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ANNEXES 1 to 3

ANNEXES

to the

Commission Implementing Regulation

laying down rules, procedures and testing methodologies for the application of Regulation (EU) 2024/1257 as regards exhaust and evaporative emission type-approval of vehicles of categories M_1 and N_1

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ANNEX I

ADMINISTRATIVE PROVISIONS FOR EMISSION TYPE-APPROVAL

1. Additional requirements for granting of emission type-approval

1.1. Additional requirements for mono fuel gas vehicles, and bi-fuel gas vehicles.

1.1.1. The additional requirements for granting of type-approval for monofuel gas vehicles, and bi-fuel gas vehicles shall be those set out in paragraph 5.9. of UN Regulation No 154[1]. The reference to the information document in paragraph 5.9.1. of UN Regulation No 154 shall be understood as being reference to Appendix 3 of Annex I of this Regulation.

1.2. Additional requirements for flex fuel vehicles

The additional requirements for granting of type-approval for flex fuel vehicles shall be those set out in paragraph 5.8. of UN Regulation No 154.

2. ADDITIONAL TECHNICAL REQUIREMENTS AND TESTS

2.1. Inlets to fuel tanks

2.1.1. The requirements for inlets to fuel tanks shall be those specified in paragraphs 6.1.5. and 6.1.6. of UN Regulation 154.

2.2. Application of tests

2.2.1. Figure I.2.3 illustrates the application of the tests for emission type-approval of a vehicle. The specific test procedures are described in Annexes II, III, IV, V, VI, VII, VIII, X, XI, XIV, XVI, XX, XXI and XXII.

[1] 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), 02 series of amendments (OJ L, 2022/2124, 10.11.2022, ELI: http://data.europa.eu/eli/reg/2022/2124/oj). In the case of a UN Regulation the series of amendments indicated reflects the version that has been published in the Official Journal of the European Union. Compliance with a series of amendments adopted after the particular series indicated shall be accepted as an alternative.

Figure I.2.3

Application of test and/or declaration requirements for type-approval and extensions

Vehicle category	Vehicles with positive ignition engines including hybrids								Vehicles with compression ignition engines including hybrids		Pure electric vehicles	Hydrogen fuel cell vehicles
	Mono fuel				Bi-fuel (3)			Flex-fuel (3)	Mono fuel			
Reference fuel	Petrol	LPG	NG/ Biome-thane	Hydro-gen (ICE)	Petrol	Petrol	Petrol	Petrol	Diesel	Petrol	—	Hydrogen (Fuel Cell)
					LPG	NG/Biome-thane	Hydrogen (ICE) (4)	Ethanol (E85)				
Type 1 test (7)	Yes	Yes (5)	Yes (5)	Yes (4)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes	Yes	—	—
ATCT test (1) (at 14 °C)	Yes	Yes	Yes	Yes (4)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes	Yes	—	—
RDE test, gaseous pollutants	Yes	Yes	Yes	Yes (4)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes	Yes	—	—
RDE test, PN	Yes	—	—	—	Yes (petrol only)	Yes (petrol only)	Yes (petrol only)	Yes (both fuels)	Yes	Yes	—	—

Vehicle category	Vehicles with positive ignition engines including hybrids			Vehicles with compression ignition engines including hybrids	Pure electric vehicles	Hydrogen fuel cell vehicles
	Mono fuel	Bi-fuel (3)	Flex-fuel (3)	Mono fuel		

Crankcase emissions [1] (Type 3 test)	Yes	Yes	Yes	—	Yes (petrol only)	Yes (petrol only)	Yes (petrol only)	Yes (petrol only)	—	—	—	—
Evaporative emissions (Type 4 test)	Yes	—	—	—	Yes (petrol only)	Yes (petrol only)	Yes (petrol only)	Yes (petrol only)	—	Yes	—	—
Durability [1] (Type 5 test)	Yes	Yes	Yes	Yes	Yes (petrol only)	Yes (petrol only)	Yes (petrol only)	Yes (petrol only)	Yes	Yes	—	—
Low temperature emissions (Type 6 test)	Yes	—	—	—	Yes (petrol only)	Yes (petrol only)	Yes (petrol only)	Yes (both fuels)	—	—	—	—
In-service conformity	Yes	Yes	Yes	Yes	Yes (as at type-approval)	Yes (as at type-approval)	Yes (as at type-approval)	Yes (as at type-approval)	Yes	Yes	—	—
OBD [1]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	—	—
Engine power	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CO_2 emissions, fuel consumption, electric energy consumption and electric range	Yes	Yes	Yes	Yes [2]	Yes (both fuels)	Yes (both fuels)	Yes (petrol), Yes [2] (hydrogen)	Yes (both fuels)	Yes	Yes	Yes	Yes [6]

Vehicle category	Vehicles with positive ignition engines including hybrids [1] [2]	Vehicles with compression ignition engines including hybrids	Pure electric vehicles	Hydrogen fuel cell vehicles

	Mono fuel				Bi-fuel ([3])			Flex-fuel ([3])	Mono fuel			
OBFCM	Yes	—	—	—	—	—	—	Yes (both fuels)	Yes	Yes	—	—

(1) Declaration of compliance by the vehicle manufacturer at type-approval.

(2) Only fuel consumption shall be determined when the vehicle is running on hydrogen.

(3) When a bi-fuel vehicle is combined with a flex fuel vehicle, both test requirements are applicable.

(4) Only NO_x emissions shall be determined when the vehicle is running on hydrogen.

(5) Particulate mass and particle number limits and respective measurement procedures shall not apply.

(6) CO_2 emissions do not need to be measured.

(7) For applicability of measured components to fuels and vehicle technology and therefore measurement procedures, see the emission limits as defined in Table 1 of Annex I to Regulation (EU) 2024/1257.

3. Extensions to EMISSION type-approvals

3.1. Extensions for tailpipe emissions (type 1 and OBFCM)

3.1.1. The type-approval shall be extended to vehicles if they conform to the requirements of paragraph 7.4. of UN Regulation No 154. The pollutant emissions shall respect the limits set out in Table 1 of Annex I to Regulation (EU) 2024/1257.

3.2. Extensions for evaporative emissions (type 4 test)

3.2.1. For tests performed in accordance with Annex VI the type-approval shall be extended to vehicles belonging to an approved evaporative emission family as defined in paragraph 6.6.3. of UN Regulation 154.

3.3. Extensions for low temperature test (type 6 test)

3.3.1. The type-approval shall be extended to vehicles if they conform to the requirements of paragraph 7.2. of UN Regulation No 83[2].

4. CONFORMITY OF PRODUCTION

4.1. Introduction

4.1.1. Every vehicle produced under a type-approval according to this Regulation shall be so manufactured as to conform to the type- approval requirements of this Regulation. The manufacturer shall implement adequate arrangements and documented control plans and carry-out at specified intervals as given in this regulation the necessary emission and OBFCM tests to verify continued conformity with the approved type. The approval authority shall verify and agree with these arrangements and control plans of the manufacturer and perform audits and conduct emission and OBFCM tests at specific intervals, as given in this regulation, at the premises of the manufacturer, including production and test facilities as part of the product conformity and continued verification arrangements as described in Annex IV of Regulation (EU) 2018/858.

