

§ 160.021-1

§ 160.017-21(c)(1), except that the step may be supported at the points where it would be attached to suspension members in an assembled ladder. If the step fails the test, ten more steps must be selected at random from the lot and tested. If one or more of the ten steps fails the test, each step in the lot must be tested.

(c) *Test #2: Ladders.* Assembled ladders must be separated into lots of 20 ladders or less. One ladder must be selected at random from the ladders in the lot. The ladder selected must be at least 3 m (10 ft.) long or, if each ladder in the lot is less than 3 m long, a ladder of the longest length in the lot must be selected. The ladder must be tested as prescribed in § 160.017-21(c)(2), except that only a 3 m section of the ladder need be subjected to the static load. If the ladder fails the test each other ladder in the lot must be tested.

(d) *Independent laboratory.* Each production test must be conducted or supervised by an independent laboratory. However, if a test is performed more than 4 different times per year, laboratory participation is required only 4 times per year. If the laboratory does not participate in all tests, the times of laboratory participation must be as selected by the laboratory. The times selected must provide for effective monitoring throughout the production schedule.

(e) *Visual examination.* The visual examination described in § 160.017-21(b) must be conducted as a part of each production test.

Subpart 160.021—Hand Red Flare Distress Signals

SOURCE: CGD 76-048a and 76-048b, 44 FR 73060, Dec. 17, 1979, unless otherwise noted.

46 CFR Ch. I (10-1-06 Edition)

§ 160.021-1 Incorporation by reference.

(a) The following is incorporated by reference into this subpart:

(1) “The Universal Color Language” and “The Color Names Dictionary” in *Color: Universal Language and Dictionary of Names*, National Bureau of Standards Special Publication 440, December 1976.

(b) NBS Special Publication 440 may be obtained by ordering from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 (Order by SD Catalog No. C13.10:440).

(c) Approval to incorporate by reference the publication listed in this section was obtained from the Director of the Federal Register on November 1, 1979. The publication is on file at the Federal Register Library.

§ 160.021-2 Type.

(a) Hand red flare distress signals specified by this subpart shall be of one type which shall consist essentially of a wooden handle to which is attached a tubular casing having a sealing plug at the handle end, the casing being filled with a flare composition and having a button of ignition material at the top, with a removable cap having a friction striking material on its top which may be exposed for use by pulling a tear strip. The flare is ignited by scraping the friction striker on top of the cap against the igniter button on top of the flare. The general arrangement of the flare is shown by Figure No. 160.021-2(a). Alternate arrangements which conform to all the performance requirements of this specification (and other arrangements which conform with all performance requirements except candlepower and burning time, but provide not less than 3,000 candlepower minutes with a minimum of 1/3 minute burning time) will be given special consideration.

