

Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) (No. 2)
Regulation 2001

(Made under section 43 of the Air Pollution Control Ordinance
(Cap. 311) after consultation with the Advisory Council
on the Environment)

1. Commencement

(1) Sections 2(h), (i) and (j), 4, 5 and 6 shall come into operation on 1 October 2001.

(2) Sections 2(a), (b), (c), (d), (e), (f) and (g), 3, 7 and 8 shall come into operation on 1 January 2002.

2. Vehicle design standards for certain motor vehicles

Regulation 7(1) of the Air Pollution Control (Vehicle Design Standards)(Emission) Regulations (Cap. 311 sub. leg.) is amended---

(a) in paragraph (a)---

(i) in subparagraph (iv), by repealing "on or after 1 January 2001" and substituting "between 1 January 2001 and 31 December 2001 (both dates inclusive)";

(ii) by adding---

"(v) if it is registered on or after 1 January 2002, to the standards specified in Part I(a), (b) or (c) of Schedule 10B;"

(b) in paragraph (d)---

(i) in subparagraph (iv), by repealing "on or after 1 January 2001" and substituting "between 1 January 2001 and 31 December 2001 (both dates inclusive)";

(ii) by adding---

"(v) if it is registered on or after 1 January 2002, to the standards specified in Part II(a), (b) or (c) of Schedule 10B;"

(c) in paragraph (e)---

(i) in subparagraph (iv), by repealing "on or after 1 January 2001" and substituting "between 1 January 2001 and 31 December 2001 (both dates inclusive)";

(ii) by adding---

"(v) if it is registered on or after 1 January 2002, to the standards specified in Part III(a) or (b) of Schedule 10B;"

(d) in paragraph (f)---

(i) in subparagraph (iv), by repealing "on or after 1 January 2001" and substituting "between 1 January 2001 and 31 December 2001 (both dates inclusive)";

(ii) by adding---

"(v) if it is registered on or after 1 January 2002, to the standards specified

in Part IV(a), (b) or (c) of Schedule 10B;"

(e) in paragraph (g)---

(i) in subparagraph (iv), by repealing "on or after 1 January 2001" and substituting "between 1 January 2001 and 31 December 2001 (both dates inclusive)";

(ii) by adding---

"(v) if it is registered on or after 1 January 2002, to the standards specified in Part V(a) or (b) of Schedule 10B;"

(f) in paragraph (h)---

(i) in subparagraph (iv), by repealing "on or after 1 January 2001" and substituting "between 1 January 2001 and 31 December 2001 (both dates inclusive)";

(ii) by adding---

"(v) if it is registered on or after 1 January 2002, to the standards specified in Part VI(a), (b) or (c) of Schedule 10B;"

(g) in paragraph (i)---

(i) in subparagraph (iv), by repealing "on or after 1 January 2001" and substituting "between 1 January 2001 and 31 December 2001 (both dates inclusive)";

(ii) by adding---

"(v) if it is registered on or after 1 January 2002, to the standards specified in Part VII(a) or (b) of Schedule 10B;"

(h) in paragraph (j)---

(i) in subparagraph (iii), by repealing "on or after 1 July 1999" and substituting "between 1 July 1999 and 30 September 2001 (both dates inclusive)";

(ii) by adding---

"(iv) if it is registered on or after 1 October 2001, to the standards specified in Part I(a) or (b) of Schedule 6A;"

(i) in paragraph (k)---

(i) in subparagraph (ii), by repealing "on or after 1 October 1998" and substituting "between 1 October 1998 and 30 September 2001 (both dates inclusive)";

(ii) by adding---

"(iii) if it is registered on or after 1 October 2001---

(A) in the case of emission from a goods vehicle or bus, to the standards specified in Part II(a) or (b) of Schedule 6A;

(B) in the case of emission from a light bus, to the standards specified in paragraph (a) or (b) of Schedule 6;"

(j) in paragraph (l)---

(i) in subparagraph (ii), by repealing "on or after 1 October 1998" and substituting "between 1 October 1998 and 30 September 2001 (both dates inclusive)";

(ii) by adding---

"(iii) if it is registered on or after 1 October 2001, to the standards specified in Part II(a) or (b) of Schedule 6A;"

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

Regulation 14 is amended---

(a) in subregulation (1), by repealing "on or after 1 January 2001" and substituting "between 1 January 2001 and 31 December 2001 (both dates inclusive)";

(b) by adding---

"(3) Every motor vehicle equipped with a positive-ignition engine and registered on or after 1 January 2002 shall be fitted with an on-board diagnostic system so constructed that it conforms to the requirements specified in the specifications referred to in subregulation (1)(a), (b) or (c).