4.1.2. The manufacturer shall check the conformity of production by testing the emissions of pollutants (given in Table 1 of Annex I to Regulation (EU) 2024/1257), the emission of CO_2 (along with the measurement of electric energy consumption and, where applicable, the monitoring of the OBFCM device accuracy), the crankcase emissions and evaporative emissions in accordance with the test procedures described in Annexes V, VI, XXI and XXII. The verification shall therefore include the tests of types 1, 3, 4 and the tests for OBFCM, as described in section 2.3.

The approval authority shall keep record for a period of at least 5 years of all the documentation related to the conformity of production test results and shall make it available to the Commission upon request.

The specific procedures for conformity of production are set out in paragraphs 8 and 9 and Appendixes 1 to 5 of UN Regulation No 154.

The calculation of additional values required for checking the Conformity of Production of electric energy consumption of PEVs and OVC-HEVs is set out in Appendix 8 of Annex B8 to UN Regulation 154.

[2] UN Regulation No 83 - Uniform provisions concerning the approval of vehicles with regard to the emission of pollutants according to engine fuel requirements (OJ L, 2024/1312, 27.6.2024, ELI: http://data.europa.eu/eli/reg/2024/1312/oj).

4.1.3. In case of non-conformity Article 51 of Regulation (EU) 2018/858 shall apply.

4.2. Vehicles fitted with eco-innovations

4.2.1. In the case of a vehicle type with regard to emissions fitted with one or more eco-innovations, within the meaning of Article 11 of Regulation (EU) 2019/631 ([3]) for M_1 or for N_1 vehicles, the conformity of production shall be demonstrated with respect to the eco-innovations, by checking the presence of the correct eco-innovation(s) in question.

4.3. Checking the conformity of the vehicle for a Type 3 test

If a verification of the Type 3 test is to be carried out, it shall be conducted in accordance with the following requirements:

4.3.1. When the approval authority determines that the quality of production seems unsatisfactory, a vehicle shall be randomly taken from the family and subjected to the tests described in Annex V.

4.3.2. The production shall be deemed to conform if this vehicle meets the requirements of the tests described in Annex V.

4.3.3. If the vehicle tested does not satisfy the requirements of the tests described in Annex V, a further random sample of four vehicles shall be taken from the same family and subjected to the tests described in Annex V. The tests may be carried out on vehicles which have completed a maximum of 15 000 km with no modifications.

4.3.4. The production shall be deemed to conform if at least three vehicles meet the requirements of the tests described in Annex V.

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

Appendix 1

(Reserved)

Appendix 2

(Reserved)

Appendix 3

MODEL

Information document No …

RELATING TO THE EMISSION TYPE-APPROVAL OF A VEHICLE

The information laid down in Annex A1 to UN Regulation No. 154, where applicable, shall be supplied in triplicate and include a list of contents. Any drawings shall be supplied in appropriate scale and in sufficient detail on size A4 or on a folder of A4 format. Photographs, if any, shall show sufficient detail.

Additionally, the information in the following sections, where applicable, shall be supplied.

0.2.2.1.	Allowed Parameter Values for multistage type-approval to use the base vehicle emission, consumption and/or range values (insert range if applicable): Final Vehicle actual mass (in kg): … Final Vehicle technically permissible maximum laden mass (in kg): … Frontal area for final vehicle (in cm^2): … Rolling resistance (kg/t): … Cross-sectional area of air entrance of the front grille (in cm^2): …
0.2.3.3.	PEMS family: …
0.5.	Name and address of the manufacturer
3.2.15.1.	Type-approval number according to Regulation (EC) No 661/2009 [(2)] or Regulation (EU) 2019/2144 [(3)]: …
3.2.16.1.	Type-approval number according to Regulation (EC) No 661/2009 or Regulation (EU) 2019/2144: …
3.2.18.1.	EC type-approval number in accordance with Regulation (EC) No 79/2009 ([4]) or Regulation (EU) 2019/2144: …
3.2.19.	H_2NG fuelling system: yes/no ([1])
3.2.19.1.	Percentage of hydrogen in the fuel (the maximum specified by the manufacturer): …
3.2.19.2.	Number of the type-approval certificate issued in accordance with UN Regulation No 110 ([5]): …
3.2.19.3	Electronic engine management control unit for H_2NG fuelling
3.2.19.3.1.	Make(s): …
3.2.19.3.2.	Type(s): …
3.2.19.3.3.	Emission-related adjustment possibilities: …
3.2.19.4.	Further documentation
3.2.19.4.2.	System lay-out (electrical connections, vacuum connections compensation hoses, etc.): …
3.2.19.4.3.	Drawing of the symbol: …
3.5.	Manufacturer's declared values for determination of CO_2 emissions/fuel consumption/electric consumption/electric range and details of eco-innovations (where applicable) ([6])
3.5.8.	Vehicle fitted with an eco-innovation within the meaning of Article 11 of Regulation (EU) No 2019/631 ([7]) for M_1 or N_1 vehicles: yes/no ([1])
3.5.8.1.	Type/Variant/Version of the baseline vehicle as referred to in Article 4 of Regulation (EU) 2023/2767 ([8]) (if applicable): …
3.5.8.2.	Existence of interactions between different eco-innovations: yes/no ([1])

3.5.8.3. Emissions data related to the use of eco-innovations (repeat the table for each reference fuel tested) ([9])

Decision approving the eco-innovation ([10])	Code of the eco-innovation ([11])	1. CO_2 emissions of the baseline vehicle (g/km)	2. CO_2 emissions of the eco-innovation vehicle (g/km)	3. CO_2 emissions of the baseline vehicle under type 1 test-cycle ([12])	4. CO_2 emissions of the eco-innovation vehicle under type 1 test-cycle	5. Usage factor (UF), i.e. temporal share of technology usage in normal operation conditions	CO_2 emissions savings ((1 – 2) – (3 – 4))*5
xxx/20xx							

Total WLTP CO_2 emissions saving (g/km) ([13])

9 BODYWORK

9.1 Type of bodywork using the codes defined in Part C of Annex I of Regulation (EU) 2018/858: …

Explanatory notes

(1) Delete where not applicable (there are cases where nothing needs to be deleted when more than one entry is applicable).
(2) OJ L 200, 31.7.2009, p. 1.
(3) OJ L 325, 16.12.2019, p. 1.
(4) Reference to Regulation (EC) No 79/2009
(5) Reference to UN Regulation No 110
(6) Determined in accordance with the requirements of Council Directive 80/1268/EEC (OJ L 375, 31.12.1980, p. 36).
(7) Reference to Regulation (EU) No 2019/631
(8) Reference to Regulation (EU) 2023/2767
(9) Expand the table if necessary, using one extra row per eco-innovation.
(10) Number of the Commission Decision approving the eco-innovation.
(11) Assigned in the Commission Decision approving the eco-innovation.
(12) Under agreement of the type-approval authority, if a modelling methodology is applied instead of the type 1 test cycle, this value shall be the one provided by the modelling methodology.
(13) Sum of the CO_2 emissions savings of each individual eco-innovation.

