

THOLEPIN SAFETY NOTES

THE RULES OF THE ROAD:

Club Requirements derive from US COAST GUARD and International Maritime Organization Rules

Part 2: Lights and Day Shapes

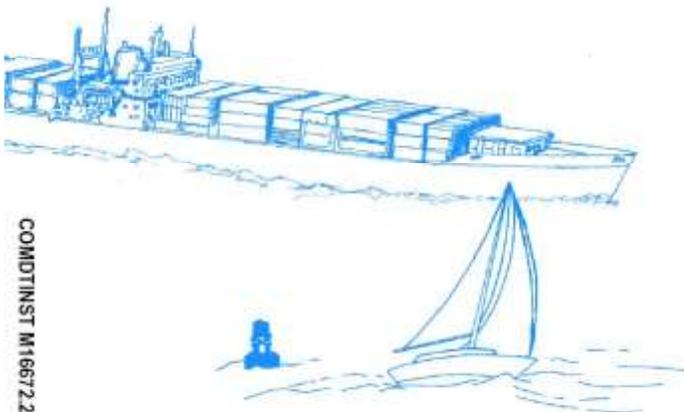
Extracts from United States Department of Homeland Security, Commandant of the Coast Guard Instruction M16672.2D, Navigation Rules International and Inland. Commonly known as “The Rules of the Road”

NAVIGATION RULES

U.S. Department
of Transportation
**United States
Coast Guard**



NAVIGATION RULES
INTERNATIONAL—INLAND



COMDTINST M16672.2D

The purpose of this note is to provide the reference for the rules we use to prevent collisions with other vessels.

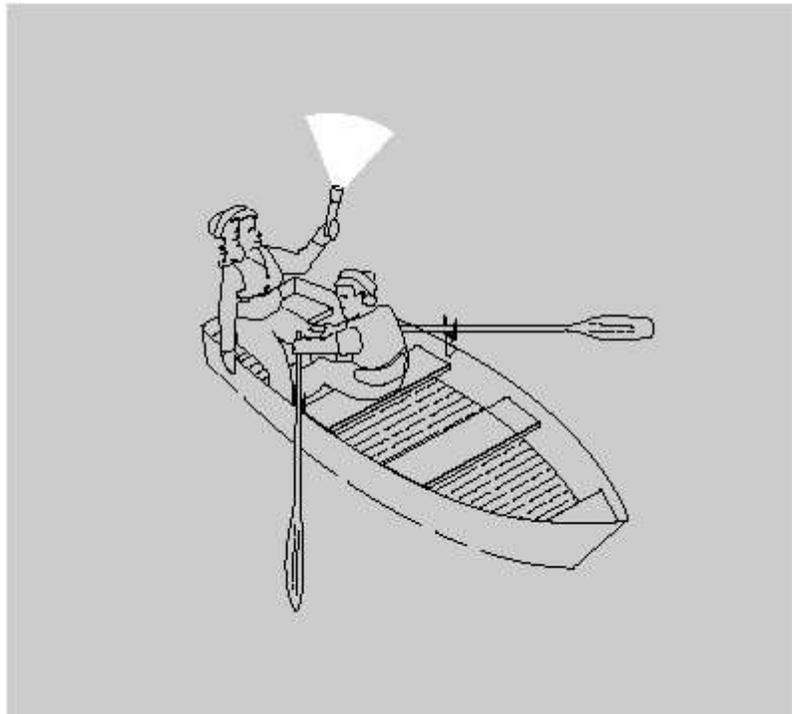
The Club published its compilation of the Rules of the Road in the Procedures For All Old Anacortes Rowing and Sailing Society Boats.

In this article, the COLREGS references to “parts” and “rules” are those used in the publication. There are more lighting configurations in the COLREGS than those in this article. The reader is referred to the reference for the complete listing.

The rules are designed to prevent collisions by prescribing steering actions, standard lighting, and sound signals. Steering rules were outlined in part 1 of this safety note series. Lighting rules and sound signals are presented here.

LIGHTING RULES prescribe those red, green, yellow, and white lights used by ships and boats and the SHAPES displayed during daylight.

- I. WHEN ARE LIGHTS REQUIRED?: sunset to sunrise and anytime when visibility is restricted. (Part C Rule 20)
- II. ROWBOAT LIGHTING (Part C Rule 25): *A vessel under oars may exhibit the lights prescribed in this Rule for sailing vessels, but if she does not, she shall have ready at hand an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.*



- III. The Major Types of Vessels and how they are lighted: Rules 23 through 30

A. Rule 23 Power-driven Vessels Underway

- (a) A power-driven vessel underway shall exhibit:
 - (i) *a masthead light forward;*
 - (ii) *a second masthead light abaft of and higher than the forward one; except that a vessel of less than 50 meters in length shall not be obliged to exhibit such light but may do so;* (iii) *sidelights;* and (iv) *a sternlight.*

