

Air Pollution Control (Vehicle Design Standards) (Emission) Regulations

(Cap. 311 sub. leg. J)

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Air Pollution Control (Vehicle Design Standards) (Emission) Regulations

(Cap. 311, section 43)

(Enacting provision omitted—E.R. 2 of 2012)

[1 January 1992]

Part I

Preliminary

(Format changes—E.R. 2 of 2012)

1. Citation

- (1) These regulations may be cited as the Air Pollution Control (Vehicle Design Standards) (Emission) Regulations.
- (2) *(Omitted as spent—E.R. 2 of 2012)*

2. Interpretation

In these regulations, unless the context otherwise requires—

bus (巴士) has the meaning given by section 2 of the Road Traffic Ordinance (Cap. 374); *(L.N. 46 of 2012)*

compression-ignition engine (壓燃式引擎) means an engine in which the fuel is injected into the cylinders or combustion space of the engine and is there ignited during normal running solely by the heat of compression of the cylinder charge;

Council (議會) means the Council of the European Communities (now known as the Council of the European Union); *(L.N. 37 of 1995)*

design weight (設計重量) means, in relation to a particular motor vehicle, the maximum design loaded vehicle weight recommended by its manufacturer for motor vehicles of the same class or description as the particular vehicle; (*L.N. 37 of 1995*)

direct-injection type (直噴型), in relation to an engine, means a type of engine in which the fuel is injected directly into the combustion space above the piston crown; (*L.N. 24 of 2017*)

emission (排放) means emission of any air pollutant;

goods vehicle (貨車) has the meaning given by section 2 of the Road Traffic Ordinance (Cap. 374); (*L.N. 46 of 2012*)

indirect-injection type (非直噴型), in relation to an engine, means a type of engine in which the fuel is not injected directly into the combustion space above the piston crown; (*L.N. 24 of 2017*)

light bus (小型巴士) has the meaning given by section 2 of the Road Traffic Ordinance (Cap. 374); (*L.N. 46 of 2012*)

liquefied petroleum gas (石油氣) has the same meaning as in section 2 of the Gas Safety Ordinance (Cap. 51); (*L.N. 101 of 2001*)

motor cycle (電單車) means a two-wheeled motor vehicle with or without a sidecar;

motor tricycle (機動三輪車) means a three-wheeled motor vehicle other than—

- (a) a motor cycle with a sidecar; and
- (b) a village vehicle;

motor vehicle (汽車) means any mechanically propelled vehicle;

positive-ignition engine (強制點火式引擎) means an engine operating on the Otto cycle in which a mixture of fuel and air is drawn into cylinders and ignited after compression

by means of an electric spark applied at a known and pre-determined moment of the cycle;

private car (私家車) has the meaning given by section 2 of the Road Traffic Ordinance (Cap. 374); (*L.N. 46 of 2012*)

registered (登記) means first registered under the Road Traffic (Registration and Licensing of Vehicles) Regulations (Cap. 374 sub. leg. E); (*L.N. 37 of 1995*)

special purpose vehicle (特別用途車輛) means a motor vehicle designed, constructed or adapted primarily for a use other than the carriage on a road of goods, the driver or passengers;

taxi (的士) has the meaning given by section 2 of the Road Traffic Ordinance (Cap. 374); (*L.N. 46 of 2012*)

unleaded petrol (無鉛汽油) has the same meaning as in section 2 of the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311 sub. leg. L); (*19 of 1994 s. 13*)

vehicle (車輛) means any vehicle whether or not mechanically propelled which is constructed or adapted for use on roads but does not include a vehicle of the North-west Railway as defined in section 2(1) of the Kowloon-Canton Railway Corporation Ordinance (Cap. 372) or a tram.

(*L.N. 24 of 2017*)

3. Power of Authority to exempt

The Authority may exempt any motor vehicle or class of motor vehicle from the provisions of these regulations or any part thereof if he considers that it would be in the public interest to do so.

Part II

Vehicle Design Standards

(L.N. 37 of 1995)

(Format changes—E.R. 2 of 2012)

4. *(Repealed L.N. 37 of 1995)*

4A. Vehicle design standards relating to smoke emission for motor vehicles registered on or after 1 April 1995

- (1) Every motor vehicle registered on or after 1 April 1995 which is equipped with a compression-ignition engine shall be so constructed that no excessive smoke is emitted from the vehicle. *(L.N. 165 of 2005)*
- (2) For the purpose of subregulation (1), smoke shall be deemed excessive if the smoke emitted from the vehicle measured by means of the test procedure specified in the first column of Schedule 1 exceeds the maximum permitted smoke level specified in the second column of that Schedule or the maximum permitted smoke level in absolute units of light absorption specified in the third column of that Schedule.
- (3) The provisions of this regulation are in addition to, and not in substitution for, regulation 31 of the Road Traffic (Construction and Maintenance of Vehicles) Regulations (Cap. 374 sub. leg. A).
- (4) This regulation does not apply to vehicles specified in regulations 7G(13A) and (18) and 7H(5A) and (7). *(L.N. 24 of 2017; L.N. 45 of 2020)*

