



EUROPEAN
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COMMISSION REGULATION (EU) .../...

of **XXX**

**amending Commission Regulation (EU) 2017/1151 as regards the emission type
approval procedures for light passenger and commercial vehicles running exclusively on
CO₂ neutral fuels**

(Text with EEA relevance)

COMMISSION REGULATION (EU) .../...

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amending Commission Regulation (EU) 2017/1151 as regards the emission type approval procedures for light passenger and commercial vehicles running exclusively on CO₂ neutral fuels

(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 information¹, and in particular Articles 5(3) and 14(3) thereof,

Whereas:

- (1) Regulation (EC) No 715/2007 regulates type approval of motor vehicles with regard to their emissions. To that end, it requires new light passenger and commercial vehicles to comply with certain emission limits. The specific technical provisions necessary to implement that Regulation are set out in Commission Regulation (EU) 2017/1151².
- (2) CO₂ neutral fuels are renewable liquid and gaseous fuels of non-biological origin as defined in Directive (EU) 2018/2001³ which achieve greenhouse gas emissions savings of at least 100% in accordance with the methodology established under that Directive.
- (3) Vehicles running exclusively on CO₂ neutral fuels when using an internal combustion engine are vehicles designed and constructed in such a way so that they cannot run on any other types of fuels in combustion mode. If the internal combustion engine is fuelled with fuels other than CO₂ neutral fuels, such vehicles should be able to detect it and prevent the vehicle from starting until it is fuelled with CO₂ neutral fuel. The choice of technological solutions for such fuelling monitors and fuelling inducement systems should be up to the manufacturers.
- (4) Currently, anti-tampering rules are limited in scope to emission controls and the odometer. Therefore, specific anti-tampering rules for fuelling monitors and fuelling inducement systems are needed.

¹ OJ L 171, 29.6.2007, p. 1.

² Commission Regulation (EU) 2017/1151 of 1 June 2017 supplementing Regulation (EC) No 715/2007 of the European Parliament and of the Council 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, amending Directive 2007/46/EC of the European Parliament and of the Council, Commission Regulation (EC) No 692/2008 and Commission Regulation (EU) No 1230/2012 and repealing Regulation (EC) No 692/2008 (OJ L 175, 7.7.2017, p. 1).

³ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82).

- (5) To allow the type approval of vehicles running exclusively on CO₂ neutral fuels, the test procedures, administrative provisions, information documents, type approval certificates and the certificate of conformity need to be adapted.
- (6) To align the Worldwide Harmonised Light-duty Vehicles Test Procedure (WLTP) methodology laid down in Regulation (EU) 2017/1151 with UN Regulation No 154⁴, it should be made clear that when a vehicle is running on hydrogen, there is no need to measure CO₂ emissions.
- (7) It should be clarified that for the evaporative emissions test and on-board diagnostics systems, the specific conformity of production requirements of UN Regulation No 154 apply.
- (8) It should also be clarified that for the power measurement of electric drive trains both the net power and the maximum 30 minutes power should be determined.
- (9) It is therefore necessary to amend Regulation (EU) 2017/1151 and Commission Implementing Regulation (EU) 2020/683.
- (10) 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) 2017/1151 is amended as follows:

- (1) Article 2 is amended as follows:

- (a) The following points are added following under point 9:

‘(9a) ‘CO₂ neutral fuels’ mean renewable fuels of non-biological origin as defined in Directive (EU) 2018/2001, that achieve the minimum threshold for greenhouse gas emissions savings of at least 100%, calculated in accordance with Commission Delegated Regulation (EU) 2023/1184 and Commission Delegated Regulation (EU) 2023/1185.

(9b) ‘vehicle running exclusively on CO₂ neutral fuels’ means a vehicle that is designed and constructed to run exclusively with the use of on CO₂ neutral fuels and which cannot run on with other types of fuels when using an internal combustion engine;

(9c) ‘fuelling monitor’ is a device that checks whether a vehicle running exclusively on CO₂ neutral fuels is correctly fuelled by monitoring appropriate physical or chemical properties of the fuel;

(9d) ‘fuelling inducement system’ is a system that prevents a vehicle running exclusively on CO₂ neutral fuels from starting if fuelled with fuels other than CO₂ neutral fuels, or blends of CO₂ neutral fuels and other fuels;’

⁴ UN Regulation No 154 – Uniform provisions concerning the approval of light duty passenger and commercial vehicles with regards to criteria emissions, emissions of carbon dioxide and fuel consumption and/or the measurement of electric energy consumption and electric range (WLTP) (OJ L 290, 10.11.2022, p. 1).

