

LEGISLATIVE COUNCIL BRIEF

Air Pollution Control Ordinance (Cap. 311)

Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) Regulation 2020

INTRODUCTION

The Secretary for the Environment, after consultation with the Advisory Council on the Environment (ACE), has made, under section 43 of the Air Pollution Control Ordinance (Chapter 311), the Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) Regulation 2020 (the “**Amendment Regulation**”), at **Annex A**, to implement Euro 4^[1] emission standards for first registered motor cycles from 1 October 2020 and Euro VI^[1] On-Board Diagnostics (OBD)^[2] Phase C standards for first registered light buses with a design weight of more than 3.5 tonnes and buses with a design weight of not more than 9 tonnes from 1 March 2021.

BACKGROUND

2. To improve roadside air quality and protect public health, our standing policy is to tighten the emission standards of first registered motor vehicles, with reference to the international developments and the supply of compliant vehicles to Hong Kong.

¹ European Union’s standards for light-duty vehicles (with a design weight of not more than 3.5 tonnes) are denoted with Arabic numerals, whereas heavy-duty vehicle (with a design weight of more than 3.5 tonnes) standards are denoted with Roman numerals. (For English version)

² Definition of OBD as defined in Commission Regulation (European Union) No 582/2011 is “A system on board a vehicle or connected to an engine which has the capability of detecting malfunctions, and, if applicable, of indicating their occurrence by means of an alert system, of identifying the likely area of malfunction by means of information stored in computer memory, and of communicating that information off-board”.

3. The Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) Regulation 2017, which was made by the Secretary for Environment under the negative vetting procedure and amended by a resolution passed by the Legislative Council on 29 March 2017, which was published in the Gazette on 31 March 2017, tightened in phases the emission standards for first registered vehicles (except for diesel private cars, light buses with a design weight of more than 3.5 tonnes and buses with a design weight of not more than 9 tonnes, motor cycles and motor tricycles) from Euro 5/V to Euro 6/VI^[3] since 1 July 2017. The emission standards for first registered diesel private cars were also tightened from California LEV II to California LEV III from 1 October 2017. The legislative amendment in 2017 did not include tightening of emission standards for first registered light buses with a design weight of more than 3.5 tonnes and buses with a design weight of not more than 9 tonnes due to the inadequate supply of Euro VI OBD Phase A/B/C compliant models in 2017, and did not include tightening of emission standards for motor cycles and motor tricycles due to the inadequate supply of Euro 4 compliant models in 2017. The prevailing emission standards for first registered vehicles upon first registration are presented in **Table 1** below—

³ The Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) Regulation 2017 tightened the statutory emission standards for various classes of vehicles as set out below –

- (i) Buses (with a design weight of more than 9 tonnes), goods vehicle (with a design weight of more than 3.5 tonnes)
The emission standards for first registered buses (with a design weight of more than 9 tonnes), goods vehicle (with a design weight of more than 3.5 tonnes) were tightened to Euro VI in two phases. Phase one, namely Euro VI OBD Phase A/B, has taken effect from 1 October 2018 and phase two, namely Euro VI OBD Phase C, has taken effect from 1 April 2019.
- (ii) Private car (petrol) and taxi
The emission standards for first registered private car (petrol) and taxi were tightened to Euro 6 in two phases. Phase one, namely Euro 6b OBD Euro 6-1, has taken effect from 1 July 2017 and phase two, namely Euro 6c OBD Euro 6-2, has taken effect from 1 September 2019.
- (iii) Light bus and goods vehicle (both with a design weight of not more than 3.5 tonnes)
The emission standards for first registered light bus and goods vehicle (both with a design weight of not more than 3.5 tonnes) were tightened to Euro 6 in two phases. Phase one, namely Euro 6b OBD Euro 6-1, has taken effect from 1 January 2018 and phase two, namely Euro 6c OBD Euro 6-2, will take effect from 1 September 2020.
- (iv) Diesel private cars
The emission standards for first registered diesel private cars were tightened from California LEV II to California LEV III from 1 October 2017.

