



September 2010

ACEM Position on the revision of directive 2009/40/EC on roadworthiness tests for motor vehicles

ACEM, the Motorcycle Industry in Europe, is the professional body representing the interests and combined skills of 12 Powered Two-Wheelers manufacturers, and 17 national associations out of 13 European countries. ACEM directly represents a total of 24 Powered Two-Wheeler brands (PTWs: motorcycles and mopeds).

Executive Summary

Roadworthiness tests are periodic inspections of the entire registered vehicle population regardless of service history against minimum safety and environment standards.

The recent recast of the directive on roadworthiness tests for motor vehicles (2009/40/EC) provides the opportunity to reflect on the inclusion of L category vehicles under the scope of the directive. Currently L category vehicles¹ are the only registered category of vehicles not falling under the scope of Directive 2009/40/EC. L category vehicles are addressed through National legislation, with 15 EU Member States having introduced safety checks and 8 Member States having introduced environmental checks on PTWs (L1 mopeds and L3 motorcycles).

Directive 2009/40/EC on roadworthiness testing identifies the category of vehicles to be periodically checked and the minimum requirements in terms of the frequency of checks (Annex1). It also includes a list of the items to be checked (Annex 2).

In view of upcoming revision of the directive, ACEM supports the inclusion of L category vehicles under the scope of 2009/40/EC, with appropriate checks and periodicity requirements, taking into account these vehicles' patterns of usage and customer acceptance. If needed, priority should be given to the inclusion of L1 and L3 category vehicles, which represent the majority of the EU market.

This would provide a European harmonisation of minimum requirements, with benefits in terms of road safety and environment. Roadworthiness tests will also contribute to improving the knowledge of the PTW EU fleet, in terms of number of vehicles, age of vehicles and annual mileage.

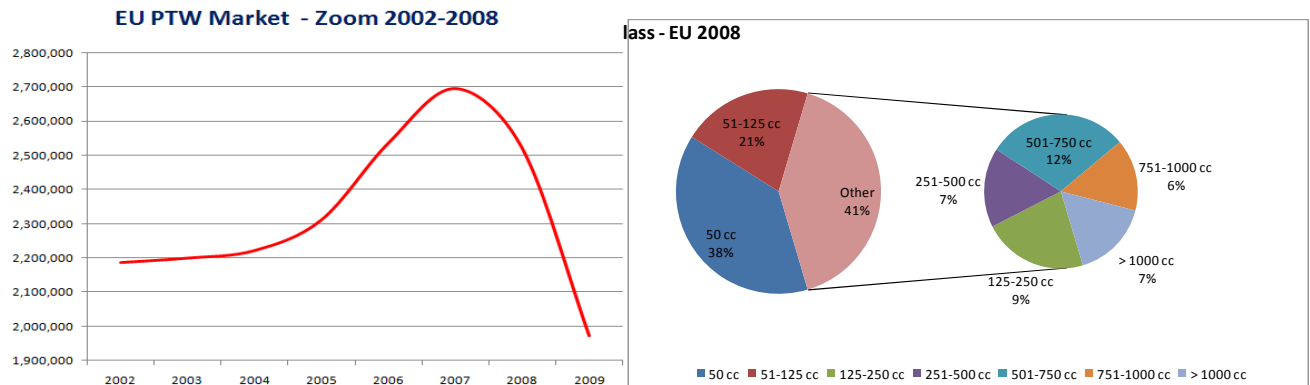
Background information about PTW market, fleet, mileage and Manufacturers warranty and servicing programmes

Every year, between 2,2 M and 2,7 M new PTWs are sold on the EU market (due to the impact of the economic and financial crisis, sales in 2009 dropped to just under 2M units). 38% of these new vehicles are L1 category vehicles (mopeds), the rest mostly being L3 category vehicles (motorcycles). 75% of all new PTWs sold are under 500 cc.

