

International Regulations for the Prevention of Collision at Sea

Part A - General

Part B - Steering and Sailing Rules

Rule 1 Application

- (a) These Rules shall apply to **all vessels** upon the high seas and in **all waters** connected therewith navigable by seagoing vessels.
- (b) Nothing in these Rules shall interfere with the operation of special rules made by an appropriate authority for roadsteads, harbours, rivers, lakes or inland waterways connected with the high seas and navigable by sea-going vessels. Such special rules shall conform as closely as possible to these Rules.
- (c) Nothing in these Rules shall interfere with the operation of any **special rules** made by the Government of any State with respect to additional station or signal lights, shapes or whistle signals for ships of war and vessels proceeding under convoy, or with respect to additional station or signal lights or shapes for fishing vessels engaged in fishing as a fleet. These additional station or signal lights, shapes or whistle signals shall, so far as possible, be such that they cannot be mistaken for any light, shape or signal authorized elsewhere under these Rules. *An example of a special rule in Sydney Harbour is the Orange diamond displayed by ferries that gives Ferries 'priority over sail'.*
- (d) Traffic separation schemes may be adopted by the Organization for the purpose of these Rules.
- (e) Whenever the Government concerned shall have determined that a vessel of special construction or purpose cannot comply fully with the provisions of any of these Rules with respect to the number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signalling appliances, such vessel shall comply with such other provisions in regard to the number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signalling appliances, as her Government shall have determined to be the closest possible compliance with these Rules in respect of that vessel.

Rule 2 Responsibility

- (a) Nothing in these Rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences of any neglect to comply with these Rules or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.
- (b) In construing and complying with these Rules due regard shall be had to **all dangers of navigation and collision** and to any special circumstances, including the limitations of the vessels involved, **which may make a departure from these Rules necessary to avoid immediate danger**. *Court judgements have made it quite clear that a vessel would be in duty bound to depart from the Rules if there are special circumstances and immediate danger, which make it necessary.*

Rule 3 General definitions

For the purpose of these Rules, except where the context otherwise requires:

- (a) The word **vessel** includes every description of water craft, including non-displacement craft, WIG craft and seaplanes, used or capable of being used as a means of transportation on water.
- (b) The term **power-driven vessel** means any vessel propelled by machinery. *A vessel lying stopped in the water is still a 'power-driven vessel' even though its engine and/or propeller may not be in use.*
- (c) The term **sailing vessel** means any vessel under sail provided that propelling machinery, if fitted, is not being used. *if a sailing vessel operates its engines it becomes, by definition, a power driven vessel.*
- (d) The term **vessel engaged in fishing** means any vessel fishing with nets, lines, trawls or other fishing apparatus which restrict manoeuvrability, but **does not include a vessel fishing with trolling lines or other fishing apparatus which do not restrict manoeuvrability**. *In other words, a few recreational fishing lines does not mean that a vessel is 'engaged in fishing' for the purpose of the Rules.*
- (e) The word **seaplane** includes any aircraft designed to manoeuvre on the water. *However, they might show unusual lights and shapes, and they come last in the 'who gives way and to whom' at Rule 18.*

(f) The term **vessel not under command** means a vessel which through some **exceptional circumstance** is unable to manoeuvre as required by these Rules and is therefore unable to keep out of the way of another vessel.

Examples of exceptional circumstances would be dragging anchor, engine breakdown, loss of steerage and a sailing vessel becalmed. Bad weather conditions are not really exceptional in the terms of this Rule, and difficulty in manoeuvring in bad weather would not normally justify the showing of NUC signals.

Simply being stopped in the water does not make a vessel NUC. A ship which has stopped her engines and is drifting offshore, waiting for weather to ease so that she can enter port is not regarded as NUC, as there is no 'exceptional circumstance'. She is simply a power-driven vessel in full command of her propulsion but which has chosen to drift

(g) The term **vessel restricted in her ability to manoeuvre** means a vessel which from the **nature of her work** is restricted in her ability to manoeuvre as required by these Rules and is therefore unable to keep out of the way of another vessel.

The term **vessels restricted in their ability to manoeuvre** shall include but not be limited to:

- (i) a vessel engaged in **laying, servicing or picking up a navigation mark, submarine cable or pipeline**;
- (ii) a vessel engaged in **dredging, surveying or underwater operations**;
- (iii) a vessel engaged in **replenishment or transferring persons, provisions or cargo while underway**;
- (iv) a vessel engaged in the **launching or recovery of aircraft**;
- (v) a vessel engaged in **mine clearance operations**;
- (vi) a vessel engaged in a **towing operation** such as **severely restricts the towing vessel** and her tow in their ability to deviate from their course.

As with NUC, the vessel must be 'restricted' and 'unable to keep out of the way', but for RAM the problem is due to the 'nature of her work'. The term RAM includes but is not limited to the 6 examples given in the Rule.

