

**Changes to legislation:** There are outstanding changes not yet made to Commission Regulation (EU) No 582/2011. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

## ANNEX VIII

### CO<sub>2</sub> EMISSIONS AND FUEL CONSUMPTION

#### 1. INTRODUCTION

1.1. This Annex sets out the provisions and test procedures for reporting CO<sub>2</sub> emissions and fuel consumption.

#### 2. GENERAL REQUIREMENTS

[<sup>F1</sup>2.1. The general requirements shall be those set out in paragraph 2 of Annex 12 to UNECE Regulation No 49.]

##### Textual Amendments

**F1** Substituted by 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).

<sup>F2</sup>2.2. ....

##### Textual Amendments

**F2** Deleted by 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).

#### 3. DETERMINATION OF CO<sub>2</sub> EMISSIONS

[<sup>F1</sup>3.1. The requirements for the determination of CO<sub>2</sub> emissions shall be those set out in paragraph 3 of Annex 12 to UNECE Regulation No 49, with the exception provided for in point 3.1.1.

3.1.1. Paragraph 3.1 and Appendix 1 of Annex 12 to UNECE Regulation No 49 shall not apply to dual-fuel engines and vehicles. Paragraph 10.3 of Annex 15 to UNECE Regulation No 49, which provides additional dual-fuel specific CO<sub>2</sub> determination requirements, shall apply instead.]

<sup>F2</sup>3.1.2. *Data evaluation*

<sup>F2</sup>3.1.3. *Calculation of cycle averaged emission*

#### <sup>F2</sup>3.2. Dilute measurement

[<sup>F2</sup>.....]

3.2.1. *Measurement*

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3.2.2. *Data evaluation*

.....

3.2.3. *Calculation of cycle averaged emission*

.....

**F<sup>2</sup>3.3. Calculation of brake specific emissions**

**F<sup>2</sup>** .....]

3.3.1. *WHTC*

.....

3.3.2. *WHSC*

.....

4. DETERMINATION OF FUEL CONSUMPTION

[<sup>F1</sup>4.1. The requirements for the determination of fuel consumption shall be those set out in paragraph 4 of Annex 12 to UNECE Regulation No 49.]

**F<sup>2</sup>4.2. Data evaluation**

.....

**F<sup>2</sup>4.3. Calculation of cycle averaged fuel consumption**

.....

**F<sup>2</sup>4.4. Calculation of brake specific fuel consumption**

[<sup>F2</sup> .....]

4.4.1. *WHTC*

.....

4.4.2. *WHSC*

.....

[<sup>F3</sup>5. Provisions on CO<sub>2</sub> emissions and fuel consumption for extension of an EC type-approval for a vehicle type-approved under Regulation (EC) No 595/2009 and this Regulation with a reference mass exceeding 2 380 kg but not exceeding 2 610 kg.

5.1. The provisions on CO<sub>2</sub> emissions and fuel consumption for extension of a type-approval for a vehicle type-approved under this Regulation with a reference mass exceeding 2 380 kg but not exceeding 2 610 kg, shall be those set out in Appendix 1 of Annex 12 to UNECE Regulation No 49, with the exceptions provided for in points 5.1.1 and 5.1.2 of this Regulation.

5.1.1. Paragraph A.1.1.1 of Appendix 1 of Annex 12 to UNECE Regulation No 49 shall be understood as follows:

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A.1.1.1. This Appendix sets out the provisions and test procedures for reporting CO<sub>2</sub> emissions and fuel consumption for extension of an EC type-approval for a vehicle type-approved under Regulation (EC) No 595/2009 and this Regulation, to a vehicle with a reference mass exceeding 2 380 kg but not exceeding 2 610 kg.

[<sup>F4</sup>5.1.2. Paragraph A.1.2.1 of Appendix 1 of Annex 12 to UNECE Regulation No 49 shall be understood as follows:

A.1.2.1. In order to receive an extension of an EU type-approval for a vehicle in respect of its engine type-approved under Regulation (EC) No 595/2009 and this Regulation to a vehicle with a reference mass exceeding 2 380 kg but not exceeding 2 610 kg, the manufacturer shall meet the requirements relating to the measurement of CO<sub>2</sub> emissions and fuel consumption established by the type 1 emissions test procedures set out in sub-annex 6 to Annex XXI to Commission Regulation (EU) 2017/1151 with only speed trace and RCB corrections. The CO<sub>2</sub> emissions shall be determined in accordance with table A6/2 not taking into account the criteria emission test results, where the vehicle during testing shall apply no AES and be considered as VH. The test reports specified in Appendices 8a part I until point 2.1. included and 8b of Annex I, to Commission Regulation (EU) 2017/1151, shall be submitted to the type approval authorities including the results of pollutant emissions.

