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COVER NOTE

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To:	Mr Uwe CORSEPIUS, Secretary-General of the Council of the European Union
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Subject:	COMMISSION DELEGATED REGULATION (EU) No …/.. of 16.12.2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof

Delegations will find attached document C(2013) 8954 final.

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Brussels, 16.12.2013
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COMMISSION DELEGATED REGULATION (EU) No …/..

of 16.12.2013

supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof

(Text with EEA relevance)

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE DELEGATED ACT

(a) Grounds for and objectives of the delegated act

The term 'L-category vehicles' covers a wide range of different vehicle types with two, three or four wheels, e.g. two- and three-wheel mopeds, two- and three-wheel motorcycles, motorcycles with side-cars and light four-wheel vehicles (quadricycles) such as on-road quads and quadri-mobiles.

Type-approval requirements applying to new L-category vehicles are currently set out in Directive 2002/24/EC of the European Parliament and of the Council[1] (the 'Framework Directive'). In addition, a series of Directives referred to in the Framework Directive contain detailed technical requirements relating to L-category vehicles.

The Commission has identified the following key concerns as regards the current provisions for the type-approval of new L-category vehicles and these concerns need to be addressed:

– the complexity of the legal framework;

– the level of emissions and their increase as a proportion of total road transport emissions, which are decreasing overall;

– vehicle functional safety aspects related to type-approval requirements;

– the lack of a legal framework for vehicles fitted with new technologies; and

– the availability on the internal market, and registration of, certain imported vehicles, systems, components or separate technical units which do not comply with the current type-approval requirements regarding vehicle functional safety or environmental protection.

This delegated act consolidates current type-approval requirements regarding the environmental and propulsion unit performance of L-category vehicles, updating them in line with technical progress and simplifying them as much as possible by referring to international requirements in this area (e.g. United Nations Economic Commission for Europe (UNECE) regulations like Global Technical Regulation No 2).

(b) Existing provisions in the area of the delegated act on environmental and propulsion unit performance requirements

– Framework Directive 2002/24/EC;

– Directives 97/24/EC[2] regarding certain components and characteristics of L-category vehicles, including the environmental performance requirements of such vehicles, and 95/1/EC[3] regarding their propulsion unit performance.

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1 OJ L 124, 9.5.2002, p. 1.
2 OJ L 226, 18.8.1997, p. 1.
3 OJ L 52, 8.3.1995, p. 1.

Type-approval legislation is addressed in the CARS 21 initiative launched in 2005 to carry out a regulatory and policy review of the automotive sector to inform the Commission's thinking on future policy options. CARS 21 was partly a response to concerns expressed by automotive industry stakeholders that the cumulative cost of regulation had a negative effect on competitiveness and made vehicles unnecessarily expensive. The CARS 21 Final Report concluded that, while most of the legislation in force should be maintained for the protection of citizens and the environment, arrangements should be simplified by means of rationalisation and international harmonisation. Plans for this simplification were set out in the Commission's Second progress report on the strategy for simplifying the regulatory environment. Any initiative taken should be aligned with this strategy. Referring to UNECE regulations that replace current EU legislation is a particularly effective way of reducing complexity and the burden on vehicle manufacturers, approval authorities and technical services.

In line with the European strategy on air quality, the European Union has constantly tightened the emission standards for motor vehicles, in particular for hydrocarbons, carbon monoxide, nitrogen oxides and particulate matter. This will now also be the case for L-category vehicles with this delegated act regarding their environmental performance.

For these reasons, this delegated act on vehicle environmental and propulsion unit performance requirements stipulates detailed technical provisions and test procedures, with reference to the Codecision act Regulation (EU) No 168/2013, to help achieve the EU's goals in terms of environmental objectives and setting harmonised, uniform rules for vehicle manufacturers and other stakeholders to determine the propulsion unit performance of L-category vehicles.

2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

(a) Consultation of interested parties

The European Commission launched a public consultation to gather the views of interested parties on its proposals for new legislation on L-category vehicle approval. The consultation document provided background and asked for opinions on the proposals.

The consultation targeted the groups most affected, including type-approval authorities, manufacturers, suppliers and consumers. It was published in English, French and German on a dedicated website.

The Commission has acknowledged the receipt of all responses to the consultation, and these have been made publicly available.