Appendix 4

MODEL OF EU TYPE-APPROVAL CERTIFICATE

(Maximum format: A4 (210 × 297 mm))

EU TYPE-APPROVAL CERTIFICATE

Stamp of administration

Communication concerning the:

– EU type-approval ([1]),
– extension of EU type-approval ([1]),
– refusal of EU type-approval ([1]),
– withdrawal of EU type-approval ([1]),
– of a type of system/type of a vehicle with regard to a system ([1]) with regard to Regulation (EU) 2024/1257 ([2]) and Regulation (EU) 2025/xxxx ([3])

EU type-approval number: …

Reason for extension: …

SECTION I

0.1. Make (trade name of manufacturer): …

0.2. Type: …

0.2.1.Commercial name(s) (if available): …

0.3. Means of identification of type if marked on the vehicle ([4])

0.3.1. Location of that marking: …

0.4. Category of vehicle ([5])

0.4.2. Base vehicle ([6]) ([1]): yes/no ([1])

0.5. Name and address of manufacturer: …

0.8. Name(s) and address(es) of assembly plant(s): …

0.9. If applicable, name and address of manufacturer's representative: …

SECTION II

0. Interpolation family identifier as defined in paragraph 6.2.1. of UN Regulation No 154

1. Additional information (where applicable): (see addendum)

2. Technical service responsible for carrying out the tests: …

3. Date of type 1 test report: …

4. Number of the type 1 test report: …

5. Remarks (if any): (see Section 3 of addendum)

6. Place: …

7. Date: …

8. Signature: …

Addendum to EU type-approval certificate No …

concerning the type-approval of a vehicle with regard to exhaust and evaporative emissions according to Regulation (EU) 2024/1257 and Regulation (EU) 2025/xxxx

The information laid down in the Addendum of Annex A2 to UN Regulation No. 154, where applicable, shall be supplied.

Cross references to information in the Test Report or Information Document should be avoided when completing the type-approval certificate.

Additionally, the EU specific information in the following sections, where applicable, shall be supplied.

1. Add the following point 0.2.

   0.2. Base vehicle identifier [1]

2. Add the following table to section 2.1. after the type 5 related sections (a)-(d):

Type 6	CO (g/km)	THC (g/km)
Measured value		
Limit value		

3. Add the following after section 2.5.1.4.1.:

   Repeat 2.5.1. in case of base vehicle.

4. Add the following after section 2.5.3.8.3.:

   Repeat 2.5.3. in case of base vehicle.

5. Add the following at the end of section 2.5.4.:

   Repeat 2.5.4. in case of base vehicle

6. Add the following sections 2.6, 4 and 5 after section 2.5.5.:

   "2.6. Test results of eco-innovations [8] [9]

Decision approving the eco-innovation [10]	Code of the eco-inno-Vation [11]	Type 1 cycle	1. CO_2 emissio-ns of the baseline vehicle (g/km)	2. CO_2 emissions of the eco-innovation vehicle (g/km)	3. CO_2 emissions of the baseline vehicle under type 1 test-cycle [12]	4. CO_2 emissions of the eco-innovation vehicle under type 1 test-cycle	5. Usage factor (UF) i.e. temporal share of technology usage in normal operation conditions	CO_2 emissions savings ((1 - 2) - (3 - 4)) * 5

xxx/20xx								
	Total CO_2 emissions saving on WLTP (g/km) ([13])							

2.6.1. *General code of the eco-innovation(s)* ([14]): …"

4. POWER MEASUREMENT

Maximum engine net power of internal combustion engine, net power and maximum 30 minutes power of electric drive train

4.1. **Internal combustion engine net power**

4.1.1. Engine speed (min^{-1}) …

4.1.2. Measured fuel flow (g/h) …

4.1.3. Measured torque (Nm) …

4.1.4. Measured power (kW) …

4.1.5. Barometric pressure (kPa) …

4.1.6. Water vapour pressure (kPa) …

4.1.7. Intake air temperature (K) …

4.1.8. Power correction factor when applied …

4.1.9. Corrected power (kW) …

4.1.10. Auxiliary power (kW) …

4.1.11. Net power (kW) …

4.1.12. Net torque (Nm) …

4.1.13. Corrected specific fuel consumption (g/kWh) …

4.2. **Electric drive train(s):**

4.2.1. Declared figures

4.2.2. Maximum net power: … kW, at … min^{-1}

4.2.3. Maximum net torque: … Nm, at … min^{-1}

4.2.4. Maximum net torque at zero engine speed: … Nm

4.2.5. Maximum 30 minutes power: … kW

4.2.6. Essential characteristics of the electric drive train

4.2.7. Test DC voltage: … V

4.2.8. Working principle: …

4.2.9. Cooling system:

4.2.10. Motor: liquid/air ([1])

4.2.11. Variator: liquid/air ([1])

5. REMARKS: …

Explanatory Notes

(1) Delete where not applicable (there are cases where nothing needs to be deleted when more than one entry is applicable)
(2) Reference to Regulation (EU) 2024/1257
(3) Reference to this Regulation, Regulation (EU) 2025/xxxx
(4) If the means of identification of type contains characters not relevant to describe the vehicle, component or separate technical unit types covered by this information, such characters shall be represented in the documentation by the symbol '?' (e.g. ABC??123??)
(5) As defined in Article 4 of Regulation (EU) 2018/858
(6) As defined in Article 3(24) of Regulation (EU) 2018/858
(7) As referred to in Article 26(4) of Regulation (EU) 2018/858
(8) Repeat the table for each reference fuel tested.
(9) Expand the table if necessary, using one extra row per eco-innovation.
(10) Number of the Commission Decision approving the eco-innovation.
(11) Assigned in the Commission Decision approving the eco-innovation.
(12) If modelling is applied instead of the Type 1 test-cycle, this value shall be the one provided by the modelling methodology.
(13) Sum of the emissions saving of each individual eco-innovation on Type 1
(14) The general code of the eco-innovation(s) shall consist of the following elements, each separated by a blank space:
- Section 1 as set out in Annex IV to Regulation (EU) 2018/858;
- Individual code of each eco-innovation fitted in the vehicle, indicated in chronological order of the Commission approval decisions.

(E.g. the general code of three eco-innovations approved chronologically as 10, 15 and 16 and fitted to a vehicle certified by the type-approval authority in Germany should be: 'e1 10 15 16')

Appendix 5

(Reserved)

Appendix 6

Emission level and Emission Type–Approval Certification Numbering System and Certificate of Conformity

1. The Certificate of Conformity, as described in the Appendix to Annex VIII of Regulation (EU) 2020/683 - Model B-Part 2 contains references to the exhaust emission level (entry 47) and the relevant EU implementing regulatory acts (entry 48 Model B-Part 2) of an individual vehicle. Entry 47 shall contain the number of the Euro level (Euro 7), followed by the relevant character from Table 1. Entry 48 shall contain the approval certificate numbers of all relevant EU Implementing Regulations.
2. Section 2 of the approval certificate numbers issued according to Article 8(2) of this Regulation and referred to in entry 48 of Annex VIII under Model B-Part 2 to Regulation (EU) 2020/683, shall be composed by the number of the base implementing regulatory act. Section 3 of the approval certificate number shall be composed by the number of the latest amending Implementing Act applicable. The number of the latest amending implementing Act shall be directly followed by one of the two-letter characters from Table 2, i.e. without an asterisk being placed between this number and the relevant two-letter character.
3. The declaration of compliance provided for the OBM system and EVP as described in Appendix 1 of Annex VI to Regulation (EU) <*publication office to insert the reference number of the Second Implementing Act*>, shall contain the applicable sub-character(s) from Table 3. These sub-characters are used for the determination of the emission level in accordance with Table 1.

