COMMISSION IMPLEMENTING REGULATION (EU) 2021/392

of 4 March 2021

on the monitoring and reporting of data relating to CO_2 emissions from passenger cars and light commercial vehicles pursuant to Regulation (EU) 2019/631 of the European Parliament and of the Council and repealing Commission Implementing Regulations (EU) No 1014/2010, (EU) No 293/2012, (EU) 2017/1152 and (EU) 2017/1153

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO_2 emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 ([1]), and in particular Articles 7(7), 12(4), 13(4) and 15(7) thereof,

Whereas:

(1) The monitoring and reporting of data on passenger cars and light commercial vehicles registered in the Union are essential for the functioning of the CO_2 emission performance standards set out in Regulation (EU) 2019/631. Considering that that Regulation started applying on 1 January 2020, it is appropriate to simplify and clarify the provisions set out in Commission Implementing Regulations (EU) No 1014/2010 ([2]) and (EU) No 293/2012 ([3]) and to bring those provisions into one single Implementing Regulation. For the reporting of data for the calendar year 2020, it is however appropriate to allow both the new and the existing provisions to overlap until 28 February 2021.

(2) It is necessary to set out procedures for the monitoring and reporting of data relating to new passenger cars and light commercial vehicles that are to be followed by the competent authorities of the Member States, the manufacturers, as well as the Commission and the European Environment Agency (EEA).

(3) The monitoring and reporting cycle provided for in Article 7 of Regulation (EU) 2019/631 consists of three main steps: the annual reporting by Member States' authorities to the Commission of the provisional data based on registrations of new vehicles in the preceding calendar year; the transmission of that provisional data by the Commission, with the support of the EEA, to the manufacturers concerned; the verification of that data by the manufacturers and, where necessary, the notification to the Commission of corrections to that data.

(4) The measures to be taken by the different actors, as part of those three steps within the relevant time-limits, should be clearly specified, with the objective of ensuring the robustness and reliability of the final dataset published by the Commission pursuant to Article 9 of Regulation (EU) 2019/631, on the basis of which a manufacturer's average specific CO_2 emissions and compliance with its specific CO_2 emission target are determined.

([1]) OJ L 111, 25.4.2019, p. 13.

([2]) Commission Implementing Regulation (EU) No 1014/2010 of 10 November 2010 on monitoring and reporting of data on the registration of new passenger cars pursuant to Regulation (EC) No 443/2009 of the European Parliament and of the Council (OJ L 293, 11.11.2010, p. 15).

([3]) Commission Implementing Regulation (EU) No 293/2012 of 3 April 2012 on monitoring and reporting of data on the registration of new light commercial vehicles pursuant to Regulation (EU) No 510/2011 of the European Parliament and of the Council (OJ L 98, 4.4.2012, p. 1).

(5) Pursuant to Article 12 of Regulation (EU) 2019/631, the Commission is required to collect, from 2021, data on the real-world fuel or energy consumption of passenger cars and light commercial vehicles that are recorded by on-board fuel and/or energy consumption monitoring devices as provided for in Article 4a of Commission Regulation (EU) 2017/1151 ([4]).

(6) Such real-world data should be collected as soon as it becomes available, as it is essential to identify, as early as possible, how the difference between the real-world emissions and fuel or energy consumption and the corresponding type-approval values evolves over time, both for monitoring the effectiveness of the CO_2 emission standards in reducing vehicle CO_2 emissions, and for informing the public.

(7) In order to ensure that it is possible to access real-world fuel and energy consumption data as early as possible, manufacturers should be required to collect such data from new passenger cars and light commercial vehicles registered from 1 January 2021. Such data may be collected either through direct data transfers from vehicles to the manufacturers, or through their authorised dealers or authorised repairers when vehicles are brought in for service or repairs and on-board data is to be read out for other purposes. Where such data is made available to a manufacturer, it should be reported to the Commission, starting with data relating to new vehicles registered in the Union for the first time in 2021.

(8) Pursuant to Regulation (EU) 2017/1151, the obligation to equip vehicles with on-board fuel or energy consumption monitoring devices does not apply to certain small volume manufacturers, and it is therefore appropriate that they should also be exempt from the obligation to collect and report real-world data. This should, however, not prevent small volume manufacturers from delivering real-world data should they so wish.

(9) Real-world fuel and energy consumption data should be collected by Member States as part of the roadworthiness tests performed in accordance with Directive 2014/45/EU of the European Parliament and of the Council ([5]). In order to facilitate this task, it is appropriate to align the obligation to collect the real-world data with the requirements set out in Directive 2014/45/EU, both as regards the national timetables for the roadworthiness tests and for the reading-out of data from the on-board diagnostics serial port of the vehicles. The data collection should therefore start from the first roadworthiness tests and should not be required before 20 May 2023, which is the date from which the bodies and establishments performing those tests are to be equipped with the necessary devices, such as scan tools, pursuant to that Directive. Member States should, however, not be prevented from delivering data before that date, should they so wish.

(10) Manufacturers and Member States should report real-world data collected during a calendar year to the Commission and the EEA, using the data transmission procedures provided by the EEA. Should such data not be available, which may be the case in particular in the first calendar years following 2021, manufacturers and Member States should inform the Commission and provide the reasons therefore.

(11) Real-world fuel and energy consumption data should be collected together with the vehicle's identification number (VIN). The VIN is considered to be personal data from the moment the vehicle is registered, and is therefore subject to the requirements laid down with regard to the protection of such data in Regulation (EU) 2016/679 of the

([4]) 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 Commission Regulation (EC) No 692/2008 (OJ L 175, 7.7.2017, p. 1).