(4) Subregulation (3) shall not apply to any motor vehicle specified in paragraph (a), (ba), (f), (g) or (h) of Schedule 11."

4. Schedule heading substituted

The heading of Schedule 6 is repealed and the following substituted---

"Vehicle Design Standards (Emission) for Certain Motor Vehicles Registered between 1 October 1998 and 30 September 2001 (Both Dates Inclusive) and for Certain Light Buses Registered on or after 1 October 2001".

5. Schedule 6A added

The following is added---

"SCHEDULE 6A [reg. 7]

Vehicle Design Standards (Emission) for Certain Motor Vehicles Registered on or after 1 October 2001

Part I

Emission shall not exceed---

(a) hydrocarbons 2.55 grams per kilowatt-hour

carbon monoxide 49.7 grams per kilowatt-hour

oxides of nitrogen 5.36 grams per kilowatt-hour

as measured by the Transient Test Procedure for heavy duty Otto cycle engines administered by the Environmental Protection Agency of the United States of America; and evaporative emission shall not exceed 4.0 grams per test as measured by the Sealed Housing for Evaporative Emissions Determination procedure administered by the Environmental Protection Agency of the United States of America;

(b) hydrocarbons 1.80 grams per kilowatt-hour

carbon monoxide 51.0 grams per kilowatt-hour

oxides of nitrogen 4.50 grams per kilowatt-hour
as measured by the 13-mode operation for heavy duty petrol-powered motor vehicles administered by the Ministry of Land, Infrastructure and Transport of Japan; and evaporative emission shall not exceed 2.0 grams per test as measured by the Japan Sealed Housing for Evaporative Emissions Determination test administered by the Ministry of Land, Infrastructure and Transport of Japan.

Part II

Emission shall not exceed---

- (a) hydrocarbons 1.74 grams per kilowatt-hour
- carbon monoxide 20.8 grams per kilowatt-hour
- oxides of nitrogen 5.36 grams per kilowatt-hour
- particulate emissions 0.07 gram per kilowatt-hour

as measured by the Transient Test Procedure for heavy duty diesel engines administered by the Environmental Protection Agency of the United States of America;

- (b) hydrocarbons 0.66 gram per kilowatt-hour
- carbon monoxide 2.1 grams per kilowatt-hour
- oxides of nitrogen 5.0 grams per kilowatt-hour
- particulate emissions

---for engines having a swept volume per cylinder of less than 700 cubic centimetres and rated power speed of engine higher than 3 000 revolutions per minute 0.13 gram per kilowatt-hour

---for engines having a swept volume per cylinder equal to or more than 700 cubic centimetres or rated power speed of engine of not more than 3 000 revolutions per minute 0.10 gram per kilowatt-hour

as measured by the procedure of ESC test for diesel engines which are for use in vehicles specified in Council Directive 88/77/EEC as amended by Council Directive 1999/96/EC, both made by the Council; and the smoke opacity shall not exceed 0.8 m-1 as measured by the procedure of ELR test for diesel engines which are for use in vehicles specified in Council Directive 88/77/EEC as amended by Council Directive 1999/96/EC, both made by the Council."

6. Schedule heading substituted

The heading of Schedule 7 is repealed and the following substituted---

"Vehicle Design Standards (Emission) for Certain Motor Vehicles

Registered between 1 July 1999 and 31 December 2000

(Both Dates Inclusive), for Taxis Equipped with

Compression-Ignition Engines and Registered

between 1 July 1999 and 31 July 2001 (Both

Dates Inclusive) and for Certain Motor

Vehicles Registered between 1 July
1999 and 30 September 2001
(Both Dates Inclusive)".

7. Schedule 10 amended

Schedule 10 is amended, in the heading, by repealing "on or After 1 January 2001"
and substituting "between 1 January 2001 and 31 December 2001 (Both Dates Inclusive)".

