

Air Pollution Control (Vehicle Design Standards)  
(Emission) (Amendment) Regulation 2003  
(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 August 2003.

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. J) is amended---

(a) in paragraph (ca)---

(i) by repealing "registered on or after 1 August 2001,";

(ii) by repealing everything after "conforms" and substituting---

"---

(i) if it is registered between 1 August 2001 and 31 July 2003 (both dates  
inclusive), to the standards specified in Part I(a), (b) or (c) of Schedule 10A;

(ii) if it is registered on or after 1 August 2003, to the standards specified  
in Part II(a), (b) or (c) of Schedule 10A;"

(b) in paragraph (d), by adding "and constructed to operate on unleaded petrol only"  
before "and which";

(c) by adding---

"(da) every light bus which---

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

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

(iii) has a design weight of not more than 1.7 tonnes; and

(iv) is registered on or after 1 August 2003,

shall be so constructed that the emission from that light bus conforms to the  
standards specified in Part I(a), (b) or (c) of Schedule 10C;"

(d) in paragraph (f), by adding "and constructed to operate on unleaded petrol only"  
before "and which";

(e) by adding---

"(fa) every light bus which---

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

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

(iii) has a design weight of more than 1.7 tonnes but not more than 2.5 tonnes;

and

(iv) is registered on or after 1 August 2003,

shall be so constructed that the emission from that light bus conforms to the standards specified in Part II(a), (b) or (c) of Schedule 10C;"

(f) in paragraph (h), by adding "and constructed to operate on unleaded petrol only" before "and which";

(g) by adding---

"(ha) every light bus which---

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

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

(iii) has a design weight of more than 2.5 tonnes but not more than 3.5 tonnes;

and

(iv) is registered on or after 1 August 2003,

shall be or shall have such engine so constructed that the emission from that light bus conforms to the standards specified in Part III(a), (b) or (c) of Schedule 10C;"

(h) in paragraph (j)---

(i) by adding "and constructed to operate on unleaded petrol only" before "and which";

(ii) in subparagraph (iv), by repealing "on or after 1 October 2001" and substituting "between 1 October 2001 and 31 July 2003 (both dates inclusive)";

(iii) by adding---

"(v) if it is registered on or after 1 August 2003, to the standards specified in Part III(a) or (b) of Schedule 6A;"

(i) by adding---

"(ja) every light bus which---

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

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

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

(iv) is registered on or after 1 August 2003,

shall have such engine so constructed that the emission from that light bus conforms to the standards specified in Part IV(a) or (b) of Schedule 10C;"

(j) in paragraph (k)---

(i) by repealing ", light bus" where it twice appears;

(ii) in subparagraphs (i) and (ii), by repealing "、小型巴士";

(iii) by repealing subparagraph (iii) and substituting---

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

(k) by adding---

"(ka) every light bus which is equipped with a compression-ignition engine and

which has a design weight of more than 3.5 tonnes but not more than 4 tonnes shall have such engine so constructed that the emission from that light bus conforms--

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(i) if it is registered between 1 April 1995 and 30 September 1998 (both dates inclusive), to the standards specified in Part IV(a) or (b) of Schedule 3;

(ii) if it is registered between 1 October 1998 and 31 July 2003 (both dates inclusive), to the standards specified in paragraph (a) or (b) of Schedule 6;

(iii) if it is registered on or after 1 August 2003, to the standards specified in Part II(a) or (b) of Schedule 6A;"

### 3. Requirements as to engine and fuel

Regulation 10 is amended---

(a) in subregulation (1), by adding "and a light bus" after "taxi";

(b) in subregulation (2), by repealing everything after "Every taxi" and before "shall" and substituting "or light bus that is equipped with a positive-ignition engine and registered respectively between 1 January 1992 and 31 July 2001 (both dates inclusive) or 1 January 1992 and 31 July 2003 (both dates inclusive)";

(c) by adding---

"(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 millimetres cannot be inserted into its filling pipe; or

(b) to operate on liquefied petroleum gas only."

