

§ 76.50-15 Spare charges.

(a) Spare charges shall be carried on all vessels for at least 50 percent of each size and each variety, i.e., foam, soda-acid, carbon dioxide, etc., of hand portable fire extinguisher required by §76.50-10(a). However, if the unit is of such variety that it cannot be readily recharged by the vessel's personnel, one spare unit of the same classification shall be carried in lieu of spare charges for all such units of the same size and variety.

(b) Spare charges shall be so packaged as to minimize the hazards to personnel while recharging the units. Acid shall be contained in a Crown stopper type of bottle.

§ 76.50-90 Vessels contracted for prior to November 19, 1952.

(a) Vessels contracted for prior to November 19, 1952, shall meet the following requirements:

(1) The provisions of §§ 76.50-5 through 76.50-15 shall be met with the exception that existing installations in safety areas, accommodations, service spaces, and cargo spaces may be maintained if in the opinion of the Officer in Charge, Marine Inspection, they are in general agreement with the standard of safety prescribed by Table 76.60-10 (a). In such cases, minor modifications may be made to the same standards as the original installation, provided that in no case will a greater departure from the standards of Table 76.50-10(a) be permitted than presently exists.

**Subpart 76.60—Fire Axes**

§ 76.60-1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 76.60-5 Number required.

(a) All vessels except barges shall carry at least the minimum number of fire axes as set forth in Table 76.60-5(a). Nothing in this paragraph shall be construed as limiting the Officer in Charge, Marine Inspection, from requiring such additional fire axes as he deems necessary for the proper protection of the vessel.

TABLE 76.60-5 (a)

Gross tons		Number of axes
Over	Not over	
-----	50	1
50	200	2
200	500	4
500	1,000	6
1,000	-----	8

(b) Covered barges shall carry at least three fire axes and uncovered barges shall carry at least two fire axes.

§ 76.60-10 Location.

(a) Fire axes shall be distributed throughout the spaces available to passengers and crew so as to be most readily available in the event of emergency.

(b) If fire axes are not located in the open or behind glass so that they may be readily seen, they may be placed in enclosures together with the fire hose, provided such enclosures are marked as required by § 78.47-20 of this subchapter.

**PART 77—VESSEL CONTROL AND MISCELLANEOUS SYSTEMS AND EQUIPMENT**

**Subpart 77.01—Application**

Sec.

77.01-1 General.

**Subpart 77.03—Marine Engineering Systems**

77.03-1 Installation and details.

**Subpart 77.05—Electrical Engineering and Interior Communication Systems**

77.05-1 Installation and details.

**Subpart 77.07—Anchors, Chains, and Hawseers**

77.07-1 Application.

77.07-5 Ocean, coastwise, or Great Lakes Service.

77.07-10 Lakes, bays, and sounds, or river service.

77.07-90 Vessels contracted for prior to November 19, 1952.

**Subpart 77.13—Radiotelegraph and Radiotelephone**

77.13-1 Required by Federal Communications Commission.

**Subpart 77.15—Radio Direction Finder**

77.15-1 Application.

77.15-5 Required by Federal Communications Commission.

77.15-90 Vessels contracted for prior to November 19, 1952.

**Subpart 77.17—Navigation Lights and Shapes**

Sec.  
77.17-1 When required.

**Subpart 77.20—Whistles**

77.20-1 Vessels other than sailing vessels and barges.

**Subpart 77.23—Foghorns**

77.23-1 When required.

**Subpart 77.25—Fog Sound Signal Devices**

77.25-1 When required.

**Subpart 77.27—Sounding Equipment**

77.27-1 When required.

**Subpart 77.30—Emergency Equipment**

77.30-1 Application.  
77.30-5 General.  
77.30-10 Stowage.  
77.30-15 Spare charges.  
77.30-90 Vessels contracted for prior to November 19, 1952.

**Subpart 77.35—Fireman's Outfit**

77.35-1 Application.  
77.35-5 General.  
77.35-10 Fireman's outfit.  
77.35-15 Stowage.  
77.35-20 Spare charges.  
77.35-90 Vessels contracted for prior to May 26, 1965.

