

**Consultation on a proposal for a Framework Regulation on type-approval of two- and three wheel motor vehicles and quadricycles**

**Position of the European Transport Safety Council (ETSC)**

**1. General remarks**

The European Transport Safety Council (ETSC)<sup>1</sup> welcomes elements of the proposal for a Framework Regulation, which have a potential for improving safety in the most risky group of road users. Stricter regulation on vehicle safety and in particular on mandatory equipment for active safety systems will contribute to reducing the current figure of more than 6,000 annual deaths among road users of these vehicles in Europe. ETSC thus considers the proposal as useful; however it regrets that it does not go further with the effort of reducing speeding, the single most important risk factors for road users of the vehicle under consideration. As a matter of fact, the risky behaviour of riders is of high importance and the measures aiming at increasing awareness and promoting responsible use should accompany any legislation relative to vehicle safety.

The users of PTWs (huge majority of vehicles concerned) represent 16% of the total number of road deaths in the EU while accounting for only 2% of the total kilometres driven. For the same distance travelled, the risk for riders being killed in road accidents is on average 18 times the risk of car drivers. While the number of road deaths has declined considerably in the past decade in Europe, the number of killed PTW riders rose in 13 out of 27 countries. This rise can only partly be attributed to the increase in use of PTWs and should thus receive special attention from policy makers at European level. It has been estimated that to reach the EU target of cutting road deaths by 50% between 2001 and 2010, a year-to-year reduction in deaths of at least 7.4% is needed. But the average annual reduction in PTW

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<sup>1</sup> The European Transport Safety Council (ETSC), founded in 1993 is a Brussels-based independent non-profit making organisation dedicated to the reduction of the number and severity of transport crashes in Europe. The ETSC seeks to identify and promote research-based measures with a high safety potential. It brings together 41 national and international organisations concerned with road safety from across Europe. ([www.etsc.eu](http://www.etsc.eu))

rider deaths between 2001 and 2006 was around 1.5%, far less than needed for PTW to contribute their share to the European target. If this were the rate of reduction in total road deaths, the EU would reach its target only by 2045<sup>2</sup>. A failure to act on the safety of PTW users thus jeopardises progress toward the EU casualty reduction target and immediate actions are thus needed.

It is also important to recognise that improving safety of users of these vehicles has benefits for society and the economy as a whole, given the immense costs of deaths and serious injuries. In Britain alone, they amount to some €2.3 billion yearly<sup>3</sup>. It is also important to recognise that collision of these vehicles generate more serious injuries per collision than collisions involving other road users. ETSC regrets that the proposal is not accompanied by a detailed impact assessment and cost-benefit analysis of the technologies under discussion, as was the case in the consultation on type-approval requirements for the general safety of motor vehicles. It is regrettable that the life saving potential of the new framework Regulation is not addressed by the proposal.

Also, the alignment with the motor vehicle regulations should be constantly sought so as to assure consistency and fairness in imposing various regulations on different road user groups.

This proposal aims at replacing 14 existing Directives by a single framework Regulation and targeting several different externalities from transport. The creation of such a huge generalised framework should allow other externalities from transport to be covered and not just those mentioned in the proposal. For example, noise-pollution could be an issue at the time when various stake-holders in the automotive industry commit themselves to additional efforts in this area.

The proposal encompasses several types of motor driven vehicles, some of them having a rather unclear legal status. Different electrical engine powered vehicles may also fall in the scope of the directive, including electrical motorcycles or segway, the latter considered nowadays in Member States as either light motorcycle or bicycle if at all. While any legislation targeting L category vehicles seems rather premature at this moment, the consideration of those new vehicle types should be assured within this

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<sup>2</sup> ETSC (2008). Road Safety PIN Flash 7, Reducing motorcyclist deaths in Europe, ETSC 2008.