The manufacturer shall provide the type approval authority with a signed declaration that all variants and versions for which this extension is requested are in conformity with the type-approval emission requirements in Regulation (EC) No 595/2009 and that the type 1 test was performed in compliance with the previous paragraph.

Existing EU type-approvals for a vehicle with a reference mass exceeding 2 380 kg but not exceeding 2 610 kg, in respect of its engine type-approved under Regulation (EC) No 595/2009, may be extended at the latest by the application date of this Regulation.

For dedicated compression ignition engines fuelled with ethanol (ED95), a fixed carbon-hydrogen-oxygen ratio shall be used for the purposes of calculating fuel consumption values, which shall be C<sub>1</sub>H<sub>2,92</sub>O<sub>0,46</sub>.]

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#### Textual Amendments

- F4** Substituted by [Commission Regulation \(EU\) 2019/1939 of 7 November 2019 amending Regulation \(EU\) No 582/2011 as regards Auxiliary Emission Strategies \(AES\), access to vehicle OBD information and vehicle repair and maintenance information, measurement of emissions during cold engine start periods and use of portable emissions measurement systems \(PEMS\) to measure particle numbers, with respect to heavy duty vehicles \(Text with EEA relevance\).](#)

5.2. Extension of a type-approval under this Section shall not be possible for dual-fuel vehicles.]

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#### Textual Amendments

- F3** Inserted by [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 \(Text with EEA relevance\).](#)

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F<sup>2</sup>Appendix 1

**Provisions on CO<sub>2</sub> emissions and fuel consumption for extension of an EC type-approval for a vehicle type approved under Regulation (EC) No 595/2009 and this Regulation with a reference mass exceeding 2 380 kg but not exceeding 2 610 kg**

1. INTRODUCTION

1.1. ....

2. GENERAL REQUIREMENTS

2.1. F<sup>2</sup> .....

2.1.1. ....

2.1.2. Section 5.2.4 of UN/ECE Regulation 101 referred to in point 2.3 of Annex XII to Regulation (EC) No 692/2008 shall be understood as follows:

.....

2.1.3. Point 1.4.3 of Annex 6 to UN/ECE Regulation 101 referred to in Section 3.3 of Annex XII to Regulation (EC) No 692/2008 shall be understood as:

.....

2.1.4. ....

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#### Changes and effects yet to be applied to :

- Annex 8 point 5 words substituted by S.I. 2022/1273 reg. 66(11)(a)
- Annex 8 point 5.1.1 words substituted by S.I. 2022/1273 reg. 66(11)(a)
- Annex 8 point 5.1.2 words substituted by S.I. 2022/1273 reg. 66(11)(b)(i)
- Annex 8 point 5.1.2 words substituted by S.I. 2022/1273 reg. 66(11)(b)(ii)