(L.N. 37 of 1995)

5-6. *(Repealed L.N. 37 of 1995)*

7. *(Repealed L.N. 24 of 2017)*

7A. *(Repealed L.N. 96 of 1998)*

7B. *(Repealed L.N. 45 of 2020)*

7C. *(Repealed L.N. 24 of 2017)*

7D. Vehicle design standards for motor cycles and motor tricycles registered on or after 1 January 2007

(1) *(Repealed L.N. 45 of 2020)*

(2) Subject to regulation 9, every motor tricycle registered on or after 1 January 2007 shall be so constructed that the emission from that motor tricycle conforms to the standards specified in Schedule 15.

(L.N. 111 of 2006)

7E. *(Repealed L.N. 45 of 2020)*

7F. Vehicle design standards for private cars and taxis registered on or after 1 July 2017

(1) This regulation does not apply to vehicles specified in regulation 9.

(2) *(Repealed L.N. 45 of 2020)*

(3) Every private car or taxi which—

(a) is equipped with a positive-ignition engine of indirect-injection type;

(b) is constructed to operate on unleaded petrol only; and

(c) is registered on or after 1 September 2019,

must be so constructed that the emission from that private car or taxi conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17.

(4) *(Repealed L.N. 45 of 2020)*

(5) Every private car or taxi which—

- (a) is equipped with a positive-ignition engine of direct-injection type;
- (b) is constructed to operate on unleaded petrol only; and
- (c) is registered on or after 1 September 2019,

must be so constructed that the emission from that private car or taxi conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17 and paragraph (b) of Part 1 of Schedule 18.

(6) Every private car which—

- (a) is equipped with a compression-ignition engine; and
- (b) is registered on or after 1 October 2017, *(L.N. 55 of 2017)*

must be so constructed that the emission from that private car conforms to the standards specified in paragraph (c) of Part 1 of Schedule 17 and paragraph (b) of Part 1 of Schedule 18.

(7) *(Repealed L.N. 45 of 2020)*

(8) Every taxi which—

- (a) is equipped with a positive-ignition engine of indirect-injection type;
- (b) is constructed to operate on liquefied petroleum gas only; and
- (c) is registered on or after 1 September 2019,

must be so constructed that the emission from that taxi conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17.

(9) *(Repealed L.N. 45 of 2020)*

(10) Every taxi which—

- (a) is equipped with a positive-ignition engine of direct-injection type;
- (b) is constructed to operate on liquefied petroleum gas only; and
- (c) is registered on or after 1 September 2019,

must be so constructed that the emission from that taxi conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17 and paragraph (b) of Part 1 of Schedule 18.

(11) *(Repealed L.N. 45 of 2020)*

(12) Every taxi which—

- (a) is equipped with a positive-ignition engine of indirect-injection type;
- (b) is constructed to operate on unleaded petrol and liquefied petroleum gas only; and
- (c) is registered on or after 1 September 2019,

must be so constructed that the emission from that taxi conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17.

(13) *(Repealed L.N. 45 of 2020)*

(14) Every taxi which—

- (a) is equipped with a positive-ignition engine of direct-injection type;

- (b) is constructed to operate on unleaded petrol and liquefied petroleum gas only; and
 - (c) is registered on or after 1 September 2019,
- must be so constructed that the emission from that taxi conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17 and paragraph (b) of Part 1 of Schedule 18.

(L.N. 24 of 2017)

7G. Vehicle design standards for goods vehicles and light buses registered on or after 1 January 2018

- (1) This regulation does not apply to vehicles specified in regulation 9.
- (2) *(Repealed L.N. 45 of 2020)*
- (3) Every goods vehicle or light bus which—
 - (a) is equipped with a positive-ignition engine of indirect-injection type;
 - (b) is constructed to operate on unleaded petrol only;
 - (c) has a design weight of not more than 3.5 tonnes; and
 - (d) is registered on or after 1 September 2020,must be so constructed that the emission from that goods vehicle or light bus conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17.
- (4) *(Repealed L.N. 45 of 2020)*
- (5) Every goods vehicle or light bus which—
 - (a) is equipped with a positive-ignition engine of direct-injection type;
 - (b) is constructed to operate on unleaded petrol only;
 - (c) has a design weight of not more than 3.5 tonnes; and

