuschwerte – zulassen einer Toleranzbreite von 1 dB(A) und abrunden der Werte – beendet werden.

#### Zu Frage 1, Grenzwerte für den Rollwiderstand:

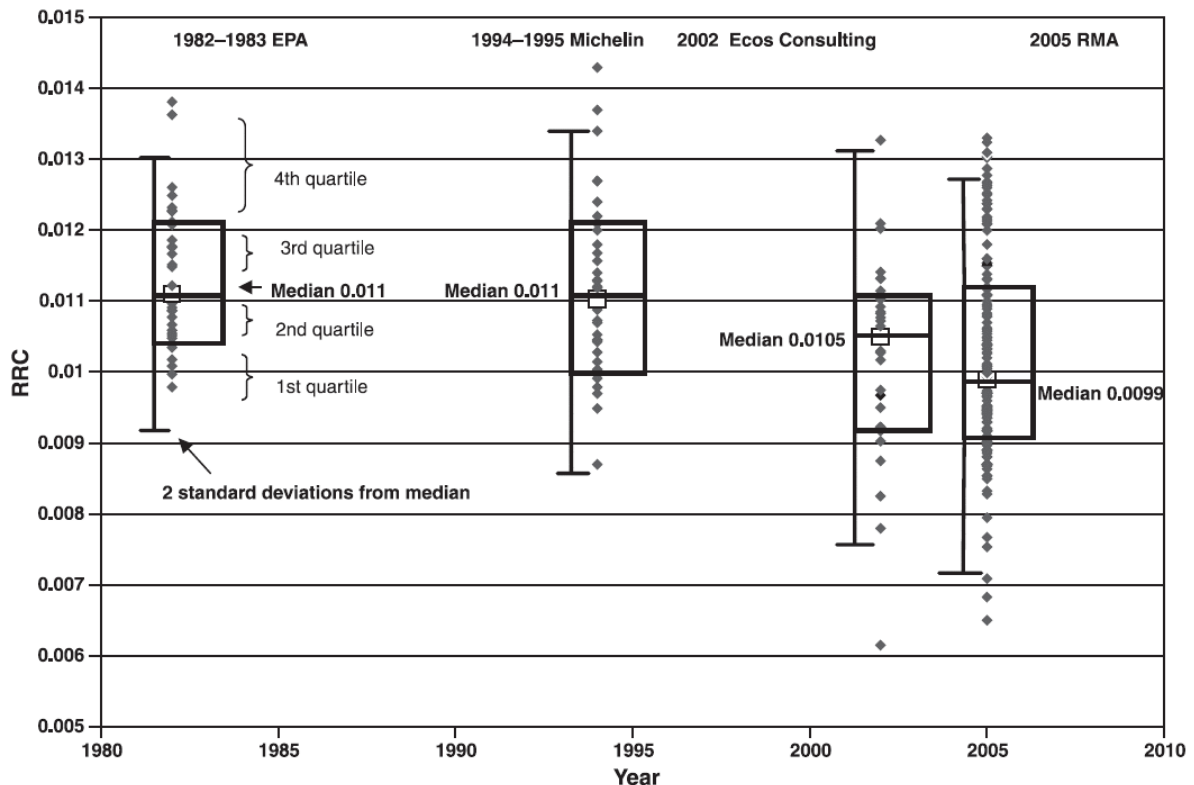
In einem Special Report vom Transportation Research Board in Washington wurde eine umfassende Recherche<sup>4</sup> zu Rollwiderstandsbeiwerten von Pkw-Reifen erstellt.

**Danach hat sich der Rollwiderstandsbeiwert seit 1982 signifikant verbessert (siehe Figure 3-4 auf Seite 71 des TRB-Reports, hier als Abbildung 1 reproduziert).**

Die Studie kommt zu dem Ergebnis, dass die Spanne des Rollwiderstandsbeiwertes bei neuen Pkw-Reifen heute zwischen 6,0 und 14,0 liegt.

