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Contribution to the Public consultation on a proposal for a Framework Regulation of the European Parliament and of the Council on type-approval of two- and three wheel motor vehicles

ACEM, the Motorcycle Industry in Europe, is the professional body representing the interests and combined skills of 11 manufacturers producing a total of 22 motorcycle, scooter and moped brands. The members of ACEM account for 90% of the production and up to 95% of the European powered two-wheeler (PTW) market.

In 2007, more than 2.7 million PTWs were sold in the European Union. Having benefited from 6 years of continuous increase in the market (+ 22 % over the period 2002 – 2007), the PTW fleet has been steadily growing over the last few years, reaching about 33 million PTWs in use in the EU. According to long term market projections, the fleet is expected to continue to grow and reach between 35 and 37 million vehicles in 2020, mainly pushed by an increasing mobility demand.

However, these market projections must be set against current economic uncertainties. In 2008, PTW market figures suffered a reduction to 2.5 million PTWs (-7.4% over 2007). In particular, the last quarter of 2008 showed a significant contraction over the same period of 2007. The month of January 2009 also showed further negative signals of severe drops in the EU PTW market (in the range of -40% for many National markets over January 2008). Given the seasonal pattern of PTW sales, the full impact of these reductions on the 2009 market will only become apparent in Spring-Summer.

It is also against this uncertain background, and the additional challenges it brings to the PTW sector, that ACEM wishes to contribute to the European Commission's public consultation on the upcoming proposal for a Framework Regulation of the European Parliament and of the Council on type-approval of two- and three wheel motor vehicles. In so doing, ACEM makes proposals in the areas of simplification of legislation, environment and safety, which it considers in line with the objectives of the upcoming EC proposal, taking into account the PTW market, the need to preserve the Industry's competitiveness and employment in the PTW sector.

This document makes references to documents already discussed in MVEG and MCWG. It also makes reference to ACEM proposals sent to DG Enterprise/ Automotive Industry Unit. Finally, it also makes several references to the Motorcycle Accidents In-Depth Study (MAIDS¹).

¹ The MAIDS- Motorcycle Accidents In-Depth Study - was carried out in the period 1999-2004, with European Commission co-funding. It is the most comprehensive in-depth study currently available for Powered Two-Wheelers (PTWs) accidents in



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Question 1: What do you think of the use of one basic EU Regulation and the split level approach for the revision of the legislation on two- and three-wheelers? Why?

ACEM has been following the CARS 21 discussions with great interest and studied the possibilities to reflect the approach into proposals for simplification of the powered two-wheeler (PTW) regulatory system. ACEM's conclusion is that an approach based on the CARS21 model is feasible for PTWs. Indeed, the PTW regulatory framework is very similar to the 4-wheeled motor vehicle system. For both products, the system is based on the "old approach" using European type-approval. For PTWs, as for motor vehicles, technical requirements are laid down in separate directives and the administrative and general principles are prescribed in a framework directive.

The envisaged replacement of the current 14 directives by one basic EU regulation and its implementing measures will bring further simplification and efficiency in the type approval system. As the EU Regulation will be directly applicable in the Member States without transposition procedure, this legislative instrument would be able to ensure better harmonization, content wise and time wise than the Directive. The split-level approach i.e. co-decisions regulation for the main requirements, and comitology regulation for technical details, allows more reactive adaptation to the technical progress.

ACEM supports the use of one basic EU Regulation and the split level approach for the revision of the legislation on two- and three-wheelers.

Question 2: Do you agree with the approach to increase the use of references to UNECE Regulations? Why?

For the PTWs, the EU has adhered to several UNECE regulations, which are accepted as equivalent to the separate directives. ACEM's recommendation is to simplify PTW regulations by replacing the separate directives by their equivalent UNECE regulations. This will avoid duplicate legislation, increase international harmonization and again allow a more reactive adaptation to the technical progress.

The inclusion of a provision to ensure the transposition of relevant GTRs should also be part of the proposed approach (the simple integration of GTRs in the ECE regulations would offer a simple solution for the EU).

Europe. Since the publication of the report, the MAIDS database provided information for developing public policy issues and, being open to researchers, formed the basis for further research projects in road safety. The MAIDS database contains more than 900 motorcycle and moped accidents collected in five sampling areas located in France, Germany, Netherlands, Spain and Italy. To provide comparative information, more than 900 control cases have also been analyzed in the same sample areas. <http://www.maids-study.eu/>

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A detailed ACEM prioritized proposal has been already forwarded to the EC.