(b) Consultation methods, main sectors targeted and general profile of respondents

The Commission consulted stakeholders in a number of ways:

The public consultation, covering possible controversial aspects of the Codecision proposal, took place on the internet between 22 December 2008 and 27 February 2009. Reactions were received from Member States, the L-category vehicle and component manufacturing industry, transport organisations, user organisations, other non-governmental organisations and private individuals.

The contents of the draft Codecision proposal and the delegated acts were discussed in several meetings of the Commission's Working Group (MCWG) on L category vehicles.

Finally, many bilateral meetings were held in which individual stakeholders could freely express their views.

(c) Impact assessment

For each of the main aspects of the Codecision act, including parts of this delegated act, the possible economic, environmental, safety and social advantages and disadvantages of the various options were assessed in both qualitative and quantitative terms. The options were then compared and one preferred option, or a logical combination of two options, was identified and described. These preferred options form the basis of the Codecision act and its delegated acts.

However, many detailed technical aspects of this delegated act on environmental and propulsion unit performance requirements were carried over from the repealed Directives referred to in Article 81 of the Codecision act and for these an impact assessment was deemed unnecessary.

The draft impact assessment report was scrutinised by the Impact Assessment Board, whose recommendations for its improvement were incorporated as far as possible. The Board's opinion on the report was published together with the Codecision proposal, the final report and its executive summary.

3. LEGAL ELEMENTS OF THE DELEGATED ACT

(a) Legal basis

The legal basis of this delegated act is Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles[4].

(b) Choice of instruments

The use of a Regulation is considered to be appropriate in that it provides the required assurance for compliance while not requiring transposition into Member States' legislation.

The delegated act uses the 'split-level approach' originally introduced at the request of the European Parliament and used in other legislation for EU type-approval of motor vehicles. This approach provides for legislation in three steps:

– the fundamental provisions and scope are laid down by the European Parliament and the Council in a Regulation based on Article 114 TFEU in accordance with the ordinary legislative procedure;

– the technical specifications associated with the fundamental provisions are laid down in three delegated acts (Article 290):

  (a) a Regulation on environmental and propulsion unit performance requirements and related subjects, containing requirements on:

    (1) Test type I requirements: tailpipe emissions after cold start;

[4] OJ L60, 2.3.2013, p. 52

(2) Test type II requirements: tailpipe emissions at (increased) idle and free acceleration;

(3) Test type III requirements: emissions of crankcase gases;

(4) Test type IV requirements: evaporative emissions;

(5) Test type V requirements: durability of pollution-control devices;

(6) Test type VII requirements: energy efficiency with respect to CO_2 emissions, fuel consumption, electric energy consumption and electric range;

(7) Test type VIII requirements: OBD environmental tests;

(8) Test type IX requirements: sound level;

(9) Testing procedures and technical requirements on maximum design vehicle speed, maximum torque, and maximum continuous rated or net power;

(10) Vehicle and propulsion family definition; and

(11) Amendment of section A of Annex V to Regulation (EU) No 168/2013.

(b) a Regulation on vehicle functional safety requirements; and

(c) a Regulation on vehicle construction requirements; and

– An Implementing Act (Article 291 of TFEU) sets out the administrative provisions regarding the information document, the definitions in the type-approval certificate, the certificate of conformity and associated production conformity requirements, etc.

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(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles[5], and in particular Article 18(3), Article 23(12), Article 24(3) and Article 74 thereof,

Whereas:

(1) The term 'L-category vehicles' covers a wide range of light vehicle types with two, three or four wheels, e.g. powered cycles, two- and three-wheel mopeds, two- and three-wheel motorcycles, motorcycles with side-cars and light four-wheel vehicles (quadricycles) such as on-road quads, all-terrain quads and quadrimobiles.

(2) Regulation (EU) No 168/2013 provides for the possibility of applying regulations of the United Nations Economic Commission for Europe (UNECE) for the purpose of EU whole vehicle type-approval. Under that Regulation, type-approval in accordance with UNECE regulations which apply on a compulsory basis is regarded as EU type-approval.

(3) The compulsory application of UNECE regulations helps avoiding duplication not only of technical requirements but also of certification and administrative procedures. In addition, type-approval that is directly based on internationally agreed standards could improve market access in third countries, in particular those which are contracting parties to the Agreement of the United Nations Economic Commission for Europe concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted to or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions ('Revised 1958 Agreement'), acceded by the Union by Council Decision 97/836/EC[6], and thus enhance the Union

[5] OJ L60, 2.3.2013, p. 52.