(h) The term **vessel constrained by her draught** means a power-driven vessel which, because of her draught in relation to the available depth and width of navigable water, is **severely restricted** in her ability to deviate from the course she is following.

- (i) The word **underway** means that a vessel is not at anchor, or made fast to the shore, or aground.
- (j) The words **length and breadth** of a vessel mean her length overall and greatest breadth.
- (k) Vessels shall be deemed to be in sight of one another only when one can be observed visually from the other.

If you can see another vessel by radar, but not visually, the Rules of Part B2 would not apply because they only apply when the other vessel is in sight.

(l) The term **restricted visibility** means any condition in which visibility is restricted by **fog, mist, falling snow, heavy rainstorms, sandstorms** or any other similar causes.

Notice that the definition mentions 'other similar causes', which might include smoke eg from bush fires, or dust storms.

(m) The term **Wing-In-Ground (WIG) craft** means a multimodal craft which, in its main operational mode, flies in close proximity to the surface by utilizing surface-effect action.

A WIG craft



Part B - Steering and Sailing Rules

Part B the Steering and Sailing rules is basically about who gives way to who. The First section applies in any condition of visibility, the second in good visibility ie when one vessel can be seen from the other, and the third section applies in restricted visibility only.

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Section I - Conduct of vessels in any condition of visibility

Rule 4 Application

Rules in this Section apply in any condition of visibility.

Rule 5 Look-out

Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

A proper look-out, is both ahead and astern, and is not limited to collision avoidance, but includes keeping a lookout for other vessels that may be in difficulty.

As well as keeping a look-out by sight and hearing, we must also use 'all available means' which would be appropriate at the time. A 'full appraisal of the situation' means that you must be fully aware of what is going on in and around your ship at all times. When using VHF for this purpose (appraisal of risk of collision) correct identification of the other vessel is paramount. Making a call to 'Ship on my port bow' is definitely unprofessional and open to misinterpretation.

Rule 6 Safe speed

Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.

STCW 95 requires that the OOW 'must not hesitate to use the helm, engines and sound signalling apparatus'

In determining a safe speed the following factors shall be among those taken into account:

(a) By all vessels:

(i) the state of visibility;

(ii) the traffic density including concentrations of fishing vessels or any other vessels;

(iii) the manoeuvrability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions;

(iv) at night the presence of background light such as from shore lights or from back scatter of her own lights;

(v) the state of wind, sea and current, and the proximity of navigational hazards;

(vi) the draught in relation to the available depth of water.
Do not hesitate to slow down in the above situations

(b) Additionally, by vessels with operational radar:

- (i) the characteristics, efficiency and limitations of the radar equipment;
- (ii) any constraints imposed by the radar range scale in use;
- (iii) the effect on radar detection of the sea state, weather and other sources of interference;
- (iv) the possibility that small vessels, ice and other floating objects may not be detected by radar at an adequate range;
- (v) the number, location and movement of vessels detected by radar;
- (vi) the more exact assessment of the visibility that may be possible when radar is used to determine the range of vessels or other objects in the vicinity.

Rule 7 Risk of collision

(a) Every vessel shall use **all available means** appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. **If there is any doubt such risk shall be deemed to exist.**

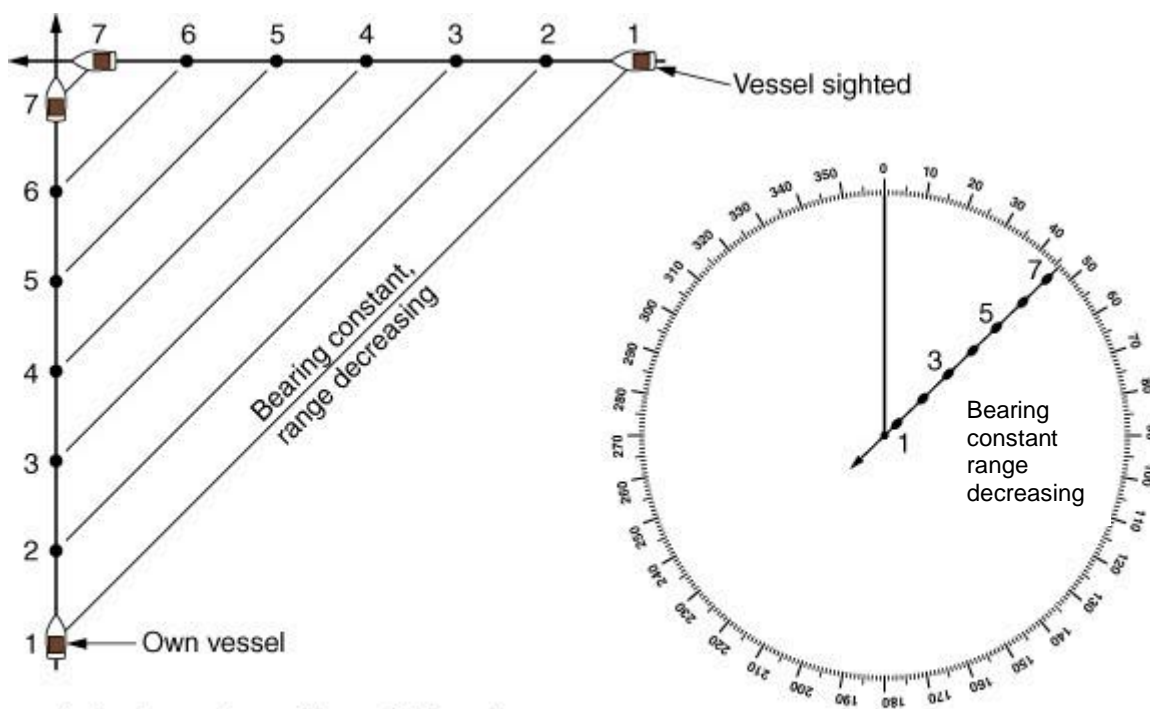
(b) **Proper use shall be made of radar equipment if fitted and operational**, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.