ACEM supports the increased use of references to UNECE Regulations (including GTRs), provided that adequate transitional provisions exclude existing vehicles, and that the EC prepares its position in UNECE forum in cooperation with interested EU stakeholders, including ACEM.

Question 3: Which administrative measures introduced for motor vehicles (Directive 2007/46/EC) should not be included in the legislation on two- and three-wheelers? Why?

As stated above, ACEM's recommendation is to simplify PTW regulations by aligning the framework directive 2002/24/EC with the framework directive 2007/46/EC, the "recast WVTA". This will create a more transparent and cost effective system for the handling of type approval for road vehicles. Therefore, all administrative measures introduced for motor vehicles (Directive 2007/46/EC) should be included in the legislation on two- and three-wheelers and in particular the following:

- Inclusion of the possibility to use UNECE regulations as unique regulatory instrument but without approval number marking as a WVTA number is already marked on the VIN plate;
- The inclusion of a provision to accept Global Technical Regulations (GTRs) as equivalent or instead of separate directives;
- Self testing and virtual testing;
- Designation and assessment of test services (in particular the criteria for manufacturers or a subcontracting party acting on his behalf, designated as a technical service).

In principle, these measures should contribute to reduce the cost and burden of delivering and obtaining type approvals.

ACEM supports the introduction of all administrative measures introduced for motor vehicles (Directive 2007/46/EC) in the legislation on two- and three-wheelers.

Question 4: Do you support the introduction of new emission limits for motorcycles equivalent to Euro 5 limits for petrol cars? Why?

Market trends clearly show that PTWs answer the mobility needs of an increasingly higher share of the European population. The fleet has been steadily growing over the last few years, reaching about 33 million PTWs in use in 2006. According to long term market projections the fleet is expected to continue to grow and reach between 35 and 37 million

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vehicles in 2020. Motorcycles above 50cc would benefit more from this market evolution than 50cc mopeds, and account for 2/3 of the future PTW circulating park.

Since the development of PTW emissions legislation began within the EU, ACEM has been a full participant in the ongoing process. To date, ACEM has provided key expertise and considerable resources to the development of the GTR2 test cycle and also to the measures as specified and agreed in the 1st December 2005 MVEG meeting (DG/ENTR Status Report, 23 November 2005). More recently, ACEM has provided input and assistance to the Commission's consultants LAT, in a fully open and cooperative way.

In view of the growing participation in European's mobility, ACEM therefore welcomes the continuation of a process that will lead to further reduce the PTW contribution to the total road transport emissions. Consequently, **ACEM wishes to support measures aimed at achieving equivalence with passenger car emissions at Euro 5/6** (gasoline engine).

However, the technological challenges the PTW industry will face at the emissions levels commensurate with this goal will run far beyond a simple upgrade of existing emissions control technology. Indeed, the solutions required will be neither simple nor inexpensive. ACEM members anticipate that new engines will have to be developed completely, or at least the inlet-combustion-exhaust areas of existing engines radically revised, including other major measures. Coupled to this will be a need for more advanced fuel delivery and exhaust systems, with inevitable consequences for other areas of the vehicle.

In assessing the implications, in particular given the current economic situation, ACEM members have stated that development of these solutions require sufficient lead time. Mindful of the need and desire to progress in the reduction in PTW emission levels in the shorter term, ACEM therefore proposes a two-stage reduction process as follows:

- A first stage comprising of the measures as specified and agreed in the 1st December 2005 MVEG meeting (DG/ENTR Status Report, 23 November 2005) and a 25% reduction in tailpipe emissions for motorcycles from 2006/72/EC row C limit values. This step, applicable simultaneously with the future regulation, also foresees the introduction of the new test cycle for mopeds and the limit values for quadricycles, both agreed in December 2005.
- The second stage, following a minimum of three years later, realising the goal of motorcycle equivalence with car Euro 5/6 (gasoline) using the calculation method presented by LAT in the October 2008 MCWG meeting.
- In both proposed stages, the needs of motorcycles equipped with two-stroke engines must be considered. We propose that limit values for vehicles equipped with two-