Table 1

Emission level

Emission Character[6]	Emission standard	Sub-character for this regulation (see Table 2)	Sub-character for OBM and EVP (see Table 3)	Vehicle category or product type	In-vehicle battery durability[3]	Brake emissions	EV system power[2]	EV-range at low temp.[3]	Last date of registration
TL[1]	Euro 7-TEMP	MT, MA, MC or ME	OA, OC or OE	M_1, N_1	N/A	N/A	N/A	N/A	28.11.2027
TE[1]	Euro 7-TEMP	MV[4], MB, MD or MF	OB, OD or OF	N_2 (Euro 7ext)	N/A	N/A	N/A	N/A	28.05.2029
TS[1]	Euro 7-TEMP	NA or NC	PA, PC or PE	M_1, N_1 (U)SVM	N/A	N/A	N/A	N/A	30.06.2030
TT[1]	Euro 7-TEMP	NB or ND	PB, PD or PF	N_2 (Euro 7ext) (U)SVM	N/A	N/A	N/A	N/A	30.06.2031
FL	Euro 7A	MA, MC[4] or ME	OA, OC or OE	M_1, N_1	UA or UB	RA or RB	SA	LA	31.12.2029[5]
FE	Euro 7A	MB, MD[4] or MF	OB, OD or OF	N_2 (Euro 7ext)	UC	RC or RD	SB	LB	31.12.2029[5]
GL	Euro 7B	MA or ME	OA, OC or OE	M_1, N_1	UA or UB	RE	SA	LA	31.12.2034[5]
GE	Euro 7B	MB or MF	OB, OD or OF	N_2 (Euro 7ext)	UC	RE	SB	LB	31.12.2034[5]
GS	Euro 7BS	NA or NC	PA, PC or PE	M_1, N_1 (U)SVM	UD or UE	RF	SC	LC	31.12.2034[5]
GT	Euro 7BT	NB or ND	PB, PD or PF	N_2 (Euro 7ext) (U)SVM	UF	RG	SD	LD	31.12.2034[5]
HL	Euro 7C	MA or ME	OA, OC or OE	M_1, N_1	UA or UB	RH	SA	LA	

HE	Euro 7C	MB or MF	OB, OD or OF	N_2 (Euro 7ext)	UC	RH	SB	LB	
HS	Euro 7CS	NA or NC	PA, PC or PE	M_1, N_1 (U)SVM	UD or UE	RH	SC	LC	
HT	Euro 7CT	NB or ND	PB, PD or PF	N_2 (Euro 7ext) (U)SVM	UF	RH	SD	LD	

(1) Voluntary application before the mandatory application date for new vehicle types with regard to emissions: 29.05.2025. Only applicable if available at the time of approval.
(2) Only applicable for hybrid vehicles and for PEVs with multiple motors.
(3) Only applicable for PEVs and OVC-HEVs.
(4) Early last date of registration.
(5) This date is applicable if not impacted by a sub-approval with an early last date of implementations, indicated by footnote 4 in the table.
(6) First letter of Character: T = TEMP-vehicle, F = Euro 7A, G = Euro 7B, H = Euro 7C.
(7) Second letter of Character: L = large volume manufacturer, E = Euro 7ext-vehicle, S = SVM, T = Euro 7ext-vehicle from SVM.

Key:
'Euro 7-TEMP' TL/TE emissions standard = Euro 7 emissions (this implementing act) with the implementing act on on-board monitoring, environmental vehicle passport and OBFCM;

'Euro 7-TEMP' TS/TT emissions standard = Euro 7 emissions (this implementing act) with the implementing act on on-board monitoring, environmental vehicle passport and OBFCM (only EVP is relevant) and voluntary any other Euro 7 implementing act for (ultra) small volume manufacturers.

Table 2

Sub-character table for this regulation

Sub-character	Description	Vehicle category or product type	Powertrain	Implementation date: new types	Implementation date: new vehicles	Last date of registration
MA	General	M_1, N_1	ICE, NOVC-HEV	29.11.2026	29.11.2027	
MT	UF EB(8)	M_1, N_1	OVC-HEV			28.11.2027
MA	UF EC(9)	M_1, N_1	OVC-HEV	29.11.2026	29.11.2027	
MB	EXT	N_2 (Euro 7ext)	ICE, NOVC-HEV	29.05.2028	29.05.2029	
MV	UF EB(8) EXT	N_2 (Euro 7ext)	OVC-HEV			31.12.2027

MB	UF EC[9] EXT	N_2 (Euro 7ext)	OVC-HEV	29.05.2028	29.05.2029	
MC	PEV, FCHEV-W/O OBFCM	M_1, N_1	PEV, FCHEV			28.11.2027
MD	PEV, FCHEV EXT-W/O OBFCM	N_2 (Euro 7ext)	PEV, FCHEV			28.05.2029
ME	PEV, FCHEV-WITH OBFCM	M_1, N_1	PEV, FCHEV	29.11.2026	29.11.2027	
MF	PEV, FCHEV EXT-WITH OBFCM	N_2 (Euro 7ext)	PEV, FCHEV	29.05.2028	29.05.2029	
NA	(U)SVM General	M_1, N_1	ICE, NOVC-HEV, OVC-HEV	N/A	01.07.2030	
NB	(U)SVM EXT	N_2 (Euro 7ext)	ICE, NOVC-HEV, OVC-HEV	N/A	01.07.2031	
NC	(U)SMV PEV, FCHEV	M_1, N_1	PEV, FCHEV	N/A	01.07.2030	
ND	(U)SVM PEV, FCHEV EXT	N_2 (Euro 7ext)	PEV, FCHEV	N/A	01.07.2031	

(8) For OVC-HEVs using the utility factor from Euro 6e-bis (EB) according to Annex XIV to Regulation (EU) 2023/443.

(9) For OVC-HEVs using the utility factor from Euro 6e-bis-FCM (EB) according to Annex XIV to Regulation (EU) 2023/443.

