

Environmental Protection Agency

§ 94.105

(c) Measure CH₄ as specified in 40 CFR 1042.235 starting in the 2012 model year.

[64 FR 73331, Dec. 29, 1999, as amended at 74 FR 56374, Oct. 30, 2009]

§ 94.104 Test procedures for Category 2 marine engines.

(a) Gaseous and particulate emissions shall be measured using the test procedures specified in 40 CFR part 92, except as otherwise specified in this subpart.

(b)(1) The requirements of 40 CFR part 92 related to charge air temperatures, engine speed and load, and engine air inlet restriction pressures do not apply for marine engines.

(2) For marine engine testing, charge air temperatures, engine speed and load, and engine air inlet restriction pressures shall be representative of typical in-use marine engine conditions.

(c) Conduct testing at ambient temperatures from 13 °C to 30 °C.

(d) The Administrator may specify changes to the provisions of paragraph

(a) of this section that are necessary to comply with the general provisions of § 94.102.

(e) Measure CO₂ as described in 40 CFR 92.129 through the 2010 model year. Measure CO₂ as specified in 40 CFR 1042.235 starting in the 2011 model year. Measure CH₄ as specified in 40 CFR 1042.235 starting in the 2012 model year.

[64 FR 73331, Dec. 29, 1999, as amended at 67 FR 68343, Nov. 8, 2002; 74 FR 56374, Oct. 30, 2009]

§ 94.105 Duty cycles.

(a) *Overview.* For the purpose of determining compliance with the emission standards of § 94.8, except for those in § 94.8(e), engines shall be tested using the appropriate duty cycles described in this section.

(b) *General cycle.* Propulsion engines that are used with (or intended to be used with) fixed-pitch propellers, propeller-law auxiliary engines, and any other engines for which the other duty cycles of this section do not apply, shall be tested using the duty cycle described in the following Table B-1:

TABLE B-1—GENERAL MARINE DUTY CYCLE

Mode No.	Engine speed ¹ (percent of maximum test speed)	Percent of maximum test power ²	Minimum time in mode (minutes)	Weighting factors
1	100	100	5.0	0.20
2	91	75	5.0	0.50
3	80	50	5.0	0.15
4	63	25	5.0	0.15

¹ Engine speed: ±2 percent of point.
² Power: ±2 percent of engine maximum value.

(c) *Variable-pitch and electrically coupled propellers.* (1) Constant-speed propulsion engines that are used with (or intended to be used with) variable-

pitch propellers or with electrically coupled propellers shall be tested using the duty cycle described in the following Table B-2:

TABLE B-2—DUTY CYCLE FOR CONSTANT-SPEED PROPULSION ENGINES

Mode No.	Engine speed ¹ (percent of maximum test speed)	Percent of maximum test power ²	Minimum time in mode (minutes)	Weighting factors
1	100	100	5.0	0.20
2	100	75	5.0	0.50
3	100	50	5.0	0.15
4	100	25	5.0	0.15

¹ Engine speed: ±2 percent of point.
² Power: ±2 percent of engine maximum value.