(c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information.

(d) In determining if risk of collision exists the following considerations shall be among those taken into account:

(i) **such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change;**

risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a tow or when approaching a vessel at close range.

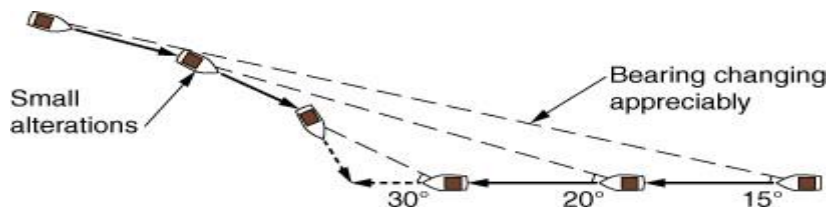


As is shown above, if you sight another vessel and its bearing remains constant, whilst its range is decreasing, you are definitely on a collision course.

The scenario on the left would appear on a radar screen

Rule 8 Action to avoid collision

- (a) Any action to avoid collision shall be taken in accordance with the Rules of this Part and shall, if the circumstances of the case admit, be **positive**, made in **ample time** and with **due regard to the observance of good seamanship**.
- (b) Any alteration of course and/or speed to avoid collision shall, if the circumstances of the case admit, **be large enough to be readily apparent to another vessel** observing visually or by radar; **a succession of small alterations of course and/or speed should be avoided**.
- (c) If there is sufficient sea room, **alteration of course alone may be the most effective action** to avoid a close quarters situation provided that it is made in good time, is substantial and does not result in another close-quarters situation.
- (d) Action taken to avoid collision with another vessel shall be such as to result in passing at a **safe distance**. The effectiveness of the action shall be carefully checked until the other vessel is **finally past and clear**.
- (e) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion.
- (f) (i) A vessel which, by any of these Rules, is required not to impede the passage or safe passage of another vessel shall, when required by the circumstances of the case, take early action to allow sufficient sea room for the safe passage of the other vessel.
- (ii) A vessel required not to impede the passage or safe passage of another vessel is not relieved of this obligation if approaching the other vessel so as to involve risk of collision and shall, when taking action, have full regard to the action which may be required by the Rules of this part.
- (iii) A vessel the passage of which is not to be impeded remains fully obliged to comply with the Rules of this part when the two vessels are approaching one another so as to involve risk of collision.



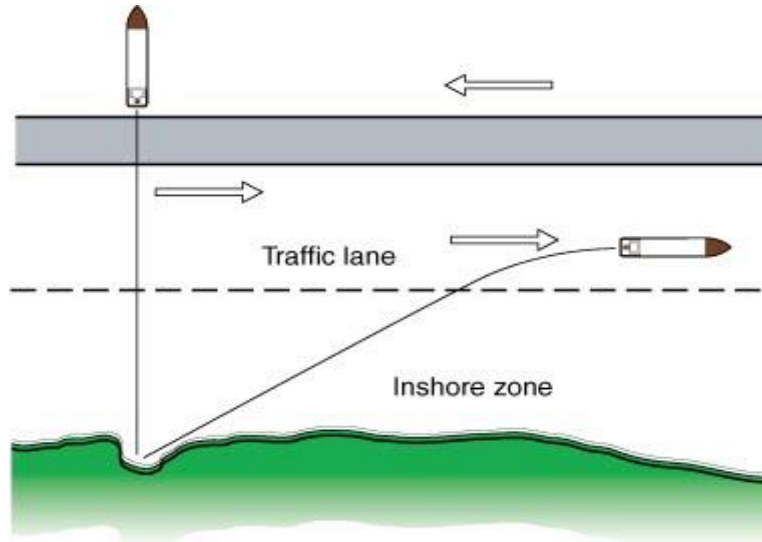
Small alterations of course should be avoided