**AUTHORITY:** The provisions of this Part 77 issued under R.S. 4405, as amended, 4462, as amended; 46 U.S.C. 375, 416. Interpret or apply R.S. 4417, as amended, 4418, as amended, 4426, as amended, 4488, as amended, 4491, as amended, sec. 10, 35 Stat. 428, as amended, 41 Stat. 305, as amended, secs. 1, 2, 49 Stat. 1544, 1545, as amended, sec. 17, 54 Stat. 166, as amended, sec. 3, 54 Stat. 347, as amended, sec. 3, 70 Stat. 152, sec. 3, 68 Stat. 675; 46 U.S.C. 391, 392, 404, 481, 489, 395, 363, 867, 526p, 1333, 390b, 50 U.S.C. 198; E.O. 11239, July 31, 1965, 30 F.R. 9671, 3 CFR, 1965 Supp. Treasury Department Orders 120, July 31, 1950, 15 F.R. 6521; 167-14, Nov. 26, 1954, 19 F.R. 8026; 167-20, June 18, 1956, 21 F.R. 4894; CGFR 56-28, July 24, 1956, 21 F.R. 5659; 167-38, Oct. 26, 1959, 24 F.R. 8857.

**SOURCE:** The provisions of this Part 77 contained in CGFR 65-50, 30 F.R. 16953, Dec. 30, 1965, unless otherwise noted.

**Subpart 77.01—Application**

**§ 77.01-1 General.**

(a) The provisions of this part shall apply to all vessels except as specifically noted.

**Subpart 77.03—Marine Engineering Systems**

**§ 77.03-1 Installation and details.**

(a) The installation of all systems of a marine engineering nature, together with the details of design, construction, and installation, shall be in accordance with the requirements of Subchapter F (Marine Engineering) of this chapter. Systems of this type include the following:

- Steering systems.
- Power for going astern.
- Bilge and ballast systems.
- Tank vent and sounding systems.
- Overboard discharges and shell connections.
- Pipe and pressure systems.

**Subpart 77.05—Electrical Engineering and Interior Communication Systems**

**§ 77.05-1 Installation and details.**

(a) The installation of all systems of an electrical engineering or interior communications nature, together with the details of design, construction, and installation, shall be in accordance with the requirements of Subchapter J (Electrical Engineering) of this chapter. Systems of this type include the following:

- Ship's service lighting and power systems.
- Emergency lighting and power systems.
- General alarm systems.
- Sound powered telephone and voice tube communication systems.
- Engine order telegraph systems.
- Rudder angle indicator systems.
- Emergency loudspeaker systems.
- Refrigerated spaces alarm systems.
- Miscellaneous machine alarms and controls.
- Daylight signaling lamps.

**Subpart 77.07—Anchors, Chains, and Hawasers**

**§ 77.07-1 Application.**

(a) The provisions of this subpart, with the exception of § 77.07-90, shall apply to all vessels contracted for on or after November 19, 1952. Vessels contracted for prior to November 19, 1952, shall meet the requirements of § 77.07-90.

**§ 77.07-5 Ocean, coastwise, or Great Lakes service.**

(a) Vessels in ocean, coastwise, or Great Lakes service shall be fitted with anchors, chains, and hawsers in general agreement with the standards estab-

lished by the American Bureau of Shipping, see Subpart 70.35 of this subchapter.

**§ 77.07-10 Lakes, bays, and sounds, or river service.**

(a) Vessels in lakes, bays, and sounds, or river service shall be fitted with such ground tackle and hawsers as deemed necessary by the Officer in Charge, Marine Inspection, depending upon the size of the vessel and the waters on which it operates.

**§ 77.07-90 Vessels contracted for prior to November 19, 1952.**

(a) Vessels contracted for prior to November 19, 1952, shall meet the following requirements:

(1) Installations previously accepted or approved shall be considered satisfactory for the same service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. If the service of the vessel is changed, the suitability of the equipment will be established by the Officer in Charge, Marine Inspection.

**Subpart 77.13—Radiotelegraph and Radiotelephone**

**§ 77.13-1 Required by Federal Communications Commission.**

(a) Radiotelegraph and radiotelephone installations are required on certain vessels. Details of the application of this requirement as well as details of the installation shall be as required by the statutes and regulations under the jurisdiction of the Federal Communications Commission.

**Subpart 77.15—Radio Direction Finder**

**§ 77.15-1 Application.**

(a) The provisions of this subpart, with the exception of § 77.15-90, shall apply to all mechanically propelled vessels of 1,600 gross tons and over in ocean service or on an international voyage contracted for on or after November 19, 1952. Such vessels contracted for prior to November 19, 1952, shall meet the requirements of § 77.15-90.

**§ 77.15-5 Required by Federal Communications Commission.**

(a) All vessels shall be fitted with a radio direction finder. Details of the

installation shall be as required by the statutes and regulations under the jurisdiction of the Federal Communications Commission.

