Approval and market surveillance of two- or three-wheel vehicles and quadricycles

2010/0271(COD) - 19/03/2018 - Follow-up document

The Commission presented a report on the effects of the Euro 5 environmental step for L-category vehicles (motorcycles and mopeds, all-terrain vehicles (quads) and other small three- or four-wheel motor vehicles).

Purpose of the report: as a reminder, Regulation (EU) No 168/2013 establishes the Euro 4 and Euro 5 emission limit values and the associated technical requirements and test procedures for the Euro 5 step. Annex IV to the Regulation sets out the timetable for the introduction of the different tests and other technical requirements with regard to type-approval:

- the Euro 4 emission limits were introduced for new vehicles of certain subcategories on 1 January 2016 but it was only on 1 January 2017 that these limits became mandatory for all new types of vehicles;
- regarding the Euro 5 emission limits, the Regulation provides that they shall become mandatory for all new types of vehicles of all sub-categories as of 1 January 2020.

In order to underpin this two-step approach, Regulation (EU) No 168/2013 requires the Commission to conduct an environmental effect study through modelling, technical feasibility and cost-effectiveness analysis based on the latest available data.

On the basis of the conclusions of this study, the Commission presented a report covering the following aspects:

- an analysis of the feasibility and cost-effectiveness of the enforcement dates of the Euro 5 level;
- an analysis of the adequacy of the Euro 5 emission limits referred to in Annex VI and OBD threshold in Annex VI of the Regulation in light of the most recent available data;
- a cost-benefit analysis of the foreseen introduction of OBD stage II at the Euro 5 level for (sub) categories L3e, L5e, L6e-A and L7e-A and;
- a review of the durability mileage for the Euro 5 level referred to in Annex VII (A) and the deterioration factors for the Euro 5 limit referred to in Annex VII (B) of this Regulation.

Main conclusions: based on its assessment of the study and targeted stakeholders consultations it conducted throughout the study's total duration, the Commission draws the following final conclusions:

- the assessment generally indicates that the existing Euro 5 emission limits, dates, requirements and test procedures, set out in Regulation (EU) No 168/2013, are both feasible and cost-effective;
- the introduction date for the Euro 5 step for mini cars (L6e-B), three wheel mopeds for utility purposes (L2e-U) and the enduro and trail motorcycles (L3e-AxE; L3eAxT): the adjustments to the emission control system needed cannot be introduced by 2020 in a cost-effective way for the engines currently fitted in those vehicles. An extra lead time of two years should allow manufacturers to move away from Euro 4 powertrains and introduce the Euro 5 step in a cost-beneficial way for these vehicle categories;
- OBD II requirements: there is a need to change the window of misfire detection and to extend the lead time for the introduction of catalyst monitoring to ensure accurate monitoring of the emission control systems;
- in Use Performance Ratios (IUPR) introduced at the Euro 5 step: IUPR should be implemented gradually, allowing for an introductory period to enable that type-approval authorities and manufacturers become familiar with the IUPR functionality;
- the mathematical durability procedure for environmental performance requirements should be phased out. The mathematical durability procedure does not reflect properly the actual deterioration of the environmental performance of a vehicle during its lifetime. Under the mathematical approach, new vehicles are only driven for 100 km during which they are tested, which does not reflect the ageing of the emission control device over the lifetime of the vehicle. Therefore, this method does not guarantee the environmental performance during the entire life of a vehicle;
- the drive cycles used for the durability requirements: a complete phasing out of the AMA cycle after 2020 is not necessary, as this is still useful for vehicles with a moderate and low speed profile, for which it provides the same accuracy as the SRCLeCV. Phasing out is therefore only recommended for larger motorcycles;
- mileage accumulation durability procedure: there is a need to introduce a bench ageing procedure as an alternative to full and half mileage accumulation.

In accordance with the outcome of the study, the Commission will consider making appropriate proposals for future amendments to the type approval legislation.