([5]) Directive 2014/45/EU of the European Parliament and of the Council of 3 April 2014 on periodic roadworthiness tests for motor vehicles and their trailers and repealing Directive 2009/40/EC (OJ L 127, 29.4.2014, p. 51).

European Parliament and of the Council ([6]). The processing of the VINs for the purposes of Regulation (EU) 2019/631 should be considered lawful pursuant to Article 6(1)(c) of Regulation (EU) 2016/679. Moreover, it should be specified that the entities involved in the collection, reporting and processing of the VINs are to be considered as controllers of such data within the meaning of point 7 of Article 4 of Regulation (EU) 2016/679 and, as regards the EEA and the Commission, within the meaning of Article 3(8) of Regulation (EU) 2018/1725 of the European Parliament and of the Council ([7]).It should be also ensured that the VINs are collected using secure means of communication, and that the data subjects, namely the vehicle owners, are adequately informed in accordance with Articles 13 and 14 of Regulation (EU) 2016/679.

(12) It should also be specified how the real-world data and the VINs are to be used, and the time period for which that data is to be retained by the different entities involved in the collection and reporting. As the objective is to follow the evolution of the real-world performance of the vehicle over its estimated lifetime, data should be collected for a period of 15 years for the same vehicle and be retained by the EEA for a period of 20 years. However, as regards other entities collecting and reporting data, they should hold the data only for the time needed to prepare the data for the transmission to the EEA.

(13) The collection of real-world data and the VINs should be fully transparent, and the vehicle owners should therefore have the possibility to refuse to make that data available to the manufacturers or during the roadworthiness tests. It should be noted that the right of refusal of the vehicle owner is not based on Article 21 of Regulation (EU) 2016/679 and the refusal should be considered valid only as regards that data collected for the purposes of this Regulation.

(14) The data to be published in accordance with Article 12(1) of Regulation (EU) 2019/631 should not allow the identification of individual vehicles or drivers, but should only be published as an anonymised and aggregated dataset without any reference to the VINs.

(15) Based on the assessment referred to in the first subparagraph of Article 12(3) of Regulation (EU) 2019/631, the Commission should review certain aspects of the provisions on the monitoring, reporting and publication of real-world fuel and energy consumption data, taking into account, inter alia, the availability of direct data transfers from vehicles.

(16) In order to ensure the availability of type-approval data for the purpose of establishing a procedure for verifying the CO_2 emissions of passenger cars and light commercial vehicles in-service, as required by Article 13 of Regulation (EU) 2019/631, the collection of such data under Commission Implementing Regulations (EU) 2017/1152 ([8]) and (EU) 2017/1153 ([9]) should continue also after the obligation to collect such data under those Regulations ceases to apply on 1 January 2021.

([6]) Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1).

([7]) Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

([8]) Commission Implementing Regulation (EU) 2017/1152 of 2 June 2017 setting out a methodology for determining the correlation parameters necessary for reflecting the change in the regulatory test procedure with regard to light commercial vehicles and amending Implementing Regulation (EU) No 293/2012 (OJ L 175, 7.7.2017, p. 644).

([9]) Commission Implementing Regulation (EU) 2017/1153 of 2 June 2017 setting out a methodology for determining the correlation parameters necessary for reflecting the change in the regulatory test procedure and amending Regulation (EU) No 1014/2010 (OJ L 175, 7.7.2017, p. 679).

(17) Type-approval authorities should therefore ensure that data relating to the tests performed in accordance with Regulation (EU) 2017/1151 continues to be recorded and transmitted to the Commission Joint Research Centre, using the secure transmission procedure provided by it.

(18) From 1 January 2021, it is no longer necessary to determine CO_2 emissions for passenger cars and light commercial vehicles in accordance with the New European Driving Cycle (NEDC) as provided for in Implementing Regulations (EU) 2017/1152 and (EU) 2017/1153, with the exception of off-vehicle-charging hybrid electric passenger cars placed on the market until 31 December 2022, where a manufacturer wishes to benefit from super-credits as set out in Article 5 of Regulation (EU) 2019/631.

(19) As the transition from the NEDC-based CO_2 emission standards to standards based on the Worldwide Harmonised Light Vehicle Test Procedure set out in Regulation (EU) 2017/1151 will only be fully completed by the end of 2023, and will be finally reported on as part of the annual CO_2 data monitoring process in 2024, and in view of, in particular, the provisions on eco-innovations and end-of-series vehicles, Implementing Regulations (EU) 2017/1152 and (EU) 2017/1153 should remain in force until the end of 2024.

(20) The European Data Protection Supervisor was consulted in accordance with Article 42(1) of Regulation (EU) 2018/1725 and delivered its comments on 14 January 2021.

(21) The measures provided for in this Regulation are in accordance with the opinion of the Climate Change Committee,

HAS ADOPTED THIS REGULATION:

CHAPTER 1

GENERAL PROVISIONS

Article 1

Subject matter

1. This Regulation sets out detailed rules on the procedures for the monitoring and reporting by Member States and manufacturers of data relating to CO_2 emissions from new passenger cars and light commercial vehicles, as well as of data on real-world CO_2 emissions and fuel or energy consumption of those vehicles.