[6] Council Decision 97/836/EC of 27 November 1997 with a view to accession by the European Community to the Agreement of the United Nations Economic Commission for Europe concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted to or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions ('Revised 1958 Agreement') (OJ L 346, 17.12.1997, p. 78).

industry's competitiveness. However, to date the available UNECE regulations are either outdated or not existing and therefore these are revisited and upgraded for technical progress.

(4) Therefore, Regulation (EU) No 168/2013 provides for the repeal of several directives concerning the approval of L-category vehicles, their systems, components and separate technical units intended for those vehicles in the areas of environmental and propulsion unit performance requirements. For the purposes of EU type-approval those directives should be replaced first with the provisions of this Regulation. On the long term, when the revisiting process at the level of the UN is finished, equivalent UNECE regulations will be available, which then will allow to replace the text of this Regulation with making reference to those UNECE regulations.

(5) In particular UNECE regulation No 41 on noise emissions of categories L3e and L4e motorcycles was updated in 2011 for technical progress. UNECE regulation No 41 should therefore be made obligatory in EU type-approval legislation and replace Annex III to Chapter 9 of Directive 97/24/EC[7] in order for motorcycles to comply with only one set of motorcycle sound requirements, which are world-wide accepted by the contracting parties to the Revised 1958 Agreement. UNECE regulation No 85 on measurement of net power of electric motors should also be made obligatory with the same objective of mutual recognition between the contracting parties to the Revised 1958 Agreement in the area of propulsion unit performance requirements for electric motors.

(6) The Euro 4 and 5 environmental steps are such measures designed to reduce emissions of particulate matter and ozone precursors such as nitrogen oxides and hydrocarbons. A considerable reduction in hydrocarbon emissions from L-category vehicles is necessary to improve air quality and comply The exhaust system which is granted system type-approval with limit values for pollution, not only directly to significantly reduce the disproportionately high hydrocarbon tailpipe and evaporative emissions from these vehicles, but also to help reduce volatile particle levels in urban areas and possibly also smog.

(7) One of the measures against excessive hydrocarbon emissions from L-category vehicles is to limit the evaporative emissions to the hydrocarbon mass limits laid down in Annex VI(C) to Regulation (EU) No 168/2013. For this purpose, a type IV test has to be conducted at type-approval in order to measure the evaporative emissions of a vehicle. One of the requirements of the type IV Sealed House evaporative Emission Determination (SHED) test is to fit either a rapidly aged carbon canister or alternatively to apply an additive deterioration factor when fitting a degreened carbon canister. It will be investigated in the environmental effect study referred to in Article 23(4) of Regulation (EU) No 168/2013 whether or not it is cost effective to maintain this deterioration factor as alternative to fitting a representative and rapidly aged carbon canister. If the result of the study demonstrates that this method is not cost-effective a proposal will follow in due course to delete this alternative and should become applicable beyond the Euro 5 step.

(8) A standardised method for measuring vehicles' energy efficiency (fuel or energy consumption, carbon dioxide emissions as well as electric range) is necessary to ensure that no technical barriers to trade arise between Member States and also to ensure that customers and users are supplied with objective and precise information.

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7 OJ L 226, 18.8.1997, p. 1

(9) The methods for measuring propulsion unit performance including the maximum design vehicle speed, maximum torque and maximum continuous total power of L-category vehicles may differ from one Member State to the next, this might constitute barriers to trade within the Union. Therefore, it is necessary to draw up harmonised requirements for methods for measuring the propulsion unit performance of L-category vehicles in order to enable the approval of vehicles, systems, components or separate technical units to be applied for each type of such vehicle.

(10) Functional safety or environmental requirements call for restrictions on tampering with certain types of L-category vehicles. In order to avoid obstacles to servicing and maintenance by vehicle owners, such restrictions should be strictly limited to tampering which significantly modifies the environmental and propulsion unit performance of the vehicle and functional safety in a harmful way. As harmful tampering of the vehicle's powertrain affects both the environmental and functional safety performance, the detailed requirements regarding propulsion unit performance and noise abatement set out in this Regulation should also be used as reference for enforcement of powertrain tampering prevention.

