

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)

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 “ $S\lambda$ ”) 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;

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- (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;
- (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 ($GER_{\text{WHTC}} \geq 90 \%$), 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 ($GER_{\text{WHTC}} \geq 90 \%$), 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 ($10 \% < GER_{\text{WHTC}} < 90 \%$) 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 ($GER_{\text{WHTC}} \geq 90 \%$), 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 ($10 \% < GER_{\text{WHTC}} < 90 \%$) 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 ($GER_{\text{WHTC}} \geq 90 \%$), 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 ($GER_{\text{WHTC}} \leq 10 \%$) and that has a diesel mode.;
- (2) in Article 3, paragraph 1 is replaced by the following:

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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:

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(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, points 2, 4.1, 5.1, 7.1, 8.1 and 10 of Annex XIII to this Regulation, and point 1 of Appendix 6 to Annex XIII to this Regulation apply.;

(b) paragraph 2 is replaced by the following:

2. When granting an EC type-approval under paragraphs 1 and 1a, the approval authority shall issue an EC type-approval certificate using the model set out in Appendix 5 to Annex I.;

(6) Article 8 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 a vehicle with an approved engine system with regard to emissions and access to vehicle repair and maintenance information if all the following conditions are fulfilled:

- a a type-approval of a vehicle with an approved engine system 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 are met;
- c the requirements 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, points 2, 4.1, 5.1, 7.1, 8.1 and 10 of Annex XIII to this Regulation, and point 1 of Appendix 6 to Annex XIII to this Regulation apply.;

(b) paragraph 2 is replaced by the following:

2. When granting an EC type-approval under paragraphs 1 and 1a, the approval authority shall issue an EC type-approval certificate using the model set out in Appendix 6 to Annex I.;

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- (7) Article 10 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 a vehicle with regard to emissions and access to vehicle repair and maintenance information if all the following conditions are fulfilled:
- a a type-approval of a vehicle 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 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, points 2, 4.1, 5.1, 7.1, 8.1 and 10 of Annex XIII to this Regulation, and point 1 of Appendix 6 to Annex XIII to this Regulation apply.;
- (b) paragraph 2 is replaced by the following:
2. When granting an EC type-approval under paragraphs 1 and 1a, the approval authority shall issue an EC type-approval certificate using the model set out in Appendix 7 to Annex I.;
- (8) in Article 16(5), the second subparagraph is replaced by the following:
- The test conditions shall comply with the requirements set out in Section 6 of Annex 4 to UNECE Regulation No 49.;
- (9) Annexes I, II and IV to XIV are amended in accordance with Annex III to this Regulation;
- (10) Annex III is replaced by the text in Annex IV to this Regulation;
- (11) Annex XVIII is added, the text of which is set out in Annex V to this Regulation.

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