

**PROPOSAL FOR ESTABLISHMENT OF AN INFORMAL WORKING GROUP
ADDRESSING THE ENVIRONMENTAL AND PROPULSION PERFORMANCE
REQUIREMENTS FOR VEHICLES OF CATEGORY L**

A. INTRODUCTION

1. The proposal for setting up an informal working group regarding environmental and propulsion performance requirements (EPPR) for L-category vehicles operating under GRPE comes at the initiative of the European Union, represented by the European Commission, DG Enterprise and Industry. L-category vehicle is the family name of light vehicles such as powered cycles, mopeds, motorcycles, tricycles and quadricycles. The intention of setting up the group was announced during the GRPE meetings in January and June 2012 and in the WP.29 plenary session in June 2012.

2. Through this initiative, the sponsor and the international partners that have shown an interest to collaborate on these topics aim to:

- exchange information on current and future regulatory requirements in the area of environmental and propulsion performance requirements for L-category vehicles,
- minimize the differences between these regulatory requirements, with a view toward facilitating the development of L-category vehicles to comply with such international requirements;
- where possible, develop common requirements in the form of one or more UN Regulations and one or more UN Global Technical Regulations (UN GTR).

3. The working group should be established under both the 1958 and 1998 Agreements to create the basis for the possible development of Regulations and GTRs in the area of EPPR. All global partners are invited to join the group and share experiences regarding setting relevant regulatory requirements as well as from the market.

4. The group should aim to replicate the successful approach of the GTR No 2 subgroup operating under GRPE, which facilitated an exchange of information among participants when each party had domestic regulatory requirements for an emission laboratory test cycle to measure exhaust gas emissions from a motorcycle after cold start. In 2011 a unique event took place in which contracting parties endorsed amendment 2 to Global Technical Regulation No. 2 putting forward global exhaust gas emission limit values for the type I emissions test for motorcycles (WMTC). Building on this success the process of international collaboration should continue to further harmonise requirements in the area of EPPR for the whole range of L-category vehicles.

5. Similar as for passenger cars the powertrain technology for L-category vehicles is fairly mature, but recent advances in energy storage (batteries, capacitors, flywheels) have largely improved electric and hybrid-electric vehicles' performance and made them a valid choice for consumers. Electric vehicles, like hydrogen and fuel cell vehicles, represent a promising technology in terms of addressing climate change, improving air quality and cutting oil dependency. The current regulatory pressure to lower CO₂ and pollutant emissions

is helping to drive an increasing market penetration of electric and hybrid electric vehicles but also by using light vehicles such as those in the L-category vehicle family. Furthermore, many governments support the development and deployment of electric and hybrid-electric vehicles by financing research or offering incentives for consumers. Consequently, the global L-category vehicle industry is investing in research and development, as well as in the production capacity for electric vehicles, at a scale not seen in the past.

6. Together with support measures for industry development, many governments have already started to define their regulatory framework for electric and hybrid-electric vehicles - mostly in order to ensure their safety and thus gain consumer confidence -- but also in consideration of environmental performance measures.

7. Because of the relatively small volume of electric vehicles and their components currently produced, any degree of convergence between regulatory obligations can result in economies of scale and cost reductions for L-category vehicle manufacturers – critical in the context of economic recovery and the general cost-sensitiveness of the industry.

8. The objective of the new informal group is to seek regulatory convergence in the area of EPPR for vehicles equipped with conventional combustion engine technology as well as pure electric and hybrid electric vehicles or other advanced propulsion technology on a global scale, via the framework of the 1958 and 1998 Agreements. This avenue of cooperation is particularly interesting in consideration of the fact that the regulatory structure for electromobility technologies is currently being developed on both sides of the Atlantic and in Asia, so that there exists a unique opportunity to develop common approaches also for state-of-the-art propulsion technology.

B. AREAS OF WORK IN THE WORKING GROUP

9. The main activities of the group are proposed to be focussing on revising or establishing the following environmental performance verification test types:

- I Tailpipe emissions test after cold start;
- II Tailpipe emissions test at (increased) idle / free acceleration test;
- III Emission test of crankcase gases;
- IV Evaporative emissions test;
- V Durability testing of pollution control devices;
- VI Test type not attributed;
- VII Measurement of CO₂ emissions, fuel consumption, electric energy consumption and electric range determination;
- VIII On-board diagnostics environmental verification tests.

10. In addition the group should assess and develop propulsion performance requirements for conventional vehicles equipped with combustion engines only as well as for advanced concepts such as electric and hybrid electric powertrains. Unified rules and test procedures to measure power and torque for this wide range of propulsion technologies fitted on L-category vehicles as well as unified measurement of maximum design vehicle speed and/or power for restricted L-category vehicles should be developed and agreed upon.

11. For both environmental and propulsion performance requirements all possible fuels should be taken into consideration: petrol, petrol-ethanol mixtures, diesel, biodiesel but also

gaseous fuels such as CNG, LPG and Hydrogen. In addition it should be assessed whether L-category vehicle classification can be further optimised and refined.

C. Existing regulations and directives:

12. Stock taking of the regional regulations and directives applicable to L-category vehicles as well as UNECE Regulations 40, 47, 83, 101, GTR No2 and the work in progress regarding the world harmonised test protocol for light duty vehicles (WLTP) should be a first step on which the group could base its work. In order to alleviate and support the group to the maximum amount possible to kick-start its activities the European Commission services has commissioned a study that has this stocktaking as one of its main objectives. The results of the study will be presented to the group in due course.

D. Timeline

13. A project plan with timings based on the activity required to deliver the objectives of the group shall be developed and submitted to GRPE in June 2013. The plan will be based on the initial draft roadmap and will regularly be reviewed and updated to reflect the latest situation on progress and the feasibility of the timeline.

- **12-16 November 2012:** World Forum for Harmonization of Vehicle Regulations (158th session of WP.29) – agreement on establishment of informal working group by adoption of the mandate regarding environmental and propulsion performance requirements for L-category vehicles.
- **18 January 2013:** .GRPE (65th session) first proposed official meeting of the informal working group. Review and adoption of the Rules of Procedure and Terms of Reference.
- **12 – 15 March 2013:** WP.29 (159th session) progress report and adoption of the Rules of Procedure and Terms of Reference.
- **4-7 June 2013:** .GRPE (66th session) second proposed official meeting of the informal working group. Presentation of draft final roadmap and related programme management items to GRPE submitted for adoption.
- **12-15 November 2013:** World Forum for Harmonization of Vehicle Regulations (158th session of WP.29), adoption of GRPE decision regarding the final roadmap and related programme management items.
- **2013-2016:** meetings of the working group, regularly reporting to GRPE and the Administrative Committee
- **2016:** possible adoption of UN Regulation(s) and Global Technical Regulation(s)

14. The respective chair will manage the various aspects of the work ensuring that the agreed action plan is implemented properly and that milestones and timelines are set and met.