(11) Part A of Annex V to Regulation (EU) No 168/2013 makes reference to the 8 test types that allow assessment of the environmental performance of the L-category vehicle to be approved. It is appropriate to set out detailed test requirements in this delegated act as well as to amend Annex V (A) of Regulation (EU) No 168/2013 by linking the test limits agreed by Council and the European Parliament with detailed test procedures and technical requirements set out in this Regulation. A reference to the detailed test procedures and requirements set out in this Regulation should be inserted into Part A of Annex V to Regulation (EU) No 168/2013 by means of the amendments set out in Annex XII of this Regulation.

HAS ADOPTED THIS REGULATION:

CHAPTER I
SUBJECT MATTER AND DEFINITIONS

Article 1
Subject matter

This Regulation establishes the detailed technical requirements and test procedures regarding environmental and propulsion unit performance for the approval of L-category vehicles and the systems, components and separate technical units intended for such vehicles in accordance with Regulation (EU) No 168/2013 and sets out a list of UNECE regulations and amendments thereto.

Article 2
Definitions

The definitions of Regulation (EU) No 168/2013 shall apply. In addition, the following definitions shall apply:

(1) ‘WMTC stage 1’ refers to the World harmonised Motorcycle Test Cycle laid down in UNECE Global Technical Regulation No 2[8] used as alternative type I emission test cycle to the European Driving Cycle as of 2006 for category L3e motorcycle types;

(2) ‘WMTC stage 2’ refers to the World harmonised Motorcycle Test Cycle laid down in the amended UNECE Global Technical Regulation No 2[9] which is used as compulsory type I emission test cycle in the approval of Euro 4 compliant (sub-)categories L3e, L4e, L5e-A and L7e-A vehicles;

(3) ‘WMTC stage 3’ refers to the revised WMTC referred to in Annex VI(A) of Regulation (EU) No 168/2013 and is equal to the World harmonised Motorcycle Test Cycle laid down in the amended UNECE Global Technical Regulation No 2[10] and adapted for vehicles with a low maximum design vehicle speed, which is used as the compulsory type I emission test cycle in the approval of Euro 5 compliant L-category vehicles;

(4) ‘maximum design vehicle speed’ means the maximum speed of the vehicle determined in accordance with Article 15 of this Regulation;

(5) ‘exhaust emissions’ means tailpipe emissions of gaseous pollutants and particulate matter;

(6) ‘particulate filter’ means a filtering device fitted in the exhaust system of a vehicle to reduce particulate matter from the exhaust flow;

(7) ‘properly maintained and used’ means that when selecting a test vehicle it satisfies the criteria with regard to a good level of maintenance and normal use according to the recommendations of the vehicle manufacturer for acceptance of such a test vehicle;

(8) ‘fuel requirement’ by the engine means the type of fuel normally used by the engine:

(a) petrol (E5);

(b) liquefied petroleum gas (LPG);

(c) NG/biomethane (natural gas);

(d) either petrol (E5) or LPG;

(e) either petrol (E5) or NG/biomethane;

(f) diesel fuel (B5);

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8 ‘Measurement procedure for two-wheel motorcycles equipped with a positive or compression ignition engine with regard to the emissions of gaseous pollutants, CO_2 emissions and fuel consumption (UN document reference ECE/TRANS/180/Add2e of 30 August 2005)’ including amendment 1 (UNECE document reference ECE/TRANS/180a2a1e of 29 January 2008).

9 The WMTC stage 2 is equal to the WMTC stage 1 amended by corrigendum 2 of addendum 2 (ECE/TRANS/180a2c2e of 9 September 2009) and corrigendum 1 of amendment 1 (ECE/TRANS/180a2a1c1e of 9 September 2009).

10 In addition, the corrigenda and amendments identified in the environmental effect study referred to in Article 23 of Regulation (EU) No 168/2013 will be taken into account, as well as corrigenda and amendments proposed and adopted by UNECE WP29 as continuous improvement of the world-harmonised test cycle for L-category vehicles.