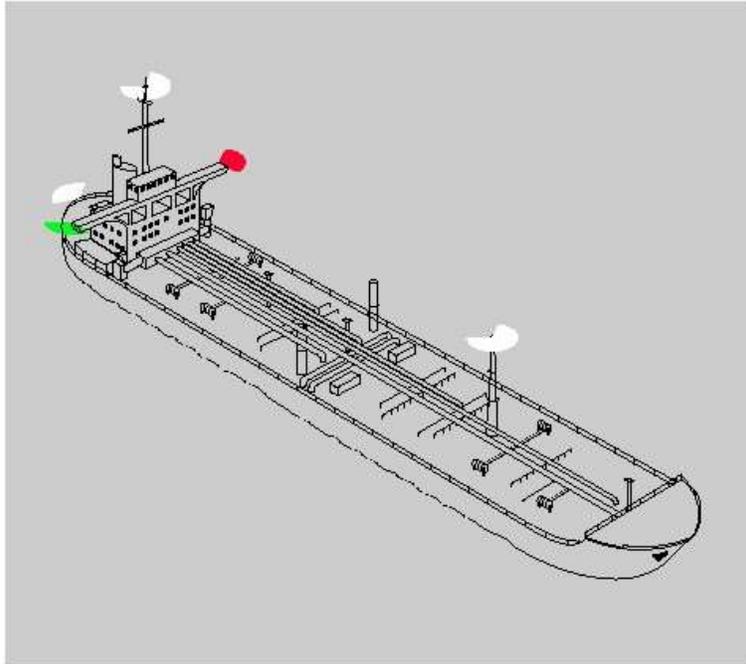


Figure 1 Power Driven Vessel over 50 meters in length

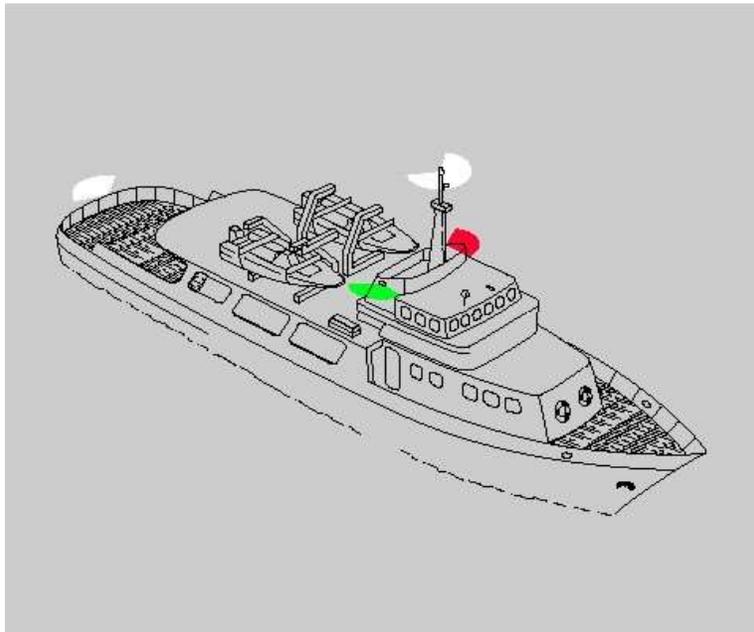


Figure 2 Power Driven Vessel under 50 meters in length

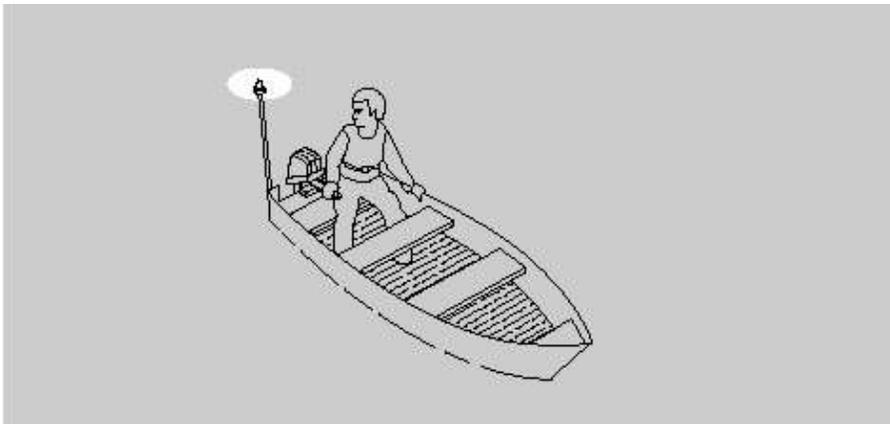


Figure 3 Power-driven vessel of less than 7 meters in length whose maximum speed does not exceed 7 knots.

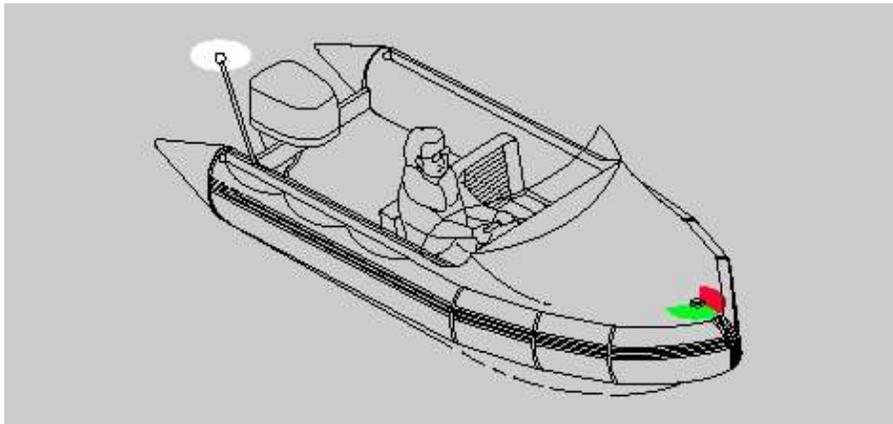


Figure 4 Power-driven vessel of less than 12 meters in length. Same for International.

B. RULE 24 Towing and Pushing: COUNT THE WHITE LIGHTS and note the YELLOW stern towing light

(a) A power-driven vessel when towing shall exhibit:

- (i) *two masthead lights in a vertical line. When the length of the tow, measuring from the stern of the towing vessel to the after end of the tow exceeds 200 meters, three such lights in a vertical line;*
- (ii) *sidelights;*
- (iii) *a stern light;*
- (iv) *a towing light in a vertical line above the stern light; and*
- (v) *when the length of the tow exceeds 200 meters, a diamond shape where it can best be seen.*

