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ENVIRONMENTAL PROTECTION AND  
MANAGEMENT ACT  
(CHAPTER 94A)

ENVIRONMENTAL PROTECTION AND MANAGEMENT  
(VEHICULAR EMISSIONS) (AMENDMENT NO. 4)  
REGULATIONS 2017

In exercise of the powers conferred by section 77(1) of the Environmental Protection and Management Act, the National Environment Agency, with the approval of the Minister for the Environment and Water Resources, makes the following Regulations:

**Citation and commencement**

1.—(1) These Regulations are the Environmental Protection and Management (Vehicular Emissions) (Amendment No. 4) Regulations 2017 and, except for regulation 5, come into operation on 1 January 2018.

(2) Regulation 5 comes into operation on 1 April 2018.

**Amendment of regulation 4**

2. Regulation 4 of the Environmental Protection and Management (Vehicular Emissions) Regulations (Rg 6) (called in these Regulations the principal Regulations) is amended by deleting paragraphs (3) and (4) and substituting the following paragraphs:

“(3) Every two-wheeled motor cycle or scooter with an engine capacity exceeding 200 cubic centimetres, and every three-wheeled motor cycle or scooter, that is to be registered in Singapore on or after 1 January 2018 must conform to the standard for exhaust emission specified in Part 2 of the Third Schedule.

(4) Every two-wheeled motor cycle or scooter with an engine capacity not exceeding 200 cubic centimetres must —

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- (a) if it is to be registered in Singapore on or after 1 January 2018 but before 1 January 2020 — conform to the standard for exhaust emission specified in Part 1 of the Third Schedule; or
- (b) if it is to be registered in Singapore on or after 1 January 2020 — conform to the standard for exhaust emission specified in Part 2 of the Third Schedule.”.

### **Amendment of First Schedule**

3. The First Schedule to the principal Regulations is amended by inserting, immediately after the words “Commission Regulation (EU) No. 459/2012” in items (a)(i), (b)(i), (d)(i) and (e)(i) of the table in paragraph 1, the words “, with the following modification: the references to “6,0 × 10<sup>11</sup>” under the sub-column titled “PI” of the column titled “Number of particles (PN)” in Regulation (EC) No. 715/2007, Table 2, Annex I, as amended by Commission Regulation (EU) No. 459/2012, are to be read as references to “6,0 × 10<sup>12</sup>””.

### **Deletion and substitution of Third Schedule**

4. The Third Schedule to the principal Regulations is deleted and the following Schedule substituted therefor:

#### **“THIRD SCHEDULE**

Regulations 4(3) and (4) and  
9(a) and (b)

#### **STANDARD FOR EXHAUST EMISSION FOR NEW MOTOR CYCLES AND SCOOTERS**

##### **PART 1**

*For two-wheeled motor cycles and scooters mentioned in regulation 4(4)(a)*

1. The standard for exhaust emission for two-wheeled motor cycles and scooters is the standard for exhaust emission for motor cycles specified in row B of the table mentioned in paragraph 2.2.1.1.5 of Annex II of Chapter 5 of Directive 97/24/EC of the European Parliament and of the Council of the European Union, as amended by Directive 2002/51/EC of the European Parliament and of the Council of the European Union of 19 July 2002.

## PART 2

*For two-wheeled motor cycles and scooters mentioned in regulation 4(3) and (4)(b), and three-wheeled motor cycles and scooters mentioned in regulation 4(3)*

1. The standard for exhaust emission for two-wheeled motor cycles and scooters is the standard for exhaust emission for motor cycles specified for vehicle category L3e and L4e in the fourth row of table A1 mentioned in Annex VI(A) of Regulation (EU) No 168/2013 of the European Parliament and of the Council of the European Union of 15 January 2013.

2. The standard for exhaust emission for three-wheeled motor cycles and scooters is the standard for exhaust emission for motor cycles specified for vehicle category L5e-A in the fourth row, and vehicle category L5e-B in the fifth row, of table A1 mentioned in Annex VI(A) of Regulation (EU) No 168/2013 of the European Parliament and of the Council of the European Union of 15 January 2013.”.