- (d) is registered on or after 1 September 2020,
must be so constructed that the emission from that goods vehicle or light bus conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17 and paragraph (b) of Part 1 of Schedule 18.
- (6) *(Repealed L.N. 45 of 2020)*
- (7) Every goods vehicle or light bus which—
- (a) is equipped with a compression-ignition engine;
 - (b) has a design weight of not more than 3.5 tonnes; and
 - (c) is registered on or after 1 September 2020,
must be so constructed that the emission from that goods vehicle or light bus conforms to the standards specified in paragraph (b) or (c) of Part 1 of Schedule 17 and paragraph (b) of Part 1 of Schedule 18.
- (8) *(Repealed L.N. 45 of 2020)*
- (9) Every light bus which—
- (a) is equipped with a positive-ignition engine of indirect-injection type;
 - (b) is constructed to operate on liquefied petroleum gas only;
 - (c) has a design weight of not more than 3.5 tonnes; and
 - (d) is registered on or after 1 September 2020,
must be so constructed that the emission from that light bus conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17.
- (10) *(Repealed L.N. 45 of 2020)*
- (11) Every light bus which—
- (a) is equipped with a positive-ignition engine of direct-injection type;

(b) is constructed to operate on liquefied petroleum gas only;

(c) has a design weight of not more than 3.5 tonnes; and

(d) is registered on or after 1 September 2020,

must be so constructed that the emission from that light bus conforms to the standards specified in paragraph (b), (c) or (d) of Part 1 of Schedule 17 and paragraph (b) of Part 1 of Schedule 18.

(12) Every light bus which—

(a) is equipped with a positive-ignition engine;

(b) is constructed to operate on unleaded petrol only;

(c) has a design weight of more than 3.5 tonnes; and

(d) is registered between 1 October 2018 and 28 February 2021 (both dates inclusive), (*L.N. 55 of 2017; L.N. 45 of 2020*)

must be so constructed that the emission from that light bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 16.

(12A) Every light bus which—

(a) is equipped with a positive-ignition engine;

(b) is constructed to operate on unleaded petrol only;

(c) has a design weight of more than 3.5 tonnes; and

(d) is registered on or after 1 March 2021,

must be so constructed that the emission from that light bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraph (b) of Part 2 of Schedule 18 and Schedule 19. (*L.N. 45 of 2020*)

(13) Every light bus which—

(a) is equipped with a compression-ignition engine;

- (b) has a design weight of more than 3.5 tonnes; and
- (c) is registered between 1 October 2018 and 28 February 2021 (both dates inclusive), (*L.N. 55 of 2017; L.N. 45 of 2020*)

must be so constructed that the emission from that light bus conforms to the standards specified in paragraph (a), (b) or (c) of Part 2 of Schedule 16.

(13A) Every light bus which—

- (a) is equipped with a compression-ignition engine;
- (b) has a design weight of more than 3.5 tonnes; and
- (c) is registered on or after 1 March 2021,

must be so constructed that the emission from that light bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraphs (a) and (b) of Part 2 of Schedule 18 and Schedule 19. (*L.N. 45 of 2020*)

(14) Every light bus which—

- (a) is equipped with a positive-ignition engine;
- (b) is constructed to operate on liquefied petroleum gas only;
- (c) has a design weight of more than 3.5 tonnes; and
- (d) is registered between 1 October 2018 and 28 February 2021 (both dates inclusive), (*L.N. 55 of 2017; L.N. 45 of 2020*)

must be so constructed that the emission from that light bus conforms to the standards specified in paragraph (a), (b) or (c) of Part 2 of Schedule 16.

(14A) Every light bus which—

- (a) is equipped with a positive-ignition engine;

(b) is constructed to operate on liquefied petroleum gas only;

(c) has a design weight of more than 3.5 tonnes; and

(d) is registered on or after 1 March 2021,

must be so constructed that the emission from that light bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraph (b) of Part 2 of Schedule 18 and Schedule 19. (*L.N. 45 of 2020*)

(15) (*Repealed L.N. 45 of 2020*)

(16) Every goods vehicle which—

(a) is equipped with a positive-ignition engine;

(b) is constructed to operate on unleaded petrol only;

(c) has a design weight of more than 3.5 tonnes; and

(d) is registered on or after 1 April 2019,

must be so constructed that the emission from that goods vehicle conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraph (b) of Part 2 of Schedule 18 and Schedule 19.

(17) (*Repealed L.N. 45 of 2020*)

(18) Every goods vehicle which—

(a) is equipped with a compression-ignition engine;

(b) has a design weight of more than 3.5 tonnes; and

(c) is registered on or after 1 April 2019,

must be so constructed that the emission from that goods vehicle conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraphs (a) and (b) of Part 2 of Schedule 18 and Schedule 19.

(*L.N. 24 of 2017*)

7H. Vehicle design standards for buses registered on or after 1 October 2018

(L.N. 55 of 2017)

- (1) This regulation does not apply to vehicles specified in regulation 9.
- (2) Every bus which—
- (a) is equipped with a positive-ignition engine;
 - (b) is constructed to operate on unleaded petrol only;
 - (c) has a design weight of not more than 9 tonnes; and
 - (d) is registered between 1 October 2018 and 28 February 2021 (both dates inclusive), *(L.N. 45 of 2020)*

must be so constructed that the emission from that bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 16.