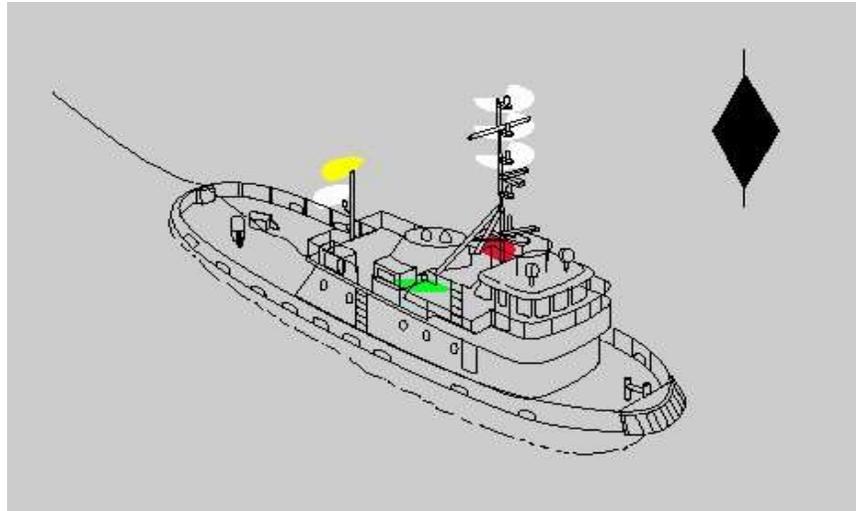


Figure 5 Towing astern under 50M length, length of tow 200 M

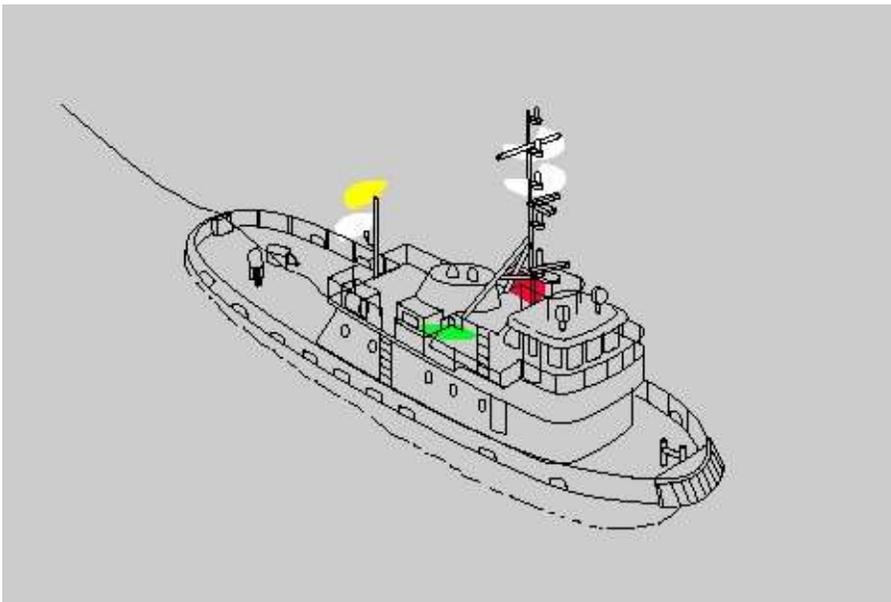


Figure 6 Vessel towing astern - towing vessel less than 50 meters in length; length of tow 200 meters or less.

**C. RULE 25 Sailing Vessels Underway and Vessels Under Oars:
“Red over Green-a sailing machine”**

- (a) A sailing vessel underway shall exhibit:
 - (i) *sidelights;*
 - (ii) *a stern light.*

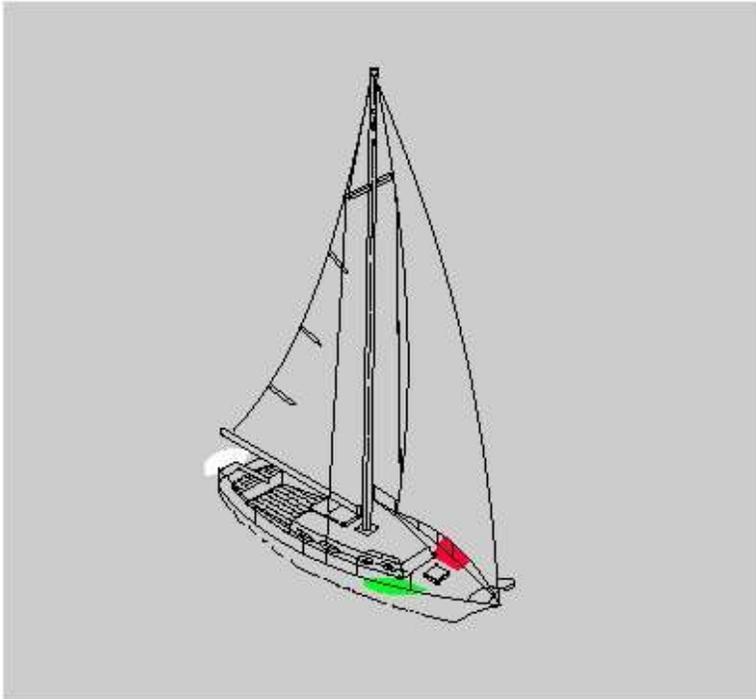


Figure 7 Sailing vessel lighting configuration 1

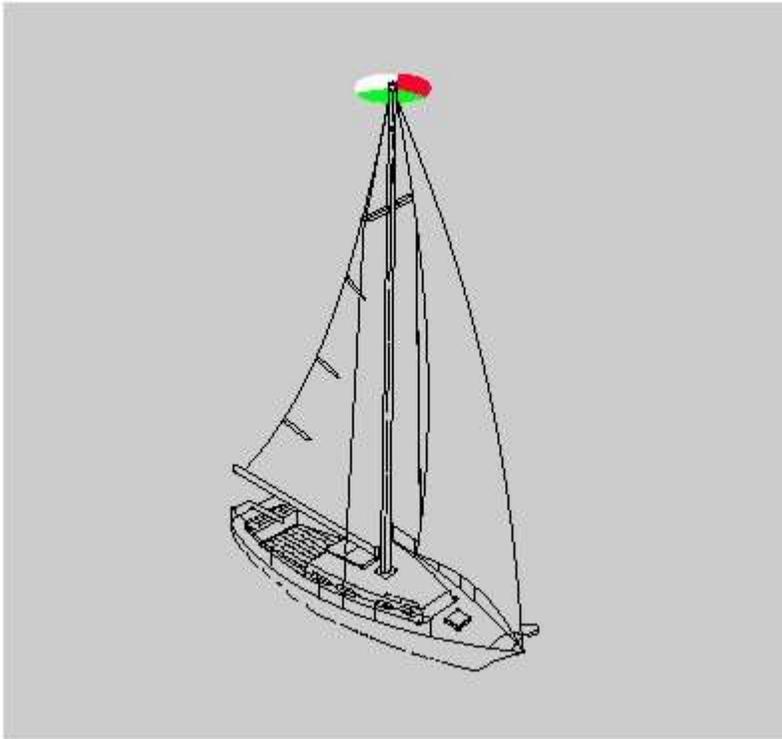


Figure 8 Sailing vessel less than 20M long optional lighting configuration

- (b) *In a sailing vessel of less than 20 meters in length the lights prescribed in paragraph (a) of this Rule may be combined in one lantern carried at or near the top of the mast where it can best be seen.*

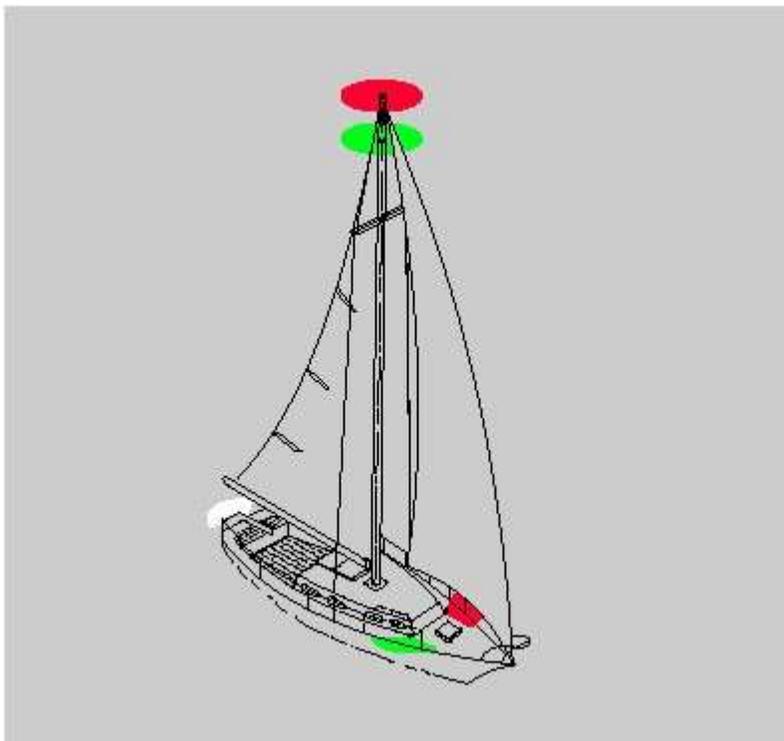


Figure 9 Sailing vessel optional lighting configuration

(c) A sailing vessel underway may, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit at or near the top of the mast, where they can best be seen, two all-round lights in a vertical line, the upper being red and the lower green, but these lights shall not be exhibited in conjunction with the combined lantern permitted by paragraph (b) of this Rule.

