COMMISSION IMPLEMENTING REGULATION (EU) 2022/195

of 11 February 2022

amending and correcting Implementing Regulation (EU) 2020/683 as regards the information document, the vehicle approval certificates, the test result sheet and the certificates of conformity in paper format

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (1), and in particular Articles 24(4), 28(3) and 36(4) thereof,

Whereas:

- (1) Commission Implementing Regulation (EU) 2020/683 (²) provides for a standardised format of the documents used for type-approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles by laying down the templates for the information document, approval certificates, the test result sheet and the certificate of conformity in paper format.
- (2) Since 1 January 2021, compliance with the CO₂ emission targets is determined on the basis of Worldwide harmonised Light-duty vehicles Test Procedures (WLTP) CO₂ emissions only. It is therefore necessary to amend the templates for the information document, the test result sheet and the certificate of conformity in paper format by removing references to the New European Driving Cycle.
- (3) With the entry into force of Commission Regulation (EU) 2017/2400 (³), new entries for CO₂ emissions and fuel consumption of heavy-duty vehicles, such as heavy buses and medium lorries as well as individually approved heavy-duty vehicles, were added to the certificates of conformity of heavy-duty lorries. It is therefore necessary to add the relevant entries to the templates for the certificate of conformity in paper format of the corresponding vehicle categories as well as to the EU and national individual vehicle approval certificate.
- (4) Taking into account the diversity of heavy-duty vehicles in terms of their design and driving pattern, annual mileage, payload and trailer configuration, Regulation (EU) 2017/2400 and Regulation (EU) 2019/1242 of the European Parliament and of the Council (4) have introduced a classification of vehicle groups and sub-groups that reflect the vehicles' typical usage pattern and specific technical characteristics. In order to accommodate also national CO₂ abating initiatives and to have a correct interpretation of the CO₂ emissions and fuel consumption, it is essential to know to which vehicle group or sub-group a vehicle belongs. It is therefore necessary to add the relevant vehicle group or sub-group to the templates for the certificate of conformity in paper format as well as to the EU individual vehicle approval certificate.

⁽¹⁾ OJ L 151, 14.6.2018, p. 1.

⁽²⁾ Commission Implementing Regulation (EU) 2020/683 of 15 April 2020 implementing Regulation (EU) 2018/858 of the European Parliament and of the Council with regards to the administrative requirements for the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (OJ L 163, 26.5.2020, p. 1).

⁽³⁾ 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 (OJ L 349, 29.12.2017, p. 1).

⁽⁴⁾ Regulation (EU) 2019/1242 of the European Parliament and of the Council of 20 June 2019 setting CO₂ emission performance standards for new heavy-duty vehicles and amending Regulations (EC) No 595/2009 and (EU) No 2018/956 of the European Parliament and of the Council and Council Directive 96/53/EC (OJ L 198, 25.7.2019, p. 202).

- (5) Taking into account the increasing deployment in the Union of plug-in hybrids (OVC-HEVs), it is important to ensure that national authorities and consumers are provided with harmonised and coherent information on their environmental performance. Consequently, it is appropriate to clarify that in the case of OVC-HEVs, the values to be reported in the certificate of conformity are the phase specific CO₂ emissions and fuel consumption values using the CO₂ mass emission and fuel consumption values for charge-sustaining conditions as well as the phase specific electric energy consumption of such vehicles. It is therefore necessary to add the relevant entries to the templates for the certificate of conformity.
- (6) Following the publication of Implementing Regulation (EU) 2020/683, certain errors have been detected in the explanatory notes for the information document, the templates for approval certificates and the certificates of conformity in paper format. The errors detected in the explanatory notes for the information document and in the templates for approval certificates consist of incorrect references to certain explanatory notes. There are also errors in the unit referred to for the pressure in feed line for trailer braking system which should refer to kilopascal (kPa) and not bar.
- As regards the certificates of conformity in paper format, some clarifications are made to accommodate in-service conformity testing. Additionally, it is necessary to update the reference to the test procedure applicable to complete and completed vehicles of vehicle category M3 and incomplete vehicles of vehicle category M2 since they currently make a reference to the test procedure applicable to light-duty vehicles and not to heavy-duty vehicles that is applicable to those categories of vehicles. It is necessary to clarify that the entry on the certificate of conformity in paper format regarding the height of the vehicle is only applicable to certain complete and completed vehicles of vehicle category N3. It is also necessary to specify that point 49 on the entries for 'CO₂ emissions/fuel consumption/electric energy consumption' for vehicle category N2 is applicable to light passenger and commercial vehicles (Euro 5 and Euro 6) and to heavy-duty vehicles (Euro VI) and that point 49 of vehicle category N3 is not applicable to light passenger and commercial vehicles (Euro 5 and Euro 6) but only in case of heavy duty vehicles (Euro VI). An error in the numbering for the point on the entry for the 'drive axle(s) fitted with air suspension or equivalent' should be corrected to be in line with the numbering provided in the other parts of the Annexes to Implementing Regulation (EU) 2020/683. The explanatory note for entry 47.1.3.2 should be removed as this was an incorrect reference to a superscript and not a base script value part of the formula for that entry. For the sake of legal certainty, those errors need to be corrected.
- (8) Implementing Regulation (EU) 2020/683 should therefore be amended and corrected accordingly.
- (9) In accordance with Article 3(5) of Commission Implementing Regulation (EU) 2021/133 (5), the approval authorities, market surveillance authorities, registration authorities of the Member States and the manufacturers are allowed up to a period of 12 months after the publication date in the Official Journal of the European Union of the amendments to the certificate of conformity in paper format to implement any necessary amendments thereto in their respective systems. Therefore, the date of application of the amendments to the certificate of conformity in paper format should be deferred.
- (10) In order to provide approval authorities, market surveillance authorities and registration authorities of the Member States and the manufacturers with sufficient time to implement the corrections that are laid down in this Regulation, the date of application of Annex II should be deferred.
- (11) 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