Rule 9 Narrow channels

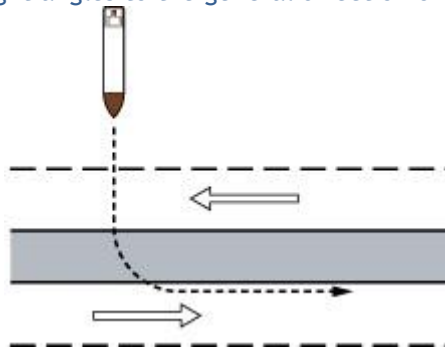
- (a) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the **outer limit of the channel or fairway which lies on her starboard side as is safe and practicable**.
- (b) A vessel of **less than 20 metres** in length or a **sailing vessel** shall **not impede** the passage of a vessel which can safely navigate only within a narrow channel or fairway.
- (c) A vessel **engaged in fishing** shall **not impede** the passage of any other vessel navigating within a narrow channel or fairway.
- (d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway. The latter vessel may use the sound signal prescribed in Rule 34(d) [*five short and rapid blasts on the whistle*] if in doubt as to the intention of the crossing vessel.
- (e) (i) In a narrow channel or fairway when overtaking can take place only if the vessel to be overtaken has to take action to permit safe passing, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34 (c)(i). [*2 long 1 short to overtake Starboard side and 2 long 2 short to overtake port side*] The vessel to be overtaken shall, if in agreement, sound the appropriate signal prescribed in Rule 34(c)(ii) [*1 long 1 short 1 long 1 short*] and take steps to permit safe passing. If in doubt she may sound the signals prescribed in Rule 34(d). [*five short and rapid blasts on the whistle*]
- (ii) This Rule does not relieve the overtaking vessel of her obligation under Rule 13. [*Rule 13 Overtaking*]
- (f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e). [*1 long blast*]
- (g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

Rule 10 Traffic separation schemes

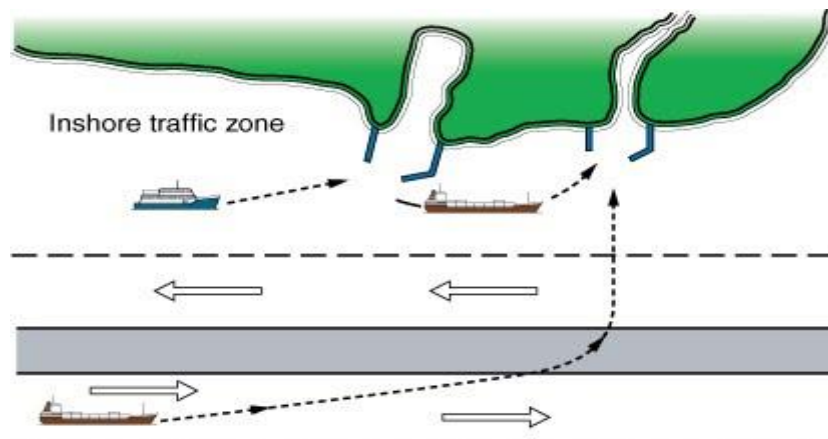
- (a) This Rule applies to traffic separation schemes adopted by the Organization and does not relieve any vessel of her obligation under any other rule.
- (b) A vessel using a traffic separation scheme shall:
 - (i) proceed in the appropriate traffic lane in the general direction of traffic flow for that lane;
 - (ii) so far as practicable keep clear of a traffic separation line or separation zone;
 - (iii) normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from either side shall do so at as small an angle to the general direction of traffic flow as practicable.



- (c) A vessel shall, so far as practicable, avoid crossing traffic lanes but if obliged to do so shall cross on a heading as nearly as practicable at right angles to the general direction of traffic flow.



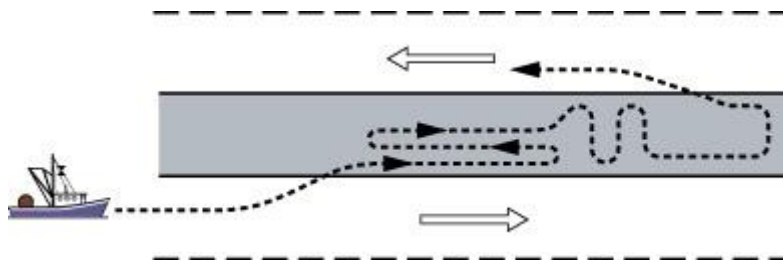
- (d) (i) A vessel shall not use an inshore traffic zone when she can safely use the appropriate traffic lane within the adjacent traffic separation scheme. However, vessels of less than 20 metres in length, sailing vessels and vessels engaged in fishing may use the inshore traffic zone.



