Commission Regulation (EU) No 133/2014 of 31 January 2014 amending, for the purposes of adapting to technical progress as regards emission limits, Directive 2007/46/EC of the European Parliament and of the Council, Regulation (EC) No 595/2009 of the European Parliament and of the Council and Commission Regulation (EU) No 582/2011 (Text with EEA relevance)

COMMISSION REGULATION (EU) No 133/2014

of 31 January 2014

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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 Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive)[(1)], and in particular Article 39(2), (6) and (7) thereof.

Having regard to Regulation (EC) No 595/2009 of the European Parliament and of the Council of 18 June 2009 on type-approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information and amending Regulation (EC) No 715/2007 and Directive 2007/46/EC and repealing Directives 80/1269/EEC, 2005/55/EC and 2005/78/EC[(2)], and in particular Articles 4(3), 5(4) and 6(2), and Article 12 thereof,

Whereas:

(1) Regulation (EC) No 595/2009 establishes emission limits and common technical requirements for the type-approval of motor vehicles and replacement parts with regard to their emissions, laying down rules for in-service conformity, on-board diagnostic (OBD) systems and measurement of fuel consumption.

(2) In order to raise the level of environmental performance of the vehicles, a particulate number limit for positive ignition engines should be introduced.

(3) The legislation on type-approval of motor vehicles and engines with respect to emissions from heavy-duty vehicles (Euro VI) needs to be adapted to technical progress. Therefore, the requirements for type-approval and in-service conformity of engines and vehicles using dual-fuel technologies need to be provided for. Additional matters relating to the type-approval of engines using gaseous fuels should also be addressed.

Changes to legislation: *There are currently no known outstanding effects for the Commission Regulation (EU) No 133/2014. (See end of Document for details)*

(4) Commission Regulation (EU) No 582/2011[3] requires that the on-board diagnostic (OBD) threshold limit (OTL) for carbon monoxide emissions be specified.

(5) In the case of heavy-duty vehicles with a technically permissible maximum laden mass not exceeding 7,5 tons, it is appropriate to allow that OBD systems fitted into those vehicles be partially developed in accordance with the OBD rules applicable to light-duty vehicles, without undermining their level of environmental performance.

(6) Regulation (EU) No 582/2011 refers repeatedly to the regulations of the United Nations Economic Commission for Europe (UNECE), and in particular to UNECE Regulation No 49[4], regarding the technical requirements to be followed at type-approval and in-service conformity by Member States, manufacturers and technical services. Since a 06 series of amendments of UNECE Regulation No 49 has been adopted by the World Forum for Harmonization of Vehicle Regulations (WP.29), it is necessary to update the references of Euro VI to UNECE Regulation No 49.

(7) Some additional requirements need to be laid down in order to ensure the equivalence between an EC type-approval and the type-approval provided for by UNECE Regulation No 49.

(8) The oil temperature of the engine must be expressed in Kelvin. It is therefore necessary to amend Annex VIII to Directive 2007/46/EC.

(9) Directive 2007/46/EC, Regulation (EC) No 595/2009 and Regulation (EU) No 582/2011 should therefore be amended accordingly.

(10) In order to provide Member States and manufacturers with sufficient lead time for the adaptation of their respective information systems, it is appropriate to delay the application of the amendments related to the certificate of conformity.

(11) The measures provided for in this Regulation are in accordance with the opinion of the Technical Committee — Motor Vehicles,

HAS ADOPTED THIS REGULATION:

Article 1

Annexes I, III, IV and IX to Directive 2007/46/EC are amended in accordance with Annex I to this Regulation.

Article 2

Annex I to Regulation (EC) No 595/2009 is replaced by the text in Annex II to this Regulation.