(g) mixture of ethanol (E85) and petrol (E5) (flex fuel);

(h) mixture of biodiesel and diesel (B5) (flex fuel);

(i) hydrogen (H_2) or a mixture (H_2NG) of NG/biomethane and hydrogen;

(j) either petrol (E5) or hydrogen (bi-fuel);

(9) 'environmental performance type-approval' of a vehicle means the approval of a vehicle type, variant or version with regard to the following conditions:

(a) complying with Parts A and B of Annex V to Regulation (EU) No 168/2013;

(b) falling into one propulsion family according to the criteria set out in Annex XI;

(10) 'vehicle type with regard to environmental performance' means a set of L-category vehicles which do not differ in the following:

(a) the equivalent inertia determined in relation to the reference mass, in accordance with Appendices 5, 7 or 8 to Annex II;

(b) the propulsion characteristics set out in Annex XI regarding propulsion family;

(11) 'periodically regenerating system' means a pollution control device such as a catalytic converter, particulate filter or any other pollution control device that requires a periodical regeneration process in less than 4000 km of normal vehicle operation;

(12) 'alternative fuel vehicle' means a vehicle designed to run on at least one type of fuel that is either gaseous at atmospheric temperature and pressure, or substantially non-mineral oil derived;

(13) 'flex fuel H_2NG vehicle' means a flex fuel vehicle designed to run on different mixtures of hydrogen and natural gas or biomethane;

(14) 'parent vehicle' means a vehicle that is representative of a propulsion family set out in Annex XI;

(15) 'pollution-control device type' means a category of pollution-control devices that are used to control pollutant emissions and that do not differ in their essential environmental performance and design characteristics;

(16) 'catalytic converter' means an emission pollution-control device which converts toxic by-products of combustion in the ehaust of an engine to less toxic substances by means of catalysed chemical reactions;

(17) 'catalytic converter type' means a category of catalytic converters that do not differ as regards the following:

(a) number of coated substrates, structure and material;

(b) type of catalytic activity (oxidising, three-way, or of another type of catalytic activity);

(c) volume, ratio of frontal area and substrate length;

(d) catalytic converter material content;

(e) catalytic converter material ratio;

(f) cell density;

(g) dimensions and shape;

(h) thermal protection;

(i) an inseparable exhaust manifold, catalytic converter and muffler integrated in the exhaust system of a vehicle or separable exhaust system units that can be replaced;

(18) 'reference mass' means the mass in running order of the L-category vehicle determined in accordance with Article 5 of Regulation (EU) No 168/2013 increased with the mass of the driver (75 kg) and if applicable plus the mass of the propulsion battery;

(19) 'drive train' means the part of the powertrain downstream of the output of the propulsion unit(s) that consists if applicable of the torque converter clutches, the transmission and its control, either a drive shaft or belt drive or chain drive, the differentials, the final drive, and the driven wheel tyre (radius);

(20) 'stop-start system' means automatic stop and start of the propulsion unit to reduce the amount of idling, thereby reducing fuel consumption, pollutant and CO_2 emissions of the vehicle;

(21) 'powertrain software' means a set of algorithms concerned with the operation of data processing in powertrain control units, propulsion control units or drive-train control units, containing an ordered sequence of instructions that change the state of the control units;

(22) 'powertrain calibration' means the application of a specific set of data maps and parameters used by the control unit's software to tune the vehicle's powertrain, propulsion or drive train unit(s)'s control;

(23) 'powertrain control unit' means a combined control unit of combustion engine(s), electric traction motors or drive train unit systems including the transmission or the clutch;

(24) 'engine control unit' means the on-board computer that partly or entirely controls the engine or engines of the vehicle;

(25) 'drive train control unit' means the on-board computer that partly or entirely controls the drive train of the vehicle;

(26) 'sensor' means a converter that measures a physical quantity or state and converts it into an electric signal that is used as input to a control unit;

(27) 'actuator' means a converter of an output signal from a control unit into motion, heat or other physical state in order to control the powertrain, engine(s) or drive train;

(28) 'carburettor' means a device that blends fuel and air into a mixture that can be combusted in a combustion engine;

(29) ‘scavenging port’ means a connector between crankcase and combustion chamber of a two-stroke engine through which the fresh charge of air, fuel and lubrication oil mixture enters the combustion chamber;

(30) ‘air intake system’ means a system composed of components allowing the fresh-air charge or air-fuel mixture to enter the engine and includes, if fitted, the air filter, intake pipes, resonator(s), the throttle body and the intake manifold of an engine;

(31) ‘turbocharger’ means an exhaust gas turbine-powered centrifugal compressor boosting the amount of air charge into the combustion engine, thereby increasing propulsion unit performance;

(32) ‘super-charger’ means an intake air compressor used for forced induction of a combustion engine, thereby increasing propulsion unit performance;

(33) ‘fuel cell’ means a converter of chemical energy from hydrogen into electric energy for propulsion of the vehicle;

(34) ‘crankcase’ means the spaces in or external to an engine which are connected to the oil sump by internal or external ducts through which gases and vapour can escape;