#### Changes and effects yet to be applied to the whole legislation item and associated provisions

- Signature words omitted by S.I. 2022/1273 reg. 65(19)
- Annex list words substituted by S.I. 2022/1273 reg. 65(20)
- Annex 1 Appendix 4Pt. 3 omitted by S.I. 2022/1273 reg. 66(3)(g)
- Annex 1 Appendix 8 image substituted by S.I. 2022/1273 reg. 66(7)(b)
- Annex 1 Appendix 4Pt. 1 table words inserted by S.I. 2022/1273 reg. 66(3)(e)(i)
- Annex 1 Appendix 4Pt. 2 table words inserted by S.I. 2022/1273 reg. 66(3)(f)(i)
- Annex 1 Appendix 4 words omitted by S.I. 2022/1273 reg. 66(3)(b)
- Annex 1 Appendix 4 words omitted by S.I. 2022/1273 reg. 66(3)(c)(ii)(bb)
- Annex 1 Appendix 4 words omitted by S.I. 2022/1273 reg. 66(3)(c)(iii)(aa)
- Annex 1 Appendix 4 table words omitted by S.I. 2022/1273 reg. 66(3)(d)(i)
- Annex 1 Appendix 4 words omitted by S.I. 2022/1273 reg. 66(3)(d)(iii)
- Annex 1 Appendix 8 words omitted by S.I. 2022/1273 reg. 66(7)(c)
- Annex 1 Appendix 1 point 2.2 words omitted by S.I. 2022/1273 reg. 66(10)(e)
- Annex 1 Appendix 4 words substituted by S.I. 2022/1273 reg. 66(3)(a)
- Annex 1 Appendix 4 words substituted by S.I. 2022/1273 reg. 66(3)(c)(i)
- Annex 1 Appendix 4 words substituted by S.I. 2022/1273 reg. 66(3)(c)(ii)(aa)
- Annex 1 Appendix 4 words substituted by S.I. 2022/1273 reg. 66(3)(c)(iii)(bb)
- Annex 1 Appendix 4 table words substituted by S.I. 2022/1273 reg. 66(3)(d)(ii)
- Annex 1 Appendix 4Pt. 1 table words substituted by S.I. 2022/1273 reg. 66(3)(e)(ii)
- Annex 1 Appendix 4Pt. 2 table words substituted by S.I. 2022/1273 reg. 66(3)(f)(ii)
- Annex 1 Appendix 5 heading words substituted by S.I. 2022/1273 reg. 66(4)(a)
- Annex 1 Appendix 5 words substituted by S.I. 2022/1273 reg. 66(4)(a)
- Annex 1 Appendix 5s. 2 point 000.5 words substituted by S.I. 2022/1273 reg. 66(4)(b)
- Annex 1 Appendix 6 heading words substituted by S.I. 2022/1273 reg. 66(5)(a)
- Annex 1 Appendix 6 heading words substituted by S.I. 2022/1273 reg. 66(5)(b)
- Annex 1 Appendix 6 heading words substituted by S.I. 2022/1273 reg. 66(5)(c)
- Annex 1 Appendix 7 heading words substituted by S.I. 2022/1273 reg. 66(6)
- Annex 1 Appendix 7 words substituted by S.I. 2022/1273 reg. 66(6)
- Annex 1 Appendix 7 Addendum words substituted by S.I. 2022/1273 reg. 66(6)
- Annex 1 Appendix 8 heading words substituted by S.I. 2022/1273 reg. 66(7)(a)
- Annex 1 Appendix 9 heading words substituted by S.I. 2022/1273 reg. 66(8)
- Annex 1 Appendix 9 words substituted by S.I. 2022/1273 reg. 66(8)
- Annex 1 Appendix 10 words substituted by S.I. 2022/1273 reg. 66(9)
- Annex 10 Appendix 5 point 2.4.1 words omitted by S.I. 2022/1273 reg. 66(12)(f)(i)
- Annex 10 Appendix 5 point 6 heading words omitted by S.I. 2022/1273 reg. 66(12)(f)(iii)
- Annex 10 Appendix 5 point 6 words omitted by S.I. 2022/1273 reg. 66(12)(f)(iii)
- Annex 10 Appendix 5 point 5.2.4 words substituted by S.I. 2022/1273 reg. 66(12)(f)(ii)
- Annex 11 Appendix 1 point 2-2.3 omitted by S.I. 2022/1273 reg. 66(13)(k)(ii)

- Annex 11 Appendix 2 words inserted by S.I. 2022/1273 reg. 66(13)(l)(ii)
- Annex 11 Appendix 1 point 000.7 words substituted by S.I. 2022/1273 reg. 66(13)(k)(i)
- Annex 11 Appendix 2 words substituted by S.I. 2022/1273 reg. 66(13)(l)(i)
- Annex 11 Appendix 2 words substituted by S.I. 2022/1273 reg. 66(13)(l)(iii)
- Annex 11 Appendix 3 point 2.4.2.11 words substituted by S.I. 2022/1273 reg. 66(13)(m)(i)
- Annex 11 Appendix 3 point 2.4.6.5 words substituted by S.I. 2022/1273 reg. 66(13)(m)(ii)
- Art. 2(44) omitted by S.I. 2022/1273 reg. 65(2)
- Art. 5(4)(d) omitted by S.I. 2022/1273 reg. 65(6)(c)
- Art. 5(4)(g) omitted by S.I. 2022/1273 reg. 65(6)(c)
- Art. 6(1a)(a) words substituted by S.I. 2022/1273 reg. 65(7)(c)(ii)
- Art. 6(1a)(b) omitted by S.I. 2022/1273 reg. 65(7)(c)(iii)
- Art. 7(4)(c) omitted by S.I. 2022/1273 reg. 65(8)(c)
- Art. 7(4)(d) omitted by S.I. 2022/1273 reg. 65(8)(c)
- Art. 8(1a)(a) word substituted by S.I. 2022/1273 reg. 65(9)(d)(i)
- Art. 8(1a)(b) omitted by S.I. 2022/1273 reg. 65(9)(d)(ii)
- Art. 8(1a)(e) words substituted by S.I. 2022/1273 reg. 65(9)(d)(iii)
- Art. 10(1a)(a) word substituted by S.I. 2022/1273 reg. 65(11)(a)
- Art. 10(1a)(b) omitted by S.I. 2022/1273 reg. 65(11)(d)(ii)
- Art. 10(1a)(e) words substituted by S.I. 2022/1273 reg. 65(11)(d)(iii)