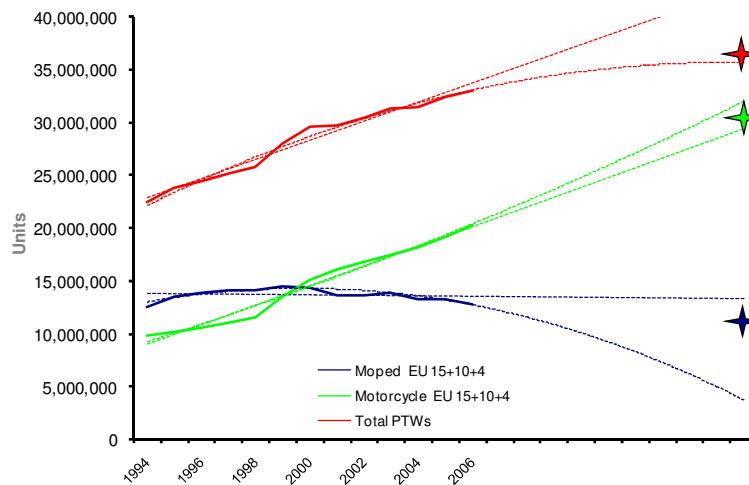
¹ L category vehicles as defined in Directive 2002/24/EC comprise of mopeds (L1), moped tricycles (L2), motorcycles (L3), motorcycles with sidecar (L4), tricycles (L5) and quadricycles (L6 & L7)



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Source: ACEM



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The EU PTW fleet has been increasing over the last fifteen years. It is now estimated at around 33M vehicles, and according to long term trends should increase to 37M in 2020. Every 10 years, two thirds of the motorcycle fleet and three quarters of the moped fleet are renewed.

PTW average annual mileage varies significantly. It is mainly dependant on vehicle class, type of usage and weather, but it is always substantially lower than for cars by a factor ranging from 3 to 5, dependant on the vehicle category.

In fact, compared to cars European average annual mileage (15000 Km/year, *source Eurostat*), available data for PTWs (*sources: France, GEMA²; Italy, Doxa³*) provide the following information:

- L1 mopeds: ≤ 50cc: 2800 Km/year average

² Groupement des Entreprises Mutuelles d'Assurances – www.gema.fr

³ www.doxa.it



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- L3 motorcycles: ≤ 125 cc: 4400 Km/year average
 > 125 cc: 5300 Km/year average

PTW manufacturers members of ACEM all provide a standard 24 months warranty coverage on new vehicles. Servicing programmes foresee a first routine check to be performed after 1000 - 1500 km, to be followed by regular checks every 8000 - 12000 km, with some models now reaching 20000 km. These checks concern safety and environmental parameters of the vehicles, and are important to ensure their good working conditions.

De facto, for PTWs and for cars, following the first routine check, the second regular check foreseen by servicing programmes is generally performed around after 24 months of average use. The third servicing will be foreseen after another 24 months of average use, which coincides with the first periodic inspection, according to the minimum requirements foreseen in Directive 2009/40/EC.

ACEM proposals for items to be checked on PTWs

Type-approval requirements determine motorcycle manufacturers having to invest into more complex and refined technologies to ensure the vehicle's compliance to higher standards. However, correct maintenance is necessary to guarantee the vehicle's proper environmental performance over its lifetime. Servicing also makes an important contribution to road safety, ensuring the good working conditions of the vehicle, in particular wheels, tyres, brakes and lighting.

Currently, a majority of Member States have introduced PTW periodic inspection for safety and, increasingly, for environmental reasons.

ACEM support the inclusion of PTWs in the scope of Directive 2009/40/EC, with appropriate periodicity requirements for:

- 1) Safety (Tyres, Brakes, Lights, Anti-tampering)
- 2) Environment (Exhaust emissions, Noise)

In light of the above, ACEM proposes that the following items (from the list in Directive 2009/40/EC, Annex 2, as modified by Directive 2010/48/EC) should be checked during the periodic inspection of PTWs:

1. Braking systems: Efficiency test, brake pads, overall condition of the system
2. Steering: steering and fork conditions
3. Visibility: rearview mirrors, e-markings
4. Lamps, reflectors and electrical equipment: correct functioning and adjustment
5. Axles, wheels, tyres, suspension: general condition, tyre e-marking
6. Chassis and chassis attachments: general condition
7. Other equipment
- 8.1 Noise: condition of exhaust system, presence of silencer, e-markings
- 8.2 Exhaust emissions⁴

Most of these items being checked through visual inspection (with the exception of brakes and exhaust emissions), this will contribute to keeping inspections simple, limiting the need for special equipment, and thus the cost to the consumer.