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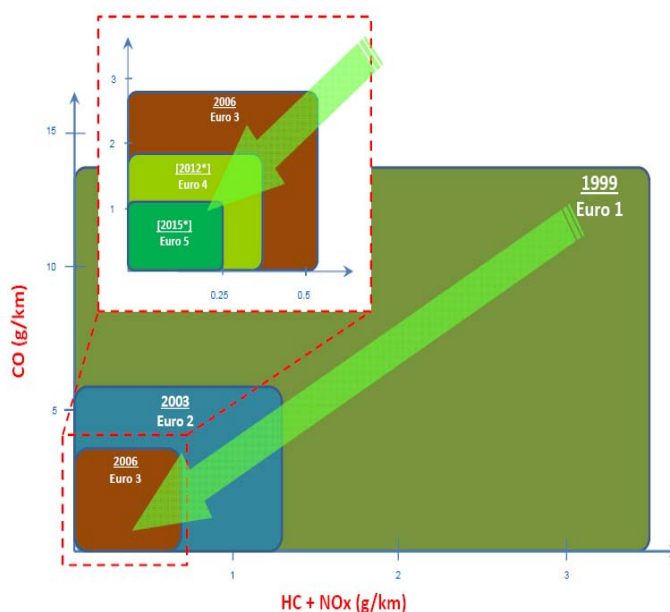
stroke engines be specified in terms of an HC+NOx limit value by simple addition of the separate limit values for four-stroke engines.

- These emission stages should be accompanied by fiscal measures supporting the renewal of the moped and motorcycle fleet.

With this proactive proposal, which we believe should be mutually acceptable, ACEM is fully prepared to work with the Commission and member states to develop the text of legislation to be presented for co-decision to the European Parliament and Council in 2009. ACEM is also committed to positively cooperate to European Commission initiatives during the comitology process in order to finalise the set of technical regulations as expeditiously as possible.

ACEM Proposal: Motorcycle Equivalence with Passenger Cars

- Euro 4 = - 25 % / Euro 3
- Euro 5 = Equivalence with Euro 5/6 Passenger Cars



*Earliest possible proposed implementation dates (subject to legislative process)

Note: the combined HC+NOx emission limit axis is used for representational purposes only

ACEM is fully supportive of measures aimed at achieving equivalence with passenger car emissions Euro 5/6 (gasoline engine) in a two-step approach (first step, applicable simultaneously with the future regulation; second step, a minimum of three years later).



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Question 5: Do you think additional emissions measures should be introduced in the legislation? Why? What is your opinion on the introduction of additional measures such as CO2 measurement, fuel consumption, etc?

As part-answered in our response to question 4, ACEM is fully supportive of the introduction of specific additional measures as specified and agreed in the 1st December 2005 MVEG meeting (DG/ENTR Status Report, 23 November 2005). These were:

- Durability
- Evaporative emissions control
- Measurement of CO2 and fuel consumption
- Euro 3 limits and test procedure for mopeds
- Euro 3 limits for petrol and diesel quadricycles

We regard the introduction of these long-agreed measures as being an essential part of ensuring parity with passenger car emissions.

Where CO2 is concerned, the present lack of official data is unhelpful to the motorcycle industry. We regard the introduction of a unified test, as agreed at the December 1st 2005 MVEG meeting, to be essential in ending speculation about the performance of our products.

With regard to the potential publication of CO2 and fuel consumption data, ACEM wishes to point out, as we anticipate LAT will also do, that the method of publication must be unified across all member states. In this respect, ACEM is against categorising motorcycles by segment (i.e. touring, enduro etc.) or by engine capacity banding. Instead we favour simple publication of the data in a unified way for all powered two-wheelers, as done for passenger cars.

LAT further states that “CO2 emissions from PTWs are overall a very small share of total emissions. Regulations to monitor the CO2 and energy consumption of PTWs can be put in place to monitor the performance of such vehicles. PTWs appear as much more energy efficient means of transportation than passenger cars and their activity should be promoted as a measure to further control GHG emissions from road transport.”²

ACEM is fully supportive of the introduction of the above mentioned additional measures as specified and agreed in the 1st December 2005 MVEG meeting (DG/ENTR Status Report, 23 November 2005).

² Study on possible new measures concerning motorcycle emissions – LAT, November 2008



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Question 6: What is your view on the mandatory fitting of ABS on all motorcycles? Why?

Currently, the available accident data do not contain a sufficient number of ABS-equipped motorcycles to enable calculation of the actual effectiveness of motorcycle ABS. In the future, if and when such accident data become available, an analysis should be done in order to determine the actual effectiveness of motorcycle ABS.