<sup>3</sup> DfT (2007). Highways Economics Note No.1: 2005 Valuation of the benefits of prevention of road accidents and casualties. DfT, TSO, London.

framework. Thus the scope of vehicles covered by the proposal should be reconsidered in relation to the existing Directive 2002/24/EC.

## 2. ETSC position to specific issues (consultation document)

### A) Advanced breaking systems (5.1, Q: 6,7)

ETSC experts are of the opinion that ABS and advanced braking systems should gradually become mandatory for all PTWs and that riders be educated regarding their use and benefits. The variety of other advanced braking systems should be evaluated for their safety impact and, if more cost-effective, be considered as an alternative to ABS<sup>4</sup>. This may result in a top-down approach, in the sense of imposing stricter regulation on vehicles having higher crash rates and implicating higher socio-economic costs of sustained injuries, instead of a flat application throughout different vehicle categories.

A number of new technologies have been progressively adopted in cars over the past decade and the European Commission has taken the lead on this, by for example making the electronic stability control, (ESC) mandatory in all new cars and commercial vehicles sold in the EU from 2012, with all new cars being equipped by 2014. At the same time, only a mere 35% of PTW street models available in Europe were equipped with an advanced braking system in 2008 whether as standard or an optional extra. EU legislation may therefore be needed to push ahead with the introduction of vehicle safety technologies having a great life saving potential.

The safety effect of advanced braking systems for vehicles considered is well known and understood. In particular, it can do much to eliminate the dangers of overbraking in a straight line. Research shows that the average rider can only apply 56% of the available braking in an emergency (Ecker and Wassermann, 2001). Another field experiment has shown that the average rider underestimates the effectiveness of the front brake: asked to perform an emergency stop on a training track, the average rider used the front brake with only 42% of its potential (Vavryn and Winkelbauer, 1998). In contrast, the rear brake was used with 169% of its potential. In total, the average rider decelerated at 6 m/s<sup>2</sup>, which is less than a modern 40 tonne truck would achieve. Thus, it is obvious that in a real-life emergency, the rider will often not be able to apply a reasonable deceleration. In that case,

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<sup>4</sup> ETSC (2008). Vulnerable riders: Safety implication of motorcycling in the European Union, ETSC, Brussels.

either they cannot avoid a collision with the obstacle, and/or the collision speed is higher.

The safety benefit of ABS is relatively well documented. For example, Sporner and Kramlich (2000) claimed that in 93% of collisions in which riders fall down as a result of sliding, these could have been mitigated were their vehicles fitted with ABS. The study of Transport Canada and National Highway Traffic Safety Administration showed that fatal motorcycle crashes per 10,000 registered vehicle years were 38% lower for ABS models than for their non-ABS versions<sup>5,6</sup>.

The cost benefit ratio of mandatory equipment of all motorcycles by ABS was estimated within the ROSEBUD project as high as 1.1-1.4 (9.39-11.24), the estimates in brackets for the scenario of having a special tax initiative<sup>7</sup>. Nevertheless, it is recognised that the C/B ratio would be smaller for small powered two-wheelers.

#### B) Anti-tampering (5.2, Q: 8,9)

ETSC is of the view that physical measures aimed at reducing tampering of vehicles, as those proposed by the TUV, would only make sense once accompanied by regular random spot checks performed by well-trained officers. Practically zero enforcement of technical standards contrasts with the strict enforcement of regulations imposed on other types of vehicles. A fair treatment of all road users in respect to the regulations in force is needed. Moreover, the lack of enforcement of vehicle-related regulations may further enhance the feeling of impunity of riders in respect of traffic law.

In this respect, ETSC suggests introducing a common European labelling system of the different parts of vehicles facilitating the assessment of vehicles in respect of tampering during their on spot inspection by Police officers. Other measures facilitating on the spot inspections should be further developed and applied.

#### C) Engine power limit for motorcycles (5.3, Q: 10,11)

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<sup>5</sup> NHTSA (2002). Motorcycle Brake System Comparison Tests, Transport Canada and National Highway Traffic Safety Administration, NHTSA-2002-11950-3.