<sup>3</sup> Die genannten Werte schließen nicht die vom FEHRL vorgeschlagene Änderung bezüglich der Datenauswertung ein. Zur Berücksichtigung der vorgeschlagenen Änderungen sind alle genannten Werte um 1,5 dB(A) zu erhöhen.

<sup>4</sup> Transportation Research Board: TIRES AND PASSENGER VEHICLE FUEL ECONOMY; SPECIAL REPORT 286, Informing Consumers, Improving Performance, Washington, D.C. 2006 www.TRB.org



Rolling resistance values for passenger tire samples, 1982 to 2005.

Abbildung 1: Entwicklung des Rollwiderstandes seit 1982

Die TÜV Automotive GmbH hat im Auftrag des Umweltbundesamtes Messungen von Rollgeräusch, Rollwiderstand und Nassbremsverhalten bei Nutzfahrzeugreifen durchgeführt<sup>5</sup>. Die Rollwiderstandsbeiwerte lagen bei Reifen der Klasse C3 zwischen 0,4 und 0,9.

Aufgrund der vorliegenden Daten schlagen wir folgende, vom Konsultationsdokument abweichende Label-Klassen für den Rollwiderstandsbeiwert für alle neu hergestellten Reifen ab dem Jahr 2010 vor:

Tyre Category	Maximum rolling resistance coefficient per label class (kg/t)				
	Label A	Label B	Label C	Label D	Label E
<b>C1/C2</b>	7.0	8.0	9.0	10.0	11.0
<b>C3</b>	4.0	5.0	6.0	7.0	8.0

Die Obergrenze der Label-Klasse E definiert den generellen Grenzwert für den Rollwiderstandsbeiwert für alle Reifen. Die feine Staffelung und die höheren Anforderung in den Klassen A und B sind erforderlich, um das Spektrum der

<sup>5</sup> TÜV Automotive GmbH: UBA-Forschungsbericht 299 54 114: Ermittlung von Rollgeräusch- und Rollwiderstandsbeiwerten sowie Durchführung von Nassbremsversuchen mit Nutzfahrzeugreifen, Zweite Auflage, Januar 2000 bis Dezember 2000.

Rollwiderstandsbeiwerte schon heute am Markt vorhandener Reifen angemessen abzubilden. Das Label muss für den Kunden gut sichtbar am Reifen angebracht sein.

Zu Frage 2, Ausnahmeregelungen:

Ausnahmeregelung sollten prinzipiell restriktiv gehandhabt werden. Um sicherzustellen, dass Ausnahmen z.B. für Spezialreifen für geländegängige Fahrzeuge nicht im Bereich der SUVs eingesetzt werden, sollten Ausnahmeregelungen in der Reifenklasse C1 generell nur für Reifen mit einem Geschwindigkeitsindex bis einschließlich „L“ (120 km/h) möglich sein.

Zu Frage 3, Reifendrucküberwachungssysteme:

Der VCD begrüßt die Pläne, Überwachungssysteme für den Reifendruck in Zukunft bei Neufahrzeugen vorzuschreiben. Ungenügender Reifendruck verringert die Fahrsicherheit des Fahrzeugs und führt zu höherem Kraftstoffverbrauch und stärkerem Reifenverschleiß. Wird der Fahrer vom Reifendrucküberwachungssystem über einen Druckabfall rechtzeitig informiert, können somit Unfälle vermieden und die Umwelt entlastet werden.

Das Überwachungssystem sollte bei Druckabweichungen von  $\pm 0,2$  bar oder 10 Prozent vom Solldruck zuverlässig reagieren.

Wir hoffen, dass unsere Anmerkungen hilfreich sind und in den weiteren Beratungen berücksichtigt werden können.

Mit freundlichen Grüßen

A handwritten signature in black ink, reading "Michael Müller". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Michael Müller  
Referent für Verkehrspolitik

Verkehrsclub Deutschland (VCD) e.V.  
Kochstr. 27  
10969 Berlin  
Deutschland

**EU Commission's Consultation on future type-approval legislation  
VDA Comment**

**Subjects 1 and 2: Objective and Background of the Regulation - General remarks:**

The VDA fully supports the comments made by ACEA.