MAIDS data shows that ABS effectiveness is limited by the relatively large number of accidents (i.e., 80 to 87%) in which there is no braking, sub-limit braking, or swerve-and-brake, for which ABS will not have an effect, according to the model used in the analysis by DRI³, i.e. simulation model integrating all the cases from Hurt⁴ and MAIDS accident databases (n=1821).

Based on the inappropriate methodology used in the Cologne Report⁵ and because the assumptions regarding the motorcycle ABS costs and ABS effectiveness used in the Cologne Report analysis are not correct, the actual benefit-cost ratio of motorcycle ABS is most likely far less than 1.0 (i.e., in the range of 0.05), regardless of which scenario is used in the Cologne Report. Dynamic Research Incorporation (DRI) carried out an extensive critique of the Cologne Report⁶.

³ DRI - Dynamic Research, Inc.

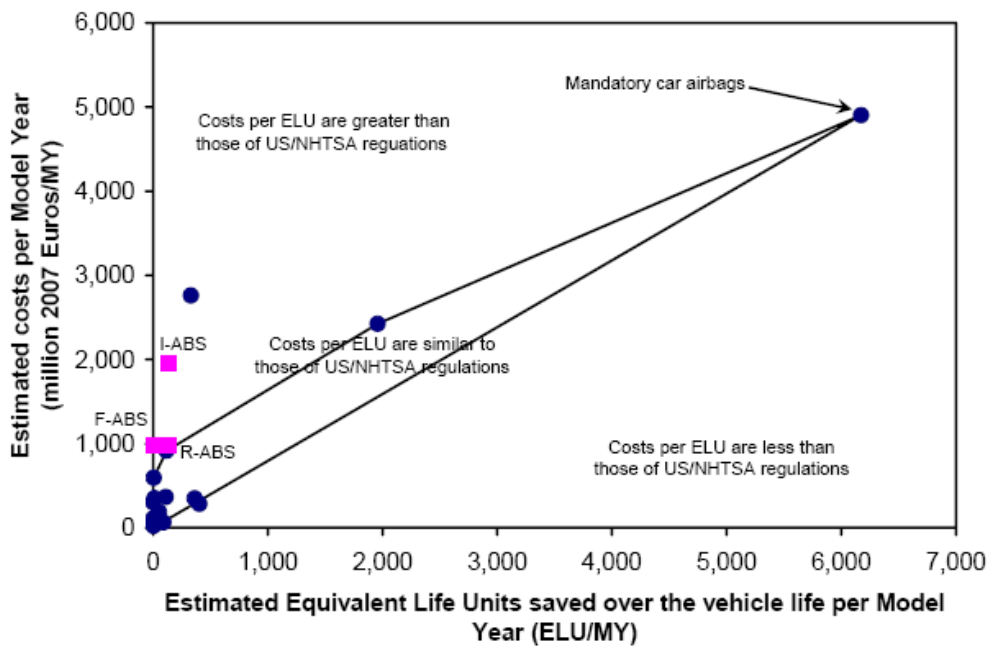
In view of the growing interest in ABS, IMMA (International Motorcycle Manufacturers Association) commissioned a comprehensive study on the cost/effectiveness of making ABS mandatory on motorcycles from Dynamic Research, Inc.

⁴ Hurt, H.H. Jr., Ouellet, J.V. & Thom D.R. (1981b). "Motorcycle Accident Cause Factors and Identification of Countermeasures" (DOT HS 805 862). Washington, DC: National Highway Traffic Safety Administration

⁵ Baum, H., Geissler, T., "Cost-benefit analysis for ABS of motorcycles," Final report, Institute for Transport Economics at the University of Cologne, July 2007

⁶ Keschull, S.A., Zellner, J.W., "Review of the University of Cologne report entitled "cost-benefit analysis for ABS of motorcycles", May 2008

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The graph above illustrates the calculated economic costs of, and equivalent lives saved by, anti-lock brakes systems when fitted to L3 vehicles, compared to those of other vehicle safety measures published by USA/NHTSA. The best available information at this time, provided in the DRI report on ABS cost-efficiency, therefore indicates that mandatory ABS would not be cost-beneficial. The full detailed DRI analysis, in its latest update⁷, has been already forwarded to the EC.