Amendments to Implementing Regulation (EU) 2020/683

Annexes I, III, VI and VIII to Implementing Regulation (EU) 2020/683 are amended in accordance with Annex I to this Regulation.

⁽⁵⁾ Commission Implementing Regulation (EU) 2021/133 of 4 February 2021 implementing Regulation (EU) 2018/858 of the European Parliament and of the Council as regards the basic format, structure and the means of exchange of the data of the certificate of conformity in electronic format (OJ L 42, 5.2.2021, p. 1).

Article 2

Corrections to Implementing Regulation (EU) 2020/683

Annexes I, III and VIII to Implementing Regulation (EU) 2020/683 are corrected in accordance with Annex II to this Regulation.

Article 3

Entry into force and application

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

Annex I shall apply from 1 January 2023.

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

Done at Brussels, 11 February 2022.

For the Commission The President Ursula VON DER LEYEN

ANNEX I

Annexes I, III, VI and VIII to Implementing Regulation (EU) 2020/683 are amended as follows:

- (1) Annex I is amended as follows:
 - (a) explanatory note (172) is replaced by the following:
 - '(1⁷²) As indicated in the customer information file drawn up in accordance with the model set out in Part II of Annex IV to Regulation (EU) 2017/2400'.
 - (b) the following new explanatory notes are added:
 - (175) Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO₂ 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 (OJ L 111, 25.4.2019, p. 13).
 - (176) Vehicle sub-group in accordance with point 1 of Annex I to Regulation (EU) 2019/1242 of the European Parliament and of the Council of 20 June 2019 setting CO₂ emission performance standards for new heavy-duty vehicles and amending Regulations (EC) No 595/2009 and (EU) No 2018/956 of the European Parliament and of the Council and Council Directive 96/53/EC (OJ L 198, 25.7.2019, p. 202) or if a sub-group is not available, vehicle group in accordance with point 1 of Annex I to Regulation (EU) 2017/2400.
 - (177) According to point 2.5.3.8.1. of the Addendum to EC type-approval certificate in Appendix 4 of Annex I to Regulation (EU) 2017/1151.
 - (178) According to point 2.5.3.8.3. of the Addendum to EC type-approval certificate in Appendix 4 of Annex I to Regulation (EU) 2017/1151.
 - (179) Applicable to vehicles type-approved in accordance with the requirements set out in Article 6(3) of Commission Implementing Regulation (EU) 2021/535
 - (180) Drawn up in accordance with the model set out in Part III of Annex IV to Regulation (EU) 2017/2400';
 - (c) point 3.5.6. is replaced by the following:
 - '3.5.6. Vehicle fitted with an eco-innovation within the meaning of Article 11 of Regulation (EU) 2019/631 (175) for M1 or N1 vehicles: yes/no(1)';
 - (d) point 3.5.7.2.1.1.0. is deleted;
 - (e) point 3.5.7.2.1.2.0. is deleted;
 - (f) point 3.5.7.2.1.3.0. is deleted;
 - (g) point 3.5.7.2.2.1.0. is deleted;
 - (h) point 3.5.7.2.2.2.0. is deleted;
 - (i) point 3.5.7.2.2.3.0. is deleted;
 - (j) point 3.5.7.2.3.1.0. is deleted;
 - (k) point 3.5.7.2.3.2.0. is deleted;
 - (l) point 3.5.7.2.3.3.0. is deleted;
 - (m) point 3.5.8. is replaced by the following:
 - '3.5.8. Vehicle fitted with an eco-innovation within the meaning of Article 11 of Regulation (EU) 2019/631 for M1 or N1 vehicles: yes/no(1)';
 - (n) in point 3.5.8.3, the fifth row of the table with the text 'total NEDC CO₂ emissions saving (g/km) (68)' is deleted;
- (2) Appendix 1 of Annex III (Part 2 of the EU individual vehicle approval certificate and of the national individual approval certificate) is amended as follows:
 - (a) the following points are inserted to Category M2:
 - '49.1. Cryptographic hash of the manufacturer's records file (4) (119): ...
 - 49.2. Zero emission heavy-duty vehicle: yes/no (4) (72) (169)