1. Supplementing the ACEA-comment we would like to ask for consideration for paragraph 5.1.5 "**Discussion on tyre requirements**" the **VDA position paper** as annexed to this E-Mail document.  
(see Annex to the E-Mail)
  
2. In addition to the ACEA-comment we propose for paragraph **5.2.3 "Discussion on Advanced Vehicle Safety Systems"** as follows:

The voluntary installation of ESC systems has increased considerably over recent years, particularly for cars at the upper end of the market, and the installation of other advanced safety systems is expected to follow a similar pattern. There is an argument that with the increasing market penetration of such systems, legislation is not necessary. However, the market penetration of such systems varies widely between Member States and legislation may be necessary to ensure that all sectors of the market are covered. Also, the increased production volume of these systems resulting from mandatory installation is likely to lead to reductions in costs.

Question by the Commission:

*Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?*

VDA's answer in addition to ACEA's Comment:

For new types of vehicles of categories M1 and N1 a target date 09/2011 for the mandatory installation is realistic provided that the technical requirements are finalised 3 years before that date.

The date 09/2011 is in line with the introduction in the USA. Any earlier introduction could cause problems for global vehicle concepts because in the USA the requirements concerning controls and tell tales are exempted from the preceding phase-in and become valid only from this date. Manufacturers are already adjusting their product plans and necessary vehicle changes accordingly.

VDA, 18.10.2008

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**Position of the VDA concerning the Draft Limit Table for the Tyre Rolling Sound  
Emission according to ECE R 117 respective 2001/43/EEC Published in the  
“Public Consultation“ of the EU-Commission**

**Position:**

The VDA opposes the draft limit table, because some of the conclusions of the FEHRL study, which created the basis for this proposal are in contradiction to the experience of the tyre and vehicle development. A limit enforcement of such a severity would mean a strong restriction of the range of original equipment tyres for vehicle manufacturers. This would lead to an unfair competition among the tyre manufacturers.

The proposed limit for class C3 M+S is of special concern as this class covers those tyres which are known as “traction tyres”. While it is known that these tyres can hardly pass even the actual limit values, they were not investigated at all in the FEHRL study.

**Proposal for the further proceeding:**

The VDA vehicle manufacturer see a potential for lower limit values in an interim step, however they shall be realistic and be introduced with enough lead time. Therefore the VDA proposes to further investigate the feasibility and time frame of FEHRL proposal for stage B in the directive. In addition a review of the classification for the tyre width is important.

It is pointed out, that an efficient reduction of the noise burden for the society can only be achieved in an integrated approach. As the FEHRL study emphasizes rolling noise reduction is strongly related to improvements and proper maintenance of roads.

Further and more severe steps must be prepared by a joint research program, e.g. as an EU research project, involving all parties to clarify the relationship of various tyre development parameters. This will then create a common basis for further discussion.

**Justification:**

The draft proposal of the EU is based on the results of the EU research program SI2.408210, called FEHRL study, where it is concluded that such a reduction would provide a remarkable effect in real traffic, without degrading any other important parameters of safety and environment for the tyre. The cost benefit ratio is estimated to be extremely valuable for the society.

Comments of the VDA regarding important elements of the FEHRL study:

1. Older study concerning tyres must be questioned, because those tyres are no longer used in production and for actual tyres the optimization strategies have been changed.
2. The FEHRL conclusion that a limit reduction in a range of 5 dB to 6 dB would not jeopardize safety and environmental issues cannot be agreed and is in contradiction to the experiences of vehicle and tyre industry.



An OE-tyre is always a carefully designed component for one specific vehicle. The focus for optimization follows the marketing aspects of the whole vehicle and the individual overall performance will differ from tyre to tyre. A random selection of tyre for research as is typically done by institutes will always cover a wide variety of tyre development strategies. Consequently those studies will hardly be able to elaborate any correlation between the various parameters.