Based on the information mentioned above, **ACEM believes that mandatory fitting of ABS is not the appropriate way forward**, and that the development of advanced braking systems should be left to the market, also for the following reasons:

- PTW market segmentation and technical characteristics determine that no or low economies of scale would be achieved through a legislative approach.
- The ACEM “advanced braking systems” commitment (further detailed in the answer to question7) ensures the large-scale deployment of all advanced systems (50% objective by 2010; 75% objective by 2015) on all PTWs providing benefits for both L1 and L3 categories.

⁷ Kebschull, S.A., Zellner, J.W., “Analysis of cost-effectiveness of motorcycle anti-lock brake systems” (volume 1, 2 & 3), July 2008

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- There is no scientific basis to support the mandatory fitting of anti-lock brakes to a particular category of PTWs. Determining legislative criteria for the fitting of the system would be an arbitrary exercise.
- A legislative approach would be detrimental to the variety of systems currently being developed by industry, potentially freezing innovation in the area of “advanced braking systems”.
- Mandatory anti-lock braking systems, applied on new vehicle architectures, would unnecessarily raise the vehicle market price to levels unaffordable for the potential end-users.
- Application of ABS (and indeed coupling braking devices) through legislation is incompatible with usage of type-approved trial and enduro bikes primarily designed for off-road use: being able to intentionally lock the wheels is essential in certain off-road conditions.

Question 7: In your opinion, are there other/supplementary solutions better suited for certain categories (i.e. coupled braking, stability control systems, etc.) that would produce the same/better effect at better costs?

ACEM believes that the variety of ‘advanced braking systems’ can make a positive contribution to motorcycle road safety. Advanced braking systems available on the market are not limited to anti-lock braking systems and coupling braking devices. There are a number of types of advanced braking systems developed by PTW manufacturers, taking into account the main purpose of the products, their distinctive characteristics, e.g. balance, weight, dynamics, and general capacities, and the cost-effectiveness of the technical solutions, which include:

i. Combined Braking Systems (CBS)

International and EU regulations require PTWs to be fitted with independent controls for the front and rear brakes. Usually this is in the form of a foot pedal and a front brake lever. Most automatic machines (which do not require a clutch control) have the rear brake operated by a lever on the left hand side of the handlebars. Less skilled riders have a tendency to over-use the rear brake and under-use the front. In a CBS system, the application of one brake control will actuate both front and rear brakes.

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ii. Anti-lock Braking Systems (ABS)

Anti-lock braking systems are available either operating on both wheels, or on front or rear wheel, depending on the vehicle and its use. Advantages are self evident as electronic control eliminates the risk of wheel lock. MAIDS and Hurt studies also indicate that in 80 to 87% of PTW accidents, ABS has no effectiveness. However, an increased share of PTWs fitted with ABS will lead to more collisions involving PTWs still in an upright position, which may reduce the expected benefit of ABS.

iii. Rear wheel Lift-off Protection (RLP)

Certain PTW architectures can benefit from RLP, which detects if the rear wheel lifts during braking operation. This initiates a momentary reduction of the pressure in the front braking circuit.

iv. Automatic brake force distribution

Due to dynamic shifts in weight during braking, efficient deceleration is strongly dependent on the optimal distribution of braking forces between the front and rear wheels. Even for an experienced rider it is difficult to accomplish this, particularly in emergency conditions, but it can be achieved electronically.

v. Amplified braking systems

These systems amplify the actuation input made by the rider, resulting in a more rapid deceleration. They enable a stronger braking pressure, since the start of the braking procedure.

vi. Brake by wire

The system consists of an electronically controlled combined brake by wire system with an innovative stroke simulator. Direct motor control ensures precise operation of the ABS, resulting in reduced pitching and smooth modulated ABS intervention.

vii. New vehicle architectures

Some new vehicle concepts, such as a three-wheeled L category vehicle providing two braked wheels in the front, provide further examples of an advanced braking system having the additional benefit of higher grip, increased stability and reduced braking distance.



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The advanced braking systems listed above offer a multitude of possible combinations, enabling manufacturers to develop the offer of a wide variety of solutions, taking into account the main purpose of the products, their distinctive characteristics, e.g. balance, weight, dynamics, and general capacities, and the cost-effectiveness of the technical solutions. Demand and market acceptance are central to the development of advanced braking systems on PTWs, and largely depend on the appropriateness of the solutions offered, technically and in terms of cost, to the specific PTW market segment and model.