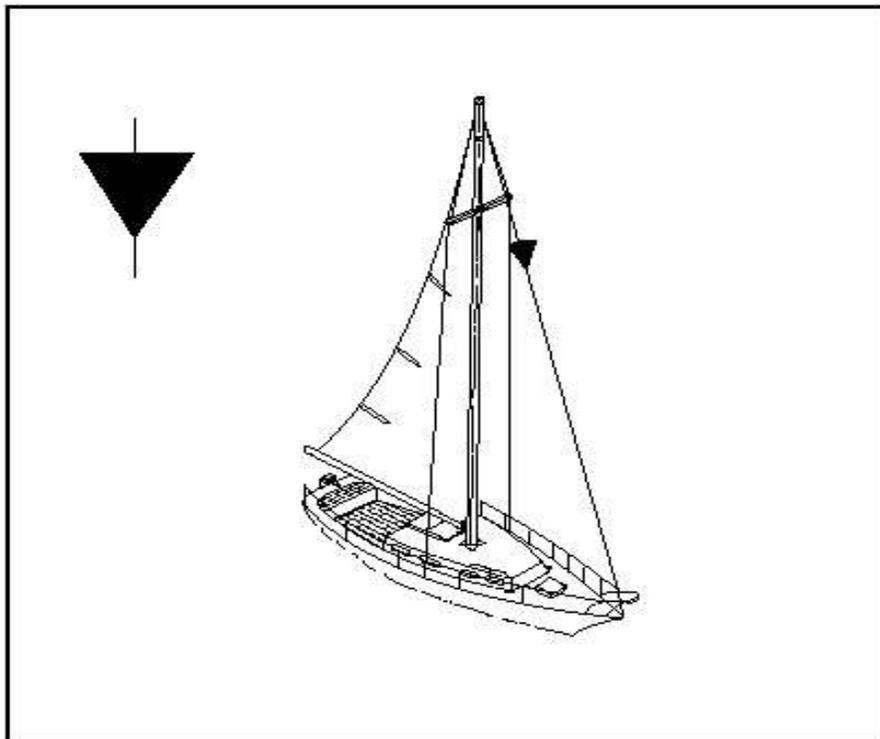


Figure 9 sailing vessel motor sailing

Vessel proceeding under sail when also being propelled by machinery. Same for Inland except that a vessel of less than 12 meters in length is not required to exhibit the dayshape. (e) A vessel proceeding under sail when also being propelled by machinery shall exhibit forward where it can best be seen a conical shape, apex downward. A vessel of less than 12 meters in length is not required to exhibit this shape, but may do so.

D. Rule 26 Fishing Vessels: “Red over White fishing at night”

While there are several types of fishing vessels operating in the Salish Sea waters, the Rules make a distinction between trawlers and other fishing vessels. Trawlers tow nets behind them and when not making way, could be hauling back their net. This gear is both large and heavy with outlying equipment that could do great damage to other vessels should they run over the trawl net and gear. For this reason, the trawler should be given wide berth.

From Rule 26:

- (a) A vessel engaged in FISHING, whether underway or at anchor, shall exhibit only the lights and shapes prescribed in this Rule.
- (b) A vessel when engaged in TRAWLING, by which is meant the dragging through the water of a dredge net or other apparatus used as a fishing appliance, shall exhibit:
 - (i) two all-round lights in a vertical line, the upper being GREEN and the lower WHITE, or a shape consisting of two cones with their apexes together in a vertical line one above the other;
 - (ii) a masthead light abaft of and higher than the all-round green light; a vessel of less than 50 meters in length shall not be obliged to exhibit such a light but may do so; and
 - (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