Table 1 The prevailing vehicle emission standards and their implementation date by vehicle classes

| Vehicle Class | Emission Standard | Implementation Date for first Registered Vehicles |
|---|--------------------------|--|
| Motor Cycle and Motor Tricycle | Euro 3 | 1 January 2007 |
| Bus (with a design weight of not more than 9 tonnes) and Light Bus (with a design weight of more than 3.5 tonnes) | Euro V | 1 June 2012 |
| Private car (diesel) | California LEV III | 1 October 2017 |
| Bus (with a design weight of more than 9 tonnes) and Goods Vehicle (with a design weight of more than 3.5 tonnes) | Euro VI OBD Phase C | 1 April 2019 |
| Private car (petrol) and taxi | Euro 6c OBD Euro 6-2 | 1 September 2019 |
| Light bus and Goods Vehicle (both with a design weight of not more than 3.5 tonnes) | Euro 6b OBD Euro 6-1 | 1 January 2018 The emission standard will be tightened to Euro 6c OBD Euro 6-2, from 1 September 2020 |

4. In view of the current supply of Euro 4 compliant motor cycle models and the latest projection of supply of Euro VI OBD Phase C compliant light buses with a design weight of more than 3.5 tonnes and buses with a design weight of not more than 9 tonnes, the Amendment Regulation seeks to tighten the emission standards of first registered motor cycles to Euro 4 and the emission standards of first registered light buses (with a design weight of more than 3.5 tonnes) and buses (with a design weight of not more than 9 tonnes) to Euro VI OBD Phase C.

Motor cycles

5. The European Union (EU), Japan and Taiwan implemented Euro 4 or equivalent emission standards for motor cycles in 2017. The Mainland has also implemented China 4 standards (equivalent to Euro 4 standards) for motor cycles since July 2019. The EU and Taiwan will further tighten the emission standards for motor cycles to Euro 5 from January 2021.

6. As at end February 2020, there were 84 383 registered motor cycles, all of which except 18 electric ones^[4] run on petrol. In comparison with Euro 3 counterparts, Euro 4 petrol motor cycles emit about 50% less total hydrocarbons (including Volatile Organic Compounds (VOC)) and about 60% less nitrogen oxides (NOx) from the tailpipes. The EU has also introduced control on evaporative emission of VOC and requirements for OBD system which are incorporated into Euro 4 standards to further reduce their emissions. A table showing the Euro 3 and Euro 4 emission limits for petrol motor cycles is at **Annex B**.

7. For diesel motor cycles, there are currently no diesel motor cycles registered in Hong Kong. Despite the above, we plan to tighten the emission standards for first registered diesel motor cycles to Euro 4 so that the vehicle suppliers could plan ahead their strategy in supplying Euro 4 diesel motor cycles to Hong Kong.

8. For motor tricycles, as the current supply of Euro 4 compliant models in the local market is still insufficient, we will continue to keep in view the supply of Euro 4 compliant motor tricycles for assessing the feasibility of tightening the relevant emission standards in future.

⁴ Electric vehicles have no tailpipe emissions.

Light buses (design weight of more than 3.5 tonnes) and Buses (design weight of not more than 9 tonnes)

9. The EU has been implementing Euro VI emission standards in phases since 2013. Compared with Euro V counterparts, Euro VI diesel heavy duty vehicles^[5] emit about 80% less NOx and 50% less respirable suspended particulates (RSP) (See **Annex B**).

10. The major suppliers of the relevant vehicles have advised that Euro VI OBD Phase C compliant diesel light bus (with a design weight of more than 3.5 tonnes) and bus (with a design weight of not more than 9 tonnes) models would be available in Hong Kong by early 2021, and other vehicle suppliers have also advised that they have plans to introduce Euro VI OBD Phase C compliant models for these 2 diesel vehicle classes to Hong Kong. Hence, we anticipate that there will be an adequate supply of Euro VI OBD Phase C compliant diesel light bus (with a design weight of more than 3.5 tonnes) and bus (with a design weight of not more than 9 tonnes) models by early 2021.

