

LN157-E

L. N. 157 of 2000

Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) Regulation 2000

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

1. Commencement

This Regulation shall come into operation on 1 January 2001.

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 (iii), by repealing "on or after 1 July 1999" and substituting "between 1 July 1999 and 31 December 2000 (both dates inclusive)";

(ii) by adding---

"(iv) if it is registered on or after 1 January 2001, to the standards specified in Part I(a), (b) or (c) of Schedule 10;";

(b) by repealing paragraph (b)(ii) and substituting---

"(ii) if it is registered between 1 April 1998 and 31 December 2000 (both dates inclusive), to the standards specified in Part I of Schedule 4;

(iii) if it is registered on or after 1 January 2001, to the standards specified in Part II of Schedule 4;";

(c) in paragraph (d)---

(i) in subparagraph (iii), by repealing "on or after 1 July 1999" and substituting "between 1 July 1999 and 31 December 2000 (both dates inclusive)";

(ii) by adding---

"(iv) if it is registered on or after 1 January 2001, to the standards specified in Part III(a), (b) or (c) of Schedule 10;";

(d) in paragraph (e)---

(i) in subparagraph (iii), by repealing "on or after 1 July 1999" and substituting "between 1 July 1999 and 31 December 2000 (both dates inclusive)";

(ii) by adding---

"(iv) if it is registered on or after 1 January 2001, to the standards specified in Part IV(a), (b) or (c) of Schedule 10;";

(e) in paragraph (f)---

(i) in subparagraph (iii), by repealing "on or after 1 July 1999" and substituting

"between 1 July 1999 and 31 December 2000 (both dates inclusive)";

(ii) by adding---

"(iv) if it is registered on or after 1 January 2001, to the standards specified in Part V(a), (b) or (c) of Schedule 10;";

(f) in paragraph (g)---

(i) in subparagraph (iii), by repealing "on or after 1 July 1999" and substituting "between 1 July 1999 and 31 December 2000 (both dates inclusive)";

(ii) by adding---

"(iv) if it is registered on or after 1 January 2001, to the standards specified in Part VI(a), (b) or (c) of Schedule 10;";

(g) in paragraph (h)---

(i) in subparagraph (iii), by repealing "on or after 1 July 1999" and substituting "between 1 July 1999 and 31 December 2000 (both dates inclusive)";

(ii) by adding---

"(iv) if it is registered on or after 1 January 2001, to the standards specified in Part VII(a), (b) or (c) of Schedule 10;";

(h) in paragraph (i)---

(i) in subparagraph (iii), by repealing "on or after 1 July 1999" and substituting "between 1 July 1999 and 31 December 2000 (both dates inclusive)";

(ii) by adding---

"(iv) if it is registered on or after 1 January 2001, to the standards specified in Part VIII(a) or (b) of Schedule 10;".

### 3. Regulation added

The following is added---

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

(1) Every motor vehicle equipped with a positive-ignition engine and registered on or after 1 January 2001 shall be fitted with an on-board diagnostic system so constructed that it conforms to the requirements specified in---

(a) the on-board diagnostic system specifications administered by the California Air Resources Board;

(b) the on-board diagnostic system specifications stipulated in Annex XI of Council Directive 70/220/EEC as amended by Council Directive 98/69/EC, both made by the Council; or

(c) the on-board diagnostic system specifications administered by the Ministry of Transport of Japan.

(2) Subregulation (1) shall not apply to any motor vehicle specified in Schedule 11. "

4. Vehicle design standards (emission) for private cars equipped with compression-ignition engines and registered on or after 1 April 1998

Schedule 4 is amended---

(a) by repealing "Emission shall not exceed---" and substituting---

"Part I

Emission shall not exceed---";

(b) by adding---

"Part II

Emission shall not exceed---

non-methane organic gases 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. "

5. Schedules added

The following are added---

"SCHEDULE 10 [reg. 7]

Vehicle Design Standards (Emission) for Certain Motor

Vehicles Registered on or After 1 January 2001

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 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 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 98/69/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 98/69/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 1 250 kg---

hydrocarbons and oxides of nitrogen combined 0.5 gram per kilometre

nitrogen combined

carbon monoxide 2.2 grams per kilometre

(iii) for a vehicle the maximum mass of which exceeds 2 500 kg and the reference mass of which exceeds 1 250 kg and does not exceed 1 700 kg---

hydrocarbons and oxides of nitrogen combined 0.6 gram per kilometre

nitrogen combined

carbon monoxide 4.0 grams per kilometre

(iv) for a vehicle the maximum mass of which exceeds 2 500 kg and the reference mass of which exceeds 1 700 kg---

hydrocarbons and oxides of nitrogen combined 0.7 gram per kilometre

nitrogen combined

carbon monoxide 5.0 grams per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 96/69/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 91/441/EC made by the Council.

