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laboratory accepted by the Commandant shall be borne by the manufacturer.

[CGFR 68–32, 33 FR 5721, Apr. 12, 1968, as amended by CGD 73–153R, 40 FR 4422, Jan. 30, 1975]

§ 160.062–3 Materials, construction, workmanship, and performance requirements.

(a) *General.* The materials, construction, workmanship, and performance requirements shall conform to the requirements of the specifications listed in § 160.062–1(a)(1) except as otherwise provided by this subpart. In addition, all metals and materials used in a hydraulic release must be compatible with each other so that the final assembly under conditions of use is not subject to such deleterious effects as galvanic corrosion, freezing, or buckling of moving parts, or loosening and tightening of joints due to differences in coefficients of thermal expansion. Galvanizing or other forms of metallic coating on the parts of a hydraulic release are not acceptable. The criteria for accepting any combination of materials shall be determined by testing or by the data stated in § 160.062–1(b).

(b) *Buoyant load capacity.* A hydraulic release working in conjunction with its spring-tensioned gripe must demonstrate that it can release buoyant loads between the limits of 200 pounds and 3,750 pounds and within the range of depths specified by paragraph (c) of this section.

(c) *Release depth.* A hydraulic release shall automatically release the buoyant loads described in paragraph (b) of this section at depths between 5 feet to 15 feet prior to being tested for either the temperature or the corrosion resistance tests of 160.062–4(c)(2). After exposure to these temperature and corrosion tests, a hydraulic release shall release the buoyant loads of paragraph (b) of this section between the depths of 5 feet to 25 feet.

§ 160.062–4 Inspections and tests.

(a) *General.* Marine inspectors shall be assigned to make factory inspections of hydraulic releases, as described in paragraph (d) of this section for sampling and testing. In addition, the Commander of the Coast Guard District may detail a marine inspector at any time to visit any place where approved hydraulic releases are manufactured or reconditioned to observe production methods and to conduct any inspections or tests which may be deemed advisable. The marine inspector shall be admitted to any place in the factory or place where work is done on hydraulic releases or their components. In addition, the marine inspector may take samples of assembled hydraulic releases or parts or materials used in their construction for further examination, inspection, or tests. The manufacturer shall provide a suitable place and the apparatus necessary for the performance of the tests which are conducted at the place of manufacture by the marine inspector.

(b) *Classification of tests.* The sampling, inspections, and tests conducted upon hydraulic releases shall fall within one of the following general classifications, as described hereafter:

(1) Preapproval tests.

(2) Factory inspections and tests.

(3) Spot check tests.

(4) Periodic servicing tests.

(c) *Preapproval testing.* The ''Visual and dimensional examination'' referred to in Table 160.062–4(c) shall be conducted by a marine inspector at the factory. The ''Physical and operational tests'' of that table shall be conducted at a laboratory accepted by the Commandant.

TABLE 160.062–4(c)—PREAPPROVAL TESTS [1]

Number of specimens	Name of tests	Reference
4	Visual and dimensional examination.	Para. 4.2.1, 4.2.2, and 4.3 of MIL-R-15041C.
4	Physical and operational tests.	Para. 4.2.1, 4.2.3, and 4.4 of MIL-R-15041C.

[1] These tests are called "Lot acceptance tests," in Military Specification MIL-R-15041C.

(1) *Visual and dimensional examination.* The marine inspector shall examine the 4 hydraulic release samples of the preapproval sample for their visual and dimensional characteristics. If all 4 of the devices are in agreement with the manufacturer's plans previously reviewed by the Commandant, the 4 devices will be accepted and are to be assembled for further testing under the

''Physical and operational tests'' of paragraph (c)(2) of this section.

(2) *Physical and operational tests.* Each hydraulic release selected under Table 160.062–4(c) for the ''Physical and operational tests'' shall undergo each of the tests described in this paragraph without renewal of parts or repairs between the tests. The tests shall be conducted in the following sequence:

(i) *Submergence test.* A hydraulic release shall be tested by applying buoyant loads of its designed capacity to its spring-tensioned gripe as required under §160.062–3(b) while the device is submerged in water or in a water-filled pressure testing tank. A hydraulic release shall show by its submergence test that it meets the buoyant capacity and release depth requirements of §160.062–3 (b) and (c) by automatically tripping and releasing its load.

(ii) *Temperature test.* After its submergence test, a hydraulic release sample shall be placed in a cold box at minus 30 degrees F. for 4 hours. Upon completion of this conditioning, the sample device shall be opened for inspection and shall show no significant change in the position of the hydraulic or manual control as a result of the low temperature exposure.

(iii) *Corrosion resisting test.* After the completion of its temperature test, a hydraulic release sample shall be exposed to a 20 percent salt spray test for 160 continuous hours in accordance with Federal Test Method Standard No. 151. At the conclusion of this test, the sample device shall be entirely serviceable and shall show a minimal amount of corrosion.