- (2A) Every bus which—
- (a) is equipped with a positive-ignition engine;
 - (b) is constructed to operate on unleaded petrol only;
 - (c) has a design weight of not more than 9 tonnes; and
 - (d) is registered on or after 1 March 2021,
- must be so constructed that the emission from that bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraph (b) of Part 2 of Schedule 18 and Schedule 19. *(L.N. 45 of 2020)*
- (3) *(Repealed L.N. 45 of 2020)*
- (4) Every bus which—
- (a) is equipped with a positive-ignition engine;
 - (b) is constructed to operate on unleaded petrol only;

- (c) has a design weight of more than 9 tonnes; and
 - (d) is registered on or after 1 April 2019,
- must be so constructed that the emission from that bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraph (b) of Part 2 of Schedule 18 and Schedule 19.

(5) Every bus which—

- (a) is equipped with a compression-ignition engine;
- (b) has a design weight of not more than 9 tonnes; and
- (c) is registered between 1 October 2018 and 28 February 2021 (both dates inclusive), (*L.N. 45 of 2020*)

must be so constructed that the emission from that bus conforms to the standards specified in paragraph (a), (b) or (c) of Part 2 of Schedule 16.

(5A) Every bus which—

- (a) is equipped with a compression-ignition engine;
- (b) has a design weight of not more than 9 tonnes; and
- (c) is registered on or after 1 March 2021,

must be so constructed that the emission from that bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraphs (a) and (b) of Part 2 of Schedule 18 and Schedule 19. (*L.N. 45 of 2020*)

(6) (*Repealed L.N. 45 of 2020*)

(7) Every bus which—

- (a) is equipped with a compression-ignition engine;
- (b) has a design weight of more than 9 tonnes; and
- (c) is registered on or after 1 April 2019,

must be so constructed that the emission from that bus conforms to the standards specified in paragraph (b) or (c) of Part 2 of Schedule 17, paragraphs (a) and (b) of Part 2 of Schedule 18 and Schedule 19.

(L.N. 24 of 2017; L.N. 55 of 2017)

7I. Vehicle design standards for motor cycles registered on or after 1 October 2020

Subject to regulation 9, every motor cycle registered on or after 1 October 2020 must be so constructed that the emission from that motor cycle conforms to the standards specified in paragraph (a) or (b) of Schedule 20.

(L.N. 45 of 2020)

8. Compliance with more stringent standards

Notwithstanding the provisions of regulations 4A, 7D, 7F, 7G, 7H, 7I and 14, if the Authority is of the opinion that the emission from a particular motor vehicle to which those regulations apply conforms to standards as stringent as, or more stringent than, the standards referred to in those regulations and applicable to it, then for the purposes of those regulations, such vehicle shall be taken as conforming to the standards so referred to and so applicable.

(L.N. 96 of 1998; L.N. 165 of 2005; L.N. 111 of 2006; L.N. 46 of 2012; L.N. 24 of 2017 and L.N. 55 of 2017; L.N. 45 of 2020)

9. Vehicles to which regulations 7D, 7F, 7G, 7H, 7I and 14 does not apply

(L.N. 111 of 2006; L.N. 46 of 2012; L.N. 24 of 2017 and L.N. 55 of 2017; L.N. 45 of 2020)

Regulations 7D, 7F, 7G, 7H, 7I and 14 do not apply to— *(L.N. 37 of 1995; L.N. 96 of 1998; L.N. 165 of 2005; L.N. 111 of 2006;*

L.N. 46 of 2012; L.N. 24 of 2017 and L.N. 55 of 2017; L.N. 45 of 2020)

- (a) *(Repealed L.N. 121 of 1999)*
- (b) a special purpose vehicle; or
- (c) any motor vehicle which is incapable by reason of its construction of exceeding a speed of 50 km/h on level ground under its own power. *(L.N. 24 of 2017)*

(Part III heading repealed L.N. 37 of 1995)

Part IV

Miscellaneous

(Format changes—E.R. 2 of 2012)