A further drawback is seen in the circumstance that most studies consider only few performance parameters. Aspects as tyre wear, price and comfort are of high importance for customers and should not be neglected.

3. For the vehicle industry it is an additional burden, that the rolling sound results from the tyre type approval has no meaning for the vehicle development. While the tyre alone is tested under rolling condition at a speed of 80 km/h, the overall vehicle has to fulfil its requirements at 50 km/h under high acceleration condition. This are conflicting development goals and it is not granted that a tyre with low rolling noise according to the tyre directive will automatically be a low noise tyre for the vehicle type approval.
4. The estimation of FEHRL for the effect of the limit reduction in real traffic seem to be too optimistic. Many parameters were not considered at all. Some assumptions are unclear and should be revised.
5. The monetary value for the society was given with 27€/dB/a/household. This can be accepted, however according to the source for this information [WG-HSEA; 2003] this value is only valid for households with a noise exposure higher than 50/55 dB Leq. Following the information of an EEA publication in 2001, this is the case for approx. 33% of all European households. It must be concluded that the estimated benefit is far too high.
6. The VDA opposes strongly the conclusion, that vehicle industry is gaining the benefit of the proposed limit reduction. As a consequence of a severe reduction of tyre selection and the negative impact for product optimization, industry has to expect increased product and development costs.

In the opinion of the VDA a limit reduction in the proposed range is not justified.

The European Commission  
DG Enterprise and Industry  
Brussels  
Belgium

**Answer to the Public Consultation on outline proposals for a new Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres**

The Swedish National Road and Transport Research Institute (VTI) would like to submit the following comments with regard to the Public Consultation.

**General comments**

Tyre/road noise has become the most serious part of noise nuisance in the European society. The number of people exposed to annoying or harmful road traffic noise levels is very high and there are no signs of reduced effects; rather the problem seems to be increasing. It is already widely recognized that the noise exposure is a serious limiting factor for people's quality of life, but recent research has highlighted the harmful effects noise exposure may have on people's health. In addition, impaired sleep may also have effects on work efficiency and learning efficiency at schools. If Europe has the ambition of being in the forefront in people's wellbeing as well as in technological development in competition with other regions in the world, such effects cannot be accepted.

It was concluded in the study by the International Institute of Noise Control Engineering on the efficiency of past noise emission limits for vehicles<sup>1</sup> (which was led by an employee of VTI) that the main reason for a lack of efficiency over the period 1970-1995 had been the lack of regulations related to noise from tyres. The development since this report was published in 2001 has only confirmed the conclusions made in that study. It has been well documented by various sources that the tyre noise emission limits introduced in 2001/43/EC have been totally ineffective and this is the chance to correct the mistake which was made when establishing the initial limits which were too liberal.

VTI therefore supports the most essential parts of the proposal by the Commission, in particular the new noise emission limits for tyres. VTI also thinks that the speed of the introduction of more stringent limits shall be high, in order to faster turn the trend towards an improved environment.

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<sup>1</sup> Downloadable from the UN/ECE/GRB website at [http://www.unece.org/trans/doc/2002/wp29grb/TRANS-WP29-GRB-36-inf\\_c1\\_sweden.pdf](http://www.unece.org/trans/doc/2002/wp29grb/TRANS-WP29-GRB-36-inf_c1_sweden.pdf)

## **Coordination with the UNECE regulations**

VTI is worried about the plans to let the UNECE Regulations replace the EU Directives on this subject, and does not support this particular issue in the Consultation, based on the following four main arguments:

- It seems that the UNECE organization, at least working with noise issues, is significantly slower in introducing new and more stringent Regulations than the EU Commission. For example, it was the EU Commission that was several years ahead of the UNECE in introducing the noise limits for tyres.
- The UNECE Regulations must be acceptable also to US, Chinese and Japanese authorities and industries (to name just a few nations outside Europe). This limits the possibilities of Europe leading the way towards decreased noise exposure.
- It is a fear that the shift of responsibility from the Commission to the UNECE in this respect may give the industry increased possibilities to slow the development towards lower noise emissions or make them less stringent.
- The reasons for certain unique European initiatives outside of the UNECE, such as for CO<sub>2</sub> emission, environmental noise pollution and road casualty reduction apply equally well to noise emission.