Table 3

Sub-character table for OBM and EVP

Sub-character	Description	Vehicle category or product type	Powertrain	Implementation date: new types	Implementation date: new vehicles	Last date of registration

OA	General	M_1, N_1	ICE, NOVC-HEV, OVC-HEV	29.11.2026	29.11.2027	
OB	EXT	N_2 (Euro 7ext)	ICE, NOVC-HEV, OVC-HEV	29.05.2028	29.05.2029	
OC	PEV	M_1, N_1	PEV	29.11.2026	29.11.2027	
OD	PEV EXT	N_2 (Euro 7ext)	PEV	29.05.2028	29.05.2029	
OE	FCHEV	M_1, N_1	FCHEV	29.11.2026	29.11.2027	
OF	FCHEV EXT	N_2 (Euro 7ext)	FCHEV	29.05.2028	29.05.2029	
PA	(U)SVM General	M_1, N_1	ICE, NOVC-HEV, OVC-HEV	N/A	01.07.2030	
PB	(U)SVM EXT	N_2 (Euro 7ext)	ICE, NOVC-HEV, OVC-HEV	N/A	01.07.2031	
PC	(U)SVM PEV	M_1, N_1	PEV	N/A	01.07.2030	
PD	(U)SVM PEV EXT	N_2 (Euro 7ext)	PEV	N/A	01.07.2031	
PE	(U)SVM FCHEV	M_1, N_1	FCHEV	N/A	01.07.2030	
PF	(U)SVM FCHEV EXT	N_2 (Euro 7ext)	FCHEV	N/A	01.07.2031	

Appendix 7

(Reserved)

Appendix 8a

Test reports

A Test Report is the report issued by the technical service responsible for conducting the tests according to this regulation.

The information laid down in Part I of Appendix 1 of Annex A1 to UN Regulation No. 154 in relation to Level 1A, where applicable, shall be included.

Together with the EU specific information in the following sections, where applicable, it is the minimum data required for the test report.

1. In section 2.1.1.2.1 'CO_2 emission of vehicles with at least one combustion engine, of NOVC-HEV and of OVC-HEV in the case of a charge-sustaining Type 1 test', add the following to the Conclusion:

Information for Conformity of Production for OVC-HEV

	Combined
CO_2 emission (g/km) $M_{CO_2,CS,COP}$	
$AF_{CO_2,CS}$	

2. Add the following section 2.3.:

2.3. Type 3 (a) test

Emission of crankcase gases into the atmosphere: none

3. 2. Add the following section 2.6.:

2.6. Real Driving Emissions test (RDE)

RDE family number	:	MSxxxx
See family report(s)	:	

4. 3. Add the following section 2.7.:

2.7. Type 6 test (a)

Family's identifier		
Date of tests	:	(day/month/year)
Place of tests	:	
Method of setting of the chassis dyno	:	coast down (road load reference)
Inertia mass (kg)	:	
If deviation from the vehicle of Type 1 test	:	
Tyres	:	
Make	:	
Type	:	
Dimensions front/rear	:	
Dynamic circumference (m)	:	

Tyre pressure (kPa)	:	

Pollutants		CO (g/km)	HC (g/km)
Test	1		
	2		
	3		
Average			
Limit			

5. Add the following section 2.10.:

2.10. Engine power

See report(s) or approval number	:	

Appendix 8b

Road Load Test Report

The information laid down in Appendix 2 of Annex A1 to UN Regulation No. 154 in relation to Level 1A, where applicable, shall be included.

Appendix 8c

Template for test sheet

The test sheet shall include the test data that are recorded, but not included in any test report.

The test sheet(s) shall be retained by the technical service or the manufacturer for at least 10 years.

The information laid down in Appendix 3 of Annex A1 to UN Regulation No. 154 in relation to Level 1A, where applicable, is the minimum data required for the test sheets.

Appendix 8d

Evaporative Emission Test Report

The information laid down in Appendix 4 of Annex A1 to UN Regulation No. 154 in relation to Level 1A, where applicable, is the minimum data required for the evaporative emission test.

ANNEX II

IN-SERVICE CONFORMITY METHODOLOGY

1. INTRODUCTION

This Annex sets out the in-service conformity (ISC) methodology for checking compliance against the emission limits for tailpipe (including low temperature) and evaporative emissions throughout the additional lifetime of the vehicle, as set out in Table 1 of Annex IV to Regulation (EU) 2024/1257.

2. GENERAL REQUIREMENTS

The general requirements for conducting in-service conformity testing set out in Article 11 apply.

3. TECHNICAL REQUIREMENTS

The technical requirements for conducting in-service conformity testing shall be those set out in Annex 4 of UN Regulation No. 83[4] with the exceptions described in the points below. The rules for performing type 4 tests during in-service conformity are set out in Appendix 1.

3.1. The Process Description in section 2 shall read as follows:

2. PROCESS DESCRIPTION

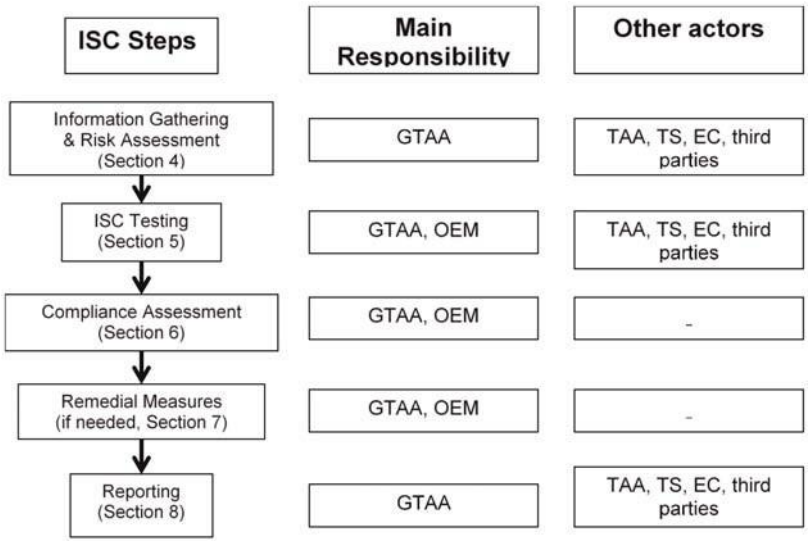

Figure 1

Illustration of the in-service conformity process (where GTAA refers to the granting type-approval authority, OEM refers to the manufacturer, and Other Actors are defined as: TAA refers to approval authorities other than the one granting the relevant type-approval, TS refer to technical services, EC to the Commission, and third parties that meet the requirements laid down in Regulation (EU) 2022/163 ([5]))

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4 UN Regulation No 83 - Uniform provisions concerning the approval of vehicles with regard to the emission of pollutants according to engine fuel requirements (OJ L, 2024/1312, 27.6.2024, ELI: http://data.europa.eu/eli/reg/2024/1312/oj).

5 Commission Implementing Regulation (EU) 2022/163 of 7 February 2022 laying down rules on the application of Regulation (EU) 2018/858 of the European Parliament and of the Council as regards

3.2. The first 3 paragraphs of section 5 shall read as follows:

5. ISC TESTING

The manufacturer shall perform ISC testing for tailpipe emissions comprising at least the Type 1 test for all ISC families. The manufacturer may also perform RDE, Type 4 and Type 6 tests for all or part of the ISC families. The manufacturer shall report to the granting type-approval authority all results of the ISC testing using the Electronic Platform for in-service conformity described in point 5.9, or other appropriate means where this is not possible.