(iv) *Second temperature test.* After its corrosion resisting test, a hydraulic release sample shall undergo a repeat of the temperature test, subdivision (ii) of this paragraph.

(v) *Second submergence test.* The final test of a hydraulic release sample shall be a repeat of the submergence test, paragraph (c)(2)(i) of this section.

(d) *Factory inspections and tests.* For purposes of sampling, a lot shall consist of not more than 500 hydraulic releases of the same model. Manufacturers of approved hydraulic releases shall maintain quality control of the materials used, manufacturing methods, workmanship, and the finished product as to produce hydraulic releases in conformity with the approvals previously issued by the Commandant.

(1) *Visual and dimensional examination.* A random sample of hydraulic releases shall be selected by a marine inspector at the factory in accordance with Table 160.062–4(d)(1) from each assembled lot. After the samples have been selected, they will undergo an examination of visual and dimensional characteristics by referring to their approved drawings with their acceptance based on Table 160.062–4(d)(1) and MIL-STD-105, and checking for compliance with specific details as described therein.

TABLE 160.062–4(d)(1)—SAMPLING FOR VISUAL AND DIMENSIONAL EXAMINATION [1]

Number of release devices in inspection lot	Number of release devices in sample	Rejection number (defectives)
15 and under	All	
16 to 25	15	1
26 to 40	25	1
41 to 110	35	2
111 to 180	50	2
181 to 300	75	3
301 to 500	110	2

[1] This table is derived from Table I of Paragraph 4.2.2 of Military Specification MIL-R-15041C.

(2) *Physical and operational tests.* If the sampling and examination of paragraph (d)(1) of this section are satisfactory, the marine inspector shall select an additional random sample of hydraulic releases from the same assembled lot as described above. This second group of samples, of a number determined by Table 160.062–4(d)(2), shall be forwarded for testing at the manufacturer's expense to a laboratory accepted by the Commandant. Each hydraulic release shall undergo each of the tests described in this paragraph without renewal of parts or repairs between tests. The tests shall be conducted in the following sequence:

(i) *Submergence test.* Same test as described in paragraph (c)(2)(i) of this section.

(ii) *Temperature test.* Same test as described in paragraph (c)(2)(ii) of this section.

(iii) *Corrosion resisting test.* Same test as described in paragraph (c)(2)(iii) of this section.

(iv) *Second temperature test.* Same test as described in paragraph (c)(2)(iv) of this section.

(v) *Second submergence test.* Same test as described in paragraph (c)(2)(v) of this section.

TABLE 160.062–4(d)(2)—SAMPLING FOR PHYSICAL AND OPERATIONAL TESTS [1]

Number of release devices in inspection lot	Number release devices in sample	Rejection number (failures in the tests)
15 and under	4	1
16 to 25	5	1
26 to 40	7	1
41 to 110	10	1
111 to 180	12	1
181 to 300	16	1
301 to 500	20	1

[1] This table is derived from Table II of Paragraph 4.2.3 of Military Specification MIL-R-15041C.

(3) *Lot acceptance at a factory.* The submergence test of paragraph (c)(2)(i) shall be performed on each of the remaining hydraulic releases in a production lot after the selection of the lot samples required by paragraph (d)(2) of this section. Such individual submergence tests may be performed at the factory in a pressure tank apparatus which simulates the hydrostatic pressure and the various tension loads on the hydraulic release. Those hydraulic releases which do not pass this submergence test shall be removed from the production lot as unacceptable, but may be reworked and included in a subsequent lot. After the completion of these individual submergence tests and after receipt of the laboratory's test report showing that the tests on the lot samples were satisfactorily met, the Commander of the Coast Guard District in which the factory is located shall have the manufacturer notified that this production lot of hydraulic releases meets the requirements of this specification subpart. After being marked as required by §160.062–5, the manufacturer may sell such hydraulic releases as approved equipment.

(i) Hydraulic releases which have been rejected may not, unless subsequently accepted, be sold or offered for sale under representation as being in compliance with this specification or as being approved for use on vessels subject to inspection under this chapter.

(4) *Records and test reports.* The manufacturer shall maintain records and copies of test reports for each production lot of hydraulic releases manufactured for a period of five (5) years from the date notified that a production lot meets the requirements in this subpart. These records and test reports, upon request, shall be made available to the marine inspector. The manufacturer will be provided with a copy of the laboratory's test report concerning each production lot of hydraulic releases submitted for testing.

