Commission Regulation (EU) 2016/646 of 20 April 2016 amending Regulation (EC) No 692/2008 as regards emissions from light passenger and commercial vehicles (Euro 6) (Text with EEA relevance)

COMMISSION REGULATION (EU) 2016/646

of 20 April 2016

amending Regulation (EC) No 692/2008 as regards emissions from light passenger and commercial vehicles (Euro 6)

(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 715/2007 of the European Parliament and of the Council of 20 June 2007 on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information[(1)], and in particular Article 5(3) thereof,

Whereas:

(1) Regulation (EC) No 715/2007 is one of the separate regulatory acts under the type-approval procedure laid down by Directive 2007/46/EC of the European Parliament and of the Council[(2)].

(2) Regulation (EC) No 715/2007 requires new light-duty vehicles to comply with certain emission limits and lays down additional requirements on access to information. The specific technical provisions necessary to implement that Regulation were adopted by Commission Regulation (EC) No 692/2008[(3)].

(3) The Commission has performed a detailed analysis of the procedures, tests and requirements for type-approval that are set out in Regulation (EC) No 692/2008 on the basis of own research and external information and found that emissions generated by real driving of Euro 5/6 vehicles on the road substantially exceed the emissions measured on the regulatory new European driving cycle (NEDC), in particular with respect to NO_x emissions of diesel vehicles.

(4) The type-approval emission requirements for motor vehicles have been gradually and significantly tightened through the introduction and subsequent revision of Euro standards. While vehicles in general have delivered substantial emission reductions across the range of regulated pollutants, this was not the case for NO_x emissions from diesel engines, in particular light-duty vehicles. Actions for correcting this situation are therefore needed.

(5) ‘Defeat devices’ as defined in Article 3(10) of Regulation (EC) No 715/2007 reducing the level of emission control are prohibited. Recent events have highlighted the need to strengthen the enforcement in this respect. Therefore it is appropriate to require a

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better supervision of the emission control strategy applied by the manufacturer at type-approval, following the principles already applied to heavy-duty vehicles by Euro VI Regulation (EC) No 595/2009 and its implementing measures.

(6) Addressing the problem of NO_x emissions from diesel vehicles should contribute to decreasing the current sustained high levels of NO_2 concentrations in ambient air, which are a major concern regarding human health.

(7) The Commission has established in January 2011 a working group involving all interested stakeholders for developing a real driving emission (RDE) test procedure better reflecting emissions measured on the road. For this purpose, and after thorough technical discussions, the option suggested in Regulation (EC) No 715/2007, i.e. the use of portable emission measurement systems (PEMS) and not-to-exceed (NTE) limits, has been followed.

(8) As agreed with stakeholders in the CARS 2020 process[(4)], the RDE test procedures should be introduced in two phases: during a first transitional period the test procedures should only be applied for monitoring purposes, while afterwards they should be applied together with binding quantitative RDE requirements to all new type-approvals and new vehicles.

(9) The RDE test procedures were introduced by Commission Regulation (EU) 2016/427[(5)]. It is now necessary to establish the quantitative RDE requirements in order to limit tailpipe emissions under all normal conditions of use pursuant to the emission limits set out in Regulation (EC) No 715/2007. For that purpose, statistical and technical uncertainties of the measurement procedures should be taken into account.

(10) In order to allow manufacturers to gradually adapt to the RDE rules, the final quantitative RDE requirements should be introduced in two subsequent steps. In the first step, which should start applying 4 years after the dates of mandatory application of the Euro 6 standards, a conformity factor of 2,1 should apply. The second step should follow 1 year and 4 months after the first step and should require full compliance with the emission limit value for NO_x of 80 mg/km set out in Regulation (EC) No 715/2007 plus a margin taking into account the additional measurement uncertainties related to the application of portable emission measurement systems (PEMS).

(11) While it is important that all possible driving situations are potentially covered by RDE testing, it should be avoided that the tested vehicles are driven in a biased manner, i.e. with the intention to generate a passed or failed test not by virtue of the technical performance of the vehicle but due to extreme driving patterns. Therefore, complementary boundary conditions for RDE testing are introduced in order to address such situations.

(12) Due to their very nature, driving conditions encountered during individual PEMS trips may not fully correspond to ‘normal conditions of use of a vehicle’. The severity of emission control during such trips may therefore vary. As a consequence, and in order to take into account the statistical and technical uncertainties of the measurement procedures, it may be considered in the future to reflect in the NTE emission limits applicable to individual PEMS trips the characteristics of those trips, described by

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certain measurable parameters, e.g. related to the driving dynamics or workload. If that principle is applied, it should not lead to the weakening of the environmental effect and the effectiveness of the RDE test procedures, which should be demonstrated by a peer-reviewed scientific study. In addition, for the assessment of the severity of emission control during a PEMS trip, only parameters that can be justified by objective scientific reasons and not just by reasons of calibration of the engine or the pollutant control devices or the emission control systems should be taken into account.