10. Requirements as to engine and fuel

- (1) Every motor vehicle (other than a taxi and a light bus) that is registered on or after 1 January 1992 and is equipped with a positive-ignition engine shall be constructed— *(L.N. 124 of 2003)*
 - (a) to operate on unleaded petrol only; and
 - (b) in such a way that a petrol pump dispensing nozzle spout with an outside diameter of 23.6 mm cannot be inserted into its filling pipe. *(L.N. 24 of 2017)*
- (2) *(Repealed L.N. 24 of 2017)*
- (3) Every taxi registered on or after 1 July 2017 equipped with an engine—
 - (a) must be equipped with a positive-ignition engine;
 - (b) must be constructed to—
 - (i) operate on liquefied petroleum gas only;
 - (ii) operate on unleaded petrol only; or
 - (iii) operate on liquefied petroleum gas and unleaded petrol only; and
 - (c) for a taxi constructed to operate on unleaded petrol—must be constructed in such a way that a petrol pump dispensing nozzle spout with an outside diameter of 23.6 mm cannot be inserted into its filling pipe. *(L.N. 24 of 2017)*

(3A) Every light bus that is registered on or after 1 August 2003 and is equipped with a positive-ignition engine shall be constructed—

- (a) (i) to operate on unleaded petrol only; and
- (ii) in such a way that a petrol pump dispensing nozzle spout with an outside diameter of 23.6 mm cannot be inserted into its filling pipe; or *(L.N. 24 of 2017)*
- (b) to operate on liquefied petroleum gas only. *(L.N. 124 of 2003)*

(4) This regulation shall not apply to motor cycles and motor tricycles.

(L.N. 101 of 2001)

11. *(Repealed L.N. 37 of 1995)*

12-13. *(Omitted as spent—E.R. 2 of 2012)*

14. Certain motor vehicles to be equipped with on-board diagnostic system

- (1)-(7) *(Repealed L.N. 24 of 2017)*
- (8)-(10) *(Repealed L.N. 45 of 2020)*
- (11) *(Repealed L.N. 24 of 2017)*
- (12) Every motor vehicle referred to in regulations 7G(12), (13) and (14) and 7H(2) and (5) must be fitted with an on-board diagnostic system so constructed that it conforms to the requirements as specified in— *(L.N. 24 of 2017; L.N. 45 of 2020)*
 - (a) the on-board diagnostic system specifications administered by the Environmental Protection Agency of the United States of America;

- (b) the on-board diagnostic system specifications stipulated in Directive 2005/55/EC of the European Parliament and of the Council as amended by its subsequent amendments up to and including amendments made by Commission Directive 2008/74/EC; or
 - (c) the on-board diagnostic system specifications administered by the Ministry of Land, Infrastructure, Transport and Tourism of Japan. (*L.N. 46 of 2012*)
(*L.N. 157 of 2000*)
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SCHEDULE 1

[reg. 4A]

VEHICLE DESIGN STANDARDS FOR SMOKE EMISSION FROM MOTOR VEHICLES

Test procedure	Maximum permitted smoke level	Maximum permitted smoke level in absolute units of light absorption (m ⁻¹)
Free acceleration test procedure specified in Council Directive 72/306/ EEC made by the Council as amended by its subsequent amendments up to and including amendments made by Commission Directive 2005/21/ EC	35 Hartridge Smoke Units	1.00

(L.N. 37 of 1995; L.N. 311 of 1996; L.N. 165 of 2005)

SCHEDULE 2

(Repealed L.N. 24 of 2017)

SCHEDULE 2A

(Repealed L.N. 24 of 2017)

SCHEDULE 3

(Repealed L.N. 24 of 2017)

SCHEDULE 4

(Repealed L.N. 24 of 2017)

SCHEDULE 5

(Repealed L.N. 24 of 2017)

SCHEDULE 6

(Repealed L.N. 24 of 2017)

SCHEDULE 6A

(Repealed L.N. 24 of 2017)

SCHEDULE 7

(Repealed L.N. 24 of 2017)

SCHEDULE 8

(Repealed L.N. 24 of 2017)

SCHEDULE 9

(Repealed L.N. 24 of 2017)

SCHEDULE 10

(Repealed L.N. 24 of 2017)

SCHEDULE 10A

(Repealed L.N. 24 of 2017)

SCHEDULE 10B

(Repealed L.N. 24 of 2017)

SCHEDULE 10C

(Repealed L.N. 24 of 2017)

Schedule 11

(Repealed L.N. 24 of 2017)

Schedule 12

(Repealed L.N. 45 of 2020)

Schedule 13

(Repealed L.N. 24 of 2017)

Schedule 14

(Repealed L.N. 45 of 2020)

Schedule 15

[reg. 7D]

Vehicle Design Standards (Emission) for Motor Tricycles Registered on or after 1 January 2007

European Union Motor Tricycle Emission Standards, comprising all of the following requirements— (*L.N. 46 of 2012*)

- (i) All the testing procedures, requirements and emission limits as specified in Directive 97/24/EC made by the European Parliament and the Council as amended by its subsequent amendments up to and including amendments made by Directive 2005/30/EC made by the European Parliament and the Council.
- (ii) The emission limit values for Type I test set out in Row A of the Table in Chapter 5, Annex II, Section 2.2.1.1.5 to Directive 97/24/EC made by the European Parliament and the Council as amended by its subsequent amendments up to and including amendments made by Directive 2005/30/EC made by the European Parliament and the Council. (*L.N. 46 of 2012*)
- (iii) All the type approval requirements as specified in Directive 2002/24/EC made by the European Parliament and the Council as amended by its subsequent amendments up to and including amendments made by Directive 2005/30/EC made by the European Parliament and the Council.