- 49.3. Vocational vehicle: (yes/no) (4) (72) (170)
- 49.4. Cryptographic hash of the customer information file: ... (4) (120) (170)
- 49.5.1. Specific CO₂ emissions: ... gCO₂/pkm (4) (171)
- 49.6.1. Average occupancy (number of persons): ... (4) (172)
- 49.7. Vehicle subgroup/group (4) (176): ...';
- (b) the following points are inserted to Category M3:
 - '49. CO₂ emissions/fuel consumption/electric energy consumption
 - 49.1. Cryptographic hash of the manufacturer's records file (4) (119): ...
 - 49.2. Zero emission heavy-duty vehicle: yes/no (4) (72) (169)
 - 49.3. Vocational vehicle: (yes/no) (4) (72) (170)
 - 49.4. Cryptographic hash of the customer information file: ... (4) (120) (170)
 - 49.5. Specific CO₂ emissions: ... gCO₂/pkm (4) (171)
 - 49.6. Average occupancy (number of persons): ... (4) (172)
 - 49.7. Vehicle subgroup/group (4) (176): ...;
- (c) Category N2 is amended as follows:
 - (1) the following points are inserted:
 - '49.2. Zero emission heavy-duty vehicle: yes/no (4) (72) (169)
 - 49.3. Vocational vehicle: (yes/no) (4) (72) (170)'
 - (2) the following points are inserted:
 - '49.5. Specific CO₂ emissions: ... gCO₂/tkm (4) (171)
 - 49.6. Average payload value: ... t' (4) (172)
 - 49.7. Vehicle subgroup/group (4) (176): ...';
- (d) Category N3 is amended as follows:
 - (1) the following points are inserted:
 - '49.2. Zero emission heavy-duty vehicle: yes/no (4) (72) (169)
 - 49.3. Vocational vehicle: (yes/no) (4) (72) (170)';
 - (2) the following points are inserted:
 - '49.5. Specific CO₂ emissions: ... gCO₂/tkm (4) (171)
 - 49.6. Average payload value: ... t' (4) (172)
 - 49.7. Vehicle subgroup/group (4) (176): ...';
- (3) Annex VI is amended as follows:
 - (a) in point 2.1.1, the heading of the table is replaced by the following: 'WLTP highest values';
 - (b) point 3.5 is deleted;
 - (c) in point 3.2, in the third table, below the row 'EAER_{city}', the following entries are inserted:

'AER	•••		
AER _{city}		'	

- (4) in Annex VIII, the Appendix is amended as follows:
 - (a) Part I (Complete and completed vehicles) is amended as follows:
 - (1) Part 1, Model A1, the following point is inserted:
 - '0.2.2.1. Allowed Parameter Values for multistage type approval to use the base vehicle emission values (insert range where applicable) (1):

Final Vehicle actual mass: ...

Final Vehicle technically permissible maximum laden mass (in kg): ...

Frontal area for final vehicle (in cm²): ...

Rolling resistance (kg/t): ...

Cross-sectional area of air entrance of the front grille (in cm²): ...';

- (2) Part 1, Model A2, the following point is inserted:
 - '0.2.2.1. Allowed Parameter Values for multistage type approval to use the base vehicle emission values (insert range where applicable) (1):

Final Vehicle actual mass: ...

Final Vehicle technically permissible maximum laden mass (in kg): ...

Frontal area for final vehicle (in cm²): ...

Rolling resistance (kg/t): ...

Cross-sectional area of air entrance of the front grille (in cm2): ...';

- (3) Part 1, Model B, the following point is inserted:
 - '0.2.2.1. Allowed Parameter Values for multistage type approval to use the base vehicle emission values (insert range where applicable) (1):

Final Vehicle actual mass: ...

Final Vehicle technically permissible maximum laden mass (in kg): ...

Frontal area for final vehicle (in cm²): ...

Rolling resistance (kg/t): ...