11. For petrol light buses with a design weight of more than 3.5 tonnes and petrol buses with a design weight of not more than 9 tonnes, we understand from the vehicle dealers that they have no plan to introduce Euro VI OBD Phase C compliant light bus and bus models. Besides, there are currently no petrol light buses or buses registered in Hong Kong. Despite the above, we plan to tighten the emission standards for first registered petrol light buses with a design weight of more than 3.5 tonnes and petrol buses with a design weight of not more than 9 tonnes to Euro VI OBD Phase C so that the vehicle suppliers could plan ahead their strategy in supplying Euro VI OBD Phase C petrol light buses and buses to Hong Kong.

12. For liquefied petroleum gas (LPG) light buses with a design weight of more than 3.5 tonnes, the only LPG light bus supplier in Hong Kong has indicated

⁵ EU defines heavy duty vehicles as vehicles of a design weight more than 3.5 tonnes.

that, based on commercial considerations, its manufacturer would cease the production of LPG light buses by the end of 2020. Notwithstanding this, we propose to tighten the emission standards for first registered LPG light buses with a design weight of more than 3.5 tonnes to Euro VI OBD Phase C so that the vehicle suppliers could plan ahead their strategy in supplying Euro VI OBD Phase C LPG light buses to Hong Kong.

13. In view of the above, to improve air quality, we propose to tighten the emission standards for first registered light buses with a design weight of more than 3.5 tonnes and buses with a design weight of not more than 9 tonnes (as mentioned in paragraphs 9 to 12) from Euro V to Euro VI OBD Phase C from 1 March 2021, bringing their emission standards on par with those of other heavy duty vehicles.

CONSULTATION WITH THE RELEVANT TRADES

Motor Cycle Supplier Trade

14. In August and September 2018, we consulted the motor cycle supplier trade including authorised dealers and parallel-import suppliers on the proposal to tighten the emission standards of first registered motor cycles to Euro 4 from the second half of 2020. All authorised motor cycles dealers, which supply the majority of motor cycles, did not object to the proposal. However, the parallel-import motor cycle suppliers objected to the proposal as they indicated difficulty in sourcing parallel-import motor cycles from other places that could meet the Euro 4 standards. They requested that the implementation date be deferred by a few years to allow adequate time for them to prepare for the tightening of the standards. We consider their request not justifiable because (a) Europe, Japan and Taiwan have already implemented Euro 4 or equivalent emission standards for motor cycles and their brands are most popular in Hong Kong; (b) at the time of consultation of the Panel on Environmental Affairs of the LegCo (the EA Panel) on 19 December 2018, there were about 140 Euro 4 compliant models type approved by the Transport Department and more would be expected to come (over

180 Euro 4 type approved models in the end of March 2020); and (c) in any case, the period from the time of consultation to the proposed implementation date in 2020 should be adequate for them to map out their business plans to cope with the proposal.

Light Bus and Bus Trade and Suppliers

15. In November 2018, we consulted light bus and bus trade and relevant vehicle suppliers including Hong Kong Motor Traders Association, Automotive Council of the European Chamber of Commerce in Hong Kong and Hong Kong Bus Suppliers Association, Right Hand Drive Motors Association, and Hong Kong Trucks Merchants Association. No objection was received on the proposed tightening of the emission standards for first registered light bus with a design weight of more than 3.5 tonnes and bus with a design weight of not more than 9 tonnes to Euro VI OBD Phase C starting from early 2021. We have approached the major suppliers of the relevant vehicles again earlier this year and were reaffirmed that their plan to bring in compliant vehicles to Hong Kong to meet the proposed new emission standard in early 2021 was unchanged.

