

(i) Recreational hybrid inflatables must provide minimum buoyancy as specified in Table 160.077-15(b)(13):

(ii) The buoyancy and volume displacement of kapok buoyant inserts must be tested in accordance with the procedures prescribed in § 160.047-4(c)(4) and § 160.047-5(e)(1) in lieu of the procedures in UL 1517, section 18 and 19.

(e) The Commandant may prescribe additional tests, if necessary, to approve unique or novel designs.

14. In § 160.077-21, the heading, paragraphs (c)(1), (c)(2), and (c)(3), (c)(4)(i) and (c)(4)(ii), and (g) are revised and paragraphs (c)(5) and (d)(3) are added to read as follows:

§ 160.077-21 Approval Testing—Type I and Commercial Hybrid PFD.

* * * * *

(c) * * *

(1) *Jump test*, UL 1517, section S6 for Adult size. Youth and Small Child sizes are exempt from this test.

(2) *In-water removal*, UL 1517, section S9 for Adult and Youth sizes. The Small Child size is exempt from this test.

(3) *Buoyancy and inflation medium retention test*, UL 1517, Section S10, except the minimum buoyancies must be as specified in the Table 160.077-17(b)(11):

(4) *Flotation stability—adults*.

(i) *Uninflated flotation stability*, UL 1517, section S7, except that for Type I devices the requirements of paragraph S7.1.A apply to all subjects regardless of their in-water weight. For Type V adult-size devices the requirements of paragraph S7.1.A apply to all adult subjects having an in-water weight of 13 lb or less, and the requirements of paragraph S.7.1.B apply to all other adult subjects.

(ii) *Righting action test*, 46 CFR 160.176-13(d)(2) through (d)(5) for Type I hybrid PFDs. UL 1517, Section S8, for Type V hybrid PFDs.

(5) *Flotation stability—youths and small children*.

(i) *Uninflated flotation stability*, UL 1517, section S7, except that the requirements of paragraph S7.1.A apply to all subjects regardless of their in-water weight.

* * * * *

(ii) *Righting action test*, UL 1517, Section 15.3 through 15.13, for Youth and Small Child hybrid PFDs except comparisons are to be made to the appropriate size and type reference vest as defined in § 160.077-2(j).

(d) * * *

(3) Each adult test subject must have a freeboard of at least:

(i) 100 mm (4 inches) if the PFD being tested is to be approved as a Type I hybrid PFD; or

(ii) 120 mm (4.75 inches) if the PFD being tested is to be approved as a SOLAS lifejacket.

* * * * *

(g) The Commandant may prescribe additional tests, if necessary, to approve unique or novel designs.

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15. In § 160.077-23, paragraphs (a)(2), (b)(1)(i), (b)(2)(ii), (b)(2)(iv), (d)(4), (g)(2), (g)(3)(iii), (h)(4), (h)(5), (j)(4)(iii), (k)(1), (k)(2), and notes (2) and (3) to Table 160.077-23B are revised, and paragraphs (b)(2)(v), (d)(5), and (g)(3)(x) are added to read as follows:

§ 160.077-23 Production tests and inspections.

(a) * * *

(2) The Commandant may prescribe additional production tests and inspections if needed to maintain quality control and check for compliance with the requirements of this subpart.

(b) * * *

(1) * * *

(i) Perform all required tests and examinations on each PFD lot before the independent laboratory inspector tests and inspects the lot, except as provided in § 160.077-23(d)(5);

* * * * *

(2) * * *

(ii) Except as specified in paragraph (b)(2)(v) of this section, an inspector must perform or supervise testing and inspection of at least one PFD lot in each five lots produced.

(iii) * * *

(iv) Except as specified in paragraph (b)(2)(v) of this section, at least once each calendar quarter, the inspector must, as a check on the manufacturer's compliance with this section, examine the manufacturer's records required by § 160.077-25 and observe the manufacturer perform each of the tests required by paragraph (h) of this section.

(v) If less than six lots are produced during any calendar year, only one lot inspection in accordance with paragraph (b)(2)(ii) of this section, and one records examination and test performance observation in accordance with paragraph (b)(2)(iv) of this section is required during that year. Each lot tested and inspected must be within seven lots of the previous lot inspected.

* * * * *

(d) * * *

(4) The number of samples selected per lot must be at least the number listed in Table 160.077-23A or Table

160.077-23B, as applicable, except as allowed in paragraph (d)(5) of this section.

(5) If the total production for any five consecutive lots does not exceed 250 devices, the manufacturer's and inspector's tests can be run on the same sample(s) at the same time.

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Table 160.077-23B Inspector's Sampling

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Notes to Table:

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(2) This test may be omitted if the manufacturer has previously conducted it and the inspector has conducted the test on a previous lot within the past year.

(3) One sample of each means of marking on each type of fabric or finish used in PFD construction must be tested whenever a new lot of materials is used or at least every six months regardless of whether a new lot of materials was used within the past six months.

* * * * *

(g) * * *

(2) *Calibration*. The manufacturer must have the calibration of all test equipment checked at least annually by a weights and measures agency or the equipment manufacturer, distributor, or dealer.

(3) * * *

(iii) A *Scale* that has sufficient capacity to weigh a submerged sample basket. The scale must be sensitive to 14 g (0.5 oz) and must not have an error exceeding ±14 g (0.5 oz).

* * * * *

(x) *Inflation chamber materials test equipment*. If the required tests in paragraph (h)(2) of this section are performed by the PFD manufacturer, test equipment suitable for conducting Grab Breaking Strength, Tear Strength, Permeability, and Seam Strength tests must be available at the PFD manufacturer's facility.

* * * * *

(h) * * *

(4) *Over-pressure*. Each sample must be tested according to and meet UL 1517, section 28. Test samples may be prestressed by inflating them to a greater pressure than the required test pressure prior to initiating the test at the specified values.

(5) *Air Retention*. Each sample must be tested according to and meet UL 1517, section 36. Prior to initiating the test at the specified values, test samples may be prestressed by inflating to a pressure greater than the design pressure, but not exceeding 50 percent of the required pressure for the tests in