- (b) point 42 is replaced by the following:
‘(42) ‘Portable emissions measurement system’ (PEMS) means a portable emissions measurement system meeting the requirements specified in Annex 4 of UN Regulation No. [RDE - UN Regulation number to be included after publication at UN];’;
- (2) Article 3 is amended as follows:
- (a) in paragraph 2, the first subparagraph is replaced by the following:
‘Vehicles shall be subject to the tests specified in point 2.4 and Figure I.2.4 of Annex I.’;
- (b) in paragraph 2, the following subparagraph is added:
‘The manufacturer of vehicles running exclusively on CO₂ neutral fuels shall also in addition provide proof that the vehicles cannot run on any fuel other than CO₂ neutral fuels by running the test described in point 5.3 of Annex II of this regulation for all relevant fuels’;
- (3) The following Article 4(b) is added after Article 4(a):
‘Article 4(b)
Requirements for type approval of vehicles running exclusively on CO₂ neutral fuels
The manufacturer shall ensure that all vehicles running exclusively on CO₂ neutral fuels are equipped with a fuelling monitor and a fuelling inducement system that function for the whole lifetime of the vehicle. Vehicles running exclusively on CO₂ neutral fuels shall have their fuel inlets appropriately marked and constructed to prevent accidental misfuelling.
The manufacturer shall ensure that the fuelling monitors and fuelling inducement system are protected from tampering for the whole lifetime of the vehicle. All provisions of this Regulation apply to vehicle types running exclusively on CO₂ neutral fuels.’;
- (4) Article 4a(1) is replaced by the following:
‘(1) pure ICE and Not-Off-Vehicle Charging Hybrid Electric vehicles (NOVC-HEVs) powered exclusively by mineral diesel, biodiesel, petrol, ethanol, CO₂ neutral fuels or any combination of these fuels’;
- (5) Article 5(1) is replaced by the following:
‘1. The manufacturer shall submit to the approval authority an application for EC type approval of a vehicle with regards to emissions. The application shall specify if the vehicle type refers to vehicles running exclusively on CO₂ neutral fuels.’;
- (6) Article 5(3) f is amended as follows:
‘(f) a description of the provisions taken to prevent tampering with and modification of the emission control systems, including the emission control computer and odometer including the recording of mileage values for the purposes of the requirements of Annexes XI and XVI and the provisions taken to prevent tampering with and modification of the fuelling monitor and fuelling inducement system’;

- (7) A new paragraph 3 is added to Article 8:

‘3. For vehicles running exclusively on CO₂ neutral fuels, conformity of production shall include a test of the functioning of the fuelling monitor and fuelling inducement system. Such tests shall also be performed during market surveillance of these vehicles.’;

Article 9(2) is replaced by the following:

‘2. The in-service conformity checks shall be appropriate for confirming that tailpipe and evaporative emissions are effectively limited during the normal life of vehicles under normal conditions of use. They shall also be appropriate for confirming that the fuelling monitoring and fuelling inducement system function as intended during the whole life of vehicles.’

- (8) A new paragraph 9 is added to Article 9:

‘9. For vehicles running exclusively on CO₂ neutral fuels, in-service conformity checks shall include a test of the functioning of the fuelling monitor and fuelling inducement system according to point 5.[X] of Annex II. For these vehicles, article 9 (4) shall not apply. Such tests shall also be performed during market surveillance of these vehicles. The requirements for in-service conformity checks for such vehicles are applicable until 10 years after the last Certificate of Conformity or individual approval certificate is issued for vehicles of that in-service conformity family. In case an in-service conformity family fails for such vehicles paragraphs 6 and 7 shall apply.’.

- (9) Annex I and Annex XX are amended as set out in the Annex to this Regulation.

Article 2

Commission Implementing Regulation (EU) 2020/683 is amended as follows:

The following point is added after every point 26.2 in the Annexes:

‘26.3 Vehicle running exclusively on CO₂ neutral fuels: Yes/No’

Article 3

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,

*For the Commission
The President
Ursula von der Leyen*



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ANNEX

ANNEX

to

Commission Regulation

**amending Commission Regulation (EU) 2017/1151 as regards the emission type
approval procedures for light passenger and commercial vehicles running exclusively on
CO₂ neutral fuels**

ANNEX

(1) Annex I is amended as follows:

(a) Point 1.3 is added after point 1.2:

‘1.3. For vehicles running exclusively on CO₂ neutral fuels, the manufacturer shall define a specific fuel type and its characteristics, other than the fuel types listed in Appendix 3, point 3.2.2.1, which shall apply for the purposes of this Regulation.’

(b) Point 2.2.1. is replaced by the following:

‘2.2.1. The requirements for inlets to fuel tanks shall be those specified in paragraphs 6.1.5. and 6.1.6. of UN Regulation 154. Inlets to fuel tanks for vehicles running exclusively on CO₂ neutral fuels shall be designed and constructed with special characteristics that allow the fuelling exclusively with CO₂ neutral fuels.’;

(c) Point 2.3.1 is replaced by the following :

‘2.3.1. The requirements for electronic system security of paragraph 6.1.7. of UN Regulation 154 shall be complied with. The effective application of these strategies in protecting the emission control systems may be tested during type approval and/or market surveillance. In case of vehicles running exclusively on CO₂ neutral fuels, the manufacturers shall take adequate steps to protect fuelling monitors and fuelling inducement systems from tampering. Methods giving an adequate level of tamper protection shall be approved by the approval authority.’