ADVISORY COUNCIL ON THE ENVIRONMENT and PANEL ON ENVIRONMENTAL AFFAIRS OF LEGISLATIVE COUNCIL

16. We consulted the ACE and the EA Panel on the proposal on 3 December 2018 and 19 December 2018 respectively. Both ACE and the EA Panel were supportive to the proposal.

THE AMENDMENT REGULATION

17. The Amendment Regulation requires –
- a) first registered motor cycles to comply with Euro 4 emission standards starting from 1 October 2020; and
 - b) first registered light buses with a design weight of more than 3.5 tonnes

and buses with a design weight of not more than 9 tonnes to comply with Euro VI OBD Phase C emission standards starting from 1 March 2021.

18. In tightening the emission standards, we will maintain the current practice of accepting Japan standards that are not inferior to the tightened standards for motor cycles (i.e. Japan standards which are not inferior to the Euro 4 standards will be accepted for motor cycles). Similar to the legislative amendment in 2017, we will accept US standards that are not inferior to the tightened standards for heavy duty vehicles (including light buses with a design weight of more than 3.5 tonnes and buses with a design weight of not more than 9 tonnes) (i.e. US standards not inferior to the Euro IV OBD Phase C standards will be accepted for light buses with a design weight of more than 3.5 tonnes and buses with a design weight of not more than 9 tonnes).

LEGISLATIVE TIMETABLE

19. We will publish the Amendment Regulation in the Gazette on 24 April 2020 and table it at the Legislative Council for negative vetting on 29 April 2020. Subject to the negative vetting by the Legislative Council, the amendments at paragraphs 17(a), 17 (b) and 18 will take effect from 1 October 2020 and 1 March 2021 respectively.

IMPLICATIONS

Environmental and Sustainability Implications

20. The Amendment Regulation can improve roadside air quality and it is in line with the sustainability principles of avoiding environmental problems and providing a living environment which protects public health. Better air quality is also conducive to improving the quality of life.

Other Implications

21. The Amendment Regulation is in conformity with the Basic Law, including the provisions concerning human rights, and will not affect the current binding effect of the Air Pollution Control (Vehicle Design Standards) (Emission) Regulations. The Amendment Regulation has no financial, civil service, gender or family implications. The Amendment Regulation has little economic implication as it is not expected to have significant effects on vehicle prices.

PUBLICITY

22. We will issue a press release when the Amendment Regulation is published in the Gazette and inform the relevant trades accordingly. A spokesman will be available for answering media enquiries.

ENQUIRIES

23. For any enquiries, please contact Mr Dave Ho, Assistant Director of Environmental Protection (Air Policy) at 2594 6310.

Environmental Protection Department

April 2020

**Air Pollution Control (Vehicle Design Standards)
(Emission) (Amendment) Regulation 2020**

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Air Pollution Control (Vehicle Design Standards) (Emission) (Amendment) Regulation 2020

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

1. Commencement

This Regulation comes into operation on 1 October 2020.

2. Air Pollution Control (Vehicle Design Standards) (Emission) Regulations amended

The Air Pollution Control (Vehicle Design Standards) (Emission) Regulations (Cap. 311 sub. leg. J) are amended as set out in sections 3 to 19.

3. Regulation 4A amended (vehicle design standards relating to smoke emission for motor vehicles registered on or after 1 April 1995)

Regulation 4A(4)—

Repeal

“7G(17) and (18) and 7H(6) and (7)”

Substitute

“7G(13A) and (18) and 7H(5A) and (7)”.

4. Regulation 7B repealed (vehicle design standards for certain motor vehicles registered on or after 1 January 2006)

Regulation 7B—

Repeal the regulation.

5. **Regulation 7D amended (vehicle design standards for motor cycles and motor tricycles registered on or after 1 January 2007)**

Regulation 7D—

Repeal subregulation (1).