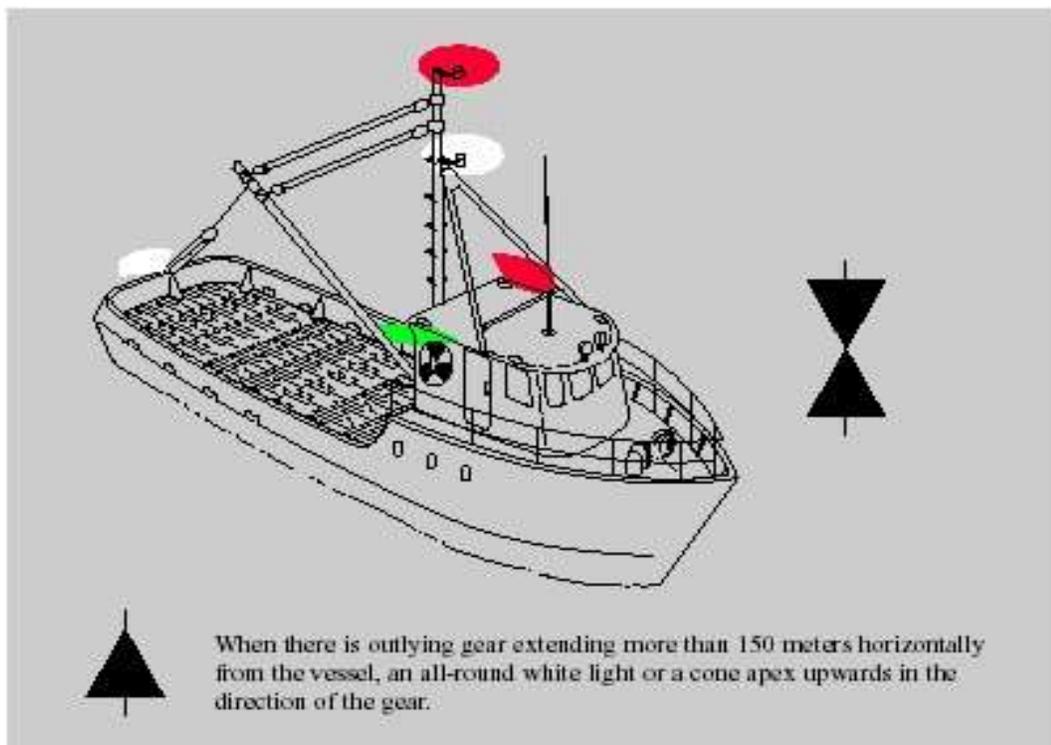


Figure 10 Fishing vessel other than trawling less than 50M in length underway

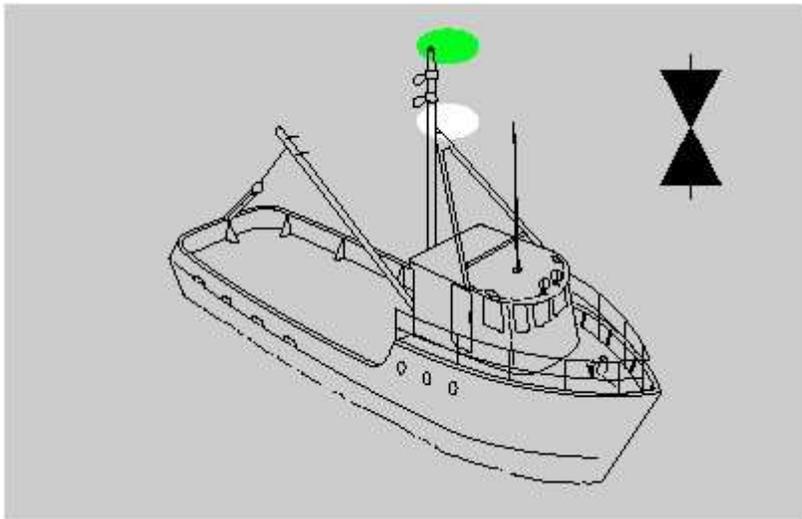


Figure 11 Fishing vessel trawling less than 50M long not underway

E. RULE 27 Vessels Not Under Command or Restricted in Their Ability to Maneuver:
 “Red over Red the Captain is dead” “Red White Red-restricted maneuvering ahead”

Note that the signals prescribed in this Rule are *not signals of vessels in distress and requiring assistance*. Such signals are contained in Annex IV to these Regulations.

(a) A vessel **not under command** shall exhibit:

- (i) two all-round red lights in a vertical line where they can best be seen;
- (ii) two balls or similar shapes in a vertical line where they can best be seen;
- (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight. “Making way” contrasts with “underway”. “Making way” means the ship is moving, whether by machinery or current. “Underway” means the ship is not tied to land whether by anchor or mooring lines.

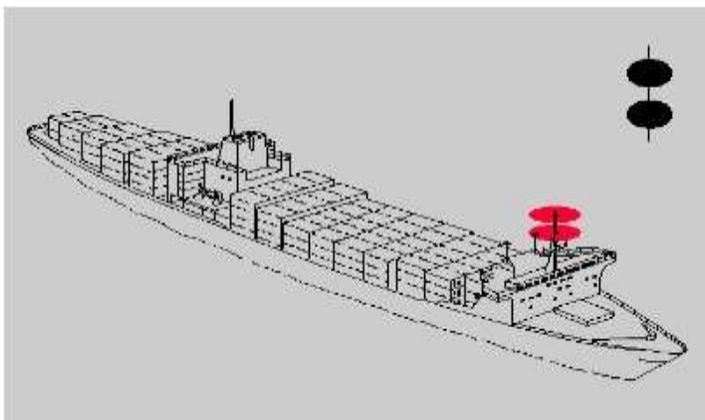


Figure 12 Vessel not under command not making way

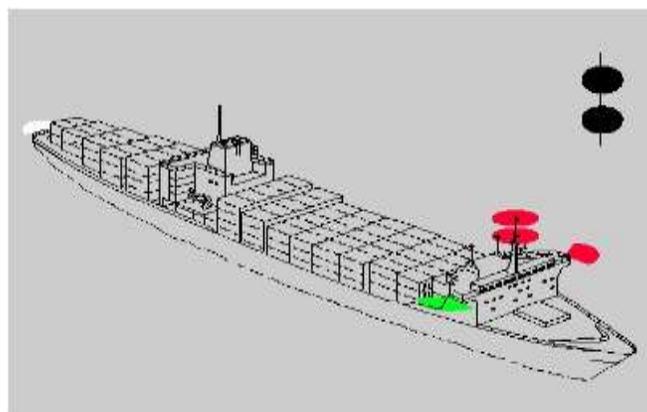


Figure 13 Vessel not under command making way

(b) A vessel **restricted in her ability to maneuver**, except a vessel engaged in mine clearance operations, shall exhibit:

- (i) three all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white;
- (ii) three shapes in a vertical line where they can best be seen. The highest and lowest of these shapes shall be balls and the middle one a diamond;
- (iii) when making way through the water, a masthead light or lights, sidelights and a stern light, in addition to the lights prescribed in subparagraph (i);
- (iv) when at anchor, in addition to the lights or shapes prescribed in subparagraphs (i) and (ii), the light, lights or shape prescribed in Rule 30.

