Commission Regulation (EU) 2017/2400 of 12 December 2017 implementing Regulation (EC) No 595/2009 of the European Parliament and of the Council as regards the determination of the CO2 emissions and fuel consumption of heavy-duty vehicles and amending Directive 2007/46/EC of the European Parliament and of the Council and Commission Regulation (EU) No 582/2011 (Text with EEA relevance)

COMMISSION REGULATION (EU) 2017/2400

of 12 December 2017

implementing Regulation (EC) No 595/2009 of the European Parliament and of the Council as regards the determination of the CO_2 emissions and fuel consumption of heavy-duty vehicles and amending Directive 2007/46/EC of the European Parliament and of the Council and Commission Regulation (EU) No 582/2011

(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 4(3) and Article 5(4)(e) thereof,

Having regard to Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive)[(2)], and in particular Article 39(7) thereof,

Whereas:

(1) Regulation (EC) No 595/2009 is one of the separate regulatory acts under the type-approval procedure laid down by Directive 2007/46/EC. It empowers the Commission to adopt measures relating to CO_2 emissions and fuel consumption of heavy duty vehicles. The present Regulation aims at establishing measures for obtaining accurate information on CO_2 emissions and fuel consumption of new heavy-duty vehicles placed on the Union market.

(2) Directive 2007/46/EC sets out the necessary requirements for the purpose of a whole vehicle type-approval.

(3) Commission Regulation (EU) No 582/2011[(3)] sets out requirements for the approval of heavy-duty vehicles with regard to emissions and access to vehicle repair and maintenance information. Measures for the determination of CO_2 emissions and fuel consumption of new heavy-duty vehicles should be part of the type-approval system

instituted by this Regulation. A licence to perform simulations to establish CO_2 emissions and fuel consumption of a vehicle will be required to obtain the approvals mentioned above.

(4) Emissions from lorries, buses and coaches, which are the most widely representative categories of heavy-duty vehicles, currently represent around 25 % of road transport CO_2 emissions and are expected to increase even further in the future. In order to reach the target of a 60 % reduction of CO_2 emissions from transport by 2050, effective measures to curb emissions from heavy-duty vehicles need to be introduced.

(5) Until now, no common method has been laid down by Union legislation to measure CO_2 emissions and fuel consumption of heavy-duty vehicles, rendering it impossible to objectively compare performance of vehicles or to introduce measures, whether on the Union or national level, that would encourage the introduction of more energy-efficient vehicles. As a consequence, there has been no transparency in the market as regards the energy-efficiency of heavy-duty vehicles.

(6) The heavy-duty vehicle sector is very diversified, with a significant number of different vehicle types and models as well as with a high degree of customisation. The Commission has conducted an in-depth analysis of the available options to measure CO_2 emissions and fuel consumption of those vehicles and concluded that in order to obtain unique data for each produced vehicle at the lowest cost, CO_2 emissions and fuel consumption of heavy-duty vehicles should be determined using simulation software.

(7) In order to reflect the diversity of the sector, heavy-duty vehicles should be divided into groups of vehicles with a similar axle configuration, chassis configuration and technically permissible maximum laden mass. Those parameters define the purpose of a vehicle and should therefore determine the set of test cycles used for the purpose of the simulation.

(8) Since there is no software available on the market to meet the requirements necessary for the purposes of the assessment of CO_2 emissions and fuel consumption of heavy-duty vehicles, the Commission should develop dedicated software to be used for those purposes.

(9) That software should be publically available, open-source, downloadable and executable. It should include a simulation tool for the calculation of CO_2 emissions and fuel consumption of specific heavy-duty vehicles. The tool should be conceived to use, as input, the data reflecting the characteristics of the components, separate technical units and systems which have a significant impact on the CO_2 emissions and fuel consumption of heavy-duty vehicles – engine, gearbox and additional driveline components, axles, tyres, aerodynamics and auxiliaries. The software should also include pre-processing tools to be used for the verification and pre-processing of the simulation tool input data relating to the engine and vehicle air drag, as well as a hashing tool to be used for the encryption of the simulation tool input and output files.

(10) In order to enable a realistic assessment, the simulation tool should be equipped with a number of functionalities allowing for a simulation of vehicles with different payloads and fuels over specific test cycles assigned to a vehicle depending on its application.

(11) Recognizing the importance of the proper functioning of the software for the correct determination of vehicles' CO_2 emissions and fuel consumption and of keeping up with technological progress, the Commission should maintain the software and update it whenever necessary.

(12) The simulations should be performed by vehicle manufacturers before registration, sale or entry into service of a new vehicle in the Union. Provisions should also be put in place for the licence of the vehicle manufacturers' processes for calculation of the CO_2 emissions and fuel consumption of vehicles. The processes of handling and application of data by the vehicle manufacturers for the purposes of calculation of the CO_2 emissions and fuel consumption of vehicles using the simulation tool should be assessed and closely monitored by the approval authorities in order to ensure that the simulations are conducted in a correct manner. Provisions should therefore be put in place requiring vehicle manufacturers to acquire a licence for the operation of the simulation tool.

(13) The CO_2 emissions and fuel consumption related properties of the components, separate technical units and systems having a significant impact on the CO_2 emissions and fuel consumption of heavy-duty vehicles should be used as input for the simulation tool.

(14) In order to reflect the specificities of the individual components, separate technical units and systems and to allow for a more precise determination of their CO_2 emissions and fuel consumption related properties, provisions for the certification of such properties on the basis of testing should be set out.