6. **Regulation 7E repealed (vehicle design standards for certain motor vehicles registered on or after 1 June 2012)**

Regulation 7E—

Repeal the regulation.

7. **Regulation 7F amended (vehicle design standards for private cars and taxis registered on or after 1 July 2017)**

Regulation 7F—

Repeal subregulations (2), (4), (7), (9), (11) and (13).

8. **Regulation 7G amended (vehicle design standards for goods vehicles and light buses registered on or after 1 January 2018)**

(1) Regulation 7G—

Repeal subregulations (2), (4), (6), (8) and (10).

(2) Regulation 7G(12)(d)—

Repeal

“on or after 1 October 2018”

Substitute

“between 1 October 2018 and 28 February 2021 (both dates inclusive)”.

(3) After regulation 7G(12)—

Add

“(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.”.

(4) Regulation 7G(13)(c)—

Repeal

“on or after 1 October 2018”

Substitute

“between 1 October 2018 and 28 February 2021 (both dates inclusive)”.

(5) After regulation 7G(13)—

Add

“(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.”.

(6) Regulation 7G(14)(d)—

Repeal

“on or after 1 October 2018”

Substitute

“between 1 October 2018 and 28 February 2021 (both dates inclusive)”.

- (7) After regulation 7G(14)—

Add

“(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.”.

- (8) Regulation 7G—

Repeal subregulations (15) and (17).

9. Regulation 7H amended (vehicle design standards for buses registered on or after 1 October 2018)

- (1) Regulation 7H(2)(d)—

Repeal

“on or after 1 October 2018”

Substitute

“between 1 October 2018 and 28 February 2021 (both dates inclusive)”.

- (2) After regulation 7H(2)—

Add

“(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.”.

- (3) Regulation 7H—

Repeal subregulation (3).

- (4) Regulation 7H(5)(c)—

Repeal

“on or after 1 October 2018”

Substitute

“between 1 October 2018 and 28 February 2021 (both dates inclusive)”.

- (5) After regulation 7H(5)—

Add

“(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.”.

- (6) Regulation 7H—
Repeal subregulation (6).
10. **Regulation 7I added**
After regulation 7H—
Add
- “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.”.
11. **Regulation 8 amended (compliance with more stringent standards)**
Regulation 8—
Repeal
“7B, 7D, 7E, 7F, 7G, 7H”
Substitute
“7D, 7F, 7G, 7H, 7I”.
12. **Regulation 9 amended (vehicles to which regulations 7B, 7D, 7E, 7F, 7G, 7H and 14 do not apply)**
(1) Regulation 9, heading—
Repeal
“7B, 7D, 7E, 7F, 7G, 7H”

- Substitute**
“7D, 7F, 7G, 7H, 7I”.
- (2) Regulation 9—
Repeal
“7B, 7D, 7E, 7F, 7G, 7H”
Substitute
“7D, 7F, 7G, 7H, 7I”.
13. **Regulation 14 amended (certain motor vehicles to be equipped with on-board diagnostic system)**
(1) Regulation 14—
Repeal subregulations (8), (9) and (10).
(2) Regulation 14(12)—
Repeal
“7E(9), (10) and (11),”.
14. **Schedule 12 repealed (vehicle design standards (emission) for certain motor vehicles registered on or after 1 January 2006)**
Schedule 12—
Repeal the Schedule.
15. **Schedule 14 repealed (vehicle design standards (emission) for motor cycles registered on or after 1 January 2007)**
Schedule 14—
Repeal the Schedule.