### Amendment of Fifth Schedule

5. The Fifth Schedule to the principal Regulations is amended —

(a) by deleting paragraph 3 and substituting the following paragraphs:

“3. The level of CO and HC emitted from the exhaust of any petrol driven motor vehicle (other than a motor cycle or scooter) that is registered in Singapore on any date during a period specified in the first column of the following table must not exceed the emission limits, if any, specified opposite in the second column of that table:

| <i>First column</i>                                | <i>Second column</i>                     |                     |   |                     |
|--|--|---------------------|---|---------------------|
|  | <i>Emission limits</i>                   |                     |   |                     |
|  | <i>Measured at idle speed</i>            |                     | <i>Measured at high idle speed</i>            |                     |
| <i>Period in which motor vehicle is registered</i> | <i>CO<br/>(percentage<br/>by volume)</i> | <i>HC<br/>(ppm)</i> | <i>CO<br/>(percen<br/>tage by<br/>volume)</i> | <i>HC<br/>(ppm)</i> |
| (a) Before<br>1 October<br>1986                    | 6.0                                      | 1,200               | No limit                                      | No limit            |

|  |     |          |          |          |
|--|-----|----------|----------|----------|
| (b) On or after<br>1 October<br>1986 but<br>before<br>1 July 1992  | 4.5 | 1,200    | No limit | No limit |
| (c) On or after<br>1 July 1992<br>but before<br>1 January<br>2001  | 3.5 | 1,200    | No limit | No limit |
| (d) On or after<br>1 January<br>2001 but<br>before<br>1 April 2014 | 1.0 | 300      | No limit | No limit |
| (e) On or after<br>1 April 2014                                    | 0.5 | No limit | 0.3      | 200      |

3A. The lambda of any petrol driven motor vehicle (other than a motor cycle or scooter) that is registered in Singapore on or after 1 April 2014, measured at high idle speed, must be within 3% of 1.00.

3B. The level of CO and HC emitted from the exhaust of any two-wheeled motor cycle or scooter that is registered in Singapore on any date during a period specified in the first column of the following table must not exceed the emission limits, if any, specified opposite in the second column of that table:

| <i>First column</i>   | <i>Second column</i>                       |                 |
|---|--|-----------------|
| <i>Period in which motor cycle or scooter is registered</i> | <i>Emission limits</i>                     |                 |
|   | <i>Measured at idle speed</i>              |                 |
|   | <i>CO</i><br><i>(percentage by volume)</i> | <i>HC (ppm)</i> |
| (a) Before<br>1 October 1986                                | 6.0  | No limit        |
| (b) On or after<br>1 October 1986                           | 4.5  | No limit        |

|     |   |     |   |
|-----|---|-----|---|
|     |   |     | but before 1 July 2003  |
| (c) | On or after 1 July 2003 but before 1 October 2014 | 4.5 | (i) 7,800 (for a motor cycle or scooter with a 2-stroke engine); or<br>(ii) 2,000 (for a motor cycle or scooter with a 4-stroke engine) |
| (d) | On or after 1 October 2014                        | 3.0 | 1,000   |

3C. The level of CO and HC emitted from the exhaust of any three-wheeled motor cycle or scooter that is registered in Singapore on any date during a period specified in the first column of the following table must not exceed the emission limits, if any, specified opposite in the second column of that table:

| <i>First column</i>   | <i>Second column</i>                       |   |
|---|--|---|
|   | <i>Emission limits</i>                     |   |
| <i>Period in which motor cycle or scooter is registered</i> | <i>Measured at idle speed</i>              |   |
|   | <i>CO</i><br><i>(percentage by volume)</i> | <i>HC (ppm)</i>   |
| (a) Before 1 October 1986                                   | 6.0  | No limit  |
| (b) On or after 1 October 1986 but before 1 July 2003       | 4.5  | No limit  |
| (c) On or after 1 July 2003                                 | 4.5  | (i) 7,800 (for a motor cycle or scooter with a 2-stroke engine); or<br>(ii) 2,000 (for a motor cycle or scooter |

with a 4-stroke  
engine) ”;

- (b) by deleting the words “visible smoke or vapour” in paragraph 5 and substituting the words “smoke or visible vapour”; and
- (c) by inserting, immediately after paragraph 5, the following paragraph:

“6. In this Schedule —

“CO” means carbon monoxide;

“HC” means hydrocarbons;

“high idle speed” means an engine speed, of a stationary motor vehicle, that is at least 2,000 revolutions per minute;

“idle speed” means the engine speed of a stationary motor vehicle when its engine is left on and its accelerator is not depressed;

“lambda” means the measurement of the air to fuel ratio of a motor vehicle measured in accordance with the simplified Brettschneider equation specified in note (\*) of paragraph 5.3.7.3. of Regulation No. 83 of the Economic Commission for Europe of the United Nations (UN/ECE) - Uniform provisions concerning the approval of vehicles with regard to the emission of pollutants according to engine fuel requirement (Revision 3);

“ppm” means parts per million.”.

*[G.N. Nos. S 625/2008; S 564/2010; S 301/2012;  
S 765/2013; S 766/2013; S 199/2014; S 609/2014;  
S 372/2016; S 26 /2017; S 396/2017; S 480/2017]*

Made on 19 December 2017.

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(To be presented to Parliament under section 77(3) of the Environmental Protection and Management Act).