

pipe, or fitting by more than the distance shown in Table 8.

TABLE 8

If minor outside diameter of the connecting spud, pipe, or fitting is—	The inside diameter of the hose must not exceed the minor outside diameter of the connecting spud, pipe, or hose fitting by more than the following distance:
Less than 3/8 in .....	0.020 in.
3/8 in. to 1 in .....	0.035 in.
Greater than 1 in .....	0.065 in.

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

#### § 183.560 Hose clamps: Installation.

Each hose clamp on a hose from the fuel tank to the fuel inlet connection on the engine, a hose between the fuel pump and the carburetor, or a vent line must:

- (a) Be used with hose designed for clamps;
- (b) [Reserved]
- (c) Be beyond the bead, flare, or over the serrations of the mating spud, pipe, or hose fitting; and
- (d) Not depend solely on the spring tension of the clamp for compressive force.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 81-092, 48 FR 55737, Dec. 15, 1983]

#### § 183.562 Metallic fuel lines.

- (a) Each metallic fuel line that is mounted to the boat structure must be connected to the engine by a flexible fuel line.
- (b) Each metallic fuel line must be attached to the boat's structure within four inches of its connection to a flexible fuel line.

#### § 183.564 Fuel tank fill system.

- (a) Each fuel fill opening must be located so that a gasoline overflow of up to five gallons per minute for at least five seconds will not enter the boat when the boat is in its static floating position.
- (b) Each hose in the tank fill system must be secured to a pipe, spud, or hose fitting by:
  - (1) A swaged sleeve;
  - (2) A sleeve and threaded insert; or
  - (3) Two adjacent metallic hose clamps that do not depend solely on

the spring tension of the clamps for compressive force.

(c) Each hose clamp in the tank fill system must be used with a hose designed for clamps.

(d) Hose clamps used in the tank fill system must:

- (1) Have a minimum nominal band width of at least one-half inch; and
- (2) Be over the hose and the spud, pipe, or hose fitting.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 81-092, 48 FR 55737, Dec. 15, 1983]

#### § 183.566 Fuel pumps: Placement.

Each fuel pump must be on the engine it serves or within 12 inches of the engine, unless it is a fuel pump used to transfer fuel between tanks.

#### § 183.568 Anti-siphon protection.

Each fuel line from the fuel tank to the fuel inlet connection on the carburetor must:

- (a) Be above the level of the tank top; or
- (b) Have an anti-siphon device or an electrically operated fuel stop valve:
  - (1) At the tank withdrawal fitting; or
  - (2) Installed so the line from the fuel tank is above the top of the tank; or
- (c) Provided that the fuel tank top is below the level of the carburetor inlet, be metallic fuel lines meeting the construction requirements of §183.538 or "USCG Type A1" hose, with one or two manual shutoff valves installed as follows:
  - (1) Directly at the fuel tank connection arranged to be readily accessible for operation from outside of the compartment, and
  - (2) If the length of fuel line from the tank outlet to the engine inlet is greater than 12 feet, a manual shutoff valve shall be installed at the fuel inlet connection to the engine.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 81-092, 48 FR 55737, Dec. 15, 1983; CGD 85-098, 52 FR 19729, May 27, 1987]

(c) Provided that the fuel tank top is below the level of the carburetor inlet, be metallic fuel lines meeting the construction requirements of §183.538 or "USCG Type A1" hose, with one or two manual shutoff valves installed as follows:

(1) Directly at the fuel tank connection arranged to be readily accessible for operation from outside of the compartment, and

#### § 183.570 Fuel filters and strainers: Installation.

Each fuel filter and strainer must be supported on the engine or boat structure independent from its fuel line connections, unless the fuel filter or strainer is inside a fuel tank.

**§ 183.572**

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**§ 183.572 Grounding.**

Each metallic component of the fuel fill system and fuel tank which is in contact with fuel must be statically grounded so that the resistance between the ground and each metallic component of the fuel fill system and fuel tank is less than 100 ohms.

TESTS

**§ 183.580 Static pressure test for fuel tanks.**

A fuel tank is tested by performing the following procedures in the following order:

(a) Fill the tank with air or inert gas to the pressure marked on the tank label under §183.514(b)(5).

(b) Examine each tank fitting and seam for leaks using a leak detection method other than the pressure drop method.

[CGD 74-209, 42 FR 5950, Jan. 31, 1977, as amended by CGD 81-092, 48 FR 55737, Dec. 15, 1983]

**§ 183.584 Shock test.**

A fuel tank is tested by performing the following procedures in the following order:

(a) Perform the static pressure test under §183.580.

(b) If the tank is non-metallic, fill it to capacity with a gasoline that has at least a 50 percent aromatic content. Keep the fuel in the tank at 21 °C or higher for 30 days prior to testing.

(c) Mount the tank to the platform of an impact test machine.

(d) Fill the tank to capacity with water.

(e) Apply one of the following accelerations within three inches of the center of the horizontal mounting surface of the tank. The duration of each vertical acceleration pulse is measured at the base of the shock envelope.

(1) If the tank is not labeled under §183.514(b)(8) for installation aft of the half length of the boat, apply 1000 cycles of 25g vertical accelerations at a rate of 80 cycles or less per minute. The duration of the acceleration pulse must be between 6 and 14 milliseconds.

(2) If the tank is manufactured for installation with its center of gravity aft of the half length of the boat, apply 1000 cycles of 15g vertical accelerations

at a rate of 80 cycles or less per minute. The duration of the shock pulse must be between 6 and 14 milliseconds.

(f) Perform the static pressure test under §183.580.

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

**§ 183.586 Pressure impulse test.**

A fuel tank is tested by performing the following procedures in the following order:

(a) Perform the static pressure test under §183.580.

(b) If the tank is non-metallic, fill it to capacity with a gasoline that has at least a 50 percent aromatic content. Keep the fuel in the tank at 21 °C or higher for 30 days prior to testing.

(c) Mount the tank on a test platform.

(d) Fill the tank to capacity with water.

(e) Cap and seal each opening in the tank.

(f) Apply 25,000 cycles of pressure impulse at the rate of no more than 15 impulses per minute varying from zero to three PSIG to zero inside the tank top from a regulated source of air, inert gas, or water.

(g) Perform the static pressure test under §183.580.

**§ 183.588 Slosh test.**

A fuel tank is tested by performing the following procedures in the following order:

(a) Perform the static pressure test under §183.580.

(b) Perform the pressure impulse test under §183.586.

(c) Secure the tank to the platform of a tank rocker assembly.

(d) Fill the tank to one-half capacity with water.

(e) Cap and seal each opening in the tank.

(f) Apply 500,000 cycles or rocking motion 15 degrees to each side of the tank centerline at the rate of 15 to 20 cycles a minute. The axis of rotation of the rocker and fuel tank must be perpendicular to the centerline of the tank length at a level six inches or less above or below the tank's bottom.