Article 3

Regulation (EU) No 582/2011 is amended as follows:

(1) Article 2 is amended as follows:

(a) point 9 is replaced by the following:

(9) "qualified deteriorated component or system" (hereinafter "QDC") means a component or system that has been intentionally

deteriorated such as by accelerated ageing or by having been manipulated in a controlled manner and which has been accepted by the approval authority in accordance with the provisions set out in Annex 9B to UN/ECE Regulation No 49 for use when demonstrating the OBD performance of the engine system;;

(b) points 19 and 20 are replaced by the following:

(19) "Wobbe index (lower W_l or upper W_u)" means the ratio of the corresponding calorific value of a gas per unit volume and the square root of its relative density under the same reference conditions:

$$W = \frac{H_{gas}}{\sqrt{\frac{\rho_{gas}}{\rho_{air}}}}$$

Which can also be expressed as

$$W = H_{gas} \times \sqrt{\rho_{air} / \rho_{gas}}$$

(20) "λ-shift factor" (hereinafter "Sλ") means an expression, specified in Section A.5.5.1 of Appendix 5 of Annex 4 to UNECE Regulation No 49, that describes the required flexibility of the engine management system regarding a change of excess-air-ratio λ if the engine is fuelled with a gas composition different from pure methane;;

(c) the following points 45 to 56 are added:

(45) "diesel mode" means the normal operating mode of a dual-fuel engine during which the engine does not use any gaseous fuel for any engine operating condition;

(46) "dual-fuel engine" means an engine system that is designed to simultaneously operate with diesel fuel and a gaseous fuel, both fuels being metered separately, where the consumed amount of one of the fuels relative to the other one may vary depending on the operation;

(47) "dual-fuel mode" means the normal operating mode of a dual-fuel engine during which the engine simultaneously uses diesel fuel and a gaseous fuel at some engine operating conditions;

(48) "dual-fuel vehicle" means a vehicle that is powered by a dual-fuel engine and that supplies the fuels used by the engine from separate on-board storage systems;

(49) "service mode" means a special mode of a dual-fuel engine that is activated for the purpose of repairing, or of moving the vehicle from the traffic when operation in the dual-fuel mode is not possible;

(50) "Gas Energy Ratio (GER)" means in case of a dual-fuel engine, the energy content of the gaseous fuel divided by the energy content of both fuels (diesel and gaseous), expressed as a percentage, the energy content of the fuels being defined as the lower heating value;

Changes to legislation: *There are currently no known outstanding effects for the Commission Regulation (EU) No 133/2014. (See end of Document for details)*

(51) "average gas ratio" means the average Gas Energy Ratio calculated over a driving cycle;

(52) "type 1A dual-fuel engine" means a dual-fuel engine that operates over the hot part of the WHTC test-cycle with an average gas ratio that is not lower than 90 per cent ($GER_{WHTC} \geq 90$ %), and that does not idle using exclusively diesel fuel, and that has no diesel mode;

(53) "type 1B dual-fuel engine" means a dual-fuel engine that operates over the hot part of the WHTC test-cycle with an average gas ratio that is not lower than 90 per cent ($GER_{WHTC} \geq 90$ %), and that does not idle using exclusively diesel fuel in dual-fuel mode, and that has a diesel mode;

(54) "type 2A dual-fuel engine" means a dual-fuel engine that operates over the hot part of the WHTC test-cycle with an average gas ratio between 10 per cent and 90 per cent ($10\ \% < GER_{WHTC} < 90\ \%$) and that has no diesel mode or that operates over the hot part of the WHTC test-cycle with an average gas ratio that is not lower than 90 per cent ($GER_{WHTC} \geq 90$ %), but that idles using exclusively diesel fuel, and that has no diesel mode;

(55) "type 2B dual-fuel engine" means a dual-fuel engine that operates over the hot part of the WHTC test-cycle with an average gas ratio between 10 per cent and 90 per cent ($10\ \% < GER_{WHTC} < 90\ \%$) and that has a diesel mode or that operates over the hot part of the WHTC test-cycle with an average gas ratio that is not lower than 90 per cent ($GER_{WHTC} \geq 90$ %), but that can idle using exclusively diesel fuel in dual-fuel mode, and that has a diesel mode;