(13) Finally, recognising the need to control NO_x emissions in urban conditions, urgent consideration shall be given to changing the relative weighting of the urban, rural and motorway elements of the RDE test to ensure a low conformity factor can be achieved in practice, creating a further boundary condition relating to driving dynamics in the third regulatory RDE package above which the extended conditions shall be applicable from the step 1 introduction dates.

(14) The Commission shall keep under review the provisions of the RDE test procedure and adapt those provisions to accommodate new vehicle technologies and to ensure their effectiveness. Similarly, the Commission shall keep under annual review the appropriate level of the final conformity factor in light of technical progress. It shall in particular review the two alternative methods for evaluating PEMS emission data set out in Appendices 5 and 6 to Annex IIIA to Regulation (EC) No 692/2008 with a view to developing a single method.

(15) It is therefore appropriate to amend Regulation (EC) No 692/2008 accordingly.

(16) 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 (EC) No 692/2008 is amended as follows:

(1) In Article 2, the following points 43 and 44 are added:

43. ‘base emission strategy’ (hereinafter ‘BES’) means an emission strategy that is active throughout the speed and load operating range of the vehicle unless an auxiliary emission strategy is activated;

44. ‘auxiliary emission strategy’ (hereinafter ‘AES’) means an emission strategy that becomes active and replaces or modifies a BES for a specific purpose and in response to a specific set of ambient or operating conditions and only remains operational as long as those conditions exist..

(2) In Article 3(10) the third paragraph shall be replaced by the following text:

Until three years after the dates specified in Article 10(4) and four years after the dates specified in Article 10(5) of Regulation (EC) No 715/2007 the following provisions shall apply:.

(3) Article 3(10)(a) shall be replaced by the following text:

The requirements of point 2.1 of Annex IIIA shall not apply..

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(4) In Article 5, the following paragraphs 11 and 12 are inserted:

11. The manufacturer shall also provide an extended documentation package with the following information:

(a) information on the operation of all AES and BES, including a description of the parameters that are modified by any AES and the boundary conditions under which the AES operate, and indication of the AES or BES which are likely to be active under the conditions of the test procedures set out in this Regulation;

(b) a description of the fuel system control logic, timing strategies and switch points during all modes of operation.

12. The extended documentation package referred to in paragraph 11 shall remain strictly confidential. It may be kept by the approval authority, or, at the discretion of the approval authority, may be retained by the manufacturer. In the case the manufacturer retains the documentation package, that package shall be identified and dated by the approval authority once reviewed and approved. It shall be made available for inspection by the approval authority at the time of approval or at any time during the validity of the approval..

(5) Appendix 6 to Annex I is amended as set out in Annex I to this Regulation.

(6) Annex IIIA is amended as set out in Annex II to this Regulation.

Article 2

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 20 April 2016.

For the Commission

The President

Jean-Claude JUNCKER

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ANNEX I

In Appendix 6 to Annex I to Regulation (EC) No 692/2008, Table 1 is amended as follows:

(1) rows ZD, ZE, ZF are replaced by the following:

ZD	Euro 6c	Euro 6-2	M, N1 class I	PI, CI		1.9.2018	31.8.2019
ZE	Euro 6c	Euro 6-2	N1 class II	PI, CI		1.9.2019	31.8.2020
ZF	Euro 6c	Euro 6-2	N1 class III, N2	PI, CI		1.9.2019	31.8.2020

(2) the following rows are inserted after row ZF:

ZG	Euro 6d-TEMP	Euro 6-2	M, N1 class I	PI, CI	1.9.2017	1.9.2019	31.12.2020
ZH	Euro 6d-TEMP	Euro 6-2	N1 class II	PI, CI	1.9.2018	1.9.2020	31.12.2021
ZI	Euro 6d-TEMP	Euro 6-2	N1 class III, N2	PI, CI	1.9.2018	1.9.2020	31.12.2021
ZJ	Euro 6d	Euro 6-2	M, N1 class I	PI, CI	1.1.2020	1.1.2021	
ZK	Euro 6d	Euro 6-2	N1 class II	PI, CI	1.1.2021	1.1.2022	
PLN	Euro 6d	Euro 6-2	N1 class III, N2	PI, CI	1.1.2021	1.1.2022	

(3) in the key to the table, the following paragraphs are inserted after the paragraph concerning the ‘Euro 6b’ emissions standard:

“Euro 6c” emissions standard	=	Full Euro 6 emission requirements but without quantitative RDE requirements, i.e. Euro 6b emission standard, final particle number standards for PI vehicles, use of E10 and B7 reference fuel (where applicable) assessed on regulatory lab test cycle and RDE testing for monitoring only (no NTE emission limits applied);
“Euro 6d-TEMP” emissions standard	=	Full Euro 6 emission requirements, i.e. Euro 6b emission standard, final particle number standards for PI vehicles, use of E10 and B7 reference fuel (where applicable) assessed on regulatory lab test cycle and RDE testing against temporary conformity factors;;

(4) in the key to the table, the paragraph concerning the ‘Euro 6c’ emissions standard is replaced by the following:

“Euro 6d”	=	Full Euro 6 emission requirements, i.e. Euro 6b emission standard, final particle number standards for PI vehicles, use of E10 and B7 reference fuel (where