

**§ 183.518**

ASTM D 1621 (incorporated by reference, see §183.5), "Compressive Strength of Rigid Cellular Plastics".

(c) Polyurethane cellular plastic used to encase metallic fuel tanks must have a density of at least 2.0 pounds per cubic foot, measured under ASTM D 1622 (incorporated by reference, see §183.5), "Apparent Density of Rigid Cellular Plastics."

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 77-98, 42 FR 36253, July 14, 1977; CGD 81-092, 48 FR 55737, Dec. 15, 1983; USCG-2000-7223, 65 FR 40059, June 29, 2000]

**§ 183.518 Fuel tank openings.**

Each opening into the fuel tank must be at or above the topmost surface of the tank.

**§ 183.520 Fuel tank vent systems.**

(a) Each fuel tank must have a vent system that prevents pressure in the tank from exceeding 80 percent of the pressure marked on the tank label under §183.514(b)(5).

(b) Each vent must:

(1) Have a flame arrester that can be cleaned unless the vent is itself a flame arrester; and

(2) Not allow a fuel overflow at the rate of up to two gallons per minute to enter the boat.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 77-98, 42 FR 36253, July 14, 1977]

**§ 183.524 Fuel pumps.**

(a) Each diaphragm pump must not leak fuel from the pump if the primary diaphragm fails.

(b) Each electrically operated fuel pump must not operate except when the engine is operating or when the engine is started.

(c) If tested under §183.590, each fuel pump, as installed in the boat, must not leak more than five ounces of fuel in 2½ minutes, inclusive of leaks from fuel line, fuel filter and strainer.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 77-98, 42 FR 36253, July 14, 1977]

**§ 183.526 Carburetors.**

(a) [Reserved]

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(b) Each carburetor must not leak more than five cubic centimeters of fuel in 30 seconds when:

(1) The float valve is open;

(2) The carburetor is at half throttle; and

(3) The engine is cranked without starting; or

(4) The fuel pump is delivering the maximum pressure specified by its manufacturer.

(c) Each updraft and horizontal draft carburetor must have a device that:

(1) Collects and holds fuel that flows out of the carburetor venturi section toward the air intake;

(2) Prevents collected fuel from being carried out of the carburetor assembly by the shock wave of a backfire or by reverse air flow; and

(3) Returns collected fuel to the engine induction system after the engine starts,

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 77-98, 42 FR 36253, July 14, 1977]

**§ 183.528 Fuel stop valves.**

(a) Each electrically operated fuel stop valve in a fuel line between the fuel tank and the engine must:

(1) Open electrically only when the ignition switch is on; and

(2) Operate manually.

(b) If tested in accordance with the fire test under §183.590, a fuel stop valve installed in a fuel line system requiring metallic fuel lines or "USCG Type A1" hose must not leak fuel.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 85-098, 52 FR 19728, May 27, 1987]

**§ 183.530 Spud, pipe, and hose fitting configuration.**

Except when used for a tank fill line, each spud, pipe, or hose fitting used with hose clamps must have:

(a) A bead;

(b) A flare; or

(c) A series of annular grooves or serrations no less than 0.015 inches deep, except a continuous helical thread, knurl, or groove.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by USCG-1999-5832, 64 FR 34716, June 29, 1999]

**Coast Guard, DHS**

**§ 183.542**

**§ 183.532 Clips, straps, and hose clamps.**

(a) Each clip, strap, and hose clamp must:

(1) Be made from a corrosion resistant material; and

(2) Not cut or abrade the fuel line.

(b) If tested in accordance with the fire test under §183.590, a hose clamp installed on a fuel line system requiring metallic fuel lines or "USCG Type A1" hose must not separate under a one pound tensile force.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 85-098, 52 FR 19728, May 27, 1987]

**§ 183.534 Fuel filters and strainers.**

If tested under §183.590, each fuel filter and strainer, as installed in the boat, must not leak more than five ounces of fuel in 2½ minutes inclusive of leaks from the fuel pump and fuel line.

[CGD 77-98, 42 FR 36253, July 14, 1977]

**§ 183.536 Seals and gaskets in fuel filters and strainers.**

(a) [Reserved]

(b) Each gasket and each sealed joint in a fuel filter and strainer must not leak when subjected for 24 hours to a gasoline that has at least a 50 percent aromatic content at the test pressure marked on the fuel tank label.

[CGD 81-092, 48 FR 55737, Dec. 15, 1983]

**§ 183.538 Metallic fuel line materials.**

Each metallic fuel line connecting the fuel tank with the fuel inlet connection on the engine must:

(a) Be made of seamless annealed copper, nickel copper, or copper-nickel; and

(b) Except for corrugated flexible fuel line, have a minimum wall thickness of 0.029 inches.

**§ 183.540 Hoses: Standards and markings.**

(a) "USCG Type A1" hose means hose that meets the performance requirements of:

(1) SAE Standard J1527DEC85, Class 1 and the fire test in §183.590; or

(2) Underwriters' Laboratories, Inc. (UL) Standard 1114.

(b) "USCG Type A2" hose means hose that meets the performance requirements of SAE Standard J1527DEC85, Class 2 and the fire test in §183.590;

(c) "USCG Type B1" hose means hose that meets the performance requirements of SAE Standard J1527DEC85, Class 1.

(d) "USCG Type B2" hose means hose that meets the performance requirements of SAE Standard J1527DEC85, Class 2.

NOTE: SAE Class 1 hose has a permeation rating of 100 grams or less fuel loss per square meter of interior surface in 24 hours.

SAE Class 2 hose has a permeation rating of 300 grams or less fuel loss per square meter of interior surface in 24 hours.

(e) Each "USCG Type A1," "USCG Type A2," "USCG Type B1," and "USCG Type B2" hose must be identified by the manufacturer by a marking on the hose.

(f) Each marking must contain the following information in English:

(1) The statement "USCG TYPE (insert A1 or A2 or B1 or B2)."

(2) The year in which the hose was manufactured.

(3) The manufacturer's name or registered trademark.

(g) Each character must be block capital letters and numerals that are at least one eighth-inch high.

(h) Each marking must be permanent, legible, and on the outside of the hose at intervals of 12 inches or less.

[CGD 85-098, 52 FR 19728, May 27, 1987]

**§ 183.542 Fuel systems.**

(a) Each fuel system in a boat must have been tested by the boat manufacturer and not leak when subjected to the greater of the following pressures:

(1) Three pounds per square inch; or

(2) One and one-half times the pressure created in the lowest part of the fuel system when it is filled to the level of overflow with fuel.

(b) The test pressure shall be obtained with air or inert gas.

[CGD 81-092, 48 FR 55737, Dec. 15, 1983]