<sup>6</sup> Teoh, E.R. (2008). Effectiveness of Antilock Braking Systems in Reducing Fatal Motorcycle Crashes, Insurance Institute for Highway Safety, Arlington.

<sup>7</sup> Winkelbauer, M. (2006). Rosebud WP4 case report: anti lock braking systems for motorcycles, KFV, Austria.

ETSC recognises that high speed is by far the single most important accident factor for powered two-wheelers. Accident and injury risk increases enormously with speed and an inappropriate/excessive speed is claimed to be behind a large proportion of fatal injury crashes in Europe.

The research conducted by TNO in 1997 in the context of plans to impose a power limit concluded that the engine power of motorcycles does not intrinsically lead to a higher accident risk<sup>8</sup>. The legislation based on simple engine power criteria may thus be ineffective.

Technical and cost-benefit aspects of speed limiters and Intelligent Speed Adaptation (ISA) should be taken into account by the current proposal. Although additional research and evaluation studies are still necessary before their introduction to all types of vehicles. The ISA, eCall and other active safety systems should be promoted across different vehicle categories.

#### D) Mini cars – L6+L7 quadricycles (5.4, Q: 12,13)

Clear criteria should be established on which types of vehicles should be type-approved. ETSC is of the view, that all motorised vehicles allowed on public roads should be type-approved. In the case of L6 and L7 quadricycles, however, the EU action may well not be essential, given their limited geographical spread. Besides, emerging vehicle types such as segway being gradually introduced in Europe on a common basis with regulations and presumably concerning more potential crash victims should be considered under the Regulations framework.

#### E) Off-road quads (5.5, Q: 14,15,16)

Despite the fact that quads are designed for off-road use, their presence on the public roads is a common feature in many European countries, where they are subjected to vehicle registration as any other type of vehicle used on public roads. Thus the requirement on vehicle type-approval may well be justified, also in respect to their potential conflict with other road users on public roads. If these vehicles should continue to be allowed on public roads, vehicle type approval regulations should be considered for them as well, including requirements on pedestrians' protection. Detailed studies on accidents involving these vehicles may be needed to justify new regulations.

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<sup>8</sup> Ruijs, P.A.J. and Berkhout, M.J. (1997). Motorcycle power 74 kW study Phase B, Report prepared by TNO for EC DG11, Industry, Nr.97.OR.VD.056.1/PR.

### 3. Additional comments

ETSC is of the view that the users of the vehicles considered should also benefit from the eCall initiative, which is going to be introduced as a standard for passenger cars in many EU countries. This could imply a need for a legislative framework, which would eventually allow for mandatory fitment of relevant devices. The proposal should not omit this.

ETSC is concerned about the implications of passing on its regulatory powers to the UN. The UNECE process excludes the European Parliamentary inspection and amendment. Moreover due to the larger number of parties involved in the process the lowest common denominator is likely to set a lower bar for regulation. This may also have negative implications for the high levels of safety needed for vehicles in the EU. The EU will lose its right of democratic scrutiny of new legislation, the Commission's role of "guardian of the Treaty" and right of initiative will be lost. ETSC would like the European Parliament to have a '*droit de regard*' on issues delegated to the UNECE.

If for reasons of "Better Regulation" this nevertheless is adopted, ETSC would like to see changes to the UNECE system. The process should be made much more open and transparent to NGOs. Moreover, this should include more consultation of independent safety experts who are not affiliated to industry or to the interests of particular Member States. These changes would ensure that safety is at the forefront of the UNECE process.

*Consultation document referred in the text:*

*[http://ec.europa.eu/enterprise/automotive/consultation/2\\_3\\_wheelers/consultation\\_document.pdf](http://ec.europa.eu/enterprise/automotive/consultation/2_3_wheelers/consultation_document.pdf)*

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