

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

(3) *Facilities.* The manufacturer must provide a suitable place and the necessary equipment for the inspector to use in conducting or supervising tests. For the final lot inspection, the manufacturer must provide a suitable working environment and a smooth-top table for the inspector's use.

[CGD 94-110, 60 FR 32848, June 23, 1995, as amended by CGD 94-110, 61 FR 13946, Mar. 28, 1996; 61 FR 15868, 61 FR Apr. 9, 1996]

§ 160.076-31 Production tests and examinations.

(a) Samples used in testing must be selected in accordance with § 160.076-29(e).

(b) On each sample selected—

(1) The manufacturer must conduct the tests in paragraphs (c)(2) through (c)(8) of this section;

(2) The recognized laboratory inspector must conduct or supervise the tests in paragraphs (c)(4) through (c)(8) of this section; and

(3) In addition to meeting the requirements of this section, each test result must meet the requirements, if any, contained in the approved plans and specifications.

(c) When conducting the tests specified by this paragraph, the following conditions must be met:

(1) *Inflation chamber materials.* The average and individual results of testing the minimum number of samples prescribed by § 160.076-25(d)(2) must comply with the requirements in § 160.076-21 (b) and (c) for permeability, grab strength, and tear strength. Lots not meeting this requirement must be rejected and, unless authorized by the Commandant, may not be subdivided and retested.

(2) *Seam strength.* The seams in each inflation chamber of each sample must be tested in accordance with § 160.076-25(d)(2)(iv). The results for each inflation chamber must be at least 90% of the results obtained in approval testing.

(3) *Over-pressure.* Each sample must be tested in accordance with and meet

UL 1180 section 7.15. Prior to initiating the test at the specified values, samples may be prestressed by inflating them to a greater pressure than the required test pressure.

(4) *Air retention.* Each sample must be tested in accordance with and meet UL 1180 section 7.16. 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 paragraph (c)(3) of this section. No alternate test method may be used that decreases the length of the test unless authorized by the Commandant. Such alternative test must require a proportionately lower allowable pressure loss and the same percentage sensitivity and accuracy as the standard allowable loss measured with the standard instrumentation.

(5) *Buoyancy and inflation medium retention.* Each sample must be tested in accordance with and meet UL 1180 section 7.2.2-7.2.10, except 7.2.5. Each buoyancy value must fall within the tolerances specified in the approved plans and specifications.

(6) *Tensile strength.* Each sample primary closure system must be tested in accordance with and meet UL 1180 section 7.4.1 and .2.

(7) *Detailed product examination.* Each sample PFD must be disassembled to the extent necessary to determine compliance with the following:

(i) All dimensions and seam allowances must be within tolerances prescribed in the approved plans and specifications.

(ii) The torque of each screw type mechanical fastener must be within its tolerance as prescribed in the approved plans and specifications.

(iii) The arrangement, markings, and workmanship must be as specified in the approved plans and specifications and this subpart.

(iv) The PFD must not contain any apparent defects.

(8) *Waterproof Marking Test.* Each sample must be completely submerged in fresh water for at least 30 minutes. The sample must then be removed, immediately placed on a hard surface, and the markings vigorously rubbed with

the fingers for 15 seconds. If the printing becomes illegible, the sample must be rejected.

(d) *Final lot examination and inspection*—(1) *General*. On each PFD lot that passes production testing, the manufacturer shall perform a final lot examination and, on every fifth lot, a laboratory inspector shall perform a final lot inspection. Samples must be selected in accordance with paragraph §160.076-29(e). Each final lot must demonstrate—

- (i) First quality workmanship;
- (ii) That the general arrangement and attachment of all components, such as body straps, closures, inflation mechanisms, tie tapes, and drawstrings, are as specified in the approved plans and specifications;
- (iii) Compliance with the marking requirements in §160.076-39; and
- (iv) That the information pamphlet and owner's manual required by §160.076-35 and 160.076-37, respectively, are securely attached to the device, with the pamphlet selection information visible and accessible prior to purchase.

(2) *Accept/reject criteria*. Each nonconforming PFD must be rejected. If three or more nonconforming PFDs are rejected for the same kind of defect, lot examination or inspection must be discontinued and the lot rejected.

(3) *Manufacturer examination*. This examination must be conducted by a manufacturer's representative who is familiar with the approved plans and specifications, the functioning of the PFD and its components, and the production testing procedures. This person must not be responsible for meeting production schedules or be supervised by someone who is. This person must prepare and sign the record required by 159.007-13(a) of this chapter and 160.076-33(b).

(4) *Independent laboratory inspection*.
(i) The inspector must discontinue lot inspection and reject the lot if examination of individual PFDs or the records for the lot shows noncompliance with either this section or the laboratory's or the manufacturer's quality control procedures.

(ii) If the inspector rejects a lot, the inspector must advise the Commandant

or the recognized laboratory within 15 days.

(iii) The inspector must prepare and sign the inspection record required by 159.007-13(a) of this chapter and 160.076-33(b). If the lot passes, the record must include the inspector's certification that the lot passed inspection and that no evidence of noncompliance with this section was observed.

(e) *Disposition of rejected PFD lot or PFD*. (1) A rejected PFD lot may be resubmitted for testing, examination or inspection if the manufacturer first removes and destroys each defective PFD or, if authorized by the Commandant, reworks the lot to correct the defect.

(2) Any PFD rejected in a final lot examination or inspection may be resubmitted for examination or inspection if all defects have been corrected and re-examination or reinspection is authorized by the Commandant.

(3) A rejected lot or rejected PFD may not be sold or offered for sale under the representation that it meets this subpart or that it is Coast Guard-approved.

[CGD 94-110, 60 FR 32848, June 23, 1995, as amended by CGD 94-110, 61 FR 13946, Mar. 28, 1996]

§ 160.076-33 Manufacturer records.

(a) Each manufacturer of inflatable PFDs shall keep the records of production inspections and tests as required by §159.007-13 of this chapter, except that they must be retained for at least 120 months after the month in which the inspection or test was conducted.

(b) In addition to the information required by §159.007-13 of this chapter, the manufacturer's records must also include the following information:

(1) For each test, the serial number of the test instrument used if more than one test instrument was available.

(2) For each test and inspection, the identification of the samples used, the lot number, the approval number, and the number of PFDs in the lot.

(3) For each lot rejected, the cause for rejection, any corrective action taken, and the final disposition of the lot.

(4) For all materials used in production the—

- (i) Name and address of the supplier;