(35) ‘permeability test’ means testing of the losses through the walls of the non-metallic fuel storage and preconditioning the non-metallic fuel storage material prior to fuel storage testing in accordance with Number C8 of Annex II to Regulation (EU) No 168/2013;

(36) ‘permeation’ means the losses through the walls of the fuel storage and delivery systems, which is generally tested by determination of the weight losses;

(37) ‘evaporation’ means the breathing losses from the fuel storage, fuel delivery system or other sources through which hydrocarbons breathe into the atmosphere;

(38) ‘mileage accumulation’ means a representative test vehicle or a fleet of representative test vehicles driving a predefined distance as set out in points (a) or (b) of Article 23(3) to Regulation (EU) No 168/2013 in accordance with the test requirements of Annex VI to this Regulation;

(39) ‘electric powertrain’ means a system consisting of one or more electric energy storage devices such as batteries, electromechanical flywheels, super capacitors or other, one or more electric power conditioning devices and one or more electric machines that convert stored electric energy to mechanical energy delivered at the wheels for propulsion of the vehicle;

(40) ‘electric range’, means the distance that vehicles powered by an electric powertrain only or by a hybrid electric powertrain with off-vehicle charging can drive electrically on one fully charged battery or other electric energy storage device as measured in accordance with the procedure set out in Appendix 3.3. to Annex VII;

(41) ‘OVC range’ means the total distance covered during complete combined cycles run until the energy imparted by external charging of the battery (or other electric energy storage device) is depleted, as measured in accordance with the procedure described in Appendix 3.3. to Annex VII;

(42) ‘maximum thirty minutes speed’ of a vehicle means the maximum achievable vehicle speed measured during 30 minutes as a result of the 30 minute power set out in UNECE regulation No 85;

(43) ‘propulsion unit performance type-approval’ of a vehicle means the approval of a vehicle type, variant or version with regard to the performance of the propulsion units as regards the following conditions:

(a) the maximum design vehicle speed(s);

(b) the maximum continuous rated torque or maximum net torque;

(c) the maximum continuous rated power or the maximum net power;

(d) the maximum total torque and power in the case of a hybrid application.

(44) ‘propulsion type’ means the propulsion units whose characteristics do not differ in any fundamental respect as regards maximum design vehicle speed, maximum net power, maximum continuous rated power and maximum torque;

(45) ‘net power’ means the power available on the test bench at the end of the crankshaft or equivalent component of the propulsion unit at the rotation speeds measured by the manufacturer at type-approval, together with the accessories listed in Tables Ap2.1-1 or Ap2.2-1 of Appendix 2 of Annex X, and taking into account the efficiency of the gearbox where the net power can only be measured with the gearbox fitted to the propulsion;

(46) ‘maximum net power’ means the maximum net power output from propulsion units that include one or more combustion engines, under full engine load operation;

(47) ‘maximum torque’ means the maximum torque value measured under full engine load operation;

(48) ‘accessories’ means all apparatus and devices listed in Table Ap2.1-1 or Ap2.2-1 of Annex X.

CHAPTER II
OBLIGATIONS OF THE MANUFACTURER REGARDING THE ENVIRONMENTAL PERFORMANCE OF VEHICLES

Article 3

Fitting and demonstration requirements related to the environmental performance of L-category vehicles

1. The manufacturer shall equip L-category vehicles with systems, components and separate technical units affecting the environmental performance of a vehicle that are designed, constructed and assembled so as to enable the vehicle in normal use and maintained according to the prescriptions of the manufacturer to comply with the detailed technical requirements and testing procedures of this Regulation.

2. The manufacturer shall demonstrate by means of physical demonstration testing to the approval authority that the L-category vehicles made available on the market, registered or entering into service in the Union comply with the detailed technical requirements and test procedures concerning the environmental performance of these vehicles laid down in Articles 5 to 15.

3. Where the manufacturer modifies the characteristics of the emission abatement system or performance of any of the emission-relevant components after the approved vehicle type with regard to environmental performance is placed on the market, the manufacturer shall report this to the approval authority without delay. The manufacturer shall provide evidence to the approval authority that the changed emission abatement system or component characteristics do not result in a worse environmental performance than that demonstrated at type-approval.