For this reason, in 2004 ACEM manufacturers have jointly committed to the European Road Safety Charter to progressively supply PTWs with advanced braking systems taking into account their distinctive characteristics. By 2010, the majority of type-approved street models will be available on the European market with advanced braking systems.

Based on latest data available, ACEM can report that in June 2008, 35% of the European PTW offer was already available with an advanced braking system, which translated into 35% actual penetration in terms of PTW sales. Based on this encouraging picture, **ACEM members anticipate that they will meet the 50% objective by 2010 and have already agreed to go beyond this initial commitment, establishing a further 75% objective by 2015.**

ACEM believes that it would be impractical to translate into legislation the rich variety of systems and combinations of systems and their adaptation to the variety of motorcycles and uses. A legislative approach (oversimplified by nature) would lose the benefits of this diversity.

The ACEM “advanced braking systems” commitment ensures the large-scale deployment of all advanced systems (50% objective by 2010; 75% objective by 2015) on all PTWs providing benefits for both L1 and L3 categories.

Question 8: What do you think about the additional measures proposed by the TÜV study and the one proposed in the Motorcycle working group mentioned above? Why?

As a preliminary remark, ACEM would remind that the TÜV report dated December 2003, did not match the expectations of evaluating the anti-tampering measures defined under chapter 7 of the Directive 97/24/EC. The report recognizes in its conclusion that “The on-road use of manipulated two and three wheeled motorized vehicles cannot be statistically analyzed for the time before or after the introduction of chapter 7 of the directive 97/24/EC, as the required data are not available.” In these conditions ACEM think that the proposed measures are not backed-up by the appropriate information.

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ACEM further disagree on extending the scope of the existing regulation to other classes. L3 category "B"⁸ vehicles (maximum 125 cc and 11 kW), are already subject to anti-tampering measures and do not need additional provisions, as no tampering practices have been reported since the introduction of the motorcycle category (1996). L3 categories "C" and "D" vehicles have no legal performance limitations at construction and are therefore not subject to anti-tampering measures.

From the measures proposed by TÜV, ACEM would retain the consideration of modern technologies (e.g. the electronic devices as stated in the answer to question 9), the improvement of certain markings (as also stated in the answer to question 9) and periodical inspection.

Question 9: Do you think other solutions should be preferred? Which one?

The anti-tampering provisions in chapter 7 of Directive 97/24/EC are based on the following principles: technical restrictions, marking and deterring enforcement by authorities. If one of the principles is lacking, the overall effectiveness of the provisions will be compromised.

L1 vehicles (mopeds) have a maximum design speed of 45 km/h and are already subject to anti-tampering measures. However, MAIDS data indicate that tampering in order to increase performance was observed by visual inspection in 17.8% of all L1 (moped) cases. This item is most probably under-reported as the MAIDS teams could not perform in-depth technical inspections of the vehicles involved in accidents. MAIDS figures further indicate that a large number of L1 fatal accidents (40%) occur at travel speeds greater than 50 km/h.

Based on the above, ACEM believes there is room for additional anti-tampering measures for L1 category vehicles, aimed at ensuring that maximum speed is not illegally raised by the user. These additional measures should cover the electronic devices which limit the vehicle's maximum speed, the inter-changeability of components, the CVT components, the exhaust silencing system and marking. A detailed ACEM counter-proposal has been forwarded to the EC in response to the French proposal made at MCWG 05-06 (Proposal from French delegation concerning chapter 7 and 0 of Directive 97/24/EC on anti-tampering measures 10/06/2005).

MAIDS provides no evidence of performance-oriented tampering on L3 vehicles. For these reasons, ACEM sees no safety justification for additional anti-tampering measures on L3 category "B" vehicles, nor for the introduction of anti-tampering measures on L3 category "C" and "D" vehicles, which would only translate in additional industrial costs that would have to be at least partially transmitted to the consumer.

⁸ Directive 97/24/EC Chapt. 7 § 1.3 Vehicle categories

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Following the integrated approach, ACEM supports technical measures addressing tampering should always be accompanied by measures in the area of behaviour, through controls carried out by authorities. These can translate into road-based enforcement and/or periodic inspections (currently, PTWs are not included in the scope of directive 96/96/EC), having benefits both in terms of road safety and environment.