8. Schedule 10B added

The following is added---

"SCHEDULE 10B [reg. 7]

Vehicle Design Standards (Emission) for Certain Motor
Vehicles Registered on or after 1 January 2002

Part I

Emission shall not exceed---

- (a) non-methane organic gases 0.047 gram per kilometre
carbon monoxide 2.1 grams per kilometre
oxides of nitrogen 0.12 gram per kilometre

as measured by the 1975 Federal Test Procedure administered by the Environmental
Protection Agency of the United States of America; and evaporative emission shall
not exceed 2.0 grams per test as measured by the California Sealed Housing for
Evaporative Emissions Determination test procedure administered by the Environmental
Protection Agency of the United States of America;

- (b) hydrocarbons 0.08 gram per kilometre
carbon monoxide 0.67 gram per kilometre
oxides of nitrogen 0.08 gram per kilometre

as measured by the 10.15-mode operation administered by the Ministry of Land,
Infrastructure and Transport of Japan; and evaporative emission shall not exceed 2.0
grams per test as measured by the Japan Sealed Housing for Evaporative Emissions
Determination test administered by the Ministry of Land, Infrastructure and Transport
of Japan;

- (c) (i) for a vehicle the maximum mass of which does not exceed 2 500 kg---
hydrocarbons 0.20 gram per kilometre
carbon monoxide 2.3 grams per kilometre
oxides of nitrogen 0.15 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC
as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative
emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure
specified in Council Directive 1999/102/EC made by the Council;

- (ii) for a vehicle the maximum mass of which exceeds 2 500 kg and the reference

mass of which does not exceed 1 305 kg---

hydrocarbons 0.20 gram per kilometre

carbon monoxide 2.3 grams per kilometre

oxides of nitrogen 0.15 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council;

(iii) for a vehicle the maximum mass of which exceeds 2 500 kg and the reference mass of which exceeds 1 305 kg but does not exceed 1 760 kg---

hydrocarbons 0.25 gram per kilometre

carbon monoxide 4.17 grams per kilometre

oxides of nitrogen 0.18 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council;

(iv) for a vehicle the maximum mass of which exceeds 2 500 kg and the reference mass of which exceeds 1 760 kg---

hydrocarbons 0.29 gram per kilometre

carbon monoxide 5.22 grams per kilometre

oxides of nitrogen 0.21 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council.

Part II

Emission shall not exceed---

(a) non-methane organic gases 0.047 gram per kilometre

carbon monoxide 2.1 grams per kilometre

oxides of nitrogen 0.12 gram per kilometre

as measured by the 1975 Federal Test Procedure administered by the Environmental Protection Agency of the United States of America; and evaporative emission shall not exceed 2.0 grams per test as measured by the California Sealed Housing for Evaporative Emissions Determination test procedure administered by the Environmental Protection Agency of the United States of America;

(b) hydrocarbons 0.08 gram per kilometre

carbon monoxide 0.67 gram per kilometre

oxides of nitrogen 0.08 gram per kilometre
as measured by the 10.15-mode operation administered by the Ministry of Land, Infrastructure and Transport of Japan; and evaporative emission shall not exceed 2.0 grams per test as measured by the Japan Sealed Housing for Evaporative Emissions Determination test administered by the Ministry of Land, Infrastructure and Transport of Japan;

(c) (i) for a vehicle the reference mass of which does not exceed 1 305 kg--
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hydrocarbons 0.20 gram per kilometre
carbon monoxide 2.3 grams per kilometre
oxides of nitrogen 0.15 gram per kilometre
as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council;

(ii) for a vehicle the reference mass of which exceeds 1 305 kg but does not exceed 1 760 kg---

hydrocarbons 0.25 gram per kilometre
carbon monoxide 4.17 grams per kilometre
oxides of nitrogen 0.18 gram per kilometre
as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council.