However, the European Commission should and could assume a leading role in influencing the UNECE to adopt the European Directives on a worldwide level.

## **The speed in following-up the Directive 2001/43/EC**

It is a pity that the report required in Article 3(2) of Directive concerning whether and to what extent technical progress would, without compromising safety, allow the introduction of the limit values, was so much delayed by the Commission. This work should have been made years ago, and has seriously delayed the expected tightening of the limiting values and thus delayed the improvement in the European environment.

## **Wet grip requirements**

The skid resistance of tyres in wet weather driving is a very critical tyre performance parameter which shall not be compromised. However, the relations between noise and wet grip among tested tyres have been found in various independent studies to be so weak that measures against noise are unlikely to have any global effect on wet grip. It is more likely that the determining factor for these aspects is how advanced the tyre technology is; i.e. the more advanced technology and more advanced rubber compounds one uses, the better the performance will be in many aspects. Furthermore, it shall not be forgotten that maybe the most important wet grip aspect of all, for example demonstrated in the EU project VERT, is the skid resistance of tyres worn down near the legal tread depth limit, and this is unlikely to be affected by a wet grip Directive or Regulation relating to new tyres. In the Nordic countries, in particular, also tyre grip on winter roads with ice or snow cover is of paramount importance.

At this time, due to some issues still being unclear, the Institute declines to adopt a position with regard to the question about the wet grip test, except that objective consumer information on wet grip is highly desirable.

### **Rolling noise emissions**

VTI fully supports the adoption of the noise limits proposed by the Commission, which follow the FEHRL proposal.

However, these limits shall apply not only to new or replacement tyres, but also for retreaded tyres. Unless this is done<sup>2</sup>, one will miss a large percentage of the tyre fleet and the Directive will be less efficient than necessary.

The Institute would like to point out that with the present predictions of an exceptionally fast increase in heavy vehicle traffic in Europe until 2020, it is important that the limits for C3 tyres are stringent; in order to counteract the increase in noise following such increase in transportation volume.

Likewise, with the rapid increase in popularity of Sports Utility Vehicles (SUV) in Europe it is important that the limits for C2 tyres and the widest C1 tyres are stringent; in order to counteract the increase in noise following the larger number of such vehicles.

### **Things missing in the rolling noise proposal**

FEHRL proposed a time scale for introduction of stricter noise limits including a two-step approach, with a minor tightening already in 2008 and the major tightening in 2012. VTI thinks that it is a pity that the faster introduction of tighter limits has been dropped by the Commission. Partly, the proposal of FEHRL relating to 2008 in fact already is foreseen in the Directive 2001/43/EC where tightenings of 1-2 dB are indicated for 2007-2009. Such tightenings have therefore been expected already since 2001. We suggest that the proposal for the first step by FEHRL is introduced from 2010. Alternatively, we propose that the limits indicated in Directive 2001/43/EC for 2007-2009 are introduced in 2008-2009, as planned.

The limits for 2012 must not be delayed by any such faster introduction of an “intermediate step”.

Furthermore, we miss the proposal made by FEHRL that tyres should be labeled with their noise levels. This would give the vehicle owners, public organizations or authorities a possibility to select tyres that are more environmentally friendly, as a supplement to the rolling resistance label. The arguments are no weaker for labeling tyres with noise levels than with rolling resistance values and it can be made as easily as for rolling resistance. We cannot find any serious argument against this.

### **Noise measurement methods**

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<sup>2</sup> It is not clear to us whether the Commission has this intention or not

It is important that the FEHRL proposal regarding treatment of measured levels is observed; i.e. that the deduction of 1 dB and truncation to nearest lower integer is removed. The present situation with such treatment of levels is only confusing and may lead to errors.