2. For the purpose of establishing the procedure for verifying CO_2 emissions of in-service vehicles in accordance with Article 13 of Regulation (EU) 2019/631, this Regulation also provides for the reporting by the Member States' competent authorities of certain data recorded as part of the type-approval tests performed in accordance with Regulation (EU) 2017/1151.

Article 2

Definitions

In addition to the definitions set out in Article 3 of Regulation (EU) 2019/631, the following definitions shall apply:

(a) 'detailed monitoring data' means the detailed monitoring data specified for passenger cars in Section 2 of Part B of Annex II to Regulation (EU) 2019/631 and for light commercial vehicles in Section 2 of Part C of Annex III to that Regulation;

(b) 'aggregated monitoring data' means the aggregated data specified for passenger cars in Section 1 of Part B of Annex II to Regulation (EU) 2019/631 and for light commercial vehicles in Section 1 of Part C of Annex III to that Regulation;

(c) 'real-world data' means the data referred to in point 3.1(a) and (b) and point 3.2(a) to (g) and (l) of Annex XXII to Regulation (EU) 2017/1151 that has been obtained from on-board fuel and/or energy consumption monitoring devices.

CHAPTER 2

REPORTING OF DATA IN ACCORDANCE WITH ARTICLE 7 OF REGULATION (EU) 2019/631

Article 3

Aggregated and detailed monitoring data

1. Member States shall ensure the maintenance, collection, control, verification and timely transmission of the aggregated and detailed monitoring data to the Commission and the European Environment Agency (EEA).

Member States shall ensure that requests by the EEA for clarifications or corrections of the transmitted data are addressed without delay by their designated contact persons.

2. The aggregated and detailed monitoring data shall be reported in two separate datasets for passenger cars and light commercial vehicles, respectively, in accordance with Part B of Annex II to Regulation (EU) 2019/631 and Part C of Annex III to that Regulation.

3. Member States shall transmit the aggregated and detailed monitoring data via electronic data transfer to the Central Data Repository (CDR) managed by the EEA. Member States shall notify the Commission when the data is transmitted.

Article 4

Provisional calculation and data

1. The Commission, together with the EEA, shall, in accordance with Article 7(4) of Regulation (EU) 2019/631, ensure that each manufacturer and pool of manufacturers responsible for new passenger cars or light commercial vehicles registered in the Union is notified of the provisional calculation of its specific emissions target and its average specific emissions of CO_2 and of the data reported by Member States.

2. The provisional calculations and the data referred to in paragraph 1 shall be notified separately for passenger cars and light commercial vehicles and shall include the records which, on the basis of the manufacturer's name and World Manufacturer Identifier, can be attributed to that manufacturer.

3. The central register of data referred to in Article 7(4) of Regulation (EU) 2019/631 shall include all data entries reported by the Member States, with the exception of the vehicle identification numbers (VINs).

The VINs shall be retained by the EEA for a period of 20 years from the date on which they were first uploaded to the CDR or the Business Data Repository (BDR) of the EEA.

Article 5

Manufacturer details

Manufacturers that place or intend to place passenger cars or light commercial vehicles that fall within the scope of Regulation (EU) 2019/631 on the market of the Union shall notify the Commission without delay of the following information and of any changes to that information:

(a) the manufacturer name they indicate or intend to indicate on the certificates of conformity;

(b) the World Manufacturer Identifier, corresponding to the first three characters of the VIN, that they indicate or intend to indicate on the certificates of conformity;

(c) for the purpose of the notification referred to in the second subparagraph of Article 7(4) of Regulation (EU) 2019/631, the name and address of the contact person representing the manufacturer to whom the notification of the provisional calculations and data is to be addressed.

The names and addresses referred to in point (c) shall be considered as personal data within the meaning of Regulation (EU) 2018/1725.

Article 6

Notification of errors in the data used for the provisional calculations

1. Where a manufacturer verifies the provisional data in accordance with the first subparagraph of Article 7(5) of Regulation (EU) 2019/631, it shall use the dataset provided for that purpose by the EEA.

2. Where an error is identified in the dataset, the manufacturer shall, where possible, correct it and indicate, by a separate entry in the dataset for each vehicle record, entitled 'Manufacturer comments', one of the following codes:

(a) Code A, if the record has been changed by the manufacturer;

(b) Code B, if the vehicle cannot be identified by the manufacturer;

(c) Code C, if the vehicle falls out of the scope of Regulation (EU) 2019/631;

(d) Code D, if the manufacturer to which a vehicle of category N1 has been attributed is the manufacturer of the completed vehicle but not of the incomplete or complete base vehicle.

For the purposes of point (b), a vehicle is considered unidentifiable where the VIN is missing or is manifestly incorrect.

3. Manufacturers shall notify the Commission of any errors in accordance with Article 7(5) of Regulation (EU) 2019/631 by uploading the complete corrected dataset to the BDR. They shall also send an electronic copy of the notification for information to the following email addresses:

EC-CO2-LDV-implementation@ec.europa.eu

and

CO2-monitoring@eea.europa.eu

4. Manufacturers shall ensure that requests for clarifications of the corrections by the Commission or the EEA are addressed without delay by their contact persons designated in accordance with Article 5(c) of this Regulation.

5. Where a manufacturer does not notify the Commission of any errors before the expiry of the three-month period provided for in Article 7(5) of Regulation (EU) 2019/631, the provisional values notified in accordance with Article 7(4) of that Regulation shall be considered as final.

Article 7

Reporting of data relating to completed light commercial vehicles

Manufacturers of a base vehicle as referred to in point 1.2.2 of Annex III to Regulation (EU) 2019/631 shall transmit the data referred to in that point via electronic data transfer to the BDR at the latest within three months from being notified of the provisional data in accordance with Article 4 of this Regulation.