### 4. Certain motor vehicles to be equipped with

on-board diagnostic system

Regulation 14(4) is amended by adding ", (ea)" after "(ba)".

### 5. Schedule 6 amended

Schedule 6 is amended, in the heading, by repealing "ON OR AFTER 1 OCTOBER 2001" and substituting "BETWEEN 1 OCTOBER 2001 AND 31 JULY 2003 (BOTH DATES INCLUSIVE)".

### 6. Schedule 6A amended

Schedule 6A is amended---

(a) in the heading, by adding "AND FOR CERTAIN LIGHT BUSES REGISTERED ON OR AFTER 1 AUGUST 2003" after "2001";

(b) in Part I(b), by repealing "13-mode" and substituting "G13-mode";

(c) by adding---

"Part III

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 test procedure administered by the Environmental Protection Agency of the United States of America;

(b) hydrocarbons 0.58 gram per  
kilowatt-hour

carbon monoxide 16.0 grams per  
kilowatt-hour  
oxides of nitrogen 1.40 grams per  
kilowatt-hour

as measured by the G13-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."

7. Vehicle design standards (emission) for certain taxis registered on or after 1 August 2001

Schedule 10A is amended---

(a) by repealing "Emission" and substituting---

"Part I  
Emission";

(b) by adding---

"Part II  
Emission shall not exceed---

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

(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;

(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

(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

(iii) for a vehicle the maximum mass of which exceeds 2 500 kg and the reference  
mass of which exceeds 1 305 kg and 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

(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 2001/1/EC, both made by the Council."

8. Schedule 10C added

The following is added---

"SCHEDULE 10C [reg. 7]

Vehicle Design Standards (Emission) for  
Certain Light Buses Registered  
on or after 1 August 2003

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;

(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;

(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;

(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.

Part II

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;

(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;

(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;

(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;

(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.

### Part III

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;

(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;

(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;

(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;

(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.

#### Part IV

Emission shall not exceed---

(a) hydrocarbons 0.58 gram per kilowatt-hour

carbon monoxide 16.0 grams per kilowatt-hour

oxides of nitrogen 1.40 grams per kilowatt-hour

as measured by the G13-mode operation for heavy duty liquefied petroleum gas-powered motor vehicles administered by the Ministry of Land, Infrastructure and Transport of Japan;

(b) non-methane hydrocarbons 0.78 gram per kilowatt-hour

carbon monoxide 5.45 grams per kilowatt-hour



oxides of nitrogen 5.0 grams per kilowatt-hour

as measured by the procedure of ETC test for gas 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."

9. Motor vehicles with positive-ignition engines not requiring installation of on-board diagnostic system

Schedule 11 is amended by adding---

"(ea) light bus which is registered on or after 1 August 2003 and constructed to operate on liquefied petroleum gas only; or".

Dr. Sarah LIAO

Secretary for the Environment,  
Transport and Works

10 May 2003

Explanatory Note

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

(a) imposing vehicle design standards in relation to the emission of air pollutants on light buses that are first registered on or after 1 August 2003, equipped with a positive-ignition engine and constructed to operate on liquefied petroleum gas only;

(b) allowing light buses that are first registered on or after 1 August 2003 and equipped with a positive-ignition engine to operate on liquefied petroleum gas;

(c) exempting light buses that are first registered on or after 1 August 2003 and constructed to operate only on liquefied petroleum gas from the requirement to be equipped with an on-board diagnostic system; and

(d) imposing more stringent vehicle design standards in relation to the emission of air pollutants on the following motor vehicles that are first registered on or after 1 August 2003---

(i) light buses that are equipped with a compression-ignition engine and have a design weight of more than 3.5 tonnes;

(ii) certain motor vehicles that are equipped with a positive-ignition engine and have a design weight of more than 3.5 tonnes; and

(iii) taxis that are constructed to operate on liquefied petroleum gas only.