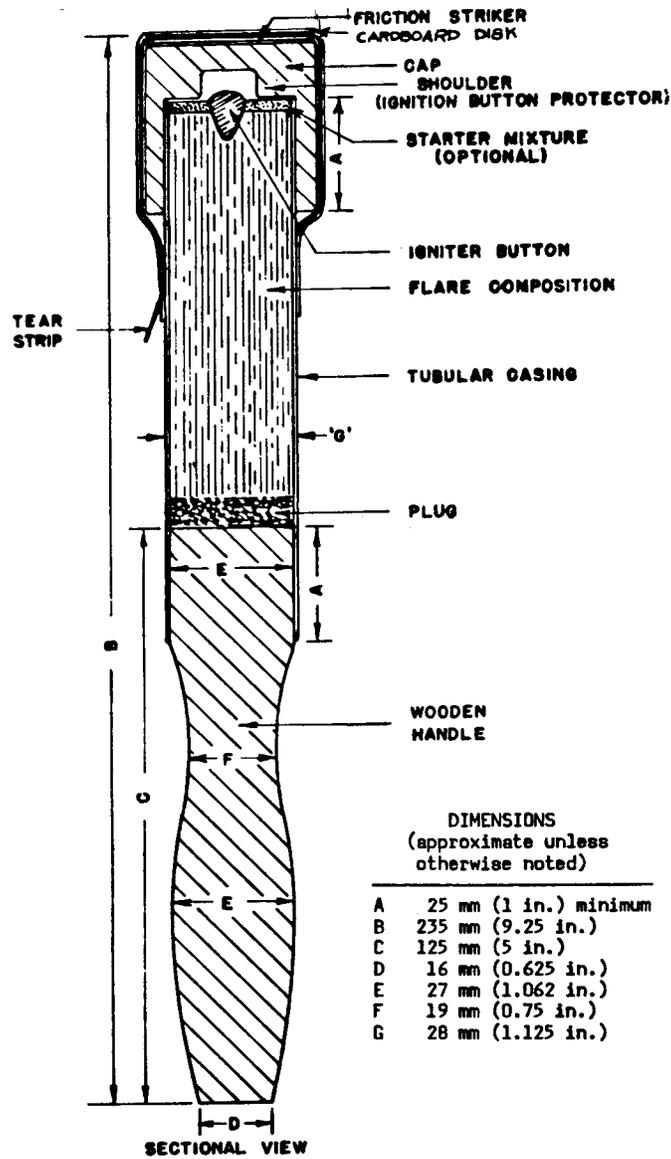


Figure 160.021-2(a). Hand Red Flare Distress Signal - General Arrangement.

§ 160.021-3

(b) [Reserved]

§ 160.021-3 Materials, workmanship, construction and performance requirements.

(a) *Materials.* The materials shall conform strictly to the specifications and drawings submitted by the manufacturer and approved by the Commandant. The color of the tube shall be red. Flare compositions containing sulphur shall not contain more than 2.6 percent of potassium chlorate or an equivalent amount of any other chlorate. Flare compositions containing chlorates in any quantity shall not contain any ammonium salts.

(b) *Workmanship.* Hand red flare distress signals shall be of first class workmanship and shall be free from imperfections of manufacture affecting their appearance or that may affect their serviceability. Moistureproof coatings shall be applied uniformly and shall be free from pinholes or other visible defects which would impair their usefulness.

(c) *Construction.* The casing shall be fitted and secured to the handle with not less than a 25 mm (1 in.) overlap and shall be attached to the handle in such a manner that failure of the joint will not occur during tests, ignition, or operation. The plug shall be securely affixed in the casing to separate the flare composition from the wooden handle. The flare composition shall be thoroughly mixed and be uniformly compressed throughout to preclude variations of density which may adversely affect uniformity of its burning characteristics. The cap shall have a lap fit of not less than 25 mm (1 in.) over the end of the casing and flare composition to entirely and securely protect the exposed surface of the igniter button and end of flare composition and casing, and shall have an inner shoulder so constructed that it is mechanically impossible for the inner surface of the cap to come in contact with the igniter button. The cap shall be securely attached to the casing in such manner as to preclude its accidental detachment. The cap shall be provided on its top with a friction striking material which shall, by a pull of the tear strip, be entirely exposed for striking the friction igniter button.

The igniter button shall be non-water soluble or be protected from moisture by a coating of some waterproof substance, and shall be raised or exposed in such manner as to provide positive ignition by the friction striker. The igniter button shall be firmly secured in or on the top of the flare composition; the arrangement shall be such that the ignition will be transmitted to the flare composition. The assembled flare, consisting of tear strip, cap, casing, and handle, shall be sealed and treated to protect the flare from deterioration by moisture. The protective waterproof coating shall be applied so none adheres to the friction striking surface. Special consideration will be given to alternate waterproofing of the signal by means of a water-resistant coating on the signal plus packaging in a sealed plastic waterproof bag satisfactory to the Commandant.

(d) *Performance.* Signals shall meet all the inspection and test requirements contained in § 160.021-4.

§ 160.021-4 Approval and production tests.

(a) *Approval tests.* The manufacturer must produce a lot of at least 100 signals from which samples must be taken for testing for approval under § 160.021-7. The approval tests are the operational tests and technical tests in paragraphs (c) and (d) of this section. The approval tests must be conducted by an independent laboratory accepted by the Commandant under § 159.010 of this Chapter.

(b) *Production inspections and tests.* Production inspections and tests of each lot of signals produced must be conducted under the procedures in § 159.007 of this chapter. Signals from a rejected lot must not be represented as meeting this subpart or as being approved by the Coast Guard. If the manufacturer identifies the cause of the rejection of a lot of signals, the signals in the lot may be reworked by the manufacturer to correct the problem. Samples from the rejected lot must be retested in order to be accepted. Records shall be kept of the reasons for rejection, the reworking performed on the rejected lot, and the results of the second test.