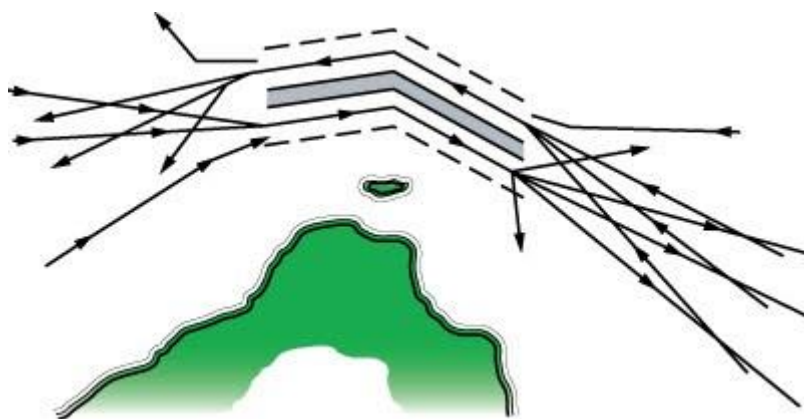
(ii) Notwithstanding subparagraph (d)(i), a vessel may use an inshore traffic zone when en route to or from a port, offshore installation or structure, pilot station or any other place situated within the inshore traffic zone, or to avoid immediate danger.

(e) A vessel other than a crossing vessel or a vessel joining or leaving a lane shall not normally enter a separation zone or cross a separation line except:

- (i) in cases of emergency to avoid immediate danger,
- (ii) to engage in fishing within a separation zone.



(f) A vessel navigating in areas near the terminations of traffic separation schemes shall do so with particular caution.



(g) A vessel shall so far as practicable avoid anchoring in a traffic separation scheme or in areas near its terminations.

(h) A vessel not using a traffic separation scheme shall avoid it by as wide a margin as is practicable.

(i) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.

(j) A vessel of less than 20 metres in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.

(k) A vessel restricted in her ability to manoeuvre when engaged in an operation for the maintenance of safety of navigation in a traffic separation scheme is exempted from complying with this Rule to the extent necessary to carry out the operation.

(l) A vessel restricted in her ability to manoeuvre when engaged in an operation for the laying, servicing or picking up of a submarine cable, within a traffic separation scheme, is exempted from complying with this Rule to the extent necessary to carry out the operation.

Section II Conduct of vessels in sight of one another

Rule 11 Application

Rules in this section apply to vessels in sight of one another.

Rule 12 Sailing vessels

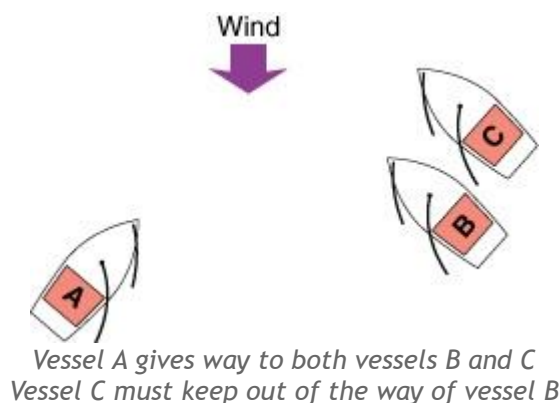
(a) When two sailing vessels are approaching one another, so as to involve risk of collision, one of them shall keep out of the way of the other as follows:

(i) when each has the wind on a **different** side, the vessel which has the wind on the **port side shall keep out of the way** of the other;

(ii) when both have the wind on the **same** side, the vessel which is to **windward shall keep out of the way** of the vessel which is to leeward;

(iii) if a vessel with the wind on the port side sees a vessel to windward and cannot determine with certainty whether the other vessel has the wind on the port or on the starboard side, she shall keep out of the way of the other.

(b) For the purposes of this Rule the windward side shall be deemed to be the side opposite to that on which the mainsail is carried or, in the case of a square-rigged vessel, the side opposite to that on which the largest fore-and-aft sail is carried.