Article 8

Reporting of NEDC CO_2 emissions for the purposes of Article 5 of Regulation (EU) 2019/631

1. A manufacturer of new passenger cars registered in the calendar years 2021 or 2022 with measured NEDC CO_2 values of less than 50 g CO_2/km, as provided for in Article 5 of Implementing Regulation (EU) 2017/1153, shall report those measured NEDC CO_2 values to the Commission together with the notification referred to in Article 6 of this Regulation.

2. The Commission may request the manufacturer to provide the relevant certificates of conformity and type-approval certificates that support the reported CO_2 emission values.

CHAPTER 3

COLLECTION AND REPORTING OF REAL-WORLD DATA

Article 9

Collection and reporting of real-world data by manufacturers

1. Manufacturers shall collect real-world data together with the VINs of new passenger cars and new light commercial vehicles that are registered from 1 January 2021 and that are equipped with on-board fuel and/or energy consumption monitoring devices in accordance with Article 4a of Regulation (EU) 2017/1151, unless the vehicle owner expressly refuses to make that data available to the manufacturer or its authorised dealer or authorised repairer.

2. Where the real-world data and the VINs are not collected by the manufacturer via direct data transfer from the vehicle, the manufacturer shall ensure that the data is collected and transmitted to it by its authorised dealer or authorised repairer each time the vehicle is brought in for service or repairs or any other intervention and data is to be read out from the on-board diagnostics serial port of the vehicle. The device or scan tool used shall be capable of reading out the data as it is recorded on the on-board fuel and/or energy consumption monitoring device. The read-out of the data shall be free of charge and not subject to any specific conditions.

The manufacturer and, where applicable, its authorised dealer or repairer, shall ensure that secure means of communication are used for the collection of the VINs.

3. On 1 April each year, with effect from 2022, a manufacturer shall report to the Commission any real-world data and the VINs that were collected in the preceding calendar year, as specified in Table 1 of the Annex, by uploading it to the BDR.

In the event that several records referring to the same VIN are collected by a manufacturer in the same calendar year, the real-world data to be reported shall be the record indicating the highest total distance travelled. Real-world data for a given vehicle shall be collected for a maximum period of 15 years from the date on which the data for that vehicle was first reported to the EEA.

Where a manufacturer claims that real-world data cannot be reported, or can only be reported in part, it shall make a statement to that effect to the Commission and shall provide the reasons therefore. The statement and the justification shall be uploaded to the BDR.

4. Paragraphs 1, 2 and 3 shall not apply to small volume manufacturers as referred to in in Article 15(11) of Regulation (EU) 2017/1151.

Article 10

Collection and reporting of real-world data by Member States

1. Member States shall ensure that the bodies or establishments referred to in Article 4(2) of Directive 2014/45/EU collect real-world data and VINs of new passenger cars and new light commercial vehicles that are registered from 1 January 2021 and that are equipped with on-board fuel and/or energy consumption monitoring devices in accordance with Article 4a of Regulation (EU) 2017/1151.

With effect from 20 May 2023, the real-world data together with the VINs shall be collected when the vehicles undergo roadworthiness tests in accordance with Article 5 of Directive 2014/45/EU, unless the vehicle owner expressly refuses to make that data available.

The real-world data shall be read out by using a device to connect to the electronic vehicle interface, such as a scan tool as referred to in Annex III to Directive 2014/45/EU. The device used shall be capable of reading out the data as it is recorded on the on-board fuel and/or energy consumption monitoring device.

2. With effect from 2022, Member States shall ensure that the real-world data together with the VINs, as specified in Table 1 of the Annex, that were collected in the preceding calendar year are reported to the Commission annually on 1 April, by uploading that data to the CDR. Where no such data is available, a statement to that effect, including the reasons why the data is not available, shall be uploaded to the CDR.

Member States shall ensure that the real-world data for a given vehicle is collected for a maximum period of 15 years from the date on which that data was first reported for the vehicle to the EEA.

The Member State and the bodies and establishments responsible for the collection of the VINs shall ensure that secure means of communication are used for that collection.

Article 11

Obligations relating to the protection of personal data

1. The following entities responsible for collecting the VINs together with the real-world data directly from the vehicles, shall, in relation to the collection and processing of the VINs, be considered as controllers of the relevant data within the meaning of point 7 of Article 4 of Regulation (EU) 2016/679:

(a) manufacturers in the case of direct data transfers from the vehicles to the manufacturer;

(b) authorised dealers or authorised repairers;

(c) bodies or establishments responsible for roadworthiness testing.

Those entities shall ensure that they meet the obligation to provide information to the vehicle owners in their capacity as data subjects, as set out in Article 13 of that Regulation.

2. Where the VINs have been obtained indirectly from the vehicle owner for the purposes of Articles 3, 9 or 10, the Member States, and, where applicable, the manufacturers shall, in their capacity as data controllers, ensure that they meet the obligation to provide information to the vehicle owners as set out in Article 14 of Regulation (EU) 2016/679.

3. The EEA and the Commission shall, in relation to the collection and processing of VINs for the purposes of this Regulation, be considered as data controllers subject to the provisions set out in Regulation (EU) 2018/1725.

4. The VINs and the real-world data collected in accordance with Articles 9 and 10 of this Regulation may not be used for any purpose other than that specified in Article 12 of Regulation (EU) 2019/631.

