

(c) Each exhaust blower system required by paragraph (a)(2) of this section must exhaust air from the boat at a rate which meets the requirements of Table 183.610, Column 3 when the engine is not operating.

(d) Each intake duct for an exhaust blower must be in the lower one-third of the compartment and above the normal level of accumulated bilge water.

(e) More than one exhaust blower may be used in combination to meet the requirements of this section.

(f) Each boat that is required to have an exhaust blower must have a label that:

- (1) Is located as close as practicable to each ignition switch;
- (2) Is in plain view of the operator; and
- (3) Has at least the following information:

WARNING—GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING ENGINE OPERATE BLOWER FOR 4 MINUTES AND CHECK ENGINE COMPARTMENT BILGE FOR GASOLINE VAPORS.

#### § 183.620 Natural ventilation system.

(a) Except for compartments open to the atmosphere, a natural ventilation system that meets the requirements of § 183.630 must be provided for each compartment in a boat that:

- (1) Contains a permanently installed gasoline engine;
- (2) Has openings between it and a compartment that requires ventilation, where the aggregate area of those openings exceeds 2 percent of the area between the compartments, except as provided in paragraph (c) of this section;
- (3) Contains a permanently installed fuel tank and an electrical component that is not ignition protected in accordance with § 183.410(a);
- (4) Contains a fuel tank that vents into that compartment; or
- (5) Contains a non-metallic fuel tank:
  - (i) With an aggregate permeability rate exceeding 1.2 grams of fuel loss in 24 hours per cubic foot of net compartment volume, or
  - (ii) If the net compartment volume is less than one cubic foot, having a permeability rate exceeding 1.2 grams of fuel loss in 24 hours.

NOTE: Reference fuel "C" at 40 degrees Celsius plus or minus 2 degrees Celsius from ASTM standard D 471 (incorporated by reference, see § 183.5) is to be used in determining the permeability rate.

(b) Each supply opening required in § 183.630 must be located on the exterior surface of the boat.

(c) An accommodation compartment above a compartment requiring ventilation that is separated from the compartment requiring ventilation by a deck or other structure is excepted from paragraph (a)(2) of this section.

[CGD 76-082, 44 FR 73027, Dec. 17, 1979, as amended by CGD 76-082(a), 46 FR 27645, May 21, 1981; CGD 85-059, 51 FR 37577, Oct. 23, 1986; USCG-1999-5832, 64 FR 34716, June 29, 1999; USCG-1999-5151, 64 FR 67176, Dec. 1, 1999]

#### § 183.630 Standards for natural ventilation.

(a) For the purpose of § 183.620, "natural ventilation" means an airflow in a compartment in a boat achieved by having:

(1) A supply opening or duct from the atmosphere or from a ventilated compartment or from a compartment that is open to the atmosphere; and

(2) An exhaust opening into another ventilated compartment or an exhaust duct to the atmosphere.

(b) Each exhaust opening or exhaust duct must originate in the lower third of the compartment.

(c) Each supply opening or supply duct and each exhaust opening or exhaust duct in a compartment must be above the normal accumulation of bilge water.

(d) Except as provided in paragraph (e) of this section, supply openings or supply ducts and exhaust openings or exhaust ducts must each have a minimum aggregate internal cross-sectional area calculated as follows:

$$A=5 \ln (V/5);$$

where:

- (1) A is the minimum aggregate internal cross-sectional area of the openings or ducts in square inches;
- (2) V is the net compartment volume in cubic feet, including the net volume of other compartments connected by openings that exceed 2 percent of the area between the compartments; and
- (3)  $\ln (V/5)$  is the natural logarithm of the quantity  $(V/5)$ .