Cross-sectional area of air entrance of the front grille (in cm²): ...';

- (4) Part 2 (vehicle category M₁) is amended as follows:
 - (a) in point 48, the third row is replaced by the following:
 - '1.2. Test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (4)';
 - (b) point 49 is amended as follows:
 - (1) points 1 and 2 are replaced by the following:
 - '1. All powertrains, except OVC hybrid electric (if applicable)

WLTP values	CO ₂ emissions (⁴)	Fuel consumption (⁴)	Electric Consumption (EC _{AC}) (⁴)
Low (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Medium (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km
High (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Combined (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km

Electric range	km
Electric range city	km

- (2) point 3.2.1 is deleted;
- (3) points 4 and 5 are replaced by the following:
 - '4. OVC hybrid electric vehicles (if applicable)

WLTP values		charge sustaining	Electric Consumption
WLIP values	CO ₂ emissions Fuel consumption		(EC) (¹⁷⁷)
Low (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
City (4)			Wh/km
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
WLTP values		charge depleting	
vvLIP values	CO ₂ emissions	Fuel consumption	
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	
weighted,	CO emissions	Fuel consumption	Electric Consumption
combined	CO ₂ emissions	Fuel consumption	(EC _{AC}) (¹⁷⁸)
values (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km

Equivalent All Electric Range (EAER)	km
Equivalent All Electric Range city (EAER city)	km
All Electric Range (AER)	km
All Electric Range city (AER city)	km

- (4) points 5.1 and 5.2 are deleted;
- (5) Part 2 (vehicle category M2) is amended as follows:
 - (a) in point 48, the third row is replaced by the following:
 - '1.2. Test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (4)';
 - (b) point 49 is amended as follows:
 - (1) points 1 to 5 are replaced by the following:
 - '1. All powertrains, except OVC hybrid electric (if applicable)

WLTP values	CO ₂ emissions (⁴)	Fuel consumption (⁴)	Electric Consumption (EC _{AC}) (⁴)
Low (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Medium (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
High (4)	g/km	I/100km or m³/100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Combined (4)	g/km	I/100km or m ³ /100km or kg/100km (⁴)	Wh/km

Electric range	km	
Electric range city	km	

4. OVC hybrid electric vehicles (if applicable)

WLTP values	charge sustaining		Electric Consumption
WLIP values	CO ₂ emissions Fuel consumption		(EC) (¹⁷⁷)
Low (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
City (4)			Wh/km
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
WLTP values		charge depleting	
WLIP values	CO ₂ emissions	Fuel consumption	
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	
weighted,	CO ₂ emissions	Fuel consumption	Electric Consumption
combined	CO ₂ emissions	ruei consumption	(EC _{AC}) (¹⁷⁸)
values (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km

Equivalent All Electric Range (EAER)	km
Equivalent All Electric Range city (EAER city)	km
All Electric Range (AER)	km
All Electric Range city (AER city)	km

- 49.1. Cryptographic hash of the manufacturer's records file (4) (119): ...
- 49.2. Zero emission heavy-duty vehicle: yes/no (4) (72) (169)
- 49.3. Vocational vehicle: (yes/no) (4) (72) (170)
- 49.4. Cryptographic hash of the customer information file: ... (4) (120) (170)
- 49.5.1. Specific CO₂ emissions: ... gCO₂/pkm (4) (171)
- 49.6. Average occupancy (number of persons): ... (4) (172)
- 49.7. Vehicle subgroup/group (4) (176): ...'
- (2) points 5.1 and 5.2 are deleted;
- (6) in Part 2 (vehicle category M3), the following points are inserted after point 48.1::
 - '49. CO₂ emissions/fuel consumption/electric energy consumption (4)
 - 49.1. Cryptographic hash of the manufacturer's records file (4) (119): ...
 - 49.2. Zero emission heavy-duty vehicle: yes/no (4) (72) (169)
 - 49.3. Vocational vehicle: (yes/no) (4) (72) (170)
 - 49.4. Cryptographic hash of the customer information file: ... (4) (120) (170)
 - 49.5.1. Specific CO₂ emissions: ... gCO₂/pkm (4) (171)
 - 49.6.1. Average occupancy (number of persons): ... (4) (172)
 - 49.7. Vehicle subgroup/group (4) (176): ...;
- (7) Part 2 (vehicle category N1) is amended as follows:
 - (a) in point 48, the third row is replaced by the following:
 - '1.2. Test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (4)';

- (b) point 49 is amended as follows:
 - (1) points 1 and 2 are replaced by the following:
 - '1. All powertrains, except OVC hybrid electric (if applicable)

WLTP values	CO ₂ emissions (⁴)	Fuel consumption (4)	Electric Consumption (EC _{AC}) (⁴)
Low (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Combined (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km

2. Electric range of pure electric vehicles (if applicable)'

Electric range	km
Electric range city	km

- (2) point 3.2.1 is deleted;
- (3) points 4 and 5 are replaced by the following:
 - '4. OVC hybrid electric vehicles (if applicable)