5. The VINs and the real-world data collected in accordance with Articles 9 and 10 may only be retained for the following periods:

(a) by manufacturers, until that data has been reported upon in accordance with Article 9(3);

(b) by authorised dealers and repairers, until that data has been transmitted to the manufacturer in accordance with Article 9(2);

(c) by bodies and establishments responsible for roadworthiness tests, until that data has been transmitted to the EEA, or to the authority designated by the Member States for reporting the data to the EEA, in accordance with Article 10(2);

(d) by the authorities designated by the Member States for reporting the real-world data to the EEA, until that data has been reported upon in accordance with Article 10(2);

(e) by the EEA, until 20 years from the date on which the data was first uploaded to the BDR in accordance with Article 9(3) or to the CDR in accordance with Article 10(2).

Article 12

Publication of real-world data

With effect from December 2022, the Commission shall each year publish anonymised and aggregated datasets that shall be split between passenger cars and light commercial vehicles powered by internal combustion engines, and off-vehicle charging hybrid electric vehicles (OVC-HEVs) of the same categories, including the following data per manufacturer:

(a) the average fuel consumption (l/100 km) based on the data reported pursuant to Articles 9 and 10;

(b) the average electric energy consumption (kWh/100 km) based on the data reported pursuant to Articles 9 and 10;

(c) the average CO_2 emissions (g/km) calculated on the basis of the data reported pursuant to Articles 9 and 10;

(d) the difference between the average fuel consumption referred to in point (a) and the average of the fuel consumption values recorded in the certificates of conformity of the same vehicles as those for which real-world data has been reported;

(e) the difference between the average electric energy consumption referred to in point (b) and the average of the electric energy consumption values recorded in the certificates of conformity of the same vehicles as those for which real-world data has been reported;

(f) the difference between the average CO_2 emissions (g/km) calculated in accordance with point (c) and the average of the CO_2 emission values recorded in the certificates of conformity of the same vehicles as those for which real-world data has been reported.

Points (b) and (e) shall apply only as regards OVC-HEVs.

Article 13

Review

The Commission shall, on the basis of the assessment referred to in the first subparagraph of Article 12(3) of Regulation (EU) 2019/631, review the implementation of Articles 9 to 12 of this Regulation considering, in particular, the following:

(a) the number of vehicles equipped with direct data transfer devices;

(b) the need for continued monitoring and reporting of real-world data by manufacturers;

(c) the time period during which real-world data need to be monitored and reported;

(d) the appropriate level of aggregation of data to be published by the Commission pursuant to Article 12 of this Regulation.

CHAPTER 4

MONITORING AND REPORTING OF DATA FROM TESTS PERFORMED IN ACCORDANCE WITH REGULATION (EU) 2017/1151

Article 14

Test data

1. Type-approval authorities shall ensure that the data specified in Table 2 of the Annex is recorded for each Type 1 test performed in accordance with Annex XXI to Regulation (EU) 2017/1151.

2. The recorded data shall be uploaded in an encrypted format to the dedicated Commission server. Where the data has been correctly uploaded, a receipt shall be sent from the Commission server to the uploading entity.

3. The test data shall not be published.

Article 15

Repeal

1. Implementing Regulations (EU) No 1014/2010 and (EU) No 293/2012 are repealed with effect from 1 March 2021.

2. Implementing Regulations (EU) 2017/1152 and (EU) 2017/1153 are repealed with effect from 1 January 2025.

Article 16

Entry into force

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, 4 March 2021.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX

1. **Collection and reporting of real-world data and VINS in accordance with Articles 9 and 10**

Table 1

Data to be reported in accordance with Articles 9 and 10

Parameter	Unit	Vehicles of category M1 and N1	
		Pure internal combustion engine vehicles and not-off-vehicle charging hybrid electric vehicles ([1])	Off-vehicle charging hybrid electric vehicles ([2])
Vehicle identification number	-	√	√
Total fuel consumed (lifetime)	l	√	√
Total distance travelled (lifetime)	km	√	√
Total fuel consumed in charge depleting operation (lifetime)	l	_	√
Total fuel consumed in driver-selectable charge increasing operation (lifetime)	l	_	√
Total distance travelled in charge depleting operation with engine off (lifetime)	km	_	√
Total distance travelled in charge depleting operation with engine running (lifetime)	km	_	√
Total distance travelled in driver-selectable charge increasing operation (lifetime)	km	_	√
Total grid energy into the battery (lifetime)	kWh	_	√

([1]) Powered exclusively by mineral diesel, biodiesel, petrol, ethanol or any combination of those fuels.
([2]) Powered by electricity and mineral diesel, biodiesel, petrol or ethanol.

2. **Reporting of data in accordance with Article 14**

The following parameters shall be reported for each interpolation family, i.e. for vehicle high (VH) and, where applicable, vehicle low (VL) or vehicle M, for the Type 1 tests performed in accordance with Annex XXI to Regulation (EU) 2017/1151.

Except where otherwise indicated in Table 2, where more than one Type 1 test of vehicle high or vehicle low is performed, the test data shall be reported in accordance with the following:

(a) in the case of two Type 1 tests, the test data for the Type 1 test with the highest measured CO_2 emissions (combined);

(b) in the case of three Type 1 tests, the test data for the Type 1 test with the median measured CO_2 emissions (combined).