⁴ See Annex with proposed modifications to Annex II, 8., of 2010/48

Expected benefits

Roadworthiness tests on PTWs contribute to improving the knowledge of the PTW EU fleet, in terms of number of vehicles, age of vehicles and annual mileage. They also provide the following benefits:

1. Safety: MAIDS⁵ confirms that lack of proper vehicle maintenance is a contributing factor in PTW accidents (5% of all PTW accident contributing factors).
 - Periodic inspection reduces the incidence of safety related defects of the tyres (according to recent analysis, it is estimated that currently 20% of the PTW fleet is equipped with non type approved tyres), the brakes and the lights, particularly those of which the owner is unaware
 - Periodic inspection addresses the growing number of urban commuters, less motivated by technical features and maintenance;
 - Periodic inspection is likely to discourage tampering of L1 mopeds.
2. Environment: LAT⁶, evaluating the potential impact and cost effectiveness of different environmental measures currently evaluated for PTWs, confirms that periodic inspection “ is one of the most effective measures that can be taken to reduce emissions. The decrease of emissions achieved in 2012 is 5% for HC and 6% for CO saving in the period some 19 kt of HC and 140 kt of CO. [...] The total cost effectiveness is better than the introduction of some of the emission standards so far.”
 - Periodic inspection contributes to maintain polluting and noise emissions controls installed as original equipment;
 - Periodic inspection supports durability requirements and reduces tampering;
 - Periodic inspection reduces the use of illegal replacement exhaust silencing systems.

ACEM proposals for periodicity of roadworthiness tests on PTWs: 4-2-2

Based on the above information in terms of warranty, servicing and annual mileage, as well as practices currently in use within the EU, ACEM proposes that minimum requirements for periodicity of roadworthiness tests (Directive 2009/40/EC, Annex 1) follow the same pattern currently applied to private passenger cars: four years after the date on which the vehicle was first used, and thereafter every two years. This should cover at least L1 and L3 category vehicles, while non registered and historic PTWs should be excluded from the scope of the Directive.

This 4-2-2 periodicity requirement is compatible with the wide diversity of PTW fleets present in the different EU Member states, and different patterns of usage. Italy, having the largest L category fleet in Europe (around a third of the EU fleet) supports the 4-2-2 frequency. Member states wishing to so do remain free to adopt a higher frequency.

The 4-2-2 periodicity is also in line with the limited cost associated with the purchase and the maintenance of the majority of powered two-wheelers, and would therefore appear to be compatible with consumers' willingness to actually perform the foreseen inspections, especially in the current economic context. The combination of the first service interval taking place within the warranty

⁵ MAIDS, Motorcycle Accidents In-Depth Study, <http://www.maids-study.eu/>

⁶ LAT, Laboratory on Applied Thermodynamics,
http://ec.europa.eu/enterprise/newsroom/cf/itemsshortdetail.cfm?item_id=3495&lang=en



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period (on average, after two years from registration) and the first periodic inspection taking place after four years from registration ensures adequate servicing of the vehicle. The need for this proportionality principle has also been underlined by French authorities in their recent consideration of a national roadworthiness testing requirement for PTWs (DSCR 2008).

Conclusions

The 4-2-2 periodicity provides a necessary and realistic first harmonisation step for periodic inspections on L category vehicles under the scope of Directive 2009/40/EC, and in the context of current revision of the Directive should extend the scope to at least L1 and L3 categories. ACEM believes that such 4-2-2 inclusion under the scope of Directive 2009/40/EC can provide cost-effective benefits in terms of safety and environmental improvements, as well as improved knowledge at EU level of the mobility patterns of these vehicles. Based on data gathered through periodic inspections in the EU27 following this first harmonisation step, it will be possible to objectively evaluate whether different items, higher frequencies, or indeed further L categories should further be considered at EU level and establish a roadmap towards such objective.

Technical Annexes:

- Roadworthiness test for mopeds and motorcycles - A proposal from Industry (ppt)
- Proposed modifications Annex II, 8., of Directive 2010/48
- Mängelstatistik2008_PTWextract, Deutsches Kraftfahrzeuggewerbe, 2009
- [THE MOT INSPECTION MANUAL MOTOR BICYCLE AND SIDE CAR TESTING:](http://www.transportoffice.gov.uk/crt/doitonline/bl/mottestingmanualsandguides/mottestingmanualsandguides.htm)
<http://www.transportoffice.gov.uk/crt/doitonline/bl/mottestingmanualsandguides/mottestingmanualsandguides.htm>
- Italian PTWs roadworthiness_testing
- Roadworthiness testing and historic motorcycles