(*Schedule 15 added L.N. 111 of 2006*)

(*Format changes—E.R. 2 of 2012*)

Schedule 16

[regs. 7G & 7H]

(L.N. 24 of 2017; L.N. 45 of 2020)

Vehicle Design Standards (Emission) for Certain Motor Vehicles Registered on or after 1 June 2012

Part 1

(Repealed L.N. 45 of 2020)

Part 2

- (a) European Union Motor Vehicle Emission Standards, comprising all of the following requirements—
 - (i) All the testing procedures, requirements and emission limits as specified in Directive 2005/55/EC of the European Parliament and of the Council as amended by its subsequent amendments up to and including amendments made by Commission Directive 2008/74/EC.
 - (ii) The emission limit values of gaseous and particulate pollutants and opacity of smoke from the engine as specified in Row B2 of the Tables in Section 6.2.1 of Annex I to Directive 2005/55/EC of the European Parliament and of the Council as amended by its subsequent amendments up to and including amendments made by Commission Directive 2008/74/EC.
 - (iii) All the type approval requirements as specified in Directive 2007/46/EC of the European Parliament and of

the Council as amended by its subsequent amendments up to and including amendments made by Commission Regulation (EU) 65/2012.

- (b) United States of America Motor Vehicle Emission Standards, comprising all of the following requirements—
 - (i) All the testing procedures, requirements and emission limits as specified in the Code of Federal Regulations Title 40 Protection of Environment Part 86 Control of Emissions from new and in-use highway vehicles and engines of the United States of America as at 20 March 2012.
 - (ii) The emission limit values as specified in—
 - (A) emission standards for Otto-cycle heavy-duty vehicle models equipped with positive-ignition engines manufactured on and after 2008 as at 20 March 2012; or
 - (B) emission standards and supplemental requirements for heavy-duty vehicle models equipped with compression-ignition engines manufactured on and after 2007 as at 20 March 2012.
 - (iii) All the type approval requirements administered by the Environmental Protection Agency of the United States of America. (*L.N. 24 of 2017*)
- (c) Japan Motor Vehicles Emission Standards, comprising all of the following requirements—
 - (i) All the testing procedures, requirements and emission limits as specified in the Safety Regulation for Road Vehicles (i.e. the Ministry of Transport Ordinance No. 67 of 28 July 1951) as amended by its subsequent amendments up to and including amendments made by—

- (A) Ministry of Land, Infrastructure, Transport and Tourism Ordinances No. 48 of 2009; and
 - (B) Ministry of Land, Infrastructure, Transport and Tourism Announcement No. 349 of 25 March 2008.
- (ii) The emission limit values as specified in the Post New Long-term Regulation published in the Ministry of Land, Infrastructure, Transport and Tourism Announcement No. 349 of 25 March 2008.
 - (iii) All the type approval requirements administered by the Ministry of Land, Infrastructure, Transport and Tourism of Japan.

(Schedule 16 added L.N. 46 of 2012. E.R. 2 of 2012)

(Format changes—E.R. 2 of 2012)

Schedule 17

[regs. 7F, 7G & 7H]

Vehicle Design Standards (Emission) for Certain Motor Vehicles Registered on or after 1 July 2017

Part 1

- (a) *(Repealed L.N. 45 of 2020)*
- (b) European Union Motor Vehicle Emission Standards, comprising all of the following requirements—
 - (i) All the testing procedures, requirements and emission limits including those for on-board diagnostic system (except Type VI test) as specified in Regulation (EC) No. 715/2007 of the European Parliament and of the Council and Commission Regulation (EC) No. 692/2008 as amended by its subsequent amendments up to and including amendments made by Commission Regulation (EU) No. 2016/646.
 - (ii) The emission limit values for Type I test as specified in Table 2 (Euro 6 Emission Limits) of Annex I to Regulation (EC) No. 715/2007 of the European Parliament and of the Council as amended by Commission Regulation (EC) No. 692/2008 and its subsequent amendments up to and including amendments made by Commission Regulation (EU) No. 2016/646.
 - (iii) The emission standards and on-board diagnostic system standards as specified in Row ZD, ZE or ZF of Table 1 of Appendix 6 to Annex I to Commission Regulation (EC) No. 692/2008 as amended by its subsequent