(e) *Spot checks.* As one of the conditions in granting an approval for a hydraulic release under this subpart, the Coast Guard reserves the right to spot check at any time and at any place the product, parts, and complete assemblies of hydraulic releases covered by the approval. The spot check shall be by a marine inspector who shall be admitted to the place or places where work may be performed before, during, or after the manufacture of hydraulic releases or at any place where hydraulic releases may be assembled, reworked, repaired, or reconditioned by the manufacturer of any repair facility accepted by the Commandant in accordance with the procedure contained in §160.062–7. A spot check includes having a marine inspector compare materials, parts, and workmanship and/or complete hydraulic releases with the manufacturer's approved plans, records and test reports to ascertain compliance with these requirements. The marine inspector may select samples of materials or parts used in the construction of hydraulic releases and complete hydraulic releases and may order or have performed any or all of the tests described in this section conducted on such devices or parts thereof. This work and any tests required shall be borne by the manufacturer without cost to the Coast Guard.

(f) *Periodic Servicing and Testing.* A hydraulic release is inspected as follows:

(1) *Inspection for devices not installed after manufacture.* A hydraulic release, that is not installed after manufacture and is stored for period of 24 months or less, is not required to be inspected or tested before installation but must be stamped by a marine inspector on the

inspection tag required in §160.062–5(b)(2) with—

(i) The word ''Installed'';

(ii) The installation date; and

(iii) The Marine Inspection Office identification letters.

(2) *Inspection for devices that have been installed.* A hydraulic release that is installed for a period of 12 months or more must pass the test contained in paragraph (f)(3) of this section and be marked as required in paragraph (f)(5) of this section. If, after passing the test, the device is stored for a period of 24 months or less, it must be stamped as required in paragraph (f)(1) of this paragraph by the marine inspector before reinstallation.

(3) *Devices stored longer than 24 months.* A hydraulic release that is stored for a period of more than 24 months must be inspected and tested by an employee of a repair or test facility, accepted in accordance with the requirement contained in §160.062–7 or §160.062–8, as follows:

(i) The device must be manually operated to determine if it releases.

(ii) If the device releases, it must pass the submergence test contained in paragraph (c)(2)(i) of this section, at a depth between 5 feet and 15 feet and be marked as required in paragraph (f)(5) of this section.

(iii) If the device fails to release or fails to pass the submergence test required in paragraph (f)(3)(ii) of this section, the device must be disassembled, repaired, and tested in accordance with the requirements contained in paragraph (f)(4) of this paragraph.

(4) *Disassembly and repair tests.* If a hydraulic release fails the test contained in paragraph (f)(3)(iii) of this section, it must be disassembled and repaired by the manufacturer or a repair facility accepted in accord with the requirements contained in §160.062–7 and be tested as follows:

(i) A production lot must be formed consisting of 12 or more but not exceeding 100 devices.

(ii) In the presence of a marine inspector, the device must pass the submergence test contained in paragraph (c)(2)(i) of this section at a depth between 5 feet and 15 feet.

(iii) Any device that fails must be—

(A) Repaired;

(B) Placed in a subsequent lot; and

(C) Submitted to the submergence test contained in paragraph (c)(2)(i) of this section at a depth between 5 feet and 15 feet.

(5) *Marking of devices.* If a hydraulic release passes the submergence test required in paragraph (c)(2)(i) of this section at a depth between 5 feet and 15 feet the marine inspector stamps the inspection tag with—

(i) The test date;

(ii) The Marine Inspection Office identification letters; and

(iii) The letters ''USCG''.

[CGFR 68–32, 33 FR 5721, Apr. 12, 1968, as amended by CGD 73–153R, 40 FR 4422, Jan. 30, 1975; CGD 75–186, 41 FR 10437, Mar. 11, 1976]

§160.062–5 Markings.

(a) Hydraulic releases manufactured prior to the granting of a certificate of approval to the manufacturer may be permitted in service only to July 1, 1969. However, such hydraulic releases meeting the type and design requirements covered by a current certificate of approval may be repaired and/or reconditioned as provided in §160.062–4(f) and be accepted as approved equipment when it bears the following markings:

(1) *Body marking.* The name of the manufacturer and the model designation are plainly visible.

(2) *Inspection tag markings.* Each hydraulic release repaired or reconditioned shall be provided with a 2″ by 3½″ stainless steel tag of a minimum thickness of 0.032 inches. This tag shall be permanently attached to a hydraulic release with a single stainless steel link made of wire 3/16″ in diameter. This link shall provide nonrigid attachment of the tag to the hydraulic release. The top of the inspection tag shall be stamped in block characters not less than 1/16″ in height with the manufacturer's name, Coast Guard approval number, the limits of buoyant capacity in pounds, the Marine Inspection Office identification letters, and the letters ''USCG.'' The remaining space on the tag will be used for the stamping of periodic servicing test dates and the marine inspector's initials as described in §160.062–4(f).

(b) Hydraulic release manufactured under a certificate of approval issued