

Proposal for amendments to the 07 series of amendments to Regulation No. 83 (Emissions of M₁ and N₁ vehicles)

The text reproduced below was prepared by the expert from the European Commission to provide clarifications and correct errors in the 07 series of amendments to Regulation No. 83.

I. Proposal

Paragraph 7.1.4.1., amend format of text to read:

"7.1.4.1. Identical parameters for extending approval are:

Engine:

(a) Combustion process.

Periodically regenerating system (i.e. catalyst, particulate trap):

(a) Construction (i.e. type of enclosure, type of precious metal, type of substrate, cell density);

(b) Type and working principle;

(c) Dosage and additive system;

(d) Volume ± 10 per cent;

(e) Location (temperature ± 50 °C at 120 km/h or 5 per cent difference of maximum temperature/pressure)."

Paragraph 2.1.1. of Annex 2 - Addendum, amend to read:

"2.1.1. For bi fuel vehicles, the type I table shall be repeated for both fuels. For flex fuel vehicles, when the ~~type I~~ **type I** test is to be performed on both fuels according to Table A of this Regulation and for vehicles running on LPG or NG/Biomethane, either mono fuel or bi fuel, the table shall be repeated for the different reference gases used in the test, and an additional table shall display the worst results obtained. When applicable, in accordance with paragraphs 3.1.4. and 3.1.5. of Annex 12 to this Regulation, it shall be shown if the results are measured or calculated."

Paragraph 1.2.12.6. of Appendix 3 to Annex 4a, amend to read:

"1.2.12.6. The HFID shall be used with a constant flow (heat exchanger) system to ensure a representative sample, unless compensation for varying ~~CFV or CFO~~ **CVS volume** flow is made."

Annex 10 – Type: Petrol (E10) table, amend as follows, including adding a new row:

"

Water content	% m/m % v/v	max 0.05 Appearance at – 7 °C: clear and bright	EN 12937
Appearance at – 7 °C		Clear and bright	

"

Paragraph 3.3.3.1. of Annex 11, amend to read:

- "3.3.3.1. The reduction in the efficiency of the catalytic converter with respect to emissions of ~~THC~~ **NMHC** and NO_x. Manufacturers may monitor the front catalyst alone or in combination with the next catalyst(s) downstream. Each monitored catalyst or catalyst combination shall be considered malfunctioning when the emissions exceed the NMHC or NO_x threshold limits provided for by paragraph 3.3.2. of this annex."

Paragraph 3.3.3.4. of Annex 11, amend to read:

- "3.3.3.4. If active on the selected fuel, other emission control system components or systems, or emission related power train components or systems which are connected to a computer, the failure of which may result in tailpipe emissions exceeding the **OBD threshold** limits given in paragraph 3.3.2. of this annex."

Paragraph 3.3.4.4. of Annex 11, amend to read:

- "3.3.4.4. Other emission control system components or systems, or emission-related power-train components or systems, which are connected to a computer, the failure of which may result in exhaust emissions exceeding the **OBD threshold** limits given in paragraph 3.3.2. of this annex. Examples of such systems or components are those for monitoring and control of air mass-flow, air volumetric flow (and temperature), boost pressure and inlet manifold pressure (and relevant sensors to enable these functions to be carried out)."

Paragraph 3.3.5. of Annex 11, amend to read:

- "3.3.5. Manufacturers may demonstrate to the Type Approval Authority that certain components or systems need not be monitored if, in the event of their total failure or removal, emissions do not exceed the ~~emission limits~~ **OBD threshold limits** given in paragraph 3.3.2. of this annex.

- 3.3.5.1. The following devices should however be monitored for total failure or removal (if removal would cause the applicable emission limits **in paragraph 5.3.1.4. of this Regulation** to be exceeded):

- (a) A particulate trap fitted to compression ignition engines as a separate unit or integrated into a combined emission control device;
- (b) A NO_x after treatment system fitted to compression ignition engines as a separate unit or integrated into a combined emission control device;
- (c) A Diesel Oxidation Catalyst (DOC) fitted to compression ignition engines as a separate unit or integrated into a combined emission control device.

3.3.5.2. The devices referred to in paragraph 3.3.5.1. of this annex shall also be monitored for any failure that would result in exceeding the applicable OBD threshold limits."

II. Justification

The amendment to the format of the text in paragraph 7.1.4.1. is to improve accuracy and align with the equivalent text in paragraph 2.1.1. of Annex 13. The terms "Engine" and "Periodically regenerating system" should both be sub-headings and not just part of the list of elements, as they are currently in paragraph 7.1.4.1.

The amendment to paragraph 2.1.1. of Annex 2 – Addendum is to correct an error in terminology.

The amendment to paragraph 1.2.12.6. of Appendix 3 to Annex 4a to change "CFV or CFO flow" to "CVS volume flow" is correct inaccurate terminology.

The amendment to Annex 10 – Type: Petrol (E10) table is to align with the amendment proposed to the table that is included in Global Technical Regulation 15 (ECE-TRANS-WP29-GRPE-2016-03). The unit should be % v/v and not % m/m. The appearance is a separate parameter, related to but not an 'answer' to the "water content" category. A new row is therefore provided for "Appearance at – 7 °C".

The amendment to paragraph 3.3.3.1. of Annex 11 is to correct an error. The reference should be to emissions of 'non-methane hydrocarbons' (NMHC) and not 'total hydrocarbons' (THC). It is NMHC for which the limits are provided in the tables in paragraph 3.3.2. of Annex 11.

The amendments to paragraphs 3.3.3.4. and 3.3.4.4. of Annex 11, to replace "limits" with "OBD threshold limits" is to provide clarity that this is a reference to the OBD threshold limits and not the emissions limits in Table 1 in paragraph 5.3.1.4. of the Regulation.

The amendment to paragraph 3.3.5. of Annex 11 to replace "emission limits" with "OBD threshold limits" is to provide clarity that this is a reference to the OBD threshold limits and not the emissions limits in Table 1 in paragraph 5.3.1.4. of the Regulation.

The addition of the text "in paragraph 5.3.1.4. of this Regulation" to paragraph 3.3.5.1. is to make it clear that the emissions limits being referred to are those in Table 1 in paragraph 5.3.1.4. of the Regulation 83 and not to the OBD threshold limits in paragraph 3.3.2. of Annex 11.