(56) "type 3B dual-fuel engine" means a dual-fuel engine that operates over the hot part of the WHTC test-cycle with an average gas ratio that does not exceed 10 per cent ($GER_{WHTC} \leq 10$ %) and that has a diesel mode.;

(2) in Article 3, paragraph 1 is replaced by the following:

1. In order to receive an EC type-approval of an engine system or engine family as a separate technical unit, EC type-approval of a vehicle with an approved engine system with regard to emissions and vehicle repair and maintenance information, or an EC type-approval of a vehicle with regard to emissions and vehicle repair and maintenance information, the manufacturer shall, in accordance with the provisions of Annex I, demonstrate that the vehicles or engine systems are subject to the tests and comply with the requirements set out in Articles 4 and 14 and in Annexes III to VIII, X, XIII, XIV and XVII. The manufacturer shall also ensure compliance with the specifications of reference fuels set out in Annex IX. In the case of dual-fuel engines and vehicles, the manufacturer shall, in addition, comply with the requirements set out in Annex XVIII.;

(3) in Article 3, paragraphs 2 to 6 are replaced by the following:

2. In order to receive an EC type-approval of a vehicle with an approved engine system with regard to emissions and vehicle repair and maintenance information, or an EC type-approval of a vehicle with regard to emissions and vehicle repair and maintenance information the manufacturer shall ensure compliance with the

installation requirements set out in Section 4 of Annex I and, in the case of dual-fuel vehicles, with the additional installation requirements set out in Section 6 of Annex XVIII.

3 In order to receive an extension of the EC type-approval of a vehicle with regard to emissions and vehicle repair and maintenance information type-approved under this Regulation with a reference mass exceeding 2 380 kg but not exceeding 2 610 kg, the manufacturer shall meet the requirements set out in Section 5 of Annex VIII.

4 The provisions for alternative type-approval specified in point 2.4.1 of Annex X and point 2.1 of Annex XIII shall not apply for the purpose of an EC type-approval of an engine system or engine family as a separate technical unit. Those provisions shall not apply to dual-fuel engines and vehicles either.

5 Any engine system and any element of design liable to affect the emission of gaseous and particulate pollutants shall be designed, constructed, assembled and installed so as to enable the engine, in normal use, to comply with the provisions of Regulation (EC) No 595/2009 and those of this Regulation. The manufacturer shall also ensure compliance with the off-cycle requirements set out in Article 14 and Annex VI to this Regulation. In the case of dual-fuel engines and vehicles, the provisions of Annex XVIII shall also apply.

6 In order to receive an EC type-approval of an engine system or engine family as a separate technical unit or an EC type-approval of a vehicle with regard to emissions and vehicle repair and maintenance information for the purposes of obtaining universal fuel-range type-approval, a restricted fuel-range type-approval or a fuel-specific type-approval, the manufacturer shall ensure compliance with the requirements set out in Section 1 of Annex I.;

(4) in Article 5(4), the following point (j) is added:

(j) where appropriate, the documentation packages necessary for the correct installation of the engine type-approved as a separate technical unit.;

(5) Article 6 is amended as follows:

(a) the following paragraph 1a is inserted:

1a. As an alternative to the procedure provided for in paragraph 1, the approval authority shall grant an EC type-approval of an engine system or engine family as a separate technical unit if all the following conditions are fulfilled:

a a type-approval of an engine system or engine family as separate technical unit has already been granted in accordance with UNECE Regulation No 49 at the moment of the application for EC type-approval;

b the requirements set out in Articles 2a to 2f of this Regulation on access to vehicle OBD and vehicle repair and maintenance information and applicable to the engine system or engine family are met;

c the requirements set out in point 6.2 of Annex X to this Regulation are met during the transitional period specified in Article 4(7);

d all other exceptions set out in points 3.1 and 5.1 of Annex VII to this Regulation, points 2.1 and 6.1 of Annex X to this Regulation,