Rule 13 Overtaking

(a) Notwithstanding anything contained in the Rules of Part B, sections I and II, **any vessel overtaking any other shall keep out of the way of the vessel being overtaken.**

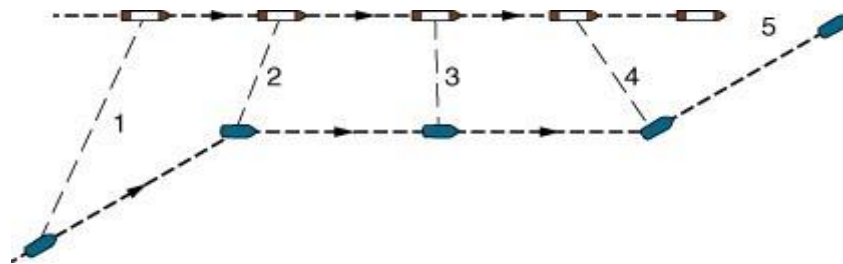
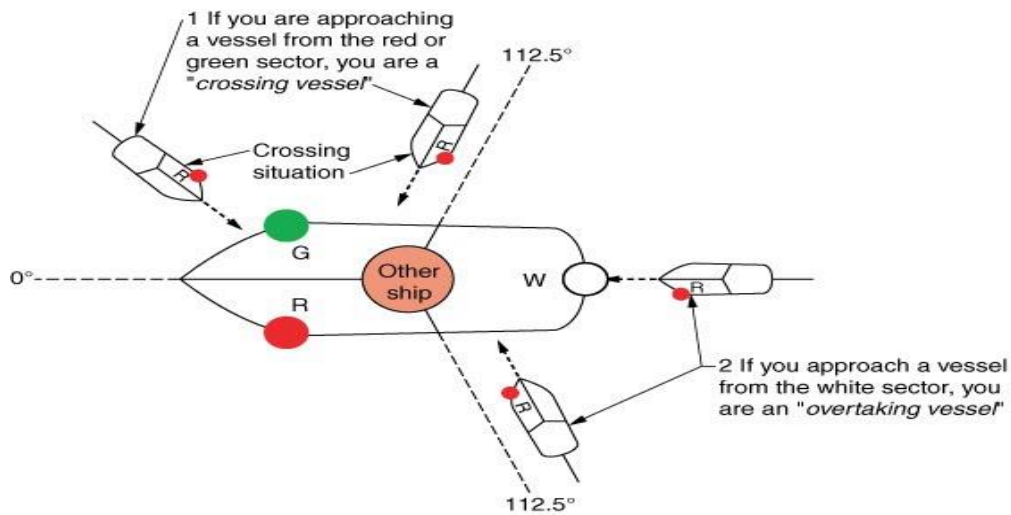
Note that the focus is on ANY vessel overtaking another. That means that regardless that you might be sailing a yacht you must still keep out of the way of a power driven vessel if you are overtaking them.

(b) A vessel shall be deemed to be overtaking when coming up with another vessel from a direction **more than 22.5 degrees abaft her beam**, that is, in such a position with reference to the vessel she is overtaking, that **at night she would be able to see only the sternlight** of that vessel but neither of her sidelights.

(c) When a vessel is in any doubt as to whether she is overtaking another, she shall assume that this is the case and act accordingly.

Doubt about whether you are overtaking is more likely to happen during the day. For example if you were approaching from green 110° you would be crossing, but from green 115° you would be overtaking. At night a stern light would clearly indicate the difference, but in daytime it is less easy to determine accurately.

(d) Any subsequent alteration of the bearing between the two vessels shall not make the overtaking vessel a crossing vessel within the meaning of these Rules or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear.

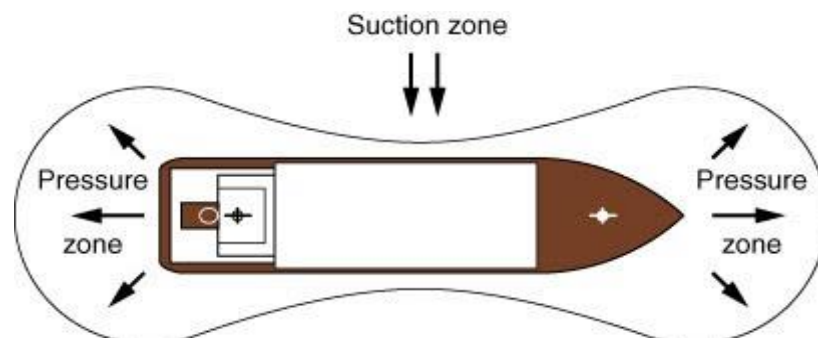


Note that when overtaking another vessel you should allow sufficient room before crossing their bow. If possible it may be a better idea to allow the other vessel to pass ahead and go behind their stern instead of crossing their bow.

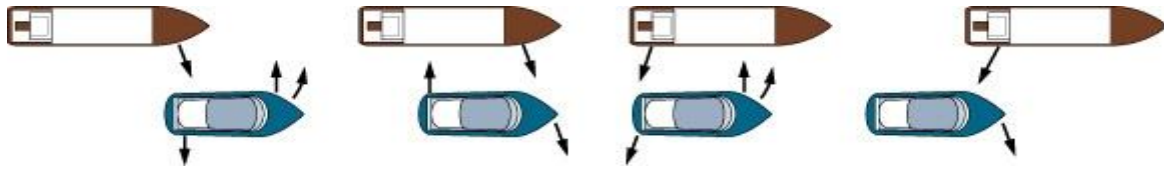
Overtaking can be a dangerous manoeuvre because all moving vessels are surrounded by a pressure wave. High pressure at the ends and low pressure (suction) at the sides. The diagram below shows this effect, which can be very pronounced in a narrow channel or in shallow waters.