4. The manufacturer shall ensure that spare parts and equipment that are made available on the market or are entering into service in the Union comply with the detailed technical requirements and test procedures with respect to the environmental performance of the vehicles referred to in this Regulation. An approved L-category vehicle equipped with such a spare part or equipment shall meet the same test requirements and performance limit values as a vehicle equipped with an original part or equipment satisfying endurance requirements up to and including those set out in Article 22(2), Article 23 and Article 24 of Regulation (EU) No 168/2013.

5. The manufacturer shall ensure that type-approval procedures for verifying conformity of production are followed as regards the detailed environmental and propulsion unit performance requirements laid down in Article 33 of Regulation (EU) No 168/2013 and its Number C3 of Annex II.

6. The manufacturer shall submit to the approval authority a description of the measures taken to prevent tampering with the powertrain management system including the computers controlling the environmental and propulsion unit performance in accordance with Number C1 of Annex II to Regulation (EU) No 168/2013.

7. For hybrid applications or applications equipped with a stop-start system, the manufacturer shall install on the vehicle a ‘service mode’ that makes it possible, subject to environmental and propulsion unit performance testing or inspection, for the vehicle to continuously run the fuel-consuming engine. Where that inspection or test execution requires a special procedure, this shall be detailed in the service manual (or equivalent media). That special procedure shall not require the use of special equipment other than that provided with the vehicle.

Article 4
Application of UNECE regulations

1. The UNECE regulations and amendments thereto set out in Annex I to this Regulation shall apply to environmental and propulsion unit performance type approval.

2. Vehicles with a maximum design vehicle speed ≤ 25 km/h shall meet all the relevant requirements of UNECE regulations applying to vehicles with a maximum vehicle design speed of > 25 km/h.

3. References to vehicle categories L1, L2, L3, L4, L5, L6 and L7 in the UNECE regulations shall be understood as references to vehicle categories L1e, L2e, L3e, L4e, L5e, L6e and L7e respectively under this Regulation, including any sub-categories.

Article 5

Technical specifications, requirements and test procedures with respect to the environmental performance of L-category vehicles

1. The environmental and propulsion unit performance test procedures shall be performed in accordance with the test requirements laid down in this Regulation.

2. The test procedures shall be carried out or witnessed by the approval authority or, if authorised by the approval authority, by the technical service. The manufacturer shall select a representative parent vehicle to demonstrate compliance of the environmental performance of the L-category vehicles to the satisfaction of the approval authority complying with the requirements of Annex XI.

3. The measurement methods and test results shall be reported to the approval authority in the test report format pursuant to Article 32(1) of Regulation (EU) No 168/2013.

4. The environmental performance type-approval regarding test types I, II, III, IV, V, VII and VIII shall extend to different vehicle variants, versions and propulsion types and families, provided that the vehicle version, propulsion or pollution-control system parameters specified in Annex XI are identical or remain within the prescribed and declared tolerances in that Annex.

5. Hybrid applications or applications equipped with a stop-start system shall be tested with the fuel-consuming engine running where specified in the test procedure.

Article 6

Test type I requirements: tailpipe emissions after cold start

The test procedures and requirements applying to test type I on tailpipe emissions after cold start referred to in Part A of Annex V to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex II to this Regulation.

Article 7

Test type II requirements: tailpipe emissions at (increased) idle and at free acceleration

The test procedures and requirements applying to test type II on tailpipe emissions at (increased) idle and at free acceleration referred to in Part A of Annex V to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex III to this Regulation.

Article 8

Test type III requirements: emissions of crankcase gases

The test procedures and requirements applying to test type III on emissions of crankcase gases referred to in Part A of Annex V to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex IV to this Regulation.

Article 9

Test type IV requirements: evaporative emissions

The test procedures and requirements applying to test type IV on evaporative emissions referred to in Part A of Annex V to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex V to this Regulation.

Article 10

Test type V requirements: durability of pollution-control devices

The type V durability of pollution-control devices test procedures and requirements referred to in Part A of Annex V to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex VI to this Regulation.

Article 11

Test type VII requirements: CO_2 emissions, fuel consumption, electric energy consumption or electric range

The test procedures and requirements applying to test type VII on energy efficiency with respect to CO_2 emissions, fuel consumption, electric energy consumption or electric range referred to in Part A of Annex V to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex VII to this Regulation.

Article 12

Test type VIII requirements: OBD environmental tests

The test procedures and requirements applying to test type VIII on the environmental part of on-board diagnostics (OBD) referred to in Part A of Annex V to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex VIII to this Regulation.

