

TABLE 3 OF § 94.5.—IMO MATERIALS

Document No. and name	40 CFR part 94 reference
Resolution 2—Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines, 1997.	94.2, 94.11, 94.108, 94.109, 94.204, 94.211, 94.1004.

[68 FR 9781, Feb. 28, 2003]

**§ 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) You may not design your engines with emission-control devices, systems, or elements of design that cause or contribute to an unreasonable risk to public health, welfare, or safety while operating. For example, this would apply if the engine emits a noxious or toxic substance it would otherwise not emit that contributes to such an unreasonable risk.

(d) Manufacturers shall ensure that all engines subject to the emission standards of this part are 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. Use good engineering judgment to locate the connection. 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. Engine manufacturers may comply with this requirement by providing vessel manufacturers with clear instructions explaining how to meet this requirement, and noting in the instructions that failure to comply may subject the vessel manufacturer to federal penalties. Vessel manufacturers are required to comply with the engine manufacturer's instructions.

(e) Electronically controlled engines subject to the emission standards of this part shall broadcast on engine's

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controller area networks engine torque (as percent of maximum torque at that speed) and engine speed.

[64 FR 73331, Dec. 29, 1999, as amended at 67 FR 68341, Nov. 8, 2002; 68 FR 9782, Feb. 28, 2003]

§ 94.8 Exhaust emission standards.

(a) The Tier 1 standards of paragraph (a)(1) of this section apply until replaced by the standards of paragraph (a)(2) of this section.

(1) *Tier 1 standards.* NO<sub>x</sub> emissions from model year 2004 and later engines with displacement of 2.5 or more liters per cylinder may not exceed the following values:

(i) 17.0 g/kW-hr when maximum test speed is less than 130 rpm.

(ii)  $45.0 \times N^{-0.20}$  when maximum test speed is at least 130 but less than 2000 rpm, where N is the maximum test speed of the engine in revolutions per minute.

(NOTE: Round speed-dependent standards to the nearest 0.1 g/kW-hr.)

(iii) 9.8 g/kW-hr when maximum test speed is 2000 rpm or more.

(2) *Tier 2 standards.* (i) Exhaust emissions from marine compression-ignition engines shall not exceed the applicable Tier 2 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 <sup>1</sup>	THC+NO <sub>x</sub> 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
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
disp. ≥ 30.0, all power levels ...	Category 3 .....	2007	See paragraph (a)(2)(ii) of this section.		

<sup>1</sup> The model years listed indicate the model years for which the specified standards start.

(ii) EPA has not finalized Tier 2 standards for Category 3 engines. EPA will promulgate final Tier 2 standards for Category 3 engines on or before April 27, 2007.

(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<sub>x</sub> 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. The ABT provisions of subpart D of this part do not apply for Category 3 engines.

(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. This requirement applies only for engines subject to hydrocarbon standards (e.g., THC standards, NMHC standards, or THC+NO<sub>x</sub> standards).