The pressure wave from a large overtaking vessel can easily cause a smaller one to swing uncontrollably. As the large vessel approaches, its pressure wave pushes the stern of the other vessel further away, causing the bow to swing in and bring the smaller vessel directly to collision, or close enough so that she can be sucked in to collide with the side as the big ship passes.

Therefore an overtaking vessel should keep well clear and the vessel being overtaken should, if possible, slow down so that it takes less time to complete the manoeuvre.



Pressure zone around a vessel as it moves through the water



Interaction between vessels as one vessel passes the other

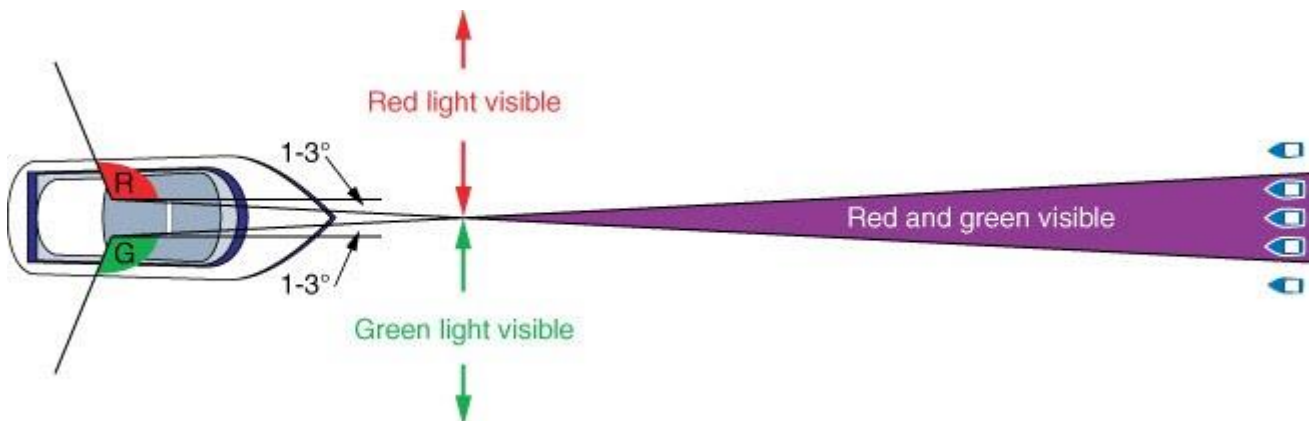
Rule 14 Head-on situation

- (a) When two power-driven vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision **each shall alter her course to starboard** so that each shall pass on the port side of the other.
- (b) Such a situation shall be deemed to exist when a vessel sees the other ahead or nearly ahead and by night she could see the masthead lights of the other in a line or nearly in a line and/or both sidelights and by day she observes the corresponding aspect of the other vessel.
- (c) When a vessel is in any doubt as to whether such a situation exists she shall assume that it does exist and act accordingly.



2 vessels approaching each other on reciprocal or almost reciprocal courses should both alter to Starboard and pass 'Port to Port'.

When we come to study the technical details of navigation lights, we will see that the sidelight beams must not cut off until 1 to 3 degrees beyond the 'dead ahead' line. This is shown exaggerated in the illustration below.



Note that If you have a ship right ahead and you can see only one sidelight, she is a 'crossing vessel'. If she remains right ahead, she must be travelling towards you and somewhat sideways, but she remains a crossing vessel.

As in all situations, it is the doubtful ones which present the most difficulty. Imagine that you can see both lights of an oncoming vessel right ahead, but the red one keeps disappearing, so you can see mostly her green light. The other vessel is probably yawing. Because of the green light, it looks as though she will probably pass to starboard, but the continual re-appearance of the red light suggests that it might be a bit close for comfort. This is a doubtful case, so you should turn to starboard in plenty of time and show the other vessel a solid red light.

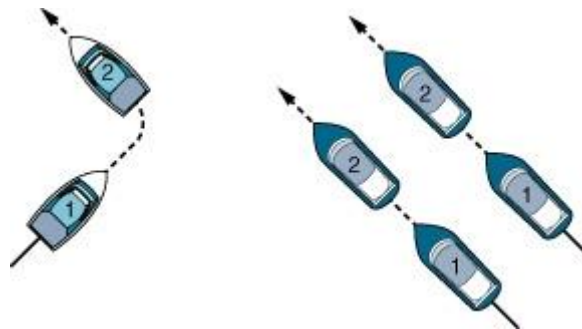
Rule 15 Crossing situation

When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.