It is also important that a second reference surface for testing is specified as soon as possible since the single use of the present reference surface means that tyres are optimized for smoother surfaces than those that are prevailing on roads and streets in northern Europe. FEHRL has a good proposal in this respect. The present use of the single smooth ISO surface limits the efficiency of the Directive. The ISO surface was developed in a working group led by an employee of VTI, but it was never intended that this surface would be used for the present purpose of limiting tyre noise. On the contrary, VTI was responsible for a proposal from Sweden in 1990 to UNECE/GRB regarding the use of TWO reference surfaces for tyre noise limitations. It is a pity that this proposal was not elaborated further by the noise group. It is urgent to implement a similar proposal now.

### **Rolling resistance**

As for wet grip and its relation to noise emission, the determining factor for rolling resistance is probably how advanced the tyre technology is; i.e. the more advanced technology and more advanced rubber compounds one uses the better the performance will be. VTI has been and is involved in research that indicates large differences in rolling resistance of various tyres. Thus, there is a potential for a substantial decrease in fuel consumption and CO<sub>2</sub> emissions by introducing limits to the use of tyres with high rolling resistance. The potential mentioned in the referenced TNO document may even be underestimated.

The approach suggested by the Commission can therefore be commended, in principle; but unfortunately the detail requirements are not good enough.

We think that especially the labelling of tyres could be efficient here. However, we think that it would be better to label the tyres with the measured rolling resistance coefficient (or kg/tonne value) rather than grouping tyres into classes A-D. The rapid technological development here would only call for redefinition of such classes within a few years; something which is avoided if the value itself is shown on the label. In fact, the Band definitions proposed by the Commission will be out-of-date already when they are put into force in 2012.

The maximum values in Annex 2 are set so high that they will hardly mean any improvement at all. Like the first noise emission limits, they will be totally ineffective seen globally. The values defining the Bands A-D seem to be based on the tyres on the market in the past decade (1990's). Today's tyres are substantially better and for the technology of 2012 the proposed values are much too high. Many tyres of present state-of-the art (tyres probably constructed at the beginning of this decade) already meet the requirements in the most advanced Band (A). For example, recent measurements we made in the EU project SILENCE indicated coefficients in the range 7.5-9.0 for 4 of the 6 new tyres while the remaining two were between 1.0 and 1.1.

Further, the Institute notes with disappointment that C3 tyres are not subject to the labeling scheme. For heavy vehicles, rolling resistance is very important and improvements are desired not only from an environmental point of view but also for the economy of fleet owners. Thus, labeling could be extra effective for heavy vehicles and it is a pity that this opportunity is not taken.

Thus, our conclusion is that the detailed requirements suggested will not be technologically-driving and will mean an inefficient Directive or Regulation regarding rolling resistance. It is therefore very important that the rolling resistance limits are reviewed with today's state-of-the-art technology in mind and that the categorization in Bands is replaced by labeling of the measured value itself.

This review shall not delay the introduction of the new noise limits.

### **Tyre Pressure Monitoring Systems (TPMS)**

The Institute supports the proposal fully. The extra costs of such systems are likely to be balanced or even overbalanced by the improved energy efficiency. But, as stated in the Consultation document, the sensitivity and accuracy of such systems should be good in order to provide the desired improvement and the text of the Directive should ensure this. The degree of accuracy or resolution for C1 and C2 tyres should probably be no worse than 10 % in order to be effective.

### **Exemption for certain tyres?**

The exemptions proposed by FEHRL are reasonable, but the suggestion by the Commission indicated in the Consultation document that the speed symbol should be max. 120 km/h is reasonable to avoid that such exempted tyres are fitted to for example SUV:s. One shall note that in traffic, the tyres with the highest noise levels have an exceptionally high influence on the environmental noise levels.

### **Advanced Vehicle Safety Systems**

The Insitute declines to offer comments on this issue here, due to problems to deal with this complicated subject within the given deadline for the Consultation.

Linköping, 2007-10-17



Maud Göthe-Lundgren  
Research Director

## German Rubber Association

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

October 18, 2007

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

The proposed limit values are unrealistic. They are based on the FEHRL-study which only gives a very limited insight into the whole tyre market. This may explain the conclusion, that no conflict was found between noise and other requirements as rolling resistance and safety. The results are in contradiction to the experience of the tyre- and automobile industry as well as of the test results the automobile journals are publishing year by year.