(d) In Point 2.4.1 in Figure I.2.4 the row covering CO₂ emissions, fuel consumption, electric energy consumption and electric range is replaced by the following:

CO ₂ emissions, fuel consumption, electric energy consumption and electric range	Yes	Yes	Yes	No	Yes (both fuels)	Yes (both fuels)	Yes (Petrol only)	Yes (both fuels)	Yes	Yes	Yes	Yes
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(e) Point 2.4.2 is added after point 2.4.1:

‘2.4.2. For vehicles running exclusively on CO₂ neutral fuels, tests requiring the use of a reference fuel shall be performed with test fuels within the specifications issued by the manufacturer for vehicle operation by the customer. The specifications of the test fuel shall be communicated to the type approval authority. In such case, physical and chemical parameters necessary for performing calculations for the purposes of this Regulation shall be determined by performing a test fuel analysis in an accredited laboratory¹. For vehicles running exclusively on CO₂ neutral fuels the tests shall be the ones specified for petrol in case of positive ignition engine vehicles and the ones

¹ According to EN ISO/IEC 17025 for the fuel analysis procedure.

specified for diesel in case of compression ignition engine vehicles. In addition, a demonstration test shall be made to prove that vehicles running exclusively on CO₂neutral fuels cannot run if fuelled with fuels other than CO₂ neutral fuels, or blends of CO₂ neutral fuels and other fuels’;

- (f) In point 3.5.2.2 the equation is replaced by the following:

$$\epsilon(E) = \left| (V_2 - V_1) \right| / V_1$$

- (g) The following is added to point 4.1.1.:

‘For vehicles running exclusively on CO₂neutral fuels, it shall additionally be demonstrated by testing that they cannot run with fuels other than CO₂ neutral fuels.’

- (h) Points 4.6 and 4.7 are deleted;

- (i) Appendix 3 is amended as follows:

- (1) The following point is inserted following point 3.2.2.1.1.:

‘3.2.2.1.2. Type of CO₂ neutral fuel with a reference to a traceable specification’;

- (2) The following points are inserted following point 3.2.4.4.3.:

‘3.2.4.5. CO₂neutral fuel only: (Y/N)

3.2.4.5.1. Description of fuelling monitor and its operating principles: ...

3.2.4.5.2. Description of the fuelling inducement system and its operation:’;

- (3) In the Addendum to EC type-approval certificate No in Appendix 4, the following points are inserted following point 1.10.3.:

‘1.10.3.1. CO₂neutral fuel only: (Y/N)’;

- (j) Point 1.1.4 of Appendix 8a is replaced by the following:

‘1.1.4. FUEL FEED SYSTEM (if applicable)

For more than one fuel feed system, please repeat the point

Direct injection	:	yes/no or description
Vehicle fuel type	:	Monofuel / bifuel / flex fuel
CO ₂ neutral fuel	:	Yes/No
Control unit	:	
Part reference	:	same as information document
Software tested	:	read via scantool, for example
Air flowmeter	:	
Throttle body	:	

Pressure sensor	:	
Injection pump	:	
Injector(s)	:	

‘;

(2) Annex II is amended as follows:

(a) The following is added to point 5.3:

‘ISC testing of the functioning of the fuelling monitor and fuelling inducement system for vehicles running exclusively on CO₂ neutral fuels shall be performed by fuelling the vehicle with any relevant market fuel that is not CO₂ neutral and with a blend of such fuel with a CO₂ neutral fuel, to check that the vehicle does not run on such fuels or blends.’;

(b) Point 5.4.1 is added:

‘5.4.1. Frequency and scope of ISC testing of the functioning of the fuelling monitor and fuelling inducement system for vehicles running exclusively on CO₂ neutral fuels.

Each granting type approval authority shall perform the test of the functioning of the fuelling monitor and fuelling inducement system for vehicles running exclusively on CO₂ neutral fuels defined in point 5.3 on a minimum of 5 % of the relevant emission types per manufacturer per year. In case there are less than 40 relevant emission types per manufacturer, at least two of them shall be tested each year, where available.

Point 5.10 shall not apply for this test. Only one vehicle per emission type shall be tested. A failed test shall be considered a ‘fail’ result for the whole emission type.’

(3) In Annex XX Section 1 is replaced by the following:

‘1. INTRODUCTION

This Annex sets out requirements for measuring;

- a) net engine power;
- b) net power and the maximum 30 minutes power of electric drive trains.

The latter (b) in case of electric drivetrains composed of controllers and motors, which are used as the sole mode of propulsion, at least for part of the time.’.