

§ 183.310

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vertical lines, one at the forward end and one at the aft end of the passenger carrying area, when the boat is level, as illustrated in Figures 3 and 4. For boats with a curved stem inside the passenger carrying area, the forward vertical line is where a line 45 degrees to the horizontal when the boat is level is tangent to the curve of the stem, as illustrated in Figure 5. For boats with cabins, the forward vertical line is where there is a minimum distance of two feet between the inside top of the cabin and the water line formed when the boat is swamped and loaded with weights under § 183.320 as illustrated in Figure 6.

(d) The breadth of the passenger carrying area is the distance between two vertical lines at the mid-length, excluding consoles, of the passenger carrying area when the boat is level as illustrated in Figures 7 and 8. For boats with round chines inside the passenger carrying area, the vertical line is where a transverse line 45 degrees to the horizontal is tangent to the arc of the chine, as illustrated in Figure 7.

[CGD 75-168, 42 FR 20245, Apr. 18, 1977; 42 FR 24738, May 16, 1977]

§ 183.310 Reference areas.

(a) The forward reference area of a boat is the forwardmost 2 feet of the top surface of the hull or deck as illustrated in Figure 9.

(b) The aft reference area of a boat is the aftmost two feet of the top surface of the hull or deck, as illustrated in Figure 9.

§ 183.315 Reference depth.

Reference depth is the minimum distance between the uppermost surface of the submerged reference area of a boat and the surface of the water measured at the centerline of the boat, as illustrated in Figure 10. If there is no deck surface at the centerline of the boat from which a measurement can be made, the reference depth is the average of two depth measurements made on opposite sides of, and at an equal distance from, the centerline of the boat.

§ 183.320 Preconditioning for tests.

A boat must meet the following conditions for at least 18 hours before the

tests required by §§ 183.325, 183.330, and 183.335:

(a) Manufacturer supplied permanent appurtenances such as windshields, and convertible tops must be installed on the boat.

(b) The boat must be loaded with a quantity of weight that, when submerged, is equal to the sum of the following:

(1) Two-fifteenths of the persons capacity marked on the boat.

(2) Twenty-five percent of the result of the following calculation, but not less than zero: the maximum weight capacity marked on the boat; less the weight shown in column 6 of Table 4 for the maximum horsepower marked on the boat; less the persons capacity marked on the boat.

(c) The weights required by paragraph (b) of this section are placed in the boat so that the center of gravity of each amount of weight required by paragraphs (b)(1) and (b)(2) of this section is within the shaded area illustrated in Figure 11. The location and dimensions of the shaded area are as follows:

(1) The shaded area is centered at the mid-length of the passenger carrying area and at the mid-breadth of the boat;

(2) The length of the shaded area, measured along the centerline of the boat, is equal to 40 percent of the length of the passenger carrying area of the boat; and

(3) The breadth of the shaded area, measured at the mid-length of the passenger carrying area, is equal to 40 percent of the breadth of the passenger carrying area of the boat.

(d) Weight must be placed in the normal operating position of the motor and controls in lieu of this equipment. The quantity of weight used for this purpose depends upon the maximum rated horsepower of the boat being tested and is specified in Column 2 of Table 4 for the swamped weight of the motor and controls.

(e) Permanent fuel tanks must be filled with fuel and each external opening into the fuel tank must be sealed.

(f) The boat must be keel down in the water.

(g) The boat must be swamped, allowing water to flow between the inside

and the outside of the boat, either over the sides, through a hull opening, or both. Entrapped air in the flooded portion of the boat must be eliminated.

§ 183.322 Flotation materials.

(a) Flotation materials must meet the requirements in § 183.114 as listed in Table 183.114 when used in the bilge, unless located in a sealed compartment.

[CGD 77-145, 43 FR 56859, Dec. 4, 1978; 44 FR 47934, Aug. 16, 1979]

TESTS

§ 183.325 Flotation test for persons capacity.

Flotation standard. When the conditions prescribed in § 183.320 are met, the boat must float in fresh, calm water as follows:

- (a) The angle of heel does not exceed 10 degrees from the horizontal.
- (b) Any point on either the forward or aft reference area is above the surface of the water.
- (c) The reference depth at the reference area that is opposite the reference area that is above the surface of the water is 6 inches or less.

§ 183.330 Stability test.

(a) *Flotation standard.* When the conditions prescribed in § 183.320 (a), (d) through (g) and paragraphs (b) and (c) of this section are met, the boat must float in fresh, calm water as follows:

- (1) The angle of heel does not exceed 30 degrees from the horizontal.
- (2) Any point on either the forward or aft reference area is above the surface of the water.
- (3) The reference depth at the reference area that is opposite the reference area that is above the surface of the water is 12 inches or less.

(b) *Quantity of weight used.* Load the boat with quantity of weight that, when submerged, is equal to the sum of the following:

- (1) One-half the quantity of weight required by § 183.320(b)(1).
- (2) The quantity of weight required by § 183.320(b)(2).
- (c) *Placement of quantity of weight: starboard side.* Place the quantity of weight required by paragraph (b) of this section in the boat so that:

(1) The quantity of weight required by § 183.320(b)(2) is positioned in accordance with § 183.320(c); and

(2) One-half the quantity of weight required by § 183.320(b)(1) is uniformly distributed over a distance along the outboard perimeter of the starboard side of the passenger carrying area that is equal to at least 30 percent of the length of the passenger carrying area so that the center of gravity of the quantity of weight is located within the shaded area illustrated in Figure 12, the center of gravity of the amount of weight placed on the floor of the boat is at least 4 inches above the floor and the center of gravity of the amount of weight placed on a seat is at least 4 inches above the seat. The location and dimensions of the shaded area are as follows:

- (i) The shaded area is centered at the mid-length of the passenger carrying area;
- (ii) The length of the shaded area is equal to 70 percent of the length of the passenger carrying area; and
- (iii) The breadth of the shaded area is 6 inches from:

(a) For weights placed on the floor, the outboard perimeter of the passenger carrying area; and

(b) For weights placed on a seat, a vertical line inside the passenger carrying area as illustrated in Figure 13.

(d) *Placement of quantity of weight: port side.* The quantity of weight required by paragraph (b)(1) of this section is placed along the port side of the passenger carrying area in accordance with the conditions prescribed in paragraph (c)(2) of this section.

§ 183.335 Level flotation test without weights for persons capacity.

When the conditions prescribed in § 183.320 (a) and (d) through (g) are met, the boat must float in fresh, calm water as follows:

- (a) The angle of heel does not exceed 10 degrees from the horizontal.
- (b) Any point on either the forward or aft reference area is above the surface of the water.