The granting type-approval authority shall check an appropriate number of ISC families each year, as set out in point 5.4. The granting type-approval authority shall include all results of the ISC testing in the Electronic Platform for in-service conformity described in point 5.9.

Other actors may perform checks on any number of ISC families each year. They shall report to the granting type-approval authority all results of the ISC testing using the Electronic Platform for in-service conformity described in point 5.9, or other appropriate means where this is not possible.

3.3. The first paragraph of section 5.7.1. shall read as follows:

5.7.1. General requirements

The vehicle shall belong to an ISC family as described in point 3 and shall comply with the checks set out in the table in Appendix 1. It shall be registered in the Union and have been driven in the Union for at least 90 % of its driving time. The emissions testing may be done in a different geographical region from that where the vehicles have been selected. In case of ISC testing conducted by the manufacturer, with the agreement of the granting type-approval authority, vehicles registered in a non-EU country may be tested, if they belong to the same ISC family and are accompanied by a certificate of conformity.

3.4. The final paragraph of section 5.7.1. shall read as follows:

A vehicle shall be excluded from ISC testing if the fuel from the vehicle tank does not meet the applicable standards laid down in Directive 98/70/EC ([6]) or if there is evidence or record of fueling with the wrong type of fuel.

3.5. Section 5.8 shall read as follows:

5.8. Sample size

When manufacturers apply the statistical procedure set out in point 5.10 for the Type 1 test, the number of sample lots shall be set on the basis of the annual sales volume of an in-service family in the Union, as described in the following table:

Table 1

Number of sample lots for ISC testing with Type 1 tests

EU Registrations per calendar year of vehicles in the sampling period	Number of sample lots (for Type 1 tests)
up to 100 000	1

functional requirements for market surveillance of vehicles, systems, components and separate technical units (OJ L 27, 8.2.2022, p. 1, ELI: http://data.europa.eu/eli/reg_impl/2022/163/oj).

6 Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels (OJ L 350, 28.12.1998, p. 58, ELI: http://data.europa.eu/eli/dir/1998/70/oj).

100 001 to 200 000	2
above 200 000	3

Each sample lot shall include enough vehicle types (with regard to emissions), in order to ensure that at least 20 % of the total registrations of this PEMS family in the EU for the previous year are covered. In case the same PEMS family is shared between more brands, then all brands shall be tested. When a family requires more than one sample lot to be tested, the vehicles selected in the second and third sample lots shall have been used in different ambient and/or typical use conditions from those selected for the first sample.

3.6. Section 5.9. above Table A4/2 shall read as follows:
5.9. Use of the Electronic Platform for in-service conformity and access to data required for testing

The Commission has set up an electronic platform in order to facilitate the exchange of data between on the one side, the manufacturers, other actors and on the other side the granting type-approval authority and the taking of the decision on the sample fail or pass.

The manufacturer shall complete the package on Testing Transparency referred to in Article 7 (9) in the format specified in Tables 1 and 2 of Appendix 5 and in Table 2 in this point and transmit it to the type- approval authority which grants the emission type-approval. Table 2 of Appendix 5 shall be used in order to allow the selection of vehicles from the same family for testing and along with Table 1 of Appendix 5 provide sufficient information for vehicles to be tested.

The type-approval authority which grants the emission type- approval shall upload the information in Tables 1 and 2 of Appendix 5 to the electronic platform referred to in the first paragraph within 5 working days of receiving it.

3.7. In paragraph 5.10.1. after the third sub-paragraph the following new sub-paragraph shall be added to read:

For vehicles that have Declared Maximum RDE Values reported in point 48.2 of the Certificate of Conformity, which is lower than the emission limits set out in Table 1 of Annex I to Regulation (EU) 2024/1257, the conformity shall be checked against these Declared Maximum RDE Values. If the sample is found not to conform with the Declared Maximum RDE Values, the granting type-approval authority shall require the manufacturer to take corrective actions.

3.8. In paragraph 5.10.1. a new final sub-paragraph shall be added to read:

The functions described above shall be executed directly in the Electronic Platform once the relevant functions are available.

3.9. Section 5.10.2. shall read as follows:
5.10.2. Pooling of ISC results

Test results from other actors may be pooled for the purposes of a common statistical procedure. The pooling of test results shall require the written consent from all the interested parties providing test results to a pool of results, and a notification to the type-approval authorities, and to the electronic platform, prior to the start of testing. One of the parties shall be designated as leader of the pool and be responsible for data reporting and communication with the granting type- approval authority.

3.10. The first paragraph of Section 5.10.3. shall read as follows:
5.10.3. Pass/Fail/Invalid outcome for a single test

An ISC emissions test shall be considered as ‘passed’ for one or more pollutants when the emissions result is equal or below the emission limit set out in Table 1 of Annex I to Regulation (EU) 2024/1257 for that type of test. When testing vehicles in the additional lifetime, the durability multipliers for adjusting the emission limits under Annex I to Regulation (EU) 2024/1257 shall be used.

3.11. The following section 5.10.6. shall be added:
5.10.6. ISC for completed vehicles and multistage special purpose vehicles

The manufacturer of the base vehicle shall determine the allowed values for the parameters listed

in Table 3. The allowed Parameter Values for each family shall be recorded in the information document of the emissions type-approval (see Appendix 3 to Annex I) and in the Transparency list 1 of Appendix 5. The final-stage manufacturer shall only be allowed to use the base vehicle emission values if the completed vehicle remains within the allowed Parameter Values. The parameter values for each final vehicle shall be recorded in its Certificate of Conformity.

Table 3

Allowed Parameter Values for multistage and multistage special purpose vehicles to use the base vehicle emission type-approval

Parameter Values	Allowed values from - to
Final Vehicle actual mass (in kg)	
Final Vehicle technically permissible maximum laden mass (in kg)	
Frontal area for final vehicle (in cm^2)	
Rolling resistance (kg/t)	
Projected frontal area of air entrance of the front grille (in cm^2)	

If a completed or multistage special purpose vehicle is tested and the result of the test is below the applicable emission limit, the vehicle shall be considered as a pass for the ISC family for the purposes of point 5.10.3.

If the result of the test on a completed or multistage special purpose vehicle exceeds the applicable emission limits but is not higher than 1,3 times the applicable emission limits, the tester shall examine whether that vehicle complies with the values in Table 3. Any non-compliance with these values shall be reported to the granting type- approval authority. If the vehicle does not comply with those values, the granting type-approval authority shall investigate the reasons for the non-compliance and take the appropriate measures regarding the manufacturer of the completed or multistage special purpose vehicle to restore conformity, including the withdrawal of the type-approval. If the vehicle complies with the values in Table 3, it shall be considered as a flagged vehicle for the in-service conformity family for the purposes of point 6.1.

If the result of the test exceeds 1,3 times the applicable emission limits, shall be considered as a fail for the in-service conformity family for the purposes of point 6.1., but not as an outlier for the relevant ISC family. If the completed or multistage special purpose vehicle does not comply with the values in Table 3, this shall be reported to the granting type-approval authority, who shall investigate the reasons for the non-compliance and take the appropriate measures regarding the manufacturer of the completed or multistage special purpose vehicle to restore conformity, including the withdrawal of the type-approval.