Part II

Part III

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 0.25 gram per kilometre

carbon monoxide 2.10 grams per kilometre  
oxides of nitrogen 0.25 gram per kilometre  
as measured by the 10.15-mode operation administered by the Ministry of Transport of Japan; and evaporative emission shall not exceed 2.0 grams per test as measured by the Japan Enclosure or Trap Method administered by the Ministry of Transport of Japan;

(c) (i) for a vehicle with a reference mass not exceeding 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 98/69/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 98/69/EC made by the Council;

(ii) for a vehicle with a reference mass of more than 1 250 kg but not more than 1 700 kg---

hydrocarbons and oxides of nitrogen combined 0.6 gram per kilometre

nitrogen combined

carbon monoxide 4.0 grams per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 96/69/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 91/441/EEC made by the Council.

#### Part IV

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) hydrocarbons 0.40 gram per kilometre

carbon monoxide 2.10 grams per kilometre

oxides of nitrogen 0.40 gram per kilometre

particulate emissions 0.08 gram per kilometre

as measured by the 10.15-mode operation administered by the Ministry of Transport of Japan;

(c) (i) for a vehicle with a reference mass not exceeding 1 305 kg---

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 98/69/EC, both made by the Council;

(ii) for a vehicle with a reference mass of more than 1 250 kg but not more than 1 700 kg---

hydrocarbons and oxides of nitrogen combined

---for engines other than direct-injection type 1.0 gram per kilometre

---for engines of direct-injection type 1.3 grams per kilometre

carbon monoxide 1.25 grams per kilometre

particulate emissions

---for engines other than direct-injection type 0.12 gram per kilometre

---for engines of direct-injection type 0.14 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 96/69/EC, both made by the Council.

#### Part V

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 2.10 grams per kilometre

carbon monoxide 13.0 grams per kilometre

oxides of nitrogen 0.40 gram per kilometre

as measured by the 10.15-mode operation administered by the Ministry of Transport of Japan; and evaporative emission shall not exceed 2.0 grams per test as measured

by the Japan Enclosure or Trap Method administered by the Ministry of Transport of Japan;

(c) (i) for a vehicle with a reference mass not exceeding 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 98/69/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 98/69/EC made by the Council;

(ii) for a vehicle with a reference mass of more than 1 250 kg but not more than 1 700 kg---

hydrocarbons and oxides of nitrogen combined 0.6 gram per kilometre

nitrogen combined

carbon monoxide 4.0 grams per kilometre

(iii) for a vehicle with a reference mass of more than 1 700 kg---

hydrocarbons and oxides of nitrogen combined 0.7 gram per kilometre

nitrogen combined

carbon monoxide 5.0 grams per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 96/69/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 91/441/EC made by the Council.

#### Part VI

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) hydrocarbons 0.40 gram per kilometre

carbon monoxide 2.10 grams per kilometre

oxides of nitrogen 0.70 gram per kilometre

particulate emissions 0.09 gram per kilometre

as measured by the 10.15-mode operation administered by the Ministry of Transport of Japan;

(c) (i) for a vehicle with a reference mass not exceeding 1 305 kg---

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 98/69/EC, both made by the Council;

(ii) for a vehicle with a reference mass of more than 1 250 kg but not more than 1 700 kg---

hydrocarbons and oxides of nitrogen combined  
---for engines other than direct-injection type 1.0 gram per kilometre  
---for engines of direct-injection type 1.3 grams per kilometre  
carbon monoxide 1.25 grams per kilometre  
particulate emissions  
---for engines other than direct-injection type 0.12 gram per kilometre  
---for engines of direct-injection type 0.14 gram per kilometre

(iii) for a vehicle with a reference mass of more than 1 700 kg---

hydrocarbons and oxides of nitrogen combined  
---for engines other than direct-injection type 1.2 grams per kilometre  
---for engines of direct-injection type 1.6 grams per kilometre  
carbon monoxide 1.5 grams per kilometre  
particulate emissions  
---for engines other than direct-injection type 0.17 gram per kilometre  
---for engines of direct-injection type 0.20 gram per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 96/69/EC, both made by the Council.

