

TABLE 1 OF § 94.5.—ASTM MATERIALS—Continued

Document No. and name	Part 94 reference
ASTM D 2622–98, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry.	94.108
ASTM D 5186–99, Standard Test Method for Determination of the Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography.	94.108
ASTM E 29–02, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications.	94.2

(b) *ISO material.* Table 2 of § 94.5 lists material from the International Organization for Standardization that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the section of this part where we reference it. Anyone may purchase copies of these materials from the International Organization for Standardization, Case Postale 56, CH–1211 Geneva 20, Switzerland.

Table 2 follows:

TABLE 2 OF § 94.5.—ISO MATERIALS

Document No. and name	40 CFR part 94 reference
ISO 8178–1, Reciprocating internal combustion engines—Exhaust emission measurement—Part 1: Test-bed measurement of gaseous and particulate exhaust emissions, 1996.	94.109

(c) *IMO material.* Table 3 of § 94.5 lists material from the International Maritime Organization that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the section of this part where we reference it. Anyone may purchase copies of these materials from the International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom.

Table 3 follows:

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.

5. Section 94.7 is amended by revising paragraph (d) to read as follows:

§ 94.7 General standards and requirements.

* * * * *

(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.

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6. Section 94.8 is amended by revising paragraphs (a), (c), (d), (e), (f), and (g) to read as follows:

§ 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_x 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 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