WLTP values	charge sustaining		Electric Consumption
WLIP values	CO ₂ emissions Fuel consumption		(EC) (¹⁷⁷)
Low (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
City (4)			Wh/km
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
WLTP values	charge depleting		
vvLIP values	CO ₂ emissions	Fuel consumption	
Combined (4)	g/km	l/100km or m³/100km or kg/100km (4)	
weighted,	CO ₂ emissions	Eugl concumption	Electric Consumption
combined	CO ₂ emissions	Fuel consumption	(EC _{AC}) (¹⁷⁸)
values (4)	g/km	$I/100$ km or $m^3/100$ km or $kg/100$ km $(^4)$	Wh/km

5. Electric range of OVC hybrid electric vehicles (if applicable)'

Equivalent All Electric Range (EAER)	km
Equivalent All Electric Range city (EAER city)	km
All Electric Range (AER)	km
All Electric Range city (AER city)	km

- (4) points 5.1 and 5.2 are deleted;
- (8) Part 2 (vehicle category N2) is amended as follows:
 - (a) in point 48, the third row is replaced by the following:
 - '1.2. Test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (4)';

- (b) point 49 is amended as follows:
 - (1) points 1 to 5 are replaced by the following:
 - '1. All powertrains, except OVC hybrid electric (if applicable)

WLTP values	CO ₂ emissions (⁴)	Fuel consumption (⁴)	Electric Consumption (EC _{AC}) (⁴)
Low (4)	g/km	$I/100$ km or $m^3/100$ km or kg/100km (4)	Wh/km
Medium (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
High (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Extra High (4)	g/km	$ \text{I}/100 \text{km} \text{or} \text{m}^3/100 \text{km} \text{or} \text{kg}/100 \text{km} (^4)$	Wh/km
Combined (4)	g/km	I/100km or m³/100km or kg/100km (⁴)	Wh/km

Electric range	km
Electric range city	km

4. OVC hybrid electric vehicles (if applicable)

WLTP values	charge sustaining		Electric Consumption
with values	CO ₂ emissions	Fuel consumption	(EC) (¹⁷⁷)
Low (⁴)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (⁴)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km
High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km
City (4)			Wh/km
Combined (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km
WLTP values		charge depleting	
vvLIP values	CO ₂ emissions	Fuel consumption	
Combined (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	
weighted,	60	F	Electric Consumption

weighted, combined	CO ₂ emissions	Fuel consumption	Electric Consumption (EC _{AC}) (¹⁷⁸)
values (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km

Equivalent All Electric Range (EAER)	km
Equivalent All Electric Range city (EAER city)	km
All Electric Range (AER)	km
All Electric Range city (AER city)	km

- (2) points 5.1 and 5.2 are deleted;
- (3) the following point 49.7 is inserted:
 - '49.7. Vehicle subgroup/group (4) (176): ...';
- (9) Part 2 (vehicle category N3) is corrected as follow:
 - (1) Point 7 is replaced by the following:
 - '7. Height: ... mm'

- (2) the following point 49.7 is inserted:
 - '49.7. Vehicle subgroup/group (4) (176): ...';
- (b) Part II (Incomplete vehicles) is amended as follows:
 - (1) Part 1, Model C1, the following point is inserted:
 - '0.2.2.1. Allowed Parameter Values for multistage type approval to use the base vehicle emission values (insert range where applicable) (1):

Final Vehicle actual mass: ...

Final Vehicle technically permissible maximum laden mass (in kg): ...

Frontal area for final vehicle (in cm²): ...

Rolling resistance (kg/t): ...

Cross-sectional area of air entrance of the front grille (in cm2): ...';

- (2) Part 1, Model C2, the following point is inserted:
 - '0.2.2.1. Allowed Parameter Values for multistage type approval to use the base vehicle emission values (insert range where applicable) (1):

Final Vehicle actual mass: ...

Final Vehicle technically permissible maximum laden mass (in kg): ...

Frontal area for final vehicle (in cm²): ...

Rolling resistance (kg/t): ...

Cross-sectional area of air entrance of the front grille (in cm²): ...';

- (3) Part 2 (vehicle category M₁) is amended as follows:
 - (a) in point 48, the third row is replaced by the following:
 - '1.2. Test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (4)';
 - (b) point 49 is amended as follows:
 - (1) points 1 and 2 are replaced by the following:
 - '1. All powertrains, except OVC hybrid electric (if applicable)

WLTP values	CO ₂ emissions (⁴)	Fuel consumption (⁴)	Electric Consumption (EC _{AC}) (4)
Low (4)	g/km	I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	$I/100$ km or $m^3/100$ km or kg/100km (4)	Wh/km
Extra High (4)	g/km	$I/100$ km or $m^3/100$ km or kg/100km (4)	Wh/km
Combined (4)	g/km	I/100km or m³/100km or kg/100km (⁴)	Wh/km