**§ 77.15-90 Vessels contracted for prior to November 19, 1952.**

(a) Vessels contracted for prior to November 19, 1952, shall meet the following requirements:

(1) Vessels of over 5,000 gross tons shall meet the requirements of § 77.15-5.

(2) Vessels of from 1,600 gross tons through 5,000 gross tons shall meet the requirements of § 77.15-5 on or before November 19, 1954.

**Subpart 77.17—Navigation Lights and Shapes**

**§ 77.17-1 When required.**

(a) All vessels shall be equipped with navigation lights and shapes as prescribed by law and regulation.

**Subpart 77.20—Whistles**

**§ 77.20-1 Vessels other than sailing vessels and barges.**

(a) All vessels other than sailing vessels and barges shall be equipped with an efficient whistle or similar appliance to give the necessary whistle signals required by the Rules of the Road applicable to the waters on which the vessel is navigated. The location of the whistle and operating devices shall be as follows:

(1) Means shall be provided to operate the whistle or other appliance from a position adjacent to the main steering station and from the steering station on top of the wheelhouse where such steering station is fitted. Details of the whistle operating device shall be as described in Subchapter J (Electrical Engineering) of this chapter.

(2) In general, the whistle shall be located on the forward side of or above the structure of the vessel so as to be as free of obstructions as possible. Where practicable, it shall be installed at least 6 feet above the wheelhouse, except that on vessels navigating the Western Rivers, and any vessel of less than 100 gross tons, it shall be at least 2 feet above the wheelhouse.

(3) On double ended ferry vessels and similar vessels, where steam whistles are employed, they shall be installed both forward and aft of the stacks or one such whistle on either the port or starboard side of the stack.

**Subpart 77.23—Foghorns**

**§ 77.23-1 When required.**

(a) Vessels shall be equipped with an efficient foghorn as prescribed by the Rules of the Road for the waters on which the vessel is navigated. On vessels in ocean or coastwise service, the fog horn shall be sounded by mechanical means.

**Subpart 77.25—Fog Sound Signal Devices**

**§ 77.25-1 When required.**

(a) All vessels shall be provided with an efficient fog bell at least 8 inches in diameter. The fog bell shall be located where the sound will be least obstructed.

(b) All vessels of more than 350 feet in length shall be provided with a fog gong which will produce a sound easily distinguishable from the sound of the bell required by paragraph (a) of this section and shall have a range of audibility approximating that of the bell. Vessels operating exclusively on the Great Lakes and the inland waters of the United States shall be exempt from this paragraph.

**Subpart 77.27—Sounding Equipment**

**§ 77.27-1 When required.**

(a) All mechanically propelled vessels in ocean or coastwise service of 500 gross tons and over, and all mechanically propelled vessels in Great Lakes service of 1,500 gross tons and over, except paddle wheel vessels, shall be fitted with an efficient mechanical or electronic deep-sea sounding apparatus in addition to the deep-sea hand leads. On Great Lakes vessels, a shallow water alarm may be substituted.

**Subpart 77.30—Emergency Equipment**

**§ 77.30-1 Application.**

(a) The provisions of this subpart, with the exception of § 77.30-90, shall apply to all vessels not on an international voyage contracted for on or after November 19, 1952. Such vessels contracted for prior to November 19, 1952, shall meet the requirements of § 77.30-90.

**§ 77.30-5 General.**

(a) All self-contained breathing apparatus and gas masks shall be of an approved type, constructed in accordance with Subpart 160.011 of Subchapter Q (Specifications) of this chapter.

(b) All gas masks, except the special refrigeration gas masks, shall be of the type approved by the Bureau of Mines as "Type N, Universal Gas Mask".

(c) All flame safety lamps shall be of an approved type, constructed in accordance with Subpart 160.016 of Subchapter Q (Specifications) of this chapter.

(d) All emergency equipment shall be maintained in an operative condition, and it shall be the responsibility of the master and chief engineer to ascertain that a sufficient number of the crew are familiar with the operation of the equipment.

**§ 77.30-10 Stowage.**

(a) The equipment set forth in Table 77.30-10 (a), together with such other items as the master may deem necessary, shall be stowed in convenient, accessible locations for use in case of emergency.

(b) The refrigeration gas masks shall be stowed convenient to, but outside of the spaces containing the refrigeration equipment.