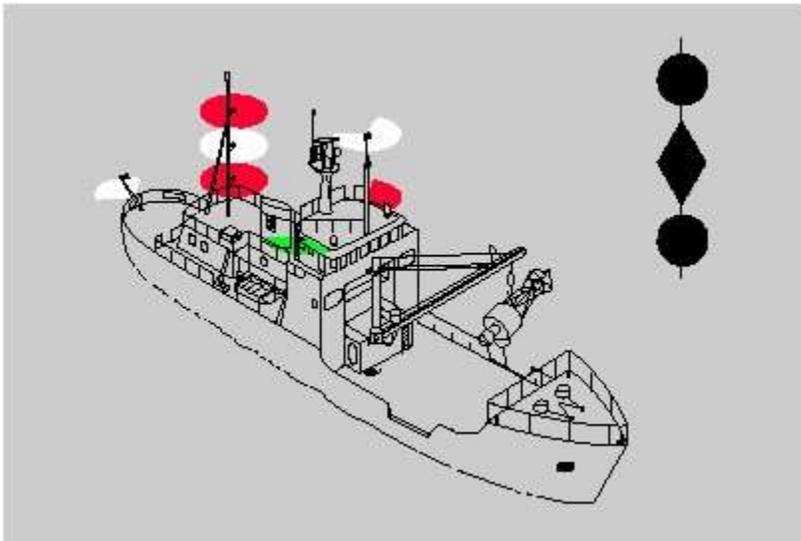


Figure 14 Vessels restricted in maneuverability underway less than 50M long

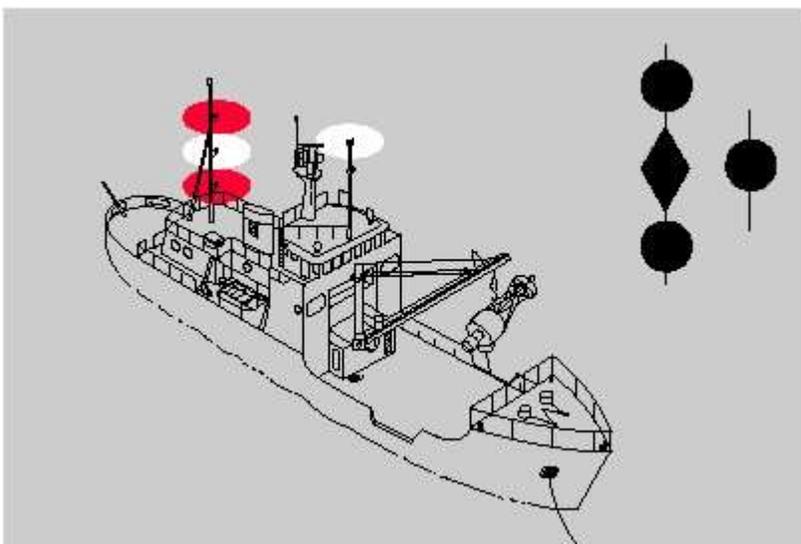


Figure 15 Vessel restricted in maneuverability at anchor less than 50M long

Things get complicated when a towing vessel is restricted in ability to maneuver and has a towline longer than 200 meters!

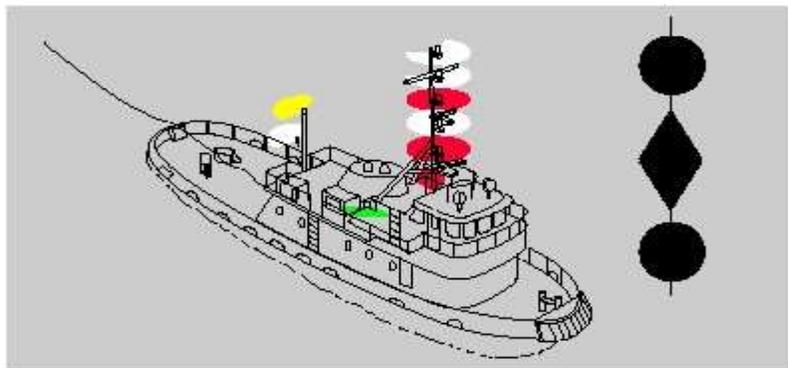


Figure 16 Vessel engaged in towing operation which severely restricts towing vessel and her tow in their ability to deviate from their course—length of tow does not exceed 200 meters; towing vessel less than 50 meters in length.

Rule 27 also prescribes lights and shapes for dredges and minesweepers, the reader is referred to COLREGS for that additional layer of complication.

Rule 27 includes small DIVING BOATS. These are common around the San Juan Islands and Fidalgo Bay: The vessel shall exhibit a rigid replica of the international code flag “A”. At night, it shall include lighting for restricted maneuverability: The recreational DIVE Flag is also displayed in lieu of the “Alpha” flag, it is an orange square with white diagonal.

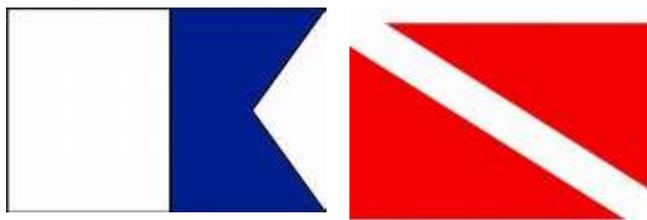


Figure 17 Code ALFA flag and recreational diver flag

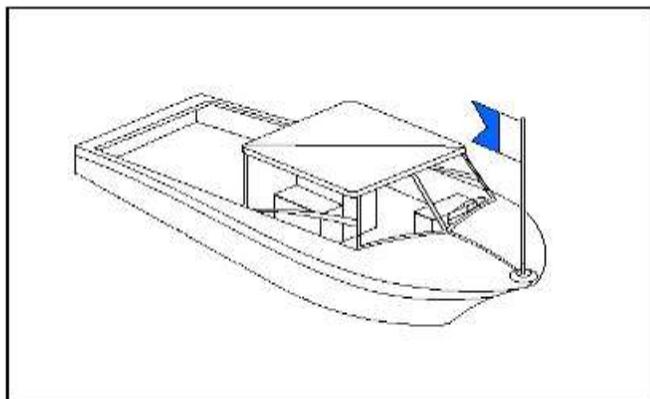


Figure 19 Small vessel engaged in diving operations.

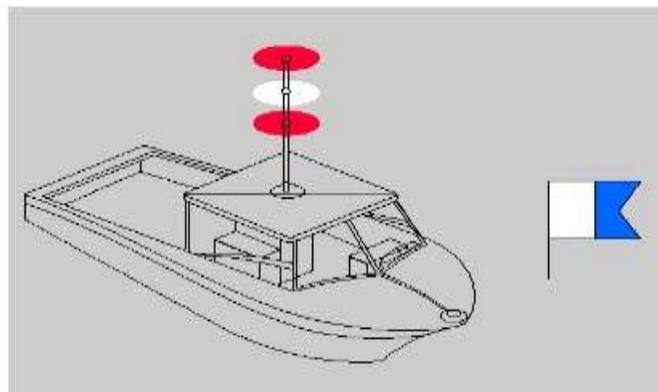
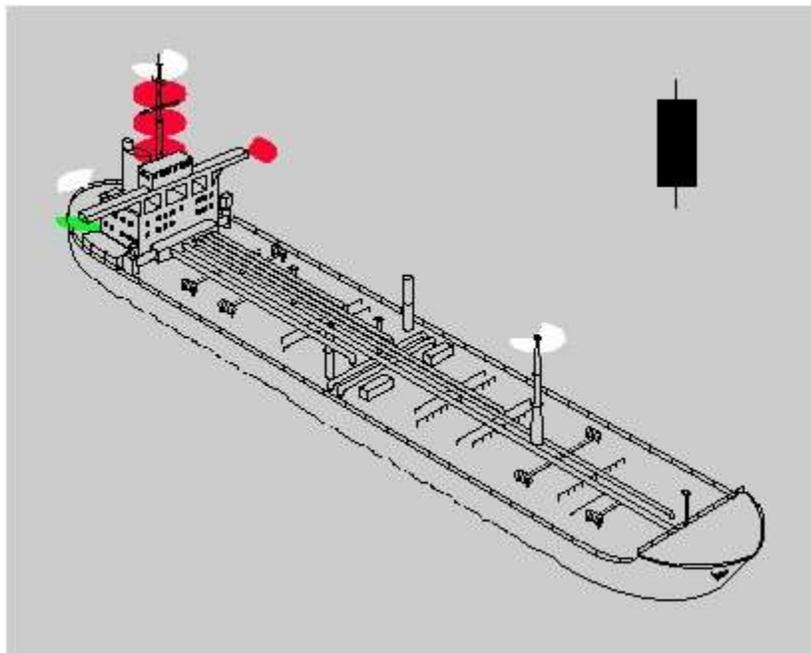


Figure 18 Diving operations at night

F. RULE 28 Vessels Constrained by Their Draft



A vessel constrained by her draft may, in addition to the lights prescribed for power-driven vessels in Rule 23, exhibit where they can best be seen three all-round red lights in a vertical line, or a cylinder.