Part III

Emission shall not exceed---

(a) non-methane hydrocarbons 0.047 gram per kilometre
carbon monoxide 2.1 grams per kilometre
oxides of nitrogen 0.12 gram per kilometre
particulate emissions 0.05 gram per kilometre

as measured by the 1975 Federal Test Procedure administered by the Environmental Protection Agency of the United States of America;

(b) (i) for a vehicle the reference mass of which does not exceed 1 305 kg--
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hydrocarbons and oxides of nitrogen 0.56 gram per kilometre
combined
carbon monoxide 0.64 gram per kilometre
oxides of nitrogen 0.50 gram per kilometre

particulate emissions 0.05 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council;

(ii) for a vehicle the reference mass of which exceeds 1 305 kg but does not exceed 1 760 kg---

hydrocarbons and oxides of nitrogen 0.72 gram per kilometre
combined

carbon monoxide 0.80 gram per kilometre

oxides of nitrogen 0.65 gram per kilometre

particulate emissions 0.07 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council.

Part IV

Emission shall not exceed---

(a) non-methane organic gases 0.062 gram per kilometre

carbon monoxide 2.73 grams per kilometre

oxides of nitrogen 0.25 gram per kilometre

as measured by the 1975 Federal Test Procedure administered by the Environmental Protection Agency of the United States of America; and evaporative emission shall not exceed 2.0 grams per test as measured by the California Sealed Housing for Evaporative Emissions Determination test procedure administered by the Environmental Protection Agency of the United States of America;

(b) hydrocarbons 0.08 gram per kilometre

carbon monoxide 2.10 grams per kilometre

oxides of nitrogen 0.13 gram per kilometre

as measured by the 10.15-mode operation administered by the Ministry of Land, Infrastructure and Transport of Japan; and evaporative emission shall not exceed 2.0 grams per test as measured by the Japan Sealed Housing for Evaporative Emissions Determination test administered by the Ministry of Land, Infrastructure and Transport of Japan;

(c) (i) for a vehicle the reference mass of which does not exceed 1 305 kg--

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hydrocarbons 0.20 gram per kilometre

carbon monoxide 2.3 grams per kilometre

oxides of nitrogen 0.15 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure

specified in Council Directive 1999/102/EC made by the Council;

(ii) for a vehicle the reference mass of which exceeds 1 305 kg but does not exceed 1 760 kg---

hydrocarbons 0.25 gram per kilometre

carbon monoxide 4.17 grams per kilometre

oxides of nitrogen 0.18 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council;

(iii) for a vehicle the reference mass of which exceeds 1 760 kg---

hydrocarbons 0.29 gram per kilometre

carbon monoxide 5.22 grams per kilometre

oxides of nitrogen 0.21 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council.

Part V

Emission shall not exceed---

(a) non-methane hydrocarbons 0.062 gram per kilometre

carbon monoxide 2.73 grams per kilometre

oxides of nitrogen 0.25 gram per kilometre

particulate emissions 0.05 gram per kilometre

as measured by the 1975 Federal Test Procedure administered by the Environmental Protection Agency of the United States of America;

(b) (i) for a vehicle the reference mass of which does not exceed 1 305 kg--

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hydrocarbons and oxides of nitrogen 0.56 gram per kilometre
combined

carbon monoxide 0.64 gram per kilometre

oxides of nitrogen 0.50 gram per kilometre

particulate emissions 0.05 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council;

(ii) for a vehicle the reference mass of which exceeds 1 305 kg but does not exceed 1 760 kg---

hydrocarbons and oxides of nitrogen combined 0.72 gram per kilometre

carbon monoxide 0.80 gram per kilometre
oxides of nitrogen 0.65 gram per kilometre
particulate emissions 0.07 gram per kilometre
as measured by the Type I test procedure specified in Council Directive 70/220/EEC
as amended by Council Directive 1999/102/EC, both made by the Council;

(iii) for a vehicle the reference mass of which exceeds 1 760 kg---
hydrocarbons and oxides of nitrogen combined 0.86 gram per kilometre
carbon monoxide 0.95 gram per kilometre
oxides of nitrogen 0.78 gram per kilometre
particulate emissions 0.10 gram per kilometre
as measured by the Type I test procedure specified in Council Directive 70/220/EEC
as amended by Council Directive 1999/102/EC, both made by the Council.