- amendments up to and including amendments made by Commission Regulation (EU) No. 2016/646.
- (iv) All the type approval requirements as specified in Directive 2007/46/EC of the European Parliament and of the Council as amended by its subsequent amendments up to and including amendments made by Regulation (EU) No. 2015/758.
- (c) United States of America Motor Vehicle Emission Standards, comprising all of the following requirements—
- (i) All the testing procedures, requirements and emission limits including those for on-board diagnostic system as specified in Title 13 of the California Code of Regulations of the United States of America as at 23 December 2016.
- (ii) The emission limit values as specified in “LEV III” in section 1961.2 of Article 2 of Chapter 1 of Division 3 of Title 13 of the California Code of Regulations of the United States of America as at 23 December 2016.
- (iii) All the type approval requirements administered by the California Air Resources Board.
- (d) Japan Motor Vehicle Emission Standards, comprising all of the following requirements—
- (i) All the testing procedures, requirements and emission limits including those for on-board diagnostic system as specified in—
- (A) the Safety Regulation for Road Vehicles (i.e. the Ministry of Transport Ordinance No. 67 of 28 July 1951) as amended by its subsequent amendments up to and including amendments made by the Ministry of Land, Infrastructure, Transport and Tourism Ordinance No. 18 of 31 March 2015; and

- (B) the Announcement that Prescribes Details of Safety Regulations for Road Vehicles (i.e. the Ministry of Land, Infrastructure and Transport Announcement No. 619 of 15 July 2002) as amended by its subsequent amendments up to and including amendments made by the Ministry of Land, Infrastructure, Transport and Tourism Announcement No. 459 of 31 March 2015.
- (ii) The emission limit values as specified in Article 41 of the Announcement that Prescribes Details of Safety Regulations for Road Vehicles (i.e. the Ministry of Land, Infrastructure and Transport Announcement No. 619 of 15 July 2002) as amended by its subsequent amendments up to and including amendments made by the Ministry of Land, Infrastructure, Transport and Tourism Announcement No. 459 of 31 March 2015.
- (iii) All the type approval requirements administered by the Ministry of Land, Infrastructure, Transport and Tourism of Japan.

Part 2

- (a) *(Repealed L.N. 45 of 2020)*
- (b) European Union Motor Vehicle Emission Standards, comprising all of the following requirements—
 - (i) All the testing procedures, requirements and emission limits including those for on-board diagnostic system as specified in Regulation (EC) No. 595/2009 of the European Parliament and of the Council and Commission Regulation (EU) No. 582/2011 as amended by its subsequent amendments up to and including

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- amendments made by Commission Regulation (EU) No. 2016/1718.
- (ii) The emission limit values of gaseous and particulate pollutants from the engine as specified in the Table entitled “Euro VI Emission Limits” of Annex I to Regulation (EC) No. 595/2009 of the European Parliament and of the Council as amended by Commission Regulation (EU) No. 582/2011 and its subsequent amendments up to and including amendments made by Commission Regulation (EU) No. 2016/1718.
 - (iii) The requirements as specified in Row C of Table 1 of Appendix 9 to Annex I to Commission Regulation (EU) No. 582/2011 as amended by its subsequent amendments up to and including amendments made by Commission Regulation (EU) No. 2016/1718.
 - (iv) All the type approval requirements as specified in Directive 2007/46/EC of the European Parliament and of the Council as amended by its subsequent amendments up to and including amendments made by Regulation (EU) No. 2015/758.
- (c) United States of America Motor Vehicle Emission Standards, comprising all of the following requirements—
- (i) All the testing procedures, requirements and emission limits including those for on-board diagnostic system for 2017 and later model years as specified in the Code of Federal Regulations Title 40 Protection of Environment Part 86 Control of Emissions from New and In-use Highway Vehicles and Engines of the United States of America including and up to the amendments on 25 October 2016.
 - (ii) The emission limit values as specified in—

- (A) section 86.008-10 entitled “Emission standards for 2008 and later model year Otto-cycle heavy-duty engines and vehicles” in the Code of Federal Regulations Title 40 Protection of Environment Part 86 Control of Emissions from New and In-use Highway Vehicles and Engines of the United States of America including and up to the amendments on 25 October 2016, for vehicle models equipped with positive-ignition engines including all the phase-in requirements for 2009; or
- (B) section 86.007-11 entitled “Emission standards and supplemental requirements for 2007 and later model year diesel heavy-duty engines and vehicles” in the Code of Federal Regulations Title 40 Protection of Environment Part 86 Control of Emissions from New and In-use Highway Vehicles and Engines of the United States of America including and up to the amendments on 25 October 2016, for vehicle models equipped with compression-ignition engines including all the phase-in requirements for 2010.
- (iii) All the type approval requirements administered by the United States Environmental Protection Agency.
(*L.N. 55 of 2017*)

(Schedule 17 added L.N. 24 of 2017)

Schedule 18

[regs. 7F, 7G & 7H]

Vehicle Design Standards for Particulate Emission from Certain Motor Vehicles Registered on or after 1 July 2017

Part 1

- (a) *(Repealed L.N. 45 of 2020)*
- (b) Number of particles emitted must not exceed 6×10^{11} per kilometre, as measured by the Type I test procedure specified in Regulation (EC) No. 715/2007 of the European Parliament and of the Council and Commission Regulation (EC) No. 692/2008 as amended by its subsequent amendments up to and including amendments made by Commission Regulation (EU) No. 2016/646.