Table 2

Type 1 test data

No	Parameters	Unit	Source (unless otherwise specified, all references are to Regulation (EU) 2017/1151)	Remarks
1	Interpolation family identifier	-	Point 0, Section II of the type approval certificate, Appendix 4 to Annex I.	*Data shall be provided for each type-approved interpolation family*
2	Parent interpolation family identifier (where applicable)	-	-	*Indicate the parent interpolation family identifier, if the test data has been determined for another interpolation family*
3	Extension of a type approval	-	EC Type-Approval certificate	*0 = No | 1 = Yes – if the test is performed for the purpose of an extension of a type approval*
4	Propulsion type	-		*Pure ICEV, OVC-HEV, NOVC-HEV*
5	Vehicle category and class		Point 0.4, Appendix 3 to Annex I	*M1 or N1 Class 1, 2 or 3*
6	Ignition type		Point 3.2.1.1, Appendix 3 to Annex I	*Positive ignition or compression ignition*
7	Number of cylinders	-	Point 3.2.1.2, Appendix 3 to Annex I	*Number, if not provided default is 4*
8	Engine stroke	mm	Point 3.2.1.2.2, Appendix 3 to Annex I	
9	Engine capacity	cm^3	Point 3.2.1.3, Appendix 3 to Annex I	
10	Rated engine power	kW	Point 3.2.1.8, Appendix 3 to Annex I	
11	Engine speed at rated engine power	min^{-1}	Point 3.2.1.8, Appendix 3 to Annex I	*Engine speed at maximum net power*
12	Fuel type	-	Point 3.2.2.1 of Appendix 3 to Annex I	*Diesel/Petrol/LPG/NG or Biomethane/ Ethanol(E85)/Biodiesel/Hydrogen*
13	Bi-fuel vehicle	-	Point 3.2.2.4, Appendix 3 to Annex I	*0 = No | 1 = Yes* *In case of bi-fuel vehicles, test results shall be provided for both fuel types (2 input templates)*

14	Maximum power output of each electric machine (P0, P1, P2, P2 planetary, P3, or P4) (*)	kW	Point 3.3.1.1.1, Appendix 3 to Annex I	*OVC-HEV and NOVC-HEV*
15	Number of REESS cells	-	Point 3.3.2.1, Appendix 3 to Annex I	*OVC-HEV and NOVC-HEV*
16	Service battery capacity	Ah	Point 3.4.4.5, Appendix 3 to Annex I	*Low voltage battery capacity*
17	Nominal voltage of the alternator	V	Point 3.4.4.5, Appendix 3 to Annex I	*Nominal voltage of the alternator (mandatory for pure ICEV)*
18	Tyre dimensions (front/rear)	-	Point 3.5.7.1 Test vehicle parameters, Appendix 3 to Annex I	*Tyre code (e.g. P195/55R1685H) of tyres of the test vehicle*
19	Road load coefficient F0	N	Point 3.5.7.1, Appendix 3 to Annex I	*VH and VL (if applicable)*
20	Road load coefficient F1	N/(km/h)	Point 3.5.7.1, Appendix 3 to Annex I	*VH and VL (if applicable)*
21	Road load coefficient F2	$N/(km/h)^2$	Point 3.5.7.1, Appendix 3 to Annex I	*VH and VL (if applicable)*
22	Gearbox type	-	Point 4.5.1, Appendix 3 to Annex I	*automatic/manual/CVT/planetary*
23	Internal gearbox ratios	-	Point 4.6, Appendix 3 to Annex I	*For each gear separately*
24	Final drive ratio(s)	-	Point 4.6, Appendix 3 to Annex I	*If the vehicle has more than one final drive, introduce values for each gear separately*
25	Additional safety margin (ASM) values	%	Point 4.6.1.7.1, Appendix 3 to Annex I	*Report values when used for gearshift calculation*
26	Drive wheels	-	Point 1.7, Appendix 4 to Annex I	*Two-wheel drive, four-wheel drive.*
27	Charge-depleting CO_2 emissions (combined)	gCO_2/km	Point 2.5.3.2, Appendix 4 to Annex I	*OVC-HEV only* *In case of 2 or 3 tests all results shall be provided.*
28	CO_2 emissions weighted combined (measured)	gCO_2/km	2.5.3.3, Appendix 4 to Annex I	*OVC-HEV only.* *In case of 2 or 3 tests all results shall be provided.*
29	CO_2 emissions weighted combined (declared)	gCO_2/km	Point 2.5.3.3, Appendix 4 to Annex I	*OVC-HEV only*