Electric range	km
Electric range city	km

- (2) point 3.2.1 is deleted;
- (3) points 4 and 5 are replaced by the following:
 - '4. OVC hybrid electric vehicles (if applicable)

WLTP values	charge sustaining		Electric Consumption
WLIP values	CO ₂ emissions	Fuel consumption	(EC) (¹⁷⁷)
Low (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
City (4)			Wh/km
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
WLTP values		charge depleting	
vvLIP values	CO ₂ emissions	Fuel consumption	
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	
weighted,	CO ₂ emissions	Fuel consumption	Electric Consumption
combined	CO ₂ emissions	ruei consumption	(EC _{AC}) (¹⁷⁸)
values (4)	g/km	l/100km or m³/100km or kg/100km (⁴)	Wh/km

Equivalent All Electric Range (EAER)	km
Equivalent All Electric Range city (EAER city)	km
All Electric Range (AER)	km
All Electric Range city (AER city)	km

- (4) points 5.1 and 5.2 are deleted;
- (4) Part 2 (vehicle category M2) is amended as follows:
 - (a) in point 48, the third row is replaced by the following:
 - '1.2. Test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (*)';
 - (b) point 49 is amended as follows:
 - (1) points 1 to 5 are replaced by the following:
 - '1. All powertrains, except OVC hybrid electric (if applicable)

WLTP values	CO ₂ emissions (⁴)	Fuel consumption (⁴)	Electric Consumption (EC _{AC}) (⁴)
Low (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Medium (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
High (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Extra High (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Combined (4)	g/km	$ \text{I}/100 \text{km} \text{or} \text{m}^3/100 \text{km} \text{or} \text{kg}/100 \text{km} (^4)$	Wh/km

Electric range	km
Electric range city	km

4. OVC hybrid electric vehicles (if applicable)

	charge sustaining Electric Consumption		
WLTP values	CO ₂ emissions	Fuel consumption	(EC) (¹⁷⁷)
Low (⁴)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (⁴)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
City (4)			Wh/km
Combined (4)	g/km	$I/100$ km or $m^3/100$ km or $kg/100$ km (4)	Wh/km
		charge depleting	
WLTP values	CO ₂ emissions	Fuel consumption	
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	
weighted, CO ₂ emissions Fuel consumption		Fuel consumption	Electric Consumption
combined	202 21113310113	r der consumption	(EC _{AC}) (¹⁷⁸)
values (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km

Equivalent All Electric Range (EAER)	km
Equivalent All Electric Range city (EAER city)	km
All Electric Range (AER)	km
All Electric Range city (AER city)	km

- (2) the following points are added:
 - '49. CO₂ emissions/fuel consumption/electric energy consumption (4)
 - 49.1. Cryptographic hash of the manufacturer's records file (4) (119): ...
 - 49.2. Zero emission heavy-duty vehicle: yes/no (4) (72) (169)
 - 49.3. Vocational vehicle: (yes/no) (4) (72) (170)
 - 49.4. Cryptographic hash of the customer information file: ... (4) (120) (170)
 - 49.5.1. Specific CO₂ emissions: ... gCO₂/pkm (4) (171)
 - 49.6.1. Average occupancy (number of persons): ... (4) (172)
 - 49.7. Vehicle subgroup/group (4) (176): ...
 - 49.8. Cryptographic hash of the vehicle information file: (4) (180): ...';
- (3) points 5.1 and 5.2 are deleted;
- (5) in Part 2 (vehicle category M3), the following points are inserted after point 48.1.:
 - '49. CO₂ emissions/fuel consumption/electric energy consumption (4)
 - 49.1. Cryptographic hash of the manufacturer's records file (4) (119): ...
 - 49.2. Zero emission heavy-duty vehicle: yes/no (4) (72) (169)
 - 49.3. Vocational vehicle: (yes/no) (4) (72) (170)

- 49.4. Cryptographic hash of the customer information file: ... (4) (120) (170)
- 49.5.1. Specific CO₂ emissions: ... gCO₂/pkm (4) (171)
- 49.6.1. Average occupancy (number of persons): ... (4) (172)
- 49.7. Vehicle subgroup/group (4) (176): ...
- 49.8. Cryptographic hash of the vehicle information file: (4) (180): ...';
- (6) Part 2 (vehicle category N₁) is amended as follows:
 - (a) in point 48, the third row is replaced by the following:
 - '1.2. Test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (4)';
 - (b) point 49 is amended as follows:
 - (1) points 1 and 2 are replaced by the following:
 - '1. All powertrains, except OVC hybrid electric (if applicable)