You might see these at the refinery docks or waiting for tugs in Fidalgo Bay.

Figure 20 A vessel constrained by draft over 50 M length.

G. RULE 30 Anchored Vessels and Vessels Aground

- (a) A vessel at anchor shall exhibit where it can best be seen:
 - (i) in the fore part, an all-round white light or one ball;
 - (ii) at or near the stern and at a lower level than the light prescribed in subparagraph (i), an all-round white light.
- (b) A vessel of less than 50 meters in length may exhibit an all-round white light where it can best be seen instead of the lights prescribed in paragraph (a) of this Rule.
- (c) A vessel at anchor may, and a vessel of 100 meters and more in length shall, also use the available working or equivalent lights to illuminate her decks.

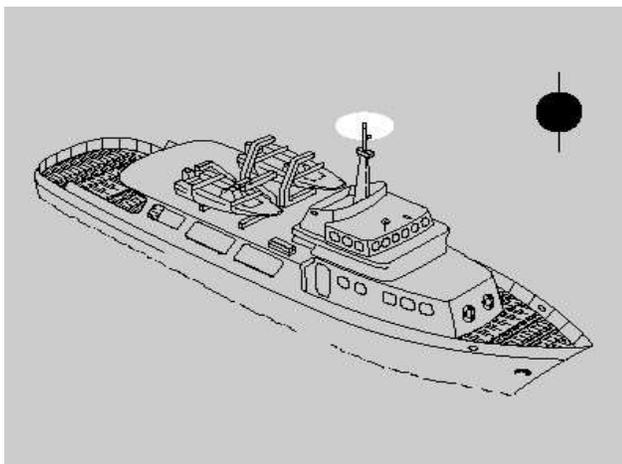


Figure 22 Vessel at anchor—less than 50 meters in length.

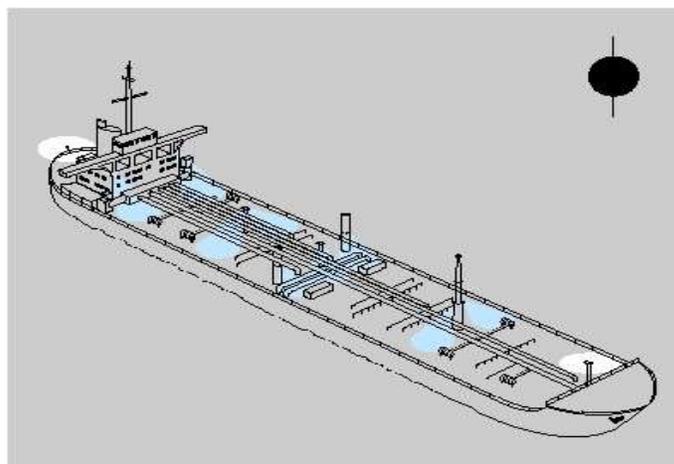


Figure 21 Vessel at anchor GT 50M deck illuminated

(d) A vessel aground shall exhibit the lights prescribed in paragraph (a) or (b) of this Rule and in addition, if practicable, where they can best be seen: (i) two all-round red lights in a vertical line; and (ii) three balls in a vertical line.

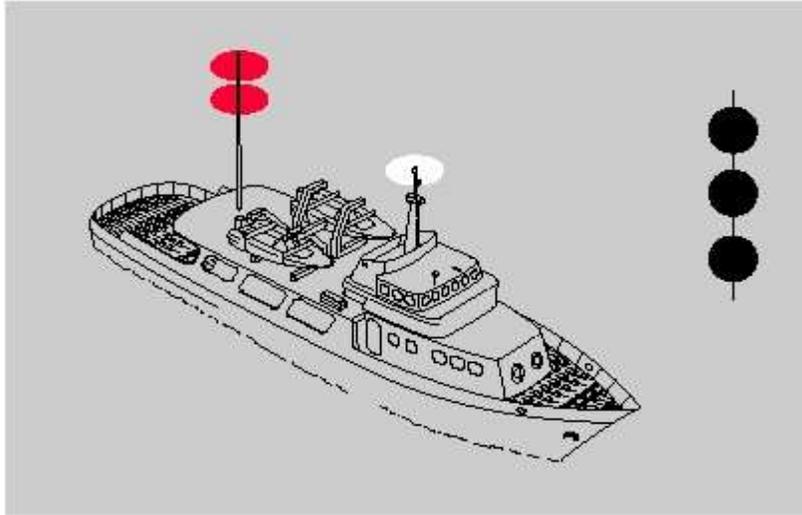


Figure 23 Vessel aground LT 50M in Length

(e) A vessel of *less than 12 meters* in length when aground shall not be required to exhibit the lights or shapes prescribed in subparagraphs (d)(i) and (ii) of this Rule. That is, the vessel is not required to exhibit red over red or three black balls.

SOUND SIGNALS Comprise Part D of the Rules.**PART D—SOUND AND LIGHT SIGNALS****RULE 32****Definitions**

- (a) The word “whistle” means any sound signaling appliance capable of producing the prescribed blasts and which complies with specifications in Annex III to these Rules.
- (b) The term “short blast” means a blast of about 1 second’s duration.
- (c) The term “prolonged blast” means a blast of from 4 to 6 seconds’ duration.

RULE 33**Equipment for Sound Signals**

(a) A vessel of 12 meters or more in length shall be provided with a whistle and a bell and a vessel of 100 meters or more in length shall, in addition, be provided with a gong, the tone and sound of which cannot be confused with that of the bell. The whistle, bell and gong shall comply with the specifications in Annex III to these Rules. The bell or gong or both may be

replaced by other equipment having the same respective sound characteristics, provided that manual sounding of the prescribed signals shall always be possible.

(b) A vessel of less than 12 meters in length shall not be obliged to carry the sound signaling appliances prescribed in paragraph (a) of this Rule but if she does not, she shall be provided with some other means of making an efficient sound signal.