30	Equivalent All Electric range (EAER) combined	km	Point 2.5.3.7.2, (EAER), Appendix 4 to Annex I	*OVC-HEV only*
31	Engine idling speed	min^{-1}	Point 1.1.2, Appendix 8a to Annex I	*Idle speed in warm conditions*
32	Willans factors for ICE for CO_2 emissions	gCO_2/MJ	Point 1.1.3, Appendix 8a to Annex I	*Value according to the Table A6.App2/3 used for RCB correction*
33	Traction REESS capacity	Ah	Point 1.1.10, Appendix 8a to Annex I	*OVC-HEV and NOVC-HEV*
34	Traction REESS technology type	-	Point 1.1.10, Appendix 8a to Annex I	*OVC-HEV and NOVC-HEV*
35	Traction REESS voltage nominal or time-series	V	Point 1.1.10, Appendix 8a to Annex I	*OVC-HEV and NOVC-HEV Nominal or time-series values used for the test (20Hz)*
36	Test mass	kg	Point 1.2.1 for VH and Point 1.3.1 for VL, Appendix 8a, Annex I	*VH and VL (if applicable)*
37	Number of dyno axis during the test	-	Point 2.1, Appendix 8a to Annex I	*Chassis Dyno configuration during Type 1 test (1-axle,2-axle) for VH/VL*
38	Alternator (DC/DC converter – low voltage side – in case of NOVC- and OVC-HEVs) current	A	As measured in the Type 1 test	*Array: 1Hz, 0,1 A resolution, external measurement device synchronised with the chassis dynamometer*
39	K_i Regenerative Factor multiplicative/additive	-	Point 2.1.1.2.1, Appendix 8a to Annex I	*CO_2 emissions; For vehicles without periodically regenerating systems this value is equal to 1.*
40	CO_2 measured value low phase	gCO_2/km	Point 2.1.1.2.1, Appendix 8a to Annex I	*Uncorrected measured value $M_{CO2,p.\ 1}$ of phase low (charge-sustaining value in case of NOVC- and OVC-HEVs).*
41	CO_2 measured value medium phase	gCO_2/km	Point 2.1.1.2.1, Appendix 8a to Annex I	*Uncorrected measured value $M_{CO2,p.\ 1}$ of phase medium (charge-sustaining value in case of NOVC- and OVC-HEVs)*
42	CO_2 measured value high phase	gCO_2/km	Point 2.1.1.2.1, Appendix 8a to Annex I	*Uncorrected measured value $M_{CO2,p.\ 1}$ of phase high (charge-sustaining value in case of NOVC- and OVC-HEVs)*
43	CO_2 measured value extra-high phase	gCO_2/km	Point 2.1.1.2.1, Appendix 8a to Annex I	*Uncorrected measured value $M_{CO2,p.\ 1}$ of phase extra-high (charge-sustaining value in case of NOVC- and OVC-HEVs).*

44	CO_2 measured value (combined)	gCO_2/km	Point 2.1.1.2.1, Appendix 8a to Annex I	*Uncorrected measured value $M_{CO2.c.1}$ of complete cycle (charge-sustaining value in case of NOVC- and OVC-HEVs). In case of 2 and 3 tests all measured results shall be provided.*
45	CO_2 measured corrected (combined)	gCO_2/km	Point 2.1.1.2.1, Appendix 8a to Annex I	*Combined measured CO_2 emissions for vehicle H and L after all applicable corrections, $M_{CO2,C,5}$. In case of 2 and 3 tests all measured corrected results shall be provided. In case of OVC-HEV and NOVC-HEV this is charge-sustaining mode*
46	CO_2 declared value	gCO_2/km	Point 2.1.1.2.1, Appendix 8a to Annex I	*Manufacturer declared value*
47	ATCT family correction factor	-	Point 2.1.1.2.2, Appendix 8a to Annex I	*ATCT Family correction factor (14 °C correction)*
48	Fuel consumption over the Type 1 test as recorded on the on-board fuel consumption monitoring device (OBFCM)	l	Point 2.1.1.3.1, Appendix 8a to Annex I	*Fuel consumed during the test (charge-sustaining value in case of NOVC-HEV and OVC-HEV). In case of 2 and 3 tests all results shall be provided.*
49	Index number of the transition cycle	-	Point 2.1.1.4.1.4, Appendix 8a to Annex I	*for OVC-HEV indicate the index number of the transition cycle*
50	Nominal REESS voltage	V	Point 1.1.10, Appendix 8a to Annex I	*For low voltage battery as described in Appendix 2 to Sub-Annex 6 to Annex XXI*
51	RCB correction			*Correction performed? 0 = No | 1 = Yes*
52	RCB correction coefficient	(g/km)/(Wh/km)	Point 2.1.1.2.1, Appendix 8a to Annex I	*NOVC-HEV and OVC-HEV*
53	Fuel consumption	l/100km	Determined in accordance with Point 6 of Sub-Annex 7 to Annex XXI and using results for criteria emissions and CO_2 emissions from Step 2 in Table A7/1	*Non-balanced fuel consumption of Type 1 test vehicle H and, where applicable, vehicle L. In case of two or three tests, all values shall be reported.*
54	Time	sec	As measured in the Type 1 test	*Array: OBD and Chassis Dynamometer data, 1Hz*

55	Velocity profile (theoretical)	km/h	As applied in the Type 1 test	*Array: 1Hz, resolution 0,1 km/h. If not provided the speed profile defined in Point 6 of sub-Annex 1 to Annex XXI and in particular to tables A1/7-A1/9, A1/11, and A1/12 applies*
56	Velocity profile (actual)	km/h	As measured in the Type 1 test	*Array: OBD and Chassis Dynamometer data, 1Hz and 10 Hz, resolution 0,1 km/h*
57	Gear (theoretical)	-	As applied in the Type 1 test based on the calculations defined in sub-Annex 2 to Annex XXI	*Array: 1Hz. Mandatory for manual transmission vehicles*
58	Engine Speed	rpm	As measured in the Type 1 test	*Array: 1Hz, 10 RPM resolution from OBD*
59	Engine Coolant Temperature	°C	As measured in the Type 1 test	*Array: OBD Data, 1Hz, 1 °C resolution*
60	Service battery current	A	As measured in the Type 1 test	*Array: 1Hz, 0,1 A resolution, external measurement device synchronised with the chassis dynamometer*
61	Calculated load	-	As measured in the Type 1 test	*Array: OBD data, 1Hz at least (higher frequencies possible, 1 % resolution) test measurement*
62	Traction REESS current	A	As measured in the Type 1 test	*20Hz time-series values used for the test(s) resampled to 1Hz mandatory for NOVC-HEV and OVC-HEV*
63	Engine fuel rate	g/s	As measured in the Type 1 test	*Instantaneous signal recorded for test (charge-sustaining value in case of NOVC-HEV and OVC-HEV).*
64	Engine fuel rate	l/h	As measured in the Type 1 test	*Idem*
65	Vehicle fuel rate	g/s	As measured in the Type 1 test	*Idem*
66	Full load power curve for ICEVs	kW vs. rpm	Manufacturer declaration	*The full load power curve over the engine speed range from n idle to n rated or n max, or n dv (n gvmax) × v max, whichever is higher*
67	Traction REESS initial state of charge	%	Manufacturer declaration	*Initial SOC of traction REESS in charge sustaining condition (for OVC-HEV and NOVC-HEV)*