(c) Half of the remaining equipment set forth in Table 77.30-10 (a) shall be stowed in or near the pilothouse together

TABLE 77.30-10(a)

Service	Number of passenger staterooms	Self-contained breathing apparatus	Additional gas masks or self-contained breathing apparatus	Special refrigeration gas masks <sup>1</sup>	Flame safety lamps
Ocean and coastwise, not on an international voyage.	0 to 49.....	1	3	1	---
	50 to 100.....	1	3	1	1
	Over 100.....	1	5	1	1
Great Lakes, and lakes, bays, and sounds.	0 to 49.....	1	1	1	---
	50 to 100.....	1	3	1	1
	Over 100.....	1	3	1	1
Rivers.....	0 to 49.....	1	---	1	---
	50 to 100.....	1	---	1	---
	Over 100.....	1	1	1	1

<sup>1</sup> Required only on vessels equipped with refrigeration, small unit type refrigerators of not more than 20 cubic feet capacity excluded. A gas mask suitable for protection against each refrigerant used shall be provided.

with a fire axe and the hand portable fire extinguishers required by Table 76.50-10 (a) for that location. The other half

of the equipment shall be stowed in a convenient accessible location, remote from the pilothouse, and preferably adjacent to the main entrance to the machinery space. Where only one of an item is required, it shall be stowed in the pilothouse.

§ 77.30-15 Spare charges.

(a) A complete recharge shall be carried for each gas mask and self-contained breathing apparatus. The spare charge shall be stowed in the same location as the equipment it is to reactivate.

§ 77.30-90 Vessels contracted for prior to November 19, 1952.

(a) Vessels contracted for prior to November 19, 1952, shall meet the following requirements:

(1) The requirements of §§ 77.30-5 through 77.30-15 shall be complied with insofar as the number of items of equipment and the method of stowage of the equipment is concerned. Existing items of equipment previously approved, but not meeting the applicable specifications set forth in § 77.30-5, may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection, but all new installations or replacements shall meet the applicable specifications or requirements.

**Subpart 77.35—Fireman's Outfit**

§ 77.35-1 Application.

(a) The provisions of this subpart, with the exception of § 77.35-90, shall apply to all vessels on an international voyage contracted for on or after May 26, 1965. Such vessels contracted for prior to May 26, 1965, shall meet the requirements of § 77.35-90.

§ 77.35-5 General.

(a) All flame safety lamps shall be of an approved type, constructed in accordance with Subpart 160.016 of Subchapter Q (Specifications) of this chapter.

(b) All self-contained breathing apparatus shall be of an approved type, constructed in accordance with Subpart 160.011 of Subchapter Q (Specifications) of this chapter.

(c) All flashlights shall be of an approved 3-cell explosion-proof type, constructed in accordance with Subpart 161.008 of Subchapter Q (Specifications) of this chapter.

(d) All lifelines shall be of steel or bronze wire rope. Steel wire rope shall be either inherently corrosion resistant, or made so by galvanizing or tinning. Each end shall be fitted with a hook with keeper having throat opening which can be readily slipped over a 5/8-inch bolt.

The total length of the lifeline shall be dependent upon the size and arrangement of the vessel, and more than one line may be hooked together to achieve the necessary length. No individual length of lifeline may be less than 50 feet in length. The assembled lifeline shall have a minimum breaking strength of 1,500 pounds.

(e) All equipment shall be maintained in an operative condition, and it shall be the responsibility of the master and chief engineer to ascertain that a sufficient number of the crew are familiar with the operation of the equipment.

§ 77.35-10 Fireman's outfit.

(a) A fireman's outfit shall consist of one self-contained breathing apparatus with lifeline attached, one flashlight, one flame safety lamp, and one fire ax.

(b) The number of fireman's outfits required are as set forth in Table 77-35-10(b).

TABLE 77.35-10(b)

Gross tonnage		Minimum number of fireman's outfits
Over—	Not over—	
10,000	20,000	2
20,000		3
		4

§ 77.35-15 Stowage.

(a) The fireman's outfit, together with such other items of equipment as the master may deem necessary, shall be stowed in convenient, accessible locations for use in case of emergency. One outfit shall be stowed in or near the pilot-house. Where additional outfits are required by Table 77.35-10(b), one of the additional outfits shall be stowed preferably adjacent to the main entrance to the machinery space. Other additional outfits shall be stowed in convenient accessible locations remote from the pilot-house.

§ 77.35-20 Spare charges.

(a) A complete recharge shall be carried for each self-contained breathing apparatus, and a complete set of spare batteries shall be carried for each flashlight. The spares shall be stowed in the same location as the equipment it is to reactivate.