Part VI

Emission shall not exceed---

(a) non-methane organic gases 0.121 gram per kilometre

carbon monoxide 3.1 grams per kilometre

oxides of nitrogen 0.37 gram per kilometre

as measured by the 1975 Federal Test Procedure administered by the Environmental Protection Agency of the United States of America; and evaporative emission shall not exceed 2.5 grams per test as measured by the California Sealed Housing for Evaporative Emissions Determination test procedure administered by the Environmental Protection Agency of the United States of America;

(b) hydrocarbons 0.08 gram per kilometre

carbon monoxide 2.10 grams per kilometre

oxides of nitrogen 0.13 gram per kilometre

as measured by the 10.15-mode operation administered by the Ministry of Land, Infrastructure and Transport of Japan; and evaporative emission shall not exceed 2.0 grams per test as measured by the Japan Sealed Housing for Evaporative Emissions Determination test administered by the Ministry of Land, Infrastructure and Transport of Japan;

(c) (i) for a vehicle the reference mass of which does not exceed 1 305 kg--

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hydrocarbons 0.20 gram per kilometre

carbon monoxide 2.3 grams per kilometre

oxides of nitrogen 0.15 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC
as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative
emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure

specified in Council Directive 1999/102/EC made by the Council;

(ii) for a vehicle the reference mass of which exceeds 1 305 kg but does not exceed 1 760 kg---

hydrocarbons 0.25 gram per kilometre

carbon monoxide 4.17 grams per kilometre

oxides of nitrogen 0.18 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council;

(iii) for a vehicle the reference mass of which exceeds 1 760 kg---

hydrocarbons 0.29 gram per kilometre

carbon monoxide 5.22 grams per kilometre

oxides of nitrogen 0.21 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council; and evaporative emission shall not exceed 2.0 grams per test as measured by the Type IV test procedure specified in Council Directive 1999/102/EC made by the Council.

Part VII

Emission shall not exceed---

(a) non-methane hydrocarbons 0.121 gram per kilometre

carbon monoxide 3.1 grams per kilometre

oxides of nitrogen 0.37 gram per kilometre

particulate emissions 0.05 gram per kilometre

as measured by the 1975 Federal Test Procedure administered by the Environmental Protection Agency of the United States of America;

(b) (i) for a vehicle the reference mass of which does not exceed 1 305 kg--
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hydrocarbons and oxides of nitrogen combined 0.56 gram per kilometre

carbon monoxide 0.64 gram per kilometre

oxides of nitrogen 0.50 gram per kilometre

particulate emissions 0.05 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 1999/102/EC, both made by the Council;

(ii) for a vehicle the reference mass of which exceeds 1 305 kg but does not exceed 1 760 kg---

hydrocarbons and oxides of nitrogen combined 0.72 gram per kilometre

carbon monoxide 0.80 gram per kilometre

oxides of nitrogen 0.65 gram per kilometre
particulate emissions 0.07 gram per kilometre
as measured by the Type I test procedure specified in Council Directive 70/220/EEC
as amended by Council Directive 1999/102/EC, both made by the Council;

(iii) for a vehicle the reference mass of which exceeds 1 760 kg---
hydrocarbons and oxides of nitrogen combined 0.86 gram per kilometre
carbon monoxide 0.95 gram per kilometre
oxides of nitrogen 0.78 gram per kilometre
particulate emissions 0.10 gram per kilometre
as measured by the Type I test procedure specified in Council Directive 70/220/EEC
as amended by Council Directive 1999/102/EC, both made by the Council."

Mrs. Lily YAM

Secretary for the Environment
and Food

28 May 2001

Explanatory Note

This Regulation amends the Air Pollution Control (Vehicle Design Standards)
(Emission) Regulations (Cap. 311 sub. leg.) by---

(a) imposing more stringent vehicle design standards in relation to the emission of
air pollutants on certain motor vehicles which have a design weight of more than 3.5
tonnes and which are first registered on or after 1 October 2001, but not including
light buses which are equipped with a compression-ignition engine and which have a
design weight of more than 3.5 tonnes but not more than 4 tonnes (sections 2(h), (i)
and (j), 4, 5 and 6);

(b) imposing more stringent vehicle design standards in relation to the emission of
air pollutants on certain motor vehicles which have a design weight of not more than
3.5 tonnes and which are first registered on or after 1 January 2002 (sections 2(a),
(b), (c), (d), (e), (f) and (g), 7 and 8); and

(c) requiring certain motor vehicles which are equipped with a positive-ignition
engine, which have a design weight of not more than 3.5 tonnes and which are first
registered on or after

1 January 2002 to install an on-board diagnostic system
(section 3).