C3 tyres are developed to fulfil the different requirements for the axles of a truck they are mounted on. The performance of the tyre on the driven axle is deceive for the mobility of a truck and is linked with the structure of the tread pattern, it influences the winter ability very much. If the tyre industry would be forced to change to more longitudinal oriented pattern due to tight noise limits, it would have a tremendous effect on safety and the mobility of trucks under winter conditions.

A noise reduction by 2 dB(A) for all tyre categories (C1, C2 and C3) based on the calculation in the current directive 2001/43 is more realistic and achievable and would balance environmental and safety requirements. Additionally the C1 classes should be rearranged and two new classes (C1f and C1g) for wider tyres with appropriate limits should be introduced. Furthermore an allowance of + 1 dB(A) is needed for winter tyres.

The rolling resistance limits for all M+S tyres (C1, C2, C3) should be increased by 1 kg/t. Before reducing the maximum rolling resistance level it has to be investigated if there is an impact on other safety requirements.

In parallel with the limitation of rolling resistance and the introduction of a grading system for rolling resistance, it is indispensable to introduce a system also for wet grip to make different performance levels transparent for the consumer.

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

So called "professional off-road tyres" in all three categories (C1, C3 and C3) should be exempted from the directive. These tyres are developed for special purposes to

fulfil requirements which are important under off-road conditions. It's proposed to describe such tyres by criteria like tread depth, maximum speed symbol, minimum void to fill ratio.

### **General remarks**

We support all measures, which help to reduce the tyre/road noise. However there will only be a noticeable effect if both sides, the tyre and the road contribute to the noise reduction. It should be mentioned that different studies show that road noise could be reduced up to 10 dB(A) by laying down the appropriate surface. This would be immediately effective.

The FEHRL-study comes to the conclusion that the reduction of noise in real traffic will result in 1 to maximum 3 dB(A), depending on the calculation method used. This is relatively low compared to the proposed new tyre noise limits, and therefore the question must be raised if the proposal effective.



**Response WG-Noise EUROCITIES towards the consultation document on outline proposals for a Regulation of the European Parliament and of the Council on Advanced Safety Features and Tyres.**

Firstly Working Group Noise of EUROCITIES wants to refer to the letter that was sent to Commissioner Verheugen of DG Enterprise and Industry on the 11<sup>th</sup> of April 2007. The letter was accompanied by a memorandum titled “Relevance of low noise tyres for urban noise environment” that was drawn up by M+P consulting engineers. Working Group Noise EUROCITIES had commissioned M+P to draw up this memorandum. The position given in the letter and the memorandum is still EUROCITIES’ position regarding the noise aspects of tyres. To complete this note the letter and the memorandum are enclosed.

In addition on the aforementioned letter and memorandum WG Noise of EUROCITIES wants to emphasize that the given data of 2012 is rather overdue and unnecessary because technology to produce quiet tyres is currently present. The year 2010 seems to be a better date in our opinion. If more time is needed to evolve the regulations regarding road safety features it’s recommend to split up the proposed regulation into two phases. The first phase could comprise the noise limits and the wet grip aspects because these issues are present at the moment. In a second phase the other items could be published in the regulation.

Regarding the exemptions that are proposed EUROCITIES wants to stress that the number of exemptions must be limited. Cars of the type “of the road”, which are usual driving on the roads, do not need an exemption.

EUROCITIES Working Group Noise thinks that cars that are able to drive faster than 140 km/hr are not necessary because there are only four areas in the entire world where these speeds are allowed. One of those places is Germany (on some trajectories). Cars with this potential are causing high air and noise pollution and are not to say energy friendly. As long as these cars are on the European market, whether or not these cars are allowed to drive faster than 140km/hr on some trajectories, they are forced by safety legislation to provide them with tyres that are suitable for those high speeds. Because it is very difficult or even impossible to make those high-speed tyres quiet, (the) EU has to realize that these high-speed potential vehicles form not only a source of CO<sub>2</sub> and air pollution but an obstacle for further improvement of the noise emission of tyres as well. Banning or phasing out these types of cars would be a sign of a sense of urgency on European level to improve the environment.