WLTP values	CO ₂ emissions (⁴)	Fuel consumption (4)	Electric Consumption (EC _{AC}) (⁴)
Low (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	\dots I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Combined (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km

Electric range	km
Electric range city	km

- (2) point 3.2.1. is deleted;
- (3) points 4 and 5 are replaced by the following:
 - '4. OVC hybrid electric vehicles (if applicable)

	Т		T
WLTP values	charge sustaining		Electric Consumption
WLIP values	CO ₂ emissions	2 emissions Fuel consumption	
Low (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
City (4)			Wh/km
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
MITD		charge depleting	
WLTP values	CO ₂ emissions	Fuel consumption	
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	
weighted,	CO aminaiana	Firel communities	Electric Consumption
combined	CO ₂ emissions	Fuel consumption	(EC _{AC}) (¹⁷⁸)
values (⁴)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km

Equivalent All Electric Range (EAER)	km
Equivalent All Electric Range city (EAER city)	km
All Electric Range (AER)	km
All Electric Range city (AER city)	km

- (4) points 5.1 and 5.2 are deleted;
- (7) Part 2 (vehicle category N_2) is amended as follows:
 - (a) in point 48, the third row is replaced by the following:
 - '1.2. Test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (4)';
 - (b) point 49 is amended as follows:
 - (1) points 1 to 5 are replaced by the following:
 - '1. All powertrains, except OVC hybrid electric (if applicable)

WLTP values	CO ₂ emissions (⁴)	Fuel consumption (⁴)	Electric Consumption (EC _{AC}) (⁴)
Low (4)	g/km	I/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
High (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Extra High (4)	g/km	$ I/100$ km or m $^3/100$ km or kg/100km (4)	Wh/km
Combined (4)	g/km	I/100km or m³/100km or kg/100km (⁴)	Wh/km

2. Electric range of pure electric vehicles (if applicable)

Electric range	km
Electric range city	km

4. OVC hybrid electric vehicles (if applicable)

WLTP values	charge sustaining		Electric Consumption
	CO ₂ emissions	Fuel consumption	(EC) (¹⁷⁷)
Low (⁴)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Medium (⁴)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
Extra High (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
City (4)			Wh/km
Combined (⁴)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km
WITD		charge depleting	
WLTP values	60	- 1	

MUTD	VLTP values CO ₂ emissions Fuel consumption		
WLIP values			
Combined (4)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	
weighted,	CO ₂ emissions	Fuel consumption	Electric Consumption
combined	COZCIIIISSIOIIS	r der consumption	(EC _{AC}) (¹⁷⁸)
values (⁴)	g/km	l/100km or m ³ /100km or kg/100km (⁴)	Wh/km

Equivalent All Electric Range (EAER)	km
Equivalent All Electric Range city (EAER city)	km
All Electric Range (AER)	km
All Electric Range city (AER city)	km

(2) points 5.1 and 5.2 are deleted.

ANNEX II

Annexes I, III and VIII are corrected as follows:

- (1) in Annex I, the explanatory note 110 is deleted;
- (2) in Annex I, "TEMPLATE FOR AN INFORMATION DOCUMENT FOR THE EU TYPE-APPROVAL OF VEHICLE, SYSTEMS, COMPONENTS OR SEPARATE TECHNICAL UNITS, point 0.2.2.1 is replaced by the following:
 - '0.2.2.1. Allowed Parameter Values for multistage type approval to use the base vehicle emission values (insert range where applicable) (1):

Final Vehicle actual mass: ...

Final Vehicle technically permissible maximum laden mass (in kg): ...

Frontal area for final vehicle (in cm²): ...

Rolling resistance (kg/t): ...

Cross-sectional area of air entrance of the front grille (in cm²): ...';

- (3) Annex III is corrected as follows:
 - (a) in Section 1 of Model D, point 0.10 is corrected as follows:
 - (1) 'explanatory note 107' is replaced by 'explanatory note 108';
 - (2) 'explanatory note 108' is replaced by 'explanatory note 109';
 - (b) Appendix 1 is corrected as follows:
 - (1) point 37 of category M_2 is replaced by the following:
 - '37. Pressure in feed line for trailer braking system: ... kPa'
 - (2) point 37 of category M_3 is replaced by the following:
 - '37. Pressure in feed line for trailer braking system: ... kPa'
 - (3) point 37 of category N_2 is replaced by the following:
 - '37. Pressure in feed line for trailer braking system: ... kPa'
 - (4) point 37 of category N₃ is replaced by the following:
 - '37. Pressure in feed line for trailer braking system: ... kPa'
 - (5) categories O1/O2 are corrected as follows:
 - point 30.2 of is replaced by the following:
 - '30.2. Track of all other axles: ... mm.';
 - point 33 is inserted:
 - '33. Drive axle(s) fitted with air suspension or equivalent: yes/no (4)';
 - (6) point 34 of category O3/O4 is replaced by the following:
 - '33. Drive axle(s) fitted with air suspension or equivalent: yes/no $^{(4)}$;
 - (7) in point 48 of category M₁, references to explanatory notes (162), (163) and (164) are deleted;
 - (8) in point 48 of category M₂, references to explanatory notes (162), (163) and (164) are deleted;
 - (9) in point 48 of category M₃, references to explanatory notes (162), (163) and (164) are deleted;
 - (10) in point 48 of category N_1 , references to explanatory notes (162), (163) and (164) are deleted;
 - (11) in point 48 of category N₂, references to explanatory notes (162), (163) and (164) are deleted;
 - (12) in point 48 of category N₃, references to explanatory notes (162), (163) and (164) are deleted;

