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".[1]

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).[2] 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 tyres 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 result in some vehicles being driven for long periods with inflation pressures below the recommended level.

[1] **Review and Analysis of the Reduction Potential and Costs of Technological and other measures to Reduce CO2-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

[2] **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

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[3]. 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.[4] 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.

[3] 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.
[4] 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.*[5]

- *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.*[6]

- *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.*[5]

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.[7] 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).[6]

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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[5] **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.
[6] **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
[7] http://www.rws-avv.nl/prosper/PROSPER_D4.3.pdf