16. **Schedule 16 amended (vehicle design standards (emission) for certain motor vehicles registered on or after 1 June 2012)**
- (1) Schedule 16—
Repeal
“[regs. 7E,”
Substitute
“[regs.”.
- (2) Schedule 16—
Repeal Part 1.
17. **Schedule 17 amended (vehicle design standards (emission) for certain motor vehicles registered on or after 1 July 2017)**
- (1) Schedule 17, Part 1—
Repeal paragraph (a).
- (2) Schedule 17, Part 2—
Repeal paragraph (a).
18. **Schedule 18 amended (vehicle design standards for particulate emission from certain motor vehicles registered on or after 1 July 2017)**
- Schedule 18, Part 1—
Repeal paragraph (a).
19. **Schedule 20 added**
- After Schedule 19—
Add

“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.”.



Secretary for the Environment

2020.4.20

Explanatory Note

This Regulation amends the Air Pollution Control (Vehicle Design Standards) (Emission) Regulations (Cap. 311 sub. leg. J) (*principal Regulations*) to—

- (a) impose more stringent vehicle design standards on—
 - (i) light buses registered on or after 1 March 2021 and having a design weight of more than 3.5 tonnes;
 - (ii) buses registered on or after 1 March 2021 and having a design weight of not more than 9 tonnes; and
 - (iii) motor cycles registered on or after 1 October 2020; and
 - (b) repeal obsolete provisions in the principal Regulations.
2. Regulations 7B, 7D(1), 7E, 7F(2), (4), (7), (9), (11) and (13), 7G(2), (4), (6), (8), (10), (15) and (17), 7H(3) and (6) and 14(8), (9) and (10) of, and Schedules 12 and 14, Part 1 of Schedule 16, paragraph (a) of Parts 1 and 2 of Schedule 17 and paragraph (a) of Part 1 of Schedule 18 to, the principal Regulations are obsolete and therefore repealed (sections 4, 5, 6, 7, 8(1) and (8), 9(3) and (6), 13(1), 14, 15, 16, 17 and 18).
 3. The new regulation 7G(12A), (13A) and (14A) specifies enhanced vehicle design standards for light buses having a design weight of more than 3.5 tonnes that are registered on or after 1 March 2021 (section 8(3), (5) and (7)).
 4. The new regulation 7H(2A) and (5A) specifies enhanced vehicle design standards for buses having a design weight of not more than 9 tonnes that are registered on or after 1 March 2021 (section 9(2) and (5)).

5. The new regulation 7I specifies enhanced vehicle design standards for motor cycles registered on or after 1 October 2020 (section 10).
6. The new Schedule 20 sets out the Euro 4 Motor Vehicle Emission Standards adopted in the European Union and the emission standards adopted in Japan. Motor cycles registered on or after 1 October 2020 are required to comply with either of those standards (section 19).

Comparison of Tailpipe Emission Limits

| Design Weight | Vehicle Class | Emission Limits | | | | | | | |
|------------------------|---------------|-------------------------|-----------------------|-------------------------|-------------------------|-----------------------------------|-----------------|----------------|---------------------------------|
| | | Nitrogen Oxides | | Total Hydrocarbons | | Respirable Suspended Particulates | | Particle No. | |
| | | Euro V | Euro VI | Euro V | Euro VI | Euro V | Euro VI | Euro V | Euro VI |
| More than 3.5 tonnes | Light Bus | 2,000# (mg/kWh) | 400# (mg/kWh) | 460# (mg/kWh) | 130# (mg/kWh) | 20# (mg/kWh) | 10# (mg/kWh) | Not Applicable | 8x10 ¹¹ # (#/kWh) |
| Not more than 9 tonnes | Bus | | | | | | | | |
| | | Euro 3 | Euro 4 | Euro 3 | Euro 4 | Euro 3 | Euro 4 | Euro 3 | Euro 4 |
| Not Applicable | Motor cycle | 170/ 220* (mg/km) | 70/ 90* (mg/km) | 750/ 330* (mg/km) | 380/ 170* (mg/km) | Not Applicable | | Not Applicable | |

Note:

Compression ignition engine (diesel)

* Positive ignition engine (petrol)

@ depending on vehicle maximum speed of the motor cycle