EUROCITIES Working Group Noise welcomes all initiatives towards labeling of tyres. Combined labeling of noise and energy can be considered by

one label containing both aspects. EUROCITIES thinks that such a label has to be consumer friendly and easy to interpret by consumers/public. This implies that we have to avoid a label with the amount of decibels or an energy use indicator. A simple method is favorable e.g. colors or figures (1 till 5) or something like that is recommended.

EUROCITIES welcomes the ideas for tyre pressure monitoring systems and the proposals for rolling resistance as well because this will lead to less CO<sub>2</sub> emissions.

Dutch newspapers reported recently that the public does not ask for quieter types. Despite the fact that these tyres are not more costly than other, more noisy types, people do not choose the quieter tyres. Therefore campaigning on the subject of quiet tyres is wanted urgently. People are not aware of the availability of quiet tyres and the advantages of quiet tyres. May be EU could stimulate Member States to apply financial incentives on quiet tyres.

As stated in our letter aforementioned, Working Group Noise of EUROCITIES is convinced that improvement of the current test methods is needed but to her opinion this may not lead to a further delay of the proposed limit values.

Besides strengthening the tyre limits Working Group Noise EUROCITIES supports the use, research and the improvements of low noise road pavements all over Europe.

Because the field of tyre technology is very dynamic Working Group Noise of EUROCITIES would suggest that the tyre directive has to be evaluated after about 5 years that the directive will come into force.

Answers to the questions in the consultation document:

***Are the proposed noise and rolling resistance limits in Annexes 1 & 2 (a) sufficient and (b) realistic? Is there a viable alternative approach, for example, 'trading-off' noise requirements for rolling resistance requirements under certain circumstances?***

Working Group Noise of EUROCITIES is convinced that the proposed limit values for C1, C2 and C3 tyres are realistic.

Working Group Noise of EUROCITIES thinks that a periodical strengthening of the limits will encourage the tyre industry to improve their noise performances.

The suggested 'trading off' approach between CO<sub>2</sub> and noise emissions we reject because to our opinion does introduction of quiet tyres not lead to a decrease of road safety (FEHRL report).

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

In principle Working Group Noise of EUROCITIES is very reserved towards the proposed exemptions, see above.

For more information you can contact Mr. Henk Wolfert, chair of the Working Group Noise of EUROCITIES ([henk.wolfert@dcmr.nl](mailto:henk.wolfert@dcmr.nl))

Best Regards,

A handwritten signature in blue ink, appearing to read 'H. Wolfert', with a horizontal line underneath.

(Henk Wolfert)

**1. Do you support the mandatory installation of ESC for all categories of M and N class vehicles (plus trailers over 3,5 tonnes)? Should any exemptions be allowed?**

Yes,

Because so many studies have proven the positive effect on road safety, and the rate of ESC in new cars registered in the EU is still too low.

**2. Is 2011 a reasonable target for a requirement for new car models to be fitted with ESC?**

Yes, due to the self Commitment of ACEA most passenger cars are equipped with ABS anyway. To add ESC is only a small further step.

**3. What would be a reasonable time scale for the mandatory introduction of systems such as automatic emergency braking and lane departure warning (assuming a favourable cost-benefit case can be made)?**

Such systems could be

- Predictive Collision Warning (PCW),
- Extended Brake Assist (PBA/XBA) with warning and brake assist functions
- Lane Keeping Support (LKS)
- Passive pedestrian protection
- Emergency Braking

The systems would be available in

- 2010: Heavy Trucks and Buses (Categories N3, M3)
- 2012: Light Trucks and Buses (Categories N2, M2)
- 2014: Transporters (Category N1) and Passenger cars (Category M1)

Gunter Zimmermeyer