ACEM believes that additional anti-tampering measures, for L1 category vehicles only, would bring road safety benefits. The measures proposed by ACEM cover the electronic devices controlling the vehicle's maximum speed, the inter-changeability of components, the CVT components, the exhaust silencing system and marking.

Question 10: Do you think that the option given to Member States to limit the maximum power of motorcycles to 74 kW should be maintained? Why?

ACEM believes that the findings of the study carried out on behalf of the EC by the TNO in 1997 are still valid. The TNO study⁹ clearly identified that PTWs with a power above 74 kW were not intrinsically more dangerous than other PTWs. MAIDS supports the TNO findings. The table below shows the distribution of engine displacement for the 921 MAIDS cases. The highest frequency category reported was 50 cc (42.7% of all cases), followed by bigger PTWs in the 501 to 750 cc category (22.4% of all cases). There was no significant difference between the accident data and the exposure data except for the over **1001 cc category which was found to be under-represented** (i.e. had less risk). As power is linked with engine capacity, this suggests that the power itself has no influence on accident risk.

MAIDS report Table 5.3: Engine displacement	Accident data		Exposure data	
	Frequency	Percent	Frequency	Percent
up to 50 cc	394	42.7	367	39.8
51 to 125 cc	89	9.7	86	9.3
126 to 250 cc	37	4.0	32	3.5
251 to 500 cc	56	6.1	50	5.4
501 to 750 cc	206	22.4	193	20.9
751 to 1000 cc	80	8.7	107	11.6
1001 or more	58	6.3	88	9.5
Unknown	1	0.1	0.0	0.0
Total	921	100.0	923	100.0

⁹ Ruijs, P. A. J. and Berkhout, M. J. (1997) Motorcycle power 74kW study Phase B Report prepared by TNO for European Commission DG 11, Industry. Report No. 97.OR.VD.056.1//PR

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This is further confirmed by the evolution of French PTW accident statistics. France is the only Member State having currently chosen to avail itself of the option to limit L3 vehicles to 74 kW. However, French PTW accident statistics compared to other Member States do not show any positive differentiation compared to other Member States, in spite of the 74 kW limit. This has recently led the French administration to question the need for the measure¹⁰.

Based on the above, ACEM believes that repealing maximum power limit would not have *per se* a negative effect on road safety. The option to limit maximum power to 74 kW is currently creating unnecessary hurdles to the circulation of goods within the EU. Because of the use of the option, in order to operate in the French market, ACEM manufacturers currently need to incur additional technical, logistic and administrative costs.

ACEM supports the repeal of the maximum power limit option left to the Member States, as this provision never demonstrated any positive effect where it has been implemented, and is not supported by scientific information.

Question 11: Do you think that alternative criteria could be used (i.e. Power-to mass ratio, acceleration potential) to limit the accident occurrence of motorcycles?

Referring to the question if a determined power-to-mass ratio limit should be evaluated, thus limiting the acceleration potential of motorcycles, one can firstly observe that there are no existing scientific elements to support this measure. The non-effectiveness of the maximum power limit averred in France should not legitimate in itself the setting of such a new provision, without the strong back-up of scientifically proven information.

In order to bring objectivity in the discussion ACEM tried to use the available data from MAIDS to quantify the magnitude of this issue. The conclusion of this exercise suggested that there is no link between a maximum power-to-mass ratio limit per construction and improved road safety for motorcyclists.

Following the integrated approach, ACEM therefore believes that other measures than power or power-to-mass limitation have significant greater potential to achieve a reduction of PTW accidents. They relates to the area of behaviour - and this is particularly the case of training and driving licence systems encouraging the gathering of experience by the rider on lower categories of vehicles, accompanied by proper enforcement of traffic rules.

¹⁰ Gisements de sécurité routière: les deux-roues motorisés, DISR, Juin 2008



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ACEM believes that hypothetical benefits of alternative criteria such as power-to-weight ratio or acceleration potential limit cannot be justified by any kind of scientific information. ACEM is convinced that rider attitude and behaviour can be addressed by better training and licensing accompanied by appropriate enforcement, rather than by vehicle-related technical measures.

Question 17: Do you think that EU legislation on hydrogen vehicles is needed? Why?