Part 2

- (a) Number of particles emitted must not exceed 8×10^{11} per kilowatt-hour, as measured by the Worldwide Harmonised Steady State Cycle (WHSC) test procedure specified in Regulation (EC) No. 595/2009 of the European Parliament and of the Council and Commission Regulation (EU) No. 582/2011 as amended by its subsequent amendments up to and including amendments made by Commission Regulation (EU) No. 2016/1718.
- (b) Number of particles emitted must not exceed 6×10^{11} per kilowatt-hour, as measured by the Worldwide Harmonised Transient Driving Cycle (WHTC) test procedure specified in

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Regulation (EC) No. 595/2009 of the European Parliament and of the Council and Commission Regulation (EU) No. 582/2011 as amended by its subsequent amendments up to and including amendments made by Commission Regulation (EU) No. 2016/1718.

(Schedule 18 added L.N. 24 of 2017)

Schedule 19

[regs. 7G & 7H]

Portable Emissions Measurement System Demonstration Test at Type Approval

Portable emissions measurement system demonstration test at type approval as specified in Appendix 1 to Annex VI to Commission Regulation (EU) No. 582/2011 as amended by its subsequent amendments up to and including amendments made by Commission Regulation (EU) No. 2016/1718.

(Schedule 19 added L.N. 24 of 2017)

Schedule 20

[reg. 7I]

Vehicle Design Standards (Emission) for Motor Cycles Registered on or after 1 October 2020

- (a) European Union Motor Vehicle Emission Standards, comprising all of the following requirements—
- (i) All the testing procedures, requirements and emission limits including those for on-board diagnostic (OBD) system (except Type IX test (sound level)) as specified in Regulation (EU) No. 168/2013 of the European Parliament and of the Council and Commission Delegated Regulation (EU) No. 134/2014 as amended by their subsequent amendments up to and including amendments made by Regulation (EU) 2019/129 of the European Parliament and of the Council.
 - (ii) The emission limit values for Type 1 test for vehicle category L3e (for a motor cycle without a sidecar) or L4e (for a motor cycle with a sidecar) as specified in Table A1 of Annex VI to Regulation (EU) No. 168/2013 of the European Parliament and of the Council and Commission Delegated Regulation (EU) No. 134/2014 as amended by their subsequent amendments up to and including amendments made by Regulation (EU) 2019/129 of the European Parliament and of the Council.
 - (iii) The OBD system standards for vehicle category L3e (for a motor cycle without a sidecar) or L4e (for a motor cycle with a sidecar) as specified in Table B1 of Annex VI to Regulation (EU) No. 168/2013 of the European Parliament and of the Council and Commission Delegated Regulation (EU) No. 134/2014 as amended by their subsequent amendments up

to and including amendments made by Regulation (EU) 2019/129 of the European Parliament and of the Council.

- (iv) The evaporative emission limit for vehicle category L3e (for a motor cycle without a sidecar) or L4e (for a motor cycle with a sidecar) as specified in Table C1 of Annex VI to Regulation (EU) No. 168/2013 of the European Parliament and of the Council and Commission Delegated Regulation (EU) No. 134/2014 as amended by their subsequent amendments up to and including amendments made by Regulation (EU) 2019/129 of the European Parliament and of the Council.
 - (v) All the type approval requirements as specified in Regulation (EU) No. 168/2013 of the European Parliament and of the Council and Commission Delegated Regulation (EU) No. 134/2014 as amended by their subsequent amendments up to and including amendments made by Regulation (EU) 2019/129 of the European Parliament and of the Council.
- (b) Japan Motor Cycle Emission Standards, comprising all of the following requirements—
- (i) All the testing procedures, requirements and emission limits including those for OBD system and evaporative emission limit as specified in the Safety Regulation for Road Vehicles (i.e. the Ministry of Transport Ordinance No. 67 of 28 July 1951) and the Announcement that Prescribes Details of Safety Regulations for Road Vehicles (i.e. the Ministry of Land, Infrastructure and Transport Announcement No. 619 of 15 July 2002) as amended by their subsequent amendments up to and including amendments made by the Ministry of Land, Infrastructure, Transport and Tourism Announcement No. 826 of 1 July 2015.
 - (ii) All the type approval requirements administered by the Ministry of Land, Infrastructure, Transport and Tourism of Japan.

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(Schedule 20 added L.N. 45 of 2020)