Article 13

Test type IX requirements: sound level

The type test procedures and requirements applying to test type IX on sound level referred to in Part A of Annex V to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex IX to this Regulation.

CHAPTER III
OBLIGATIONS OF MANUFACTURERS REGARDING THE PROPULSION PERFORMANCE OF VEHICLES

Article 14
General obligations

1. Before making an L-category vehicle available on the market, the manufacturer shall demonstrate the propulsion unit performance of the L-category vehicle type to the approval authority in accordance with the requirements laid down in this Regulation.

2. When making an L-category vehicle available on the market or registering it or before its entry into service, the manufacturer shall ensure that the propulsion unit performance of the L-category vehicle type does not exceed that reported to the approval authority in the information folder provided for in Article 27 of Regulation (EU) No 168/2013.

3. The propulsion unit performance of a vehicle equipped with a replacement system, component or separate technical unit shall not exceed that of a vehicle equipped with the original systems, components or separate technical units.

Article 15
Propulsion performance requirements

The test procedures and requirements on propulsion unit performance referred to in Number A2 of Annex II to Regulation (EU) No 168/2013, shall be conducted and verified in accordance with Annex X to this Regulation.

CHAPTER IV
OBLIGATIONS OF THE MEMBER STATES

Article 16
Type-approval of L-category vehicles, their systems, components or separate technical units

1. Where a manufacturer so requests, the national authorities shall not, on grounds relating to the environmental performance of vehicle, refuse to grant an environmental and propulsion unit performance type-approval or national approval for a new type of vehicle, or prohibit the making available on the market, registration, or entry into service of a vehicle, system, component or separate technical unit, where the vehicle concerned complies with Regulation (EU) No 168/2013 and the detailed test requirements laid down in this Regulation.

2. With effect from the dates laid down in Annex IV to Regulation (EU) No 168/2013, national authorities shall, in the case of new vehicles that do not comply with the Euro 4 environmental step set out in Parts A1, B1, C1 and D of Annex VI and Annex VII to Regulation (EU) No 168/2013 or the Euro 5 environmental step set out in Parts A2, B2, C2 and D of Annex VI and Annex VII to Regulation (EU) No 168/2013 consider certificates of conformity containing previous environmental limit values to be no longer valid for the purposes of Article 43(1) of Regulation (EU) No 168/2013 and shall, on grounds relating

to emissions, fuel or energy consumption, or the applicable functional safety or vehicle construction requirements, prohibit the making available on the market, registration or entry into service of such vehicles.

3. When applying Article 77(5) of Regulation (EU) No 168/2013, national authorities shall classify the approved vehicle type in accordance with Annex I to that Regulation.

Article 17
Type-approval of replacement pollution-control devices

1. National authorities shall prohibit the making available on the market or installation on a vehicle of new replacement pollution-control devices intended to be fitted on vehicles approved under this Regulation where they are not of a type in respect of which an environmental and propulsion unit performance type-approval has been granted in compliance with Article 23(10) of Regulation (EU) No 168/2013 and with this Regulation.

2. National authorities may continue to grant extensions to EU type-approvals referred to in Article 35 of Regulation (EU) No 168/2013 for replacement pollution-control devices which are of a type in the scope of Directive 2002/24/EC under the terms which originally applied. National authorities shall prohibit the making available on the market or installation on a vehicle of such replacement pollution-control device type unless they are of a type in respect of which a relevant type-approval has been granted.

3. A replacement pollution-control device type intended to be fitted to a vehicle type-approved in compliance with this Regulation shall be tested in accordance with Appendix 10 to Annex II and with Annex VI.

4. Original equipment replacement pollution-control devices which are of a type covered by this Regulation and which are intended to be fitted to a vehicle which the relevant whole vehicle type-approval document refers to, do not need to comply with the test requirements of Appendix 10 to Annex II, provided they fulfil the requirements of point 4 of that Appendix.

CHAPTER V
FINAL PROVISIONS

Article18
Amendment of Annex V to Regulation (EU) No 168/2013

Part A of Annex V to Regulation (EU) No 168/2013 is amended in accordance with Annex XII.

Article19
Entry into force

1. This Regulation shall enter into force on the day following that of its publication in the *Official Journal of the European Union.*

2. It shall apply from 1 January 2016.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 16.12.2013

For the Commission
The President
José Manuel BARROSO