(15) For the purpose of limiting the costs of the certification, manufacturers should have the possibility to group into families components, separate technical units and systems with similar design and CO_2 emission and fuel consumption characteristics. One component, separate technical unit or system per family with the least favourable characteristics as regards CO_2 emissions and fuel consumption within that family should be tested and its results should apply to the entire family.

(16) The costs related to testing may constitute a significant obstacle in particular to companies manufacturing components, separate technical units or systems in small numbers. In order to provide an economically viable alternative to certification, standard values should be set out for certain components, separate technical units and systems with the possibility of using those values instead of the certified values determined on the basis of testing. Standard values should, however, be set out in a way to encourage suppliers of components, separate technical units and systems to apply for certification.

(17) In order to ensure that the results relating to CO_2 emissions and fuel consumption declared by the suppliers of components, separate technical units and systems as well as vehicle manufacturers are correct, provisions for verifying and ensuring the conformity of the simulation tool operation as well as of the CO_2 emissions and fuel consumption related properties of the relevant components, separate technical units and systems should be set out.

Changes to legislation: *There are currently no known outstanding effects for the Commission Regulation (EU) 2017/2400. (See end of Document for details)*

(18) In order to ensure sufficient lead time for the national authorities and the industry, the obligation to determine and declare CO_2 emissions and fuel consumption of new vehicles should be implemented gradually for different vehicle groups starting with the vehicles which are the biggest contributors to CO_2 emissions of the heavy-duty sector.

(19) The provisions set out in this Regulation form part of the framework established by Directive 2007/46/EC and complement the provisions for type approval with regard to emissions and vehicle repair and maintenance information laid down in Regulation (EU) No 582/2011. To establish a clear relationship between those provisions and this Regulation, Directive 2007/46/EC and Regulation (EU) No 582/2011 should be amended accordingly.

(20) The measures provided for in this Regulation are in accordance with the opinion of the Technical Committee Motor Vehicles,

HAS ADOPTED THIS REGULATION:

CHAPTER 1

GENERAL PROVISIONS

Article 1

Subject matter

This Regulation complements the legal framework for the type-approval of motor vehicles and engines with regard to emissions and vehicle repair and maintenance information established by Regulation (EU) No 582/2011 by laying down the rules for issuing licences to operate a simulation tool with a view to determining CO_2 emissions and fuel consumption of new vehicles to be sold, registered or put into service in the Union and for operating that simulation tool and declaring the CO_2 emissions and fuel consumption values thus determined.

Article 2

Scope

1 Subject to the second paragraph of Article 4, this Regulation shall apply to vehicles of category N2, as defined in Annex II to Directive 2007/46/EC, with a technically permissible maximum laden mass exceeding 7 500 kg and to all vehicles of category N3, as defined in that Annex.

[[F1]2 In case of multi-stage type-approvals or individual approvals of vehicles referred to in paragraph 1, this Regulation shall apply only to base vehicles equipped at least with a chassis, engine, transmission, axles and tyres.**]**

3 This Regulation shall not apply to off-road vehicles, special purpose vehicles and off road special purpose vehicles as defined, respectively, in points 2.1., 2.2. and 2.3. of Part A of Annex II to Directive 2007/46/EC.

***Changes to legislation:** There are currently no known outstanding effects for the Commission Regulation (EU) 2017/2400. (See end of Document for details)*

Textual Amendments

F1 Substituted by Commission Regulation (EU) 2019/318 of 19 February 2019 amending Regulation (EU) 2017/2400 and Directive 2007/46/EC of the European Parliament and of the Council as regards the determination of the CO2 emissions and fuel consumption of heavy-duty vehicles (Text with EEA relevance).

Article 3

Definitions

For the purposes of this Regulation, the following definitions shall apply:

(1) ‘CO_2 emissions and fuel consumption related properties’ means specific properties derived for a component, separate technical unit and system which determine the impact of the part on the CO_2 emissions and fuel consumption of a vehicle;

(2) ‘input data’ means information on the CO_2 emissions and fuel consumption related properties of a component, separate technical unit or system which is used by the simulation tool for the purpose of determining CO_2 emissions and fuel consumption of a vehicle;

(3) ‘input information’ means information relating to the characteristics of a vehicle which is used by the simulation tool for the purposes of determining their CO_2 emissions and fuel consumption of the vehicle and which is not part of an input data;

(4) ‘manufacturer’ means the person or body who is responsible to the approval authority for all aspects of the certification process and for ensuring conformity of CO_2 emissions and fuel consumption related properties of components, separate technical units and systems. It is not essential that the person or body be directly involved in all stages of the construction of the component, separate technical unit or system which is the subject of the certification.

(4a) **[**[F2]‘vehicle manufacturer’ means a body or person responsible for issuing the manufacturer's records file and the customer information file pursuant to Article 9;**]**

(5) ‘authorised entity’ means a national authority authorised by a Member State to request relevant information from the manufacturers and vehicle manufacturers on the CO_2 emissions and fuel consumption related properties of a specific component, specific separate technical unit or specific system and CO_2 emissions and fuel consumption of new vehicles respectively.

(6) ‘transmission’ means a device consisting of at least of two shiftable gears, changing torque and speed with defined ratios;

(7) **[**[F1]‘torque converter’ means a hydrodynamic start-up component either as a separate component of the driveline or transmission with serial or parallel power flow that adapts speed between engine and wheel and provides torque multiplication;**]**

(8) ‘other torque transferring component’ or ‘OTTC’ means a rotating component attached to the driveline which produces torque losses dependent on its own rotational speed;