Part VII

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 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 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 Transport of Japan;

(c) (i) for a vehicle with a reference mass not exceeding 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 98/69/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 98/69/EC made by the Council;

(ii) for a vehicle with a reference mass of more than 1 250 kg but not more than 1 700 kg---

hydrocarbons and oxides of 0.6 gram per kilometre

nitrogen combined

carbon monoxide 4.0 grams per kilometre

(iii) for a vehicle with a reference mass of more than 1 700 kg---

hydrocarbons and oxides of 0.7 gram per kilometre

nitrogen combined

carbon monoxide 5.0 grams per kilometre

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 96/69/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 91/441/EC made by the Council.

Part VIII

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 with a reference mass not exceeding 1 305 kg---  
hydrocarbons and oxides of 0.56 gram per kilometre  
nitrogen 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 98/69/EC, both made by the Council;

(ii) for a vehicle with a reference mass of more than 1 250 kg but not more than 1 700 kg---

hydrocarbons and oxides of  
nitrogen combined  
---for engines other than 1.0 gram per kilometre  
direct-injection type

---for engines of direct-injection  
type 1.3 grams per kilometre  
carbon monoxide 1.25 grams per kilometre  
particulate emissions

---for engines other than 0.12 gram per kilometre  
direct-injection type

---for engines of direct-injection  
type 0.14 gram per kilometre

(iii) for a vehicle with a reference mass of more than 1 700 kg---  
hydrocarbons and oxides of  
nitrogen combined

---for engines other than 1.2 grams per kilometre  
direct-injection type

---for engines of direct-injection 1.6 grams per kilometre  
type

carbon monoxide 1.5 grams per kilometre  
particulate emissions

---for engines other than 0.17 gram per kilometre

direct-injection type

---for engines of direct-injection 0.20 gram per kilometre

type

as measured by the Type I test procedure specified in Council Directive 70/220/EEC as amended by Council Directive 96/69/EC, both made by the Council.

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#### SCHEDULE 11 [reg. 14]

Motor Vehicles with Positive-ignition Engines not Requiring  
Installation of On-board Diagnostic System

Every---

- (a) motor vehicle which has a design weight more than 3.5 tonnes; or
- (b) private car or taxi which has its maximum mass exceeding 2 500 kg and its emission conforms to the emission standards as measured by the Type I test procedure specified in Council Directive 70/200/EEC as amended by Council Directive 96/69/EC, both made by the Council; or
- (c) goods vehicle or light bus which has its design weight of not more than 3.5 tonnes and which has a reference mass exceeding 1 305 kg and its emission conforms to the emission standards as measured by the Type I test procedure specified in Council Directive 70/200/EEC as amended by Council Directive 96/69/EC, both made by the Council; or
- (d) goods vehicle or light bus which has a design weight of not more than 2.5 tonnes and its emission conforms to the emission standards as measured by the 10.15-mode operation administered by the Ministry of Transport of Japan; or
- (e) goods vehicle or light bus which has a design weight of more than 2.5 tonnes but not more than 3.5 tonnes and its emission conforms to the emission standards as measured by the 13-mode operation for heavy duty petrol-powered motor vehicles administered by the Ministry of Transport of Japan; or
- (f) motor cycle; or
- (g) motor tricycle; or
- (h) special purpose vehicle. "

Paul TANG

Acting Secretary for the  
Environment and Food

16 May 2000

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 for emission of air pollutants

applicable to certain motor vehicles first registered on or after 1 January 2001;

(b) imposing more stringent vehicle design standards for emission of air pollutants applicable to private cars equipped with a compression-ignition engine and first registered on or after 1 January 2001;

(c) including a new requirement for the installation of on-board diagnostic system in certain motor vehicles equipped with a positive-ignition engine and first registered on or after 1 January 2001.