The state of the art of this technology, applied to powered two-wheelers, is characterized by very few prototypes and still at its early stage of development. Therefore the need for a type-approval regulation does not seem corresponding to a concrete reality, and is not supported for the time being by a concrete market demand. Moreover, ACEM believes that the know-how and the experience necessary for developing such piece of legislation is not fully available and not mature enough yet within the PTW industry to enable a valuable contribution to be made. Proceeding now in the direction of establishing a type-approval regulation would add the disadvantage of artificially restricting opportunities for present and future R&D development, and could require the regulation to be substantially modified at a later stage.

Should prototypes or small fleets of prototypes be experimented in real traffic situation, ACEM believes that at this stage these vehicles could be either type-approved at national level or exempted from the 2002/24 directive.

ACEM think that EU legislation on hydrogen PTWs is not needed for the very next future. Prototypes could be individually type-approved at national level or subject to an exemption of 2002/24/EC.

Question 18: What do you think will be the impact of the range of measures that are outlined above on the competitiveness of the EU industry, and in particular SME's?

The PTW industry represents a turn-over of 10 bn Euro in the EU and is made up of both global and local niche players. It is smaller and more heterogeneous than the automotive industry: the product range goes from small 50cc town vehicles, up to motorcycles of 1000cc and over. Therefore, the impact of the range of measures outlined above will be differently felt within the sector.

Simplification of the legislation would benefit to all market players, particularly new entrants to the market, in theory reducing cost and complexity associated with type-approval, in the long term. However, this simplification should not translate into an increase of already observed non-compliant PTWs imported from certain extra-EU emerging countries. In order

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to maintain fair competition among all market operators, it is necessary to ensure consistent quality and efficiency of type-approval and conformity of production procedures.

Research and development costs will affect both PTW and component industries, with a more severe impact for smaller PTW and component manufacturers, among which some are SMEs. This impact is expected to be exacerbated by the current European economic background, with a potentially stronger and more direct repercussion on smaller PTW manufacturers and the upstream component manufacturers.

The implementation of the envisaged measures should ensure enough lead time allowing PTW and component industries to plan development and production, and to structurally withstand the associated investments. The implementation dates proposed by ACEM for Euro 4 and Euro 5 take into account these factors. The same applies to the ACEM commitment on advanced braking systems, which is also based on the recognition that production capacities of ABS suppliers based in Europe would not be able to respond to a blanket application of ABS to all motorcycles. The ACEM commitment ensures a progressive building up of production capacities in harmony with consumer demand.

The simplification of the legislation would benefit all market players. In the current economic context, phasing in of environmental standards is furthermore necessary, as well as a market-aware approach to advanced braking systems. Together, these are the conditions for maintaining or developing the competitiveness of the industry.

Question 19: What will be the impact of the measures on employment in the EU?

The PTW sector in the EU currently guarantees jobs to over 200.000 people, directly or indirectly (manufacturing, plus up-stream, downstream activities). The blanket application of all the measures proposed in this consultation would provoke price increases far beyond market acceptance, resulting in severe drop of the demand, which would inevitably reduce employment in the PTW sector. For the PTW manufacturers, this would most likely translate in job reduction; for upstream (component suppliers) and downstream (dealerships) SMEs, the consequences could lead to closing businesses, and/or relocating outside the EU.

Employment in the PTW sector is highly sensitive to the measures proposed and their implementation schemes.



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Question 20: Do you think that the measures proposed could have a significant impact on the final price of the vehicles? If yes, which ones?

The proposed new measures would by definition imply additional new tests, with their corresponding costs. At best, one could expect that the simplification of the legislation would bring some savings to the industry, resulting eventually in a partial compensation in terms of type-approval costs, in the long term. This balance would also be improved by ensuring the removal of unnecessary hurdles to the circulation of goods within the EU such as the existing optional power limit, which currently generates additional technical, logistic and administrative costs.

All the additional environment and safety measures would generate significant development costs, which would need to be transferred to the consumers as well as the additional component costs. As an illustration of the foreseeable impact, for the most important market segment - light PTW up to 125cc – a blanket ABS legislative approach linked with a premature implementation of new environmental standards could represent a price increase in the range of 30% (for mid-sized motorcycles, in the range of 15%). Even in a context of a booming market, this type of increase is inconceivable for the majority of the consumers.

A blanket application of all the measures would be incompatible with the PTW market.

The implementation dates proposed by ACEM for Euro 4 and Euro 5 and the ACEM commitment on advanced braking systems, take into account today's reality of the market, its future evolution and customer acceptance.