

§ 94.6

(2) [Reserved]

§ 94.6 Regulatory structure.

This section provides an overview of the regulatory structure of this part.

(a) The regulations of this Part 94 are intended to control emissions from in-use marine engines.

(b) The engines for which the regulations of this part (i.e., 40 CFR part 94) apply are specified by § 94.1, and by the definitions of § 94.2. The point at which an engine or vessel becomes subject to the regulations of this part is determined by the definitions of new marine engine and new marine vessel in § 94.2. Subpart J of this part contains provisions exempting certain engines and vessels from the emission standards in this part under special circumstances.

(c) To comply with the requirements of this part, a manufacturer must demonstrate to EPA that the engine meets the applicable standards of §§ 94.7 and 94.8, and all other requirements of this part. The requirements of this certification process are described in subparts C and D of this part.

(d) Subpart B of this part specifies procedures and equipment to be used for conducting emission tests for the purpose of the regulations of this part.

(e) Subparts E, F, and H of this part specify requirements for manufacturers after certification; that is during production and use of the engines.

(f) Subpart I of this part contains requirements applicable to the importation of marine engines covered by the provisions of this part.

(g) Subpart L of this part describes prohibited acts and contains other enforcement provisions relating to marine engines and vessels covered by the provisions of this part.

(h) Unless specified otherwise, the provisions of this part apply to all marine engines and vessels subject to the emission standards of this part.

§ 94.7 General standards and requirements.

(a) Marine engines and vessels may not be equipped with a defeat device.

(b) An engine may not be equipped with an emission control system for the purpose of complying with emission standards if such a system will cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation or function.

(c) An engine with an emission control system may not emit any noxious or toxic substance which would not be emitted in the operation of the engine in the absence of such a system, except as specifically permitted by regulation.

(d) All engines subject to the emission standards of this part shall be equipped with a connection in the engine exhaust system that is located downstream of the engine and before any point at which the exhaust contacts water (or any other cooling/scrubbing medium) for the temporary attachment of gaseous and/or particulate emission sampling equipment. This connection shall be internally threaded with standard pipe threads of a size not larger than one-half inch, and shall be closed by a pipe-plug when not in use. (Equivalent connections are allowed.)

(e) Electronically controlled engines subject to the emission standards of this part shall broadcast on engine's controller area networks engine torque (as percent of maximum) and engine speed.

§ 94.8 Exhaust emission standards.

(a) Exhaust emissions from marine compression-ignition engines shall not exceed the applicable exhaust emission standards contained in Table A-1 as follows:

TABLE A-1.—PRIMARY TIER 2 EXHAUST EMISSION STANDARDS (G/KW-HR)

Engine size—liters/cylinder, rated power	Category	Model Year ¹	THC+NO _x g/kW-hr	CO g/kW-hr	PM g/kW-hr
Disp. <0.9 and power ≥ 37 kW	Category 1	2005	7.5	5.0	0.40
0.9 ≤disp. <1.2 all power levels	Category 1	2004	7.2	5.0	0.30
1.2 ≤disp. <2.5 all power levels	Category 1	2004	7.2	5.0	0.20
2.5 ≤disp. <5.0 all power levels	Category 1	2007	7.2	5.0	0.20
5.0 ≤disp. <15.0 all power levels	Category 2	2007	7.8	5.0	0.27
15.0 ≤disp. <20.0 power < 3300 kW	Category 2	2007	8.7	5.0	0.50
15.0 ≤disp. <20.0 power ≥ 3300 kW	Category 2	2007	9.8	5.0	0.50

TABLE A-1.—PRIMARY TIER 2 EXHAUST EMISSION STANDARDS (G/KW-HR)—Continued

Engine size—liters/cylinder, rated power	Category	Model Year ¹	THC+NO _x g/kW-hr	CO g/kW-hr	PM g/kW-hr
20.0 ≤disp. <25.0 all power levels	Category 2	2007	9.8	5.0	0.50
25.0 ≤disp. <30.0 all power levels	Category 2	2007	11.0	5.0	0.50

¹The model years listed indicate the model years for which the specified standards start.

(b) Exhaust emissions of oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter (and other compounds, as applicable) shall be measured using the procedures set forth in subpart B of this part.

(c) In lieu of the THC+NO_x standards, and PM standards specified in paragraph (a) of this section, manufacturers may elect to include engine families in the averaging, banking, and trading program, the provisions of which are specified in subpart D of this part. The manufacturer shall then set a family emission limit (FEL) which will serve as the standard for that engine family.

(d)(1) Naturally aspirated engines subject to the standards of this section shall not discharge crankcase emissions into the ambient atmosphere.

(2) For engines using turbochargers, pumps, blowers, or superchargers for air induction, if the engine discharges crankcase emissions into the ambient atmosphere in use, these crankcase emissions shall be included in all exhaust emission measurements.

(e) Exhaust emissions from propulsion engines subject to the standards (or FELs) in paragraph (a), (c), or (f) of this section shall not exceed:

- (1) 1.20 times the applicable standards (or FELs) when tested in accordance with the supplemental test procedures specified in §94.106 at loads greater than or equal to 45 percent of the maximum power at rated speed or 1.50 times the applicable standards (or FELs) at loads less than 45 percent of the maximum power at rated speed; or
- (2) 1.25 times the applicable standards (or FELs) when tested over the whole power range in accordance with the supplemental test procedures specified in §94.106.

(f) The following paragraphs define the requirements for low-emitting Blue Sky Series engines.

- (1) *Voluntary standards.* Engines may be designated “Blue Sky Series” en-

gines through the 2010 model year by meeting the voluntary standards listed in Table A-2, which apply to all certification and in-use testing, as follows:

TABLE A-2.—VOLUNTARY EMISSION STANDARDS (G/KW-HR)

Rated Brake Power (kW)	THC+NO _x	PM
Power ≥37 kW, and displ.<0.9	4.0	0.24
0.9≤displ.<1.2	4.0	0.18
1.2≤displ.<2.5	4.0	0.12
2.5≤displ.<5	5.0	0.12
5≤displ.<15	5.0	0.16
15 ≤disp. <20, and power <3300 kW	5.2	0.30
15 ≤disp. <20, and power ≥3300 kW	5.9	0.30
20 ≤disp. <25	5.9	0.30
25 ≤disp. <30	6.6	0.30

(2) *Additional standards.* Blue Sky Series engines are subject to all provisions that would otherwise apply under this part.

(3) *Test procedures.* Manufacturers may use an alternate procedure to demonstrate the desired level of emission control if approved in advance by the Administrator.

(g) Standards for alternative fuels. The standards described in this section apply to compression-ignition engines, irrespective of fuel, with the following two exceptions:

- (1) Engines fueled with natural gas shall comply with NMHC+NO_x standards that are numerically equivalent to the THC+NO_x described in paragraph (a) of this section; and
- (2) Engines fueled with alcohol fuel shall comply with THCE+NO_x standards that are numerically equivalent to the THC+NO_x described in paragraph (a) of this section.

§ 94.9 Compliance with emission standards.

- (a) The general standards and requirements in §94.7 and the emission standards in §94.8 apply to each new engine throughout its useful life period. The useful life is specified both in years and in hours of operation, and