- (4) in Annex VIII, the Appendix is corrected as follows:
 - (a) Part I (Complete and completed vehicles) is corrected as follows:
 - (1) in Part 2 (vehicle category M_1), point 47.1.3.2 is replaced by the following: '47.1.3.2. f2, $N/(km/h)^2$: ...';
 - (2) Part 2 (vehicle category M₂) is corrected as follows:
 - in point 28.1, the introductory part before the table is replaced by the following:

'Gearbox ratios (to complete for vehicles with manual shift transmissions) (1)';

— point 47.1.3.2 is replaced by the following:

```
'47.1.3.2. f2, N/(km/h)<sup>2</sup>: ...';
```

- (3) in point 48 of Part 2 (vehicle category M₃), the third row is replaced by the following: '1.2. test procedure: WHSC (EURO VI)';
- (4) in Part 2 (vehicle category N_1), point 47.1.3.2 is replaced by the following:

```
'47.1.3.2. f2, N/(km/h)<sup>2</sup>: ...';
```

- (5) Part 2 (vehicle category N₂) is corrected as follows:
 - point 47.1.3.2 is replaced by the following:

```
'47.1.3.2. f2, N/(km/h)<sup>2</sup>: ...';
```

— in point 49, the introductory part is replaced by the following:

'CO₂ emissions/fuel consumption/electric energy consumption (162) (169) (1)';

- (6) Part 2 (vehicle category N₃) is corrected as follows:
 - point 49 is replaced by the following:
 - '49. CO₂ emissions/fuel consumption/electric energy consumption (169):'
- (7) in Part 2 (vehicle categories O1 and O2), point 34 is replaced by the following:
 - '33. Drive axle(s) fitted with air suspension or equivalent: yes/no (4)';
- (8) in Part 2 (vehicle categories O3 and O4), point 34 is replaced by the following:
 - '33. Drive axle(s) fitted with air suspension or equivalent: yes/no (4)';
- (b) Part II (Incomplete vehicles) is corrected as follows:
 - (1) Part 2 (vehicle category M₁) is corrected as follows:
 - in point 28.1, the introductory part before the table is replaced by the following: 'Gearbox ratios (to complete for vehicles with manual shift transmissions) (1)';

\ 1

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point 47.1.3.2 is replaced by the following:'47.1.3.2. f2, N/(km/h)<sup>2</sup>: ...';
```

- (2) Part 2 (vehicle category M₂) is corrected as follows:
 - point 4 is replaced by the following:
 - '4. Wheelbase (157): ... mm';
 - point 47.1.3.2 is replaced by the following:

- in point 48, the third row is replaced by the following:
 - '1.2. test procedure: Type 1 (WLTP highest values) or WHSC (EURO VI) (4):';

- (3) in Part 2 (vehicle category M₃), point 4 is replaced by the following: '4. Wheelbase (157): ... mm';
- (4) in Part 2 (vehicle category N_1), point 47.1.3.2 is replaced by the following: '47.1.3.2. f2, $N/(km/h)^2$: ...';
- (5) Part 2 (vehicle category N₂) is corrected as follows:
 - point 47.1.3.2. of Part 2 (vehicle category N_2), is replaced by the following:

```
'47.1.3.2. f2, N/(km/h)<sup>2</sup>: ...'.
```

- point 49 is replaced by the following:
 - '49. CO₂ emissions/fuel consumption/electric energy consumption (162) (169) (1).';
- (6) in Part 2 (vehicle category N₃), point 49 is replaced by the following: '49. CO₂ emissions/fuel consumption/electric energy consumption (169):';
- (7) in Part 2 (vehicle categories O1 and O2), point 34 is replaced by the following: '33. Drive axle(s) fitted with air suspension or equivalent: yes/no (4)*;
- (8) in Part 2 (vehicle categories O3 and O4), point 34 is replaced by the following: '33. Drive axle(s) fitted with air suspension or equivalent: yes/no (4).