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)

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)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

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[(1)], and in particular Article 5(4) thereof,

Whereas:

(1) CEN standards for certain common Fatty Acid Methyl Ester (FAME) diesel blends and paraffinic diesel have recently been published. Therefore, it is appropriate to update the current rules to refer also to those new standards.

(2) In relation to testing with portable emission measurement systems (PEMS), Commission Regulation (EU) 2016/1718[(2)] introduced requirements on both urban trip share as well as the total trip length. Especially on some N_3 category vehicles equipped with an engine with higher power rating, it has been discovered that, due to those limiting requirements, PEMS testing in accordance with the current provisions will result in void tests. In order to resolve the issue, the conditions for compliance with the urban window requirement should be amended, with the urban trip being enlarged at the expense of the motorway trip share and the maximum overall trip length extended.

(3) Clarification is needed regarding the requirement to have at least one valid window in urban only operations applying to NO_x emissions specifically, as it is the critical polutant in those conditions.

(4) In case of universal fuel range type-approval, the procedure for demonstrating compliance with the required tolerances for the engine control unit (ECU) torque signal is currently not set out in Commission Regulation (EU) No 582/2011[(3)]. Therefore, when the engine is not equipped with a system to recognise which fuel is being used, the demonstration on how to determine compliance is up to the discretion of the

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

technical service. Due to the increasing interest in type approval of alternative fuels, it is appropriate to harmonise that procedure. The torque deviation caused by the alternative fuel should therefore be determined and the deviation should then be used to calculate a power correction factor, which should be stated in the type approval documentation. The power correction factor may be applied to demonstrate compliance with the ECU torque signal accuracy requirements. Moreover, for PEMS testing with an alternative fuel, the power correction factor may be applied to determine the correct torque value for emission calculations.

(5) Regulation (EU) No 582/2011 should therefore be amended accordingly.

(6) 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

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[(4)], 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_3 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_2 reference mass in kg/cycle from the WHTC as applicable.;