RULE 34 Maneuvering and Warning Signals (International)

(a) When vessels are in sight of one another, a power-driven vessel underway, when maneuvering as authorized or required by these Rules, shall indicate that maneuver by the following signals on her whistle:

- one short blast to mean “I am altering my course to starboard”;
- two short blasts to mean “I am altering my course to port”;
- three short blasts to mean “I am operating astern propulsion”.

(b) Any vessel may supplement the whistle signals prescribed in paragraph (a) of this Rule by light signals, repeated as appropriate, while the maneuver is being carried out:

(i) these light signals shall have the following significance:

- one flash to mean “I am altering my course to starboard”;
 - two flashes to mean “I am altering my course to port”;
 - three flashes to mean “I am operating astern propulsion”;
- (ii) the duration of each flash shall be about one second, the interval between flashes shall be about one second, and the interval between successive signals shall be not less than ten seconds;

(iii) the light used for this signal shall, if fitted, be an all-round white light, visible at a minimum range of 5 miles, and shall comply with the provisions of Annex I to these Regulations.

RULE 34—Narrow Channel or Waterway (International)

(a) When in sight of one another in a narrow channel or fairway:

(i) a vessel intending to overtake another shall in compliance with Rule 9(e)(i) indicate her intention by the following signals on her whistle:

- two prolonged blasts followed by one short blast to mean “I intend to overtake you on your starboard side”;
- two prolonged blasts followed by two short blasts to mean “I intend to overtake you on your port side”.

(ii) the vessel about to be overtaken when acting in accordance with Rule 9(e)(i) shall indicate her agreement by the following signal on her whistle:

- one prolonged, one short, one prolonged and one short blast, in that order.

(b) When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other, or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least five short and rapid blasts on the whistle. Such signal may be supplemented by a light signal of at least five short and rapid flashes.

(c) A vessel nearing a bend or an area of a channel or fairway where other vessels may be obscured by an intervening obstruction shall sound one prolonged blast. Such signal shall be answered with a prolonged blast by any approaching vessel that may be within hearing around the bend or behind the intervening obstruction.

RULE 35 Sound Signals in Restricted Visibility

In or near an area of restricted visibility, whether by day or night, the signals prescribed in this Rule shall be used as follows:

(a) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.

(b) A power-driven vessel underway but stopped and making no way through the water shall sound at intervals of not more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them.

(c) A vessel not under command, a vessel restricted in her ability to maneuver, a vessel constrained by her draft, a sailing vessel, a vessel engaged in fishing and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in paragraphs (a) or (b) of this Rule, sound at intervals of not more than 2 minutes three blasts in succession, namely one prolonged followed by two short blasts.

(d) A vessel engaged in fishing, when at anchor, and a vessel restricted in her ability to maneuver when carrying out her work at anchor, shall instead of the signals prescribed in paragraph (g) of this Rule sound the signal prescribed in paragraph (c) of this Rule.

(e) A vessel towed or if more than one vessel is towed the last vessel of the tow, if manned, shall at intervals of not more than 2 minutes sound four blasts in succession, namely one prolonged followed by three short blasts. When practicable, this signal shall be made immediately after the signal made by the towing vessel.

(f) When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit they shall be regarded as a power-driven vessel and shall give the signals prescribed in paragraphs (a) or (b) of this Rule.

(g) A vessel at anchor shall at intervals of not more than one minute ring the bell rapidly for about 5 seconds. In a vessel of 100 meters or more in length the bell shall be sounded in the forepart of the vessel and immediately after the ringing of the bell the gong shall be sounded rapidly for about 5 seconds in the after part of the vessel. A vessel at anchor may in addition sound three blasts in succession, namely one short, one prolonged and one short blast, to give warning of her position and of the possibility of collision to an approaching vessel.

(h) A vessel aground shall give the bell signal and if required the gong signal prescribed in paragraph (g) of this Rule and shall, in addition, give three separate and distinct strokes on the bell immediately before and after the rapid ringing of the bell. A vessel aground may in addition sound an appropriate whistle signal.

(i) A vessel of 12 meters or more but less than 20 meters in length shall not be obliged to give the bell signals prescribed in paragraphs (g) and (h) of this Rule. However, if she does not, she shall make some other efficient sound signal at intervals of not more than 2 minutes.

(j) A vessel of less than 12 meters in length shall not be obliged to give the above-mentioned signals but, if she does not, shall make some other efficient sound signal at intervals of not more than 2 minutes.

(k) A pilot vessel when engaged on pilotage duty may in addition to the signals prescribed in paragraphs (a), (b) or (g) of this Rule sound an identity signal consisting of four short blasts.

(f) The following vessels shall not be required to sound signals as prescribed in paragraph (f) of this Rule when anchored in a special anchorage area designated by the Secretary:

- (i) a vessel of less than 20 meters in length; and
- (ii) a barge, canal boat, scow, or other nondescript craft.

RULE 36- Signals to Attract Attention (International)

If necessary to attract the attention of another vessel, any vessel may make light or sound signals that cannot be mistaken for any signal authorized elsewhere in these Rules, or may direct the beam of her searchlight in the direction of the danger, in such a way as not to embarrass any vessel

RULE 37 -Distress Signals (International)

When a vessel is in distress and requires assistance, she shall use or exhibit the signals described in Annex IV to these Rules.



ANNEX IV - Distress Signals

1. The following signals, used or exhibited either together or separately, indicate distress and need of assistance:
 - (a) a gun or other explosive signal fired at intervals of about a minute;
 - (b) a continuous sounding with any fog-signaling apparatus;
 - (c) rockets or shells, throwing red stars fired one at a time at short intervals;

- (d) a signal made by radiotelegraphy or by any other signaling method consisting of the group . . . - - - . . . (SOS) in the Morse Code;
 - (e) a signal sent by radiotelephony consisting of the spoken word “Mayday”;
 - (f) the International Code Signal of distress indicated by N.C.;
 - (g) a signal consisting of a square flag having above or below it a ball or anything resembling a ball;
 - (h) flames on the vessel (as from a burning tar barrel, oil barrel, etc.);
 - (i) a rocket parachute flare or a hand flare showing a red light;
 - (j) a smoke signal giving off orange-colored smoke;
 - (k) slowly and repeatedly raising and lowering arms outstretched to each side;
 - (l) the radiotelegraph alarm signal;
 - (m) the radiotelephone alarm signal;
 - (n) signals transmitted by emergency position-indicating radio beacons;
 - (o) approved signals transmitted by radiocommunication systems, including survival craft radar transponders.
2. The use or exhibition of any of the foregoing signals except for the purpose of indicating distress and need of assistance and the use of other signals which may be confused with any of the above signals is prohibited.
 3. Attention is drawn to the relevant sections of the International Code of Signals, the Merchant Ship Search and Rescue Manual and the following signals:
 - (a) a piece of orange-colored canvas with either a black square and circle or other appropriate symbol (for identification from the air)
 - (b) a dye marker.

