

Commission Regulation (EU) 2018/932 of 29 June 2018 amending Regulation (EU) No 582/2011 as regards the provisions on testing by means of portable emission measurement systems (PEMS) and the requirements for universal fuel range type-approval (Text with EEA relevance)

*Article 1*

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

- (1) Annex I is amended as follows:
- (a) in point 1.1.2, the introductory part of the first paragraph is replaced by the following:

If the manufacturer permits the engine family to run on market fuels that do not comply either with Directive 98/70/EC of the European Parliament and of the Council<sup>(1)</sup>, or with CEN standard EN 228:2012 in the case of unleaded petrol or CEN standard EN 590:2013 in the case of diesel, such as running on FAME B100 (CEN standard EN 14214), FAME diesel blends B20/B30 (CEN standard EN 16709), paraffinic fuel (CEN standard EN 15940) or others, the manufacturer shall, in addition to the requirements in point 1.1.1, comply with the following requirements;
  - (b) in point 1.1.2, the following point (a1) is inserted:
    - (a1) determine the power correction factor for each fuel declared pursuant to point 5.2.7 if applicable;;
  - (c) in point 5.2.5, point (b) is replaced by the following:
    - (b) 10 % when performing the World Harmonised Steady state Cycle (hereinafter “WHSC”) test in accordance with Annex III, except for mode 1 and 13 (idle modes);
  - (d) the following point 5.2.7 is inserted:

5.2.7. If the difference between the measured torque value obtained with a declared market fuel and the torque calculated from the information requested in point 5.2.1 exceeds any of the values specified in point 5.2.5, a power correction factor for each additional market fuel permitted by the manufacturer in accordance with point 1.1.2 shall be determined for the engine family. The correction factor shall be calculated as the ratio between average measured peak torque [Nm] on the reference fuel according to Annex IX, and average measured peak torque [Nm] on the market fuel declared.;
  - (e) points 5.3.3 and 5.3.3.1 are replaced by the following:

5.3.3. The fulfilment of the requirement referred to in point 5.2.5 shall be demonstrated for the parent engine of an engine family when determining the engine power in accordance with Annex XIV and when performing the WHSC test in accordance with Annex III and off-cycle laboratory testing at type-approval in accordance with Section 6 of Annex VI.

- 5.3.3.1. The fulfilment of the requirement referred to in point 5.2.5 shall be demonstrated for each engine family member when determining the engine power in accordance with Annex XIV. For that purpose, additional measurements shall be performed at several part load and engine speed operating points (for example at the modes of the WHSC and some additional random points).;
- (f) the following point 5.3.3.2 is inserted:
- 5.3.3.2. If applicable, the power correction factor for the engine family, as referred to in point 5.2.7, shall be determined with the parent engine of the engine family.;
- (g) in Appendix 5, in the Addendum to EC type-approval certificate, point 1.5.2 is replaced by the following:
- 1.5.2. Additional data, e.g. the power correction factor for each fuel declared (if applicable);
- (h) in Appendix 7, in the Addendum to EC type-approval certificate, point 1.5.2 is replaced by the following:
- 1.5.2. Additional data, e.g. the power correction factor for each fuel declared (if applicable);
- (2) Annex II is amended as follows:
- (a) point 4.4.2 is replaced by the following:
- 4.4.2. *Fuel*
- The test fuel shall be market fuel covered by Directive 98/70/EC and the relevant CEN standards, or reference fuel as specified in Annex IX to this Regulation.;
- (b) the following point 4.4.2.2 is inserted:
- 4.4.2.2. Fuel samples shall be taken.;
- (c) point 4.5.3 is replaced by the following:
- 4.5.3. For N<sub>3</sub> vehicles the trip shall consist of approximately 30 % urban, 25 % rural and 45 % motorway operation.;
- (d) point 4.6.5 is replaced by the following:
- 4.6.5. The test duration shall be long enough to complete between four and eight times the work performed during the WHTC or produce between four and eight times the CO<sub>2</sub> reference mass in kg/cycle from the WHTC as applicable.;
- (e) Appendix 1 is amended as follows:
- (i) the following point 4.2.1.1 is inserted:
- 4.2.1.1. Calculation of the specific emissions for a declared market fuel

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**Changes to legislation:** There are currently no known outstanding effects for the  
Commission Regulation (EU) 2018/932, Article 1. (See end of Document for details)

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If a test pursuant to this Annex was performed with a market fuel declared in point 3.2.2.2.1 of Part 1 in Appendix 4 to Annex I, the specific emissions  $e_{\text{gas}}$  (mg/kWh) shall be calculated for each window and each pollutant by multiplication of the uncorrected specific emissions with the power correction factor determined pursuant to point 1.1.2 (a1) of Annex I;

(ii) point 4.2.2.2.2 is replaced by the following:

4.2.2.2.2. The test shall be void if the percentage of valid windows is less than 50 % or if there are no valid windows in respect of nitrogen oxides (NO<sub>x</sub>) left in urban only operations after the 90 percentile rule has been applied.;

(f) in Appendix 4, the following point 2.1.1 is inserted:

2.1.1. If a market fuel declared in point 3.2.2.2.1 of Part 1 in Appendix 4 to Annex I is used for the test, the ECU torque signal shall be divided by the correction factor prior to the verification with the reference maximum torque curve performed with that market fuel..

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- (1) Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC ([OJ L 350, 28.12.1998, p. 58](#)).';

**Changes to legislation:**

There are currently no known outstanding effects for the Commission Regulation (EU) 2018/932, Article 1.