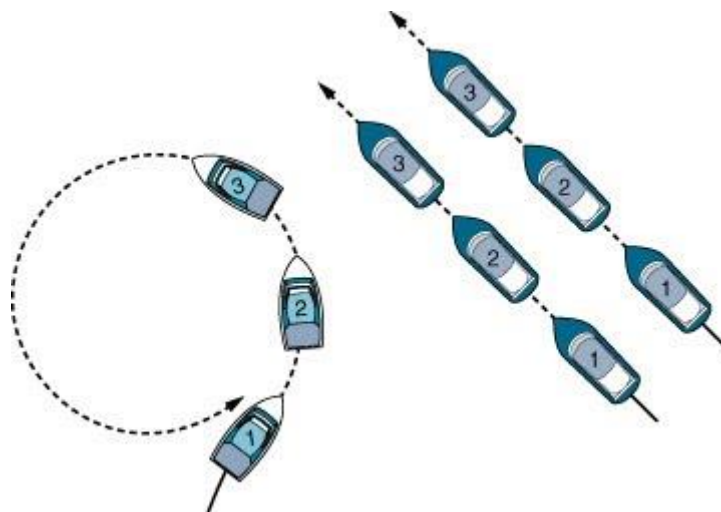


The reason for altering to starboard is so that you avoid crossing ahead of the other vessel, as shown above. If a starboard alteration is simply not practicable (because of other ships or hazards), to avoid crossing ahead, it might be better to simply slow down, as long as the change in speed is (if circumstances permit) readily apparent to the other vessel both visually and by radar as required by Rule 8.

If altering to port to avoid a collision you should certainly do it early, and make the alteration large, as we have already learnt. If the alteration is large enough, the other vessel would finish up astern of you. By continuing on a similar course to the other vessel, the rate of approach would be reduced, and it would turn the other vessel into an overtaking vessel and she would have to keep clear.

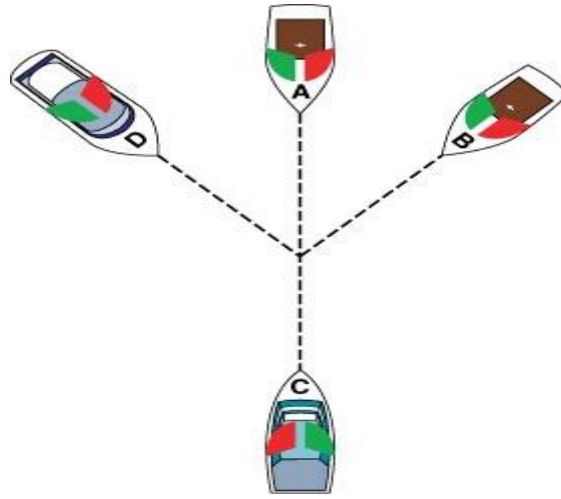


We could take this idea further and keep the wheel over so that we simply go round in a big circle, by which time the other vessel will probably be out of the way.



You have probably noticed that the Rules always refer to a situation between TWO vessels, not three or four. So what happens if four similar vessels are heading for a collision at the same spot?

Simple, really. They all turn to starboard. Look at the diagram on the following page. The Rules only apply to two ships at a time, so let's look at each pair in turn, starting with vessel A. Colour the sidelight sectors yourself for clarity.



Between vessels A and B, B should turn to starboard (pass astern of A).

Between vessels A and C, both A and C should turn to starboard.

Between vessels A and D, A should turn to starboard (pass astern of D).

Now let's look at vessel D, What does she have to do?

Between vessels D and A A should turn to starboard.

Between vessels D and B B should turn to starboard.

Between vessels D and C D should turn to starboard.

See that all vessels turn to starboard.

Check similarly for yourself with vessels B and C.

The above diagram is included to illustrate the concept of applying the Rules between TWO vessels at a time, and the effectiveness of turning to starboard. Coming back to the Rule, the purpose of the starboard turn is to avoid crossing ahead of the other vessel 'if the circumstances of the case admit'.

It follows that in a crossing collision situation the Rule does allow a turn to port - in fact it demands it shall keep out of the way—if circumstances make it necessary to avoid collision. The variety of vessels and their differences in speed and manoeuvrability are today so large that an alteration to port (crossing ahead) could perhaps be more easily justified than in times past.

Rule 16 Action by give-way vessel

Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take **early and substantial** action to keep well clear.

It is imperative that whatever action you take is immediately obvious to the Stand On vessel so as not to leave in them in a ny doubt that you have taken action.

Rule 17 Action by stand-on vessel

(a) (i) Where one of two vessels is to keep out of the way the other shall **keep her course and speed**.