3.12. Section 6.1. shall read as follows:

6.1. Within 10 working days of the end of the ISC testing for the sample as referred to in point 5.10.5, the granting type-approval authority shall start detailed investigations with the manufacturer in order to decide whether the ISC family (or part of it) complies with the ISC rules and whether it requires remedial measures. For multistage or special purpose vehicles the granting type-approval authority shall also perform detailed investigations when there are at least three faulty vehicles with the same fault or five flagged vehicles in the same ISC family, as set out in point 5.10.6.

3.13. Section 7.6. shall read as follows:

7.6. If the granting type-approval authority does not approve the second plan submitted by the manufacturer, it shall take all appropriate measures, in accordance with Article 53 of

Regulation (EU) 2018/858, to restore conformity, including withdrawal of type-approval where necessary.

3.14. Point 4 in Appendix 3 shall read as follows:
4. Date of transmission to GTAA or upload to Electronic Platform

3.15. The description in row ID 1 of Table 1 in Appendix 5 should read as follows:
'As reported on the model of the EU type-approval certificate in Annex I/Appendix 4 to this regulation'

3.16. The description in row ID 2 of Table 1 in Appendix 5 should read as follows:
'As reported in Annex I, Appendix 4, Section II, Point 0 to this regulation and in UN Regulation No. 154 ([7]), Annex A2, Addendum to type-approval communication item 0.1: Interpolation Family Identifier as defined in paragraph 6.2.6. of the same regulation'

3.17. The description in row ID 7 of Table 1 in Appendix 5 should read as follows:
'As reported in paragraph 0.2.3.4.1. of Annex A1 of UN Regulation No 154 for RL and paragraph 0.2.3.5. for RM'

3.18. The type of data in row ID 18, ID 19, ID 42 and ID 43 of Table 1 in Appendix 5 should read as follows:
'Possible formats: pdf, jpg.'

3.19. The description in row ID 33 of Table 1 in Appendix 5 should read as follows:
'Optional for NOVC and OVC-HEVs, correction of CS CO_2 emissions as defined in paragraph 2 of Appendix 2 to Annex B8 of UN Regulation No 154'

3.20. Table 1 in Appendix 5 shall include additional rows between rows 44a and 49 as follows:

	For multistage or multistage special purpose vehicles			
45	Allowed final Vehicle mass in running order	Number	Kg	As reported in point 0.2.2.1 in Annex I of Regulation (EU) 2020/683 ([8]) From-to
45a	Allowed final Vehicle actual mass	Number	kg	As reported in point 0.2.2.1 in Annex I of Regulation (EU) 2020/683 From-to
45b	Allowed Vehicle technically permissible maximum laden mass (in kg)	Number	kg	As reported in point 0.2.2.1 in Annex I of Regulation (EU) 2020/683 From-to

[7] 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), 02 series of amendments (OJ L, 2022/2124, 10.11.2022, ELI: http://data.europa.eu/eli/reg/2022/2124/oj).

[8] 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, ELI: http://data.europa.eu/eli/reg_impl/2020/683/oj).

46	Allowed frontal area for final vehicle	Number	cm^2	As reported in point 0.2.2.1 in Annex I of Regulation (EU) 2020/683 From-to
47	Allowed Rolling resistance	Number	kg/t	As reported in point 0.2.2.1 in Annex I of Regulation (EU) 2020/683 From-to
48	Allowed projected frontal area of air entrance of the front grille	Number	cm2	As reported in point 0.2.2.1 in Annex I of Regulation (EU) 2020/683 From-to
	FOR ALL VEHICLES			

3.21. Table 2 in Appendix 5 shall be read as follows:

Table 2

Transparency list 2

Field	Type of data	Description
TVV	Text	Unique identifier of the Type, Variant, Version of the vehicle as reported in point 0.2. of the Certificate of Conformity, Annex VIII to Regulation (EU) 2020/683, Appendix Part 1.
PEMS Family ID	Text	As reported in Annex III of this regulation, point 3.5.2.
Make	Text	Trade name of manufacturer, point 0.1 of Annex I to Regulation (EU) 2020/683.
Commercial name	Text	Commercial names of the TVV, point 0.2.1 of Annex I to Regulation (EU) 2020/683.
Other name	Text	Free text
Category and class	Enumeration (M_1, N_1 class I, N_1 class II, N_1 class III, N_2, N_3, M_2, M_3)	Category and class of vehicle, Annex I, Table 1 to Regulation (EU) 2024/1257.

Bodywork	Enumeration (AA Saloon; AB Hatchback, AC Station Wagon, AD Coupe, AE Convertible, AF Multi-purpose vehicle, AG Truck station wagon, BA Lorry, BB Van, BC Tractor unit for semi-trailer, BD Road tractor, BE Pick-up truck, BX Chassis-cab or chassis-cowl)	Type of bodywork, Annex I to Regulation (EU) 2020/683, point 0.3.0.2.
Emission TA Number	Text	As reported on the model of the EU type-approval certificate in Annex I/Appendix 4 to this regulation.
WVTA Number	Text	Identifier of the Whole Vehicle Type-Approval as defined in Annex IV to Regulation (EU) 2020/683.
Evap family ID	Text	As reported in paragraph 0.2.3.7 of Annex A1 of UN Regulation No 154
Rated Engine Power fuel 1, fuel 2 (if relevant)	Number	Paragraph 3.2.1.8 of Annex A1 of UN Regulation No 154
Twin tires	Yes/No	Declared by OEM.
Fuel Tank Capacities (discreet values)	Number	Fuel tank(s) capacity(ies), point 3.2.3.1.1 of Annex I to Regulation (EU) 2020/683.
Sealed tank	Yes/No	Point 3.2.12.2.5.5.3 of Annex I to Regulation (EU) 2020/683.
WMI used in this WVTA+TVV	Text	Declared by the OEM (ISO 3779)

Appendix 1

Rules for performing type 4 tests during in-service conformity

Type 4 tests for in-service conformity shall be performed in accordance with Annex VI, with the following exceptions:

— vehicles tested with the Type 4 test shall be at least 12 months of age.

— the canister shall be considered aged and therefore the Canister Bench Ageing procedure shall not be followed.

— the canister shall be loaded outside the vehicle, following the procedure described for this purpose in Annex VI and shall be removed and mounted to the vehicle following the repair instructions of the manufacturer. Before and after the loading a FID sniff test (with results less than 100 ppm at 20 °C) shall be made as close as possible to the canister to confirm that the canister is mounted properly.

— the tank shall be considered aged and therefore no Permeability Factor shall be added in the calculation of the result of the Type 4 test.

ANNEX III

VERIFYING REAL DRIVING EMISSIONS

1. INTRODUCTION
This Annex describes the procedure for determining Real Driving Emission.

2. GENERAL REQUIREMENTS

2.1. The general requirements for conducting the RDE test shall be those set out in UN Regulation No 168 ([9]).

2.2. For vehicle types with regards to emissions approved according to this Annex, the final RDE emission results calculated according to this Annex at any possible RDE test performed in accordance with the requirements of this Annex, shall not be higher than any of the relevant Euro 7 emission limits laid down in Table 1 of Annex I to Regulation (EU) 2024/1257.