68	Engine idle fuel consumption	g/s	Manufacturer declaration	*Idle fuel consumption in warm condition*
69	Alternator maximum power	kW	Manufacturer declaration	
70	Efficiency of the alternator	-	Manufacturer declaration	*Default value = 0,67*
71	Torque converter	-	Manufacturer declaration	*0 = No, 1 = Yes; Does the vehicle use torque converter?*
72	Fuel saving gear for automatic transmission	-	Manufacturer declaration	*0 = No, 1 = Yes*
73	Turbo- or Supercharger	-	Manufacturer declaration	*0 = No | 1 = Yes – Is the engine equipped with any kind of charging system?*
74	Start-stop	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the vehicle have start-stop system?*
75	Brake energy Recuperation	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the vehicle have energy recuperation technologies?*
76	Variable valve actuation	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the engine feature variable valve actuation?*
77	Thermal management	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the vehicle have technologies that actively manage temperature at the gear box?*
78	Direct injection/Port Fuel Injection	-	Manufacturer declaration	*0 = PFI | 1 = DI*
79	Lean burn	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the engine use lean burn?*
80	Cylinder deactivation	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the engine use a cylinder deactivation system? If yes please also provide active cylinder ratios*
81	Exhaust gas recirculation	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the vehicle have an external EGR system?*
82	Particulate filter	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the vehicle have a particulate filter?*
83	Selective Catalytic Reduction	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the vehicle have an SCR system?*
84	NOx storage catalyst	-	Manufacturer declaration	*0 = No | 1 = Yes – Does the vehicle have a NOx storage catalyst?*

85	Hybrid Vehicle Configuration (P0, P1, P2, P2 planetary, P3, or P4) (*)	-	Manufacturer declaration	*Does the vehicle have an electric machine used for vehicle propulsion and electric energy generation in P0, P1, P2, P2 planetary, P3, or P4 position, or a combination thereof?*
86	Maximum torque output of each electric machine (P0, P1, P2, P2 planetary, P3, or P4) (*)	Nm	Manufacturer declaration	
87	For each electric machine, the ratio between the electric machine rotational speed and the reference rotational speed (P0, P1, P2, P2 planetary, P3, or P4) (*)	-	Manufacturer declaration	
88	Engine-on coasting function	-	Manufacturer declaration	*Yes/No. Does the vehicle have the engine idle coasting function (allow the engine to idle during vehicle coasting in order to save fuel)?*
89	Engine-off coasting function	-	Manufacturer declaration	*Yes/No. Does the vehicle have the engine-stop coasting function (allow the engine to switch off during vehicle coasting in order to save fuel)?*
90	Vehicle is incomplete	-	Manufacturer declaration	*0 = No | 1 = Yes – Is the vehicle incomplete?*
91	Mass of the vehicle in running order	kg	Point 1.1, Appendix 4 to Annex I	*MRO for VH and VL (if applicable)*
92	Capped vehicle speed	km/h	Cycle selection parameters point 1.2.3, Appendix 8a to Annex I	*Indicate if capped speed (and the value) was used in Type 1 test for VH and VL (if applicable)*
93	Maximum speed of the vehicle	km/h	Cycle selection parameters point 1.2.3, Appendix 8a to Annex I	*Indicate maximum speed of the vehicle for VH and VL (if applicable)*
94	Additional information for gearshift calculation	min^{-1}	Gearshift point 1.2.4, Appendix 8a to Annex I	*For manual transmission vehicles only. Information about n_min drive.*

(*) P0: the electric machine is connected to the engine service belt and therefore has the engine speed as reference speed;
P1: the electric machine is connected to the engine crankshaft and therefore has the engine speed as reference speed;

P2: the electric machine is mounted right upstream the transmission (gearbox or continuously variable transmission), and therefore has the transmission input speed as reference speed;
P2 planetary: the electric machine is connected to the gear of a planetary gear set that is not connected to the internal combustion engine or the final drive sides, here referred to as the planetary side. In this case the speed ratio to be specified is the ratio between the electric machine and planetary side rotational speed (reference speed) reflecting the speed multiplication/reduction effect of a reduction gear;
P3: the electric machine is right upstream the final drive of a driven axle therefore has the final drive input rotational speed as reference speed (this includes electric machines mounted on the gear of a planetary gear set on the final drive side). A vehicle can have up to two P3 machines (one for the front (P3a) and one for the rear (P3b) axle);
P4: the electric machine is downstream the final drive, and therefore has the wheel speed as reference speed. A vehicle can have up to four P4 motors (one for each wheel, where P4a indicates front wheels and P4b rear wheels).