**§ 77.35-90 Vessels contracted for prior to May 26, 1965.**

(a) Vessels contracted for prior to May 26, 1965, shall meet the following requirements:

(1) The requirements of §§ 77.35-5 through 77.35-20 shall be complied with insofar as the number of items of equipment and the method of stowage of the equipment is concerned. Existing items of equipment previously approved, but not meeting the applicable specifications set forth in § 77.35-5, may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection, but all new installations or replacements shall meet the applicable specifications or requirements.

**PART 78—OPERATIONS**

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| <p><b>Sec.</b><br/>78.01-1 General.</p> <p><b>Subpart 78.03—Penalties</b><br/>78.03-1 General.</p> <p><b>Subpart 78.05—Notice to Mariners and Aids to Navigation</b><br/>78.05-1 Duty of officers.<br/>78.05-5 Charts.</p> <p><b>Subpart 78.07—Notice of Casualty and Voyage Records</b><br/>78.07-1 Notice of casualty.<br/>78.07-5 Information required.<br/>78.07-10 Written report.<br/>78.07-15 Retention of records.<br/>78.07-20 Aids to navigation.<br/>78.07-25 Reports when state of war exists.</p> <p><b>Subpart 78.10—Persons Allowed in Pilothouse and on Navigation Bridge</b><br/>78.10-1 Persons excluded.</p> <p><b>Subpart 78.13—Station Bills</b><br/>78.13-1 Master's responsibility.<br/>78.13-5 Duties of crew.<br/>78.13-10 Emergency signals.<br/>78.13-15 Emergency squad.<br/>78.13-20 Master to instruct crew.</p> <p><b>Subpart 78.14—Manning of Lifeboats and Liferrafts</b><br/>78.14-1 Application.<br/>78.14-5 Person in command of lifeboat or liferaft.<br/>78.14-10 Certificated lifeboatmen.<br/>78.14-15 Motor-propelled lifeboat.<br/>78.14-20 Lifeboat carrying a wireless or searchlight.</p> | <p><b>Subpart 78.15—Doors Closed at Sea</b><br/><b>Sec.</b><br/>78.15-1 Subdivision bulkheads.</p> <p><b>Subpart 78.17—Tests, Drills, and Inspections</b><br/>78.17-1 Application.<br/>78.17-3 Watertight doors.<br/>78.17-5 Valves and closing appliances.<br/>78.17-10 Loudspeaker system.<br/>78.17-15 Steering gear, whistle, and means of communication.<br/>78.17-20 Drafts and load line markings.<br/>78.17-25 Sanitation.<br/>78.17-30 Examination of boilers and machinery.<br/>78.17-35 Hatches and other openings.<br/>78.17-40 Line-throwing appliances.<br/>78.17-45 Emergency lighting and power systems.<br/>78.17-50 Fire and boat drills.<br/>78.17-55 Electric power operated lifeboat winches.<br/>78.17-60 Lifeboats, liferafts, lifeboats, and buoyant apparatus.<br/>78.17-65 Smoke detecting system.<br/>78.17-70 Radio apparatus for lifeboats.<br/>78.17-75 Requirements for fuel oil.<br/>78.17-80 Firefighting equipment, general.</p> <p><b>Subpart 78.20—Steering Orders</b><br/>78.20-1 Method of communicating.</p> <p><b>Subpart 78.23—Whistling</b><br/>78.23-1 Unnecessary whistling prohibited.</p> <p><b>Subpart 78.25—Unauthorized Lights</b><br/>78.25-1 Unauthorized lights prohibited.</p> <p><b>Subpart 78.27—Searchlights</b><br/>78.27-1 Improper use prohibited.</p> <p><b>Subpart 78.30—Lookouts, Pilothouse Watch, Patrolmen, and Watchmen</b><br/>78.30-5 Pilothouse watch.<br/>78.30-10 Supervised patrol.<br/>78.30-15 Watchmen.<br/>78.30-20 Master's and officer's responsibility.<br/>78.30-30 Reckless or negligent operation prohibited by law.</p> <p><b>Subpart 78.33—Reports of Accidents, Repairs, and Unsafe Equipment</b><br/>78.33-1 Repairs of boiler and pressure vessels.<br/>78.33-5 Accidents to machinery.<br/>78.33-10 Notice required before repairs.<br/>78.33-20 Breaking of safety valve seal.</p> <p><b>Subpart 78.35—Cable Traveler</b><br/>78.35-1 When required.</p> <p><b>Subpart 78.36—Work Vests</b><br/>78.36-1 Application.<br/>78.36-5 Approved unicellular plastic foam work vests.</p> |
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