2.3. The manufacturer may declare compliance with lower emission limits by declaring lower values called 'Declared Maximum RDE', either for NOx or PN or both, in the Manufacturer's RDE certificate of compliance and the Certificate of Conformity of each vehicle. These Declared Maximum RDE values shall be used for checking the compliance of cars when applicable, including for tests performed during In-service Conformity and Market Surveillance.

3. TECHNICAL REQUIREMENTS
The technical requirements for conducting the RDE test shall be those set out in paragraph 6. and Annexes of UN Regulation No 168, with the exceptions described in the points below.

3.1. The following definition is added after paragraph 3.1.:
'Declared Maximum RDE' means the emission values, which shall necessarily be lower than the applicable emission limits, declared optionally by the manufacturer and used for checking compliance against lower emission limits.'

3.2. Paragraph 10.8. of UN Regulation No 168 shall read as follows:

'10.8. Data Reporting: All data of a single RDE test shall be recorded according to the data exchange and data reporting files provided by the Commission ([10]).'

3.3. The following paragraphs are added after paragraph 10.8. of UN Regulation No 168:

'10.9. *Reporting and dissemination of RDE type-approval test information*

10.9.1. A technical report prepared by the manufacturer shall be made available to the approval authority. The technical report is composed of 4 items:
(i) the Data Exchange file
(ii) the Reporting file
(iii) the Vehicle and engine description as described in Appendix 4 of Annex I of this Regulation;
(iv) visual supporting material (photographs and/or videos) of the PEMS installation in the tested vehicle of adequate quality and quantity to identify the vehicle and to assess if the installation of the PEMS main unit, the EFM, the GNSS antenna, and the weather station follow the instrument manufacturers recommendations and the general good practices of PEMS testing.

10.9.2. The manufacturer shall ensure that the information listed in paragraph 10.9.2.1. is made available on a publicly accessible website without costs and without the need for the user to reveal his identity or sign up. The manufacturer shall keep the Commission and Type Approval Authorities informed on the location of the website.

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9 UN Regulation No 168 - Uniform provisions concerning the approval of light duty passenger and commercial vehicles with regards to real driving emissions (RDE) [2024/211] (OJ L, 2024/211, 12.1.2024, ELI: http://data.europa.eu/eli/reg/2024/211/oj).

10 To be found in CIRCABC link: https://circabc.europa.eu/ui/group/f4243c55-615c-4b70- a4c8-1254b5eebf61/library/a0be83ba-89bd-4499-8189-2696362d2f72?p=1

10.9.2.1. The website shall allow a wildcard search of the underlying database based on one or more of the following:
Make, Type, Variant, Version, Commercial name, or Type Approval Number as referred to in the certificate of conformity, pursuant to Annex VIII to Regulation (EU) 2020/683.
The information described below shall be made available for each vehicle in a search:
— The PEMS family ID to which that vehicle belongs, in accordance with the Transparency List 2 of Annex II to this Regulation;
— The Declared Maximum RDE Values as reported in point 48.2 of the Certificate of Conformity, as described in Annex VIII to Regulation (EU) 2020/683.

10.9.2.2. Upon request, without costs and within 10 days, the manufacturer shall make available the technical report referred to in paragraph 10.9.1. to any third party and the Commission. The manufacturer shall also make available the technical report referred to in paragraph 10.9.1. upon request and with a reasonable and proportionate fee to others, which does not discourage an inquirer with a justified interest from requesting the respective information or exceed the internal costs of the manufacturer for making the requested information available.
Upon request, the type-approval authority shall make available the information listed under paragraphs 10.9.1. and 10.9.2. without costs and within 10 days of receiving the request to any third party or the Commission. The type-approval authority shall also make available to others upon request the information listed under paragraphs 10.9.1. and 10.9.2. with a reasonable and proportionate fee, which does not discourage an inquirer with a justified interest from requesting the respective information or exceed the internal costs of the authority for making the requested information available.'

3.4. The first sentence of Paragraph 6.1. of Annex 5 to UN Regulation No 168 shall read as follows:
The PN analyser shall consist of a pre-conditioning unit and a particle detector that counts with 65 per cent efficiency from approximately 10 nm.'

3.5. The legend in Figure A5/1 of Paragraph 6.1. of Annex 5 to UN Regulation No 168 shall read as follows:
(Dotted lines depict optional parts. The heated section shall be catalytically active. EFM = Exhaust mass Flow Meter, d = inner diameter, PND = Particle Number Diluter)

3.6. The first sentence of P the fourth paragraph of Paragraph 6.1. of Annex 5 to UN Regulation No 168 shall read as follows:
The PN analyser shall include a catalytically active heated section at wall temperature ≥ 573 K.

3.7. The last sentence of Paragraph 6.1. of Annex 5 to UN Regulation No 168 does not apply.

3.8. Table A5/3a in Paragraph 6.2. of Annex 5 to UN Regulation No 168 shall read as follows:

d_p [nm]	10	15	30	50	70	100	200
$E(d_p)$ PN analyser	0,1 – 0,5	0,3 – 0,7	0,75 – 1,05	0,85 – 1,15	0,85 – 1,15	0,80 – 1,20	0,80 – 2,00

3.9. The first paragraph under Table A5/3a of Paragraph 6.1. of Annex 5 to UN Regulation No 168 shall read as follows:

Efficiency E(dp) is defined as the ratio in the readings of the PN analyser system to a reference Condensation Particle Counter (CPC)'s (with counting efficiency above 90 per cent for 10 nm equivalent electrical mobility diameter, checked for linearity and calibrated with an electrometer) or an Electrometer's number concentration measuring in parallel monodisperse aerosol of mobility diameter dp and normalized at the same temperature and pressure conditions.

3.7. The third sentence sentence of Paragraph 6.3. of Annex 5 to UN Regulation No 168 shall read as follows:
The reference instrument shall be an Electrometer or a Condensation Particle Counter (CPC) with counting efficiency above 90 per cent for 10 nm equivalent electrical mobility diameter, verified for linearity.

3.8. The last sentence of the first paragraph of Paragraph 6.3. of Annex 5 to UN Regulation No 168 shall read as follows:
Alternatively, a particle number system compliant with UN Regulation No. 154 on WLTP with a

counting efficiency above 90 per cent for 10 nm equivalent electrical mobility diameter can be used as reference instrument for the linearity check of the complete system.

3.10. The first and second sentence of Paragraph 6.4. of Annex 5 to UN Regulation No 168 shall read as follows:

The system shall achieve > 99.9 per cent removal of ≥ 30 nm tetracontane ($CH_3(CH_2)_{38}CH_3$) particles with an inlet concentration of ≥ 10 000 particles per cubic-centimetre at the minimum dilution.

The system shall also achieve a > 99.9 per cent removal efficiency of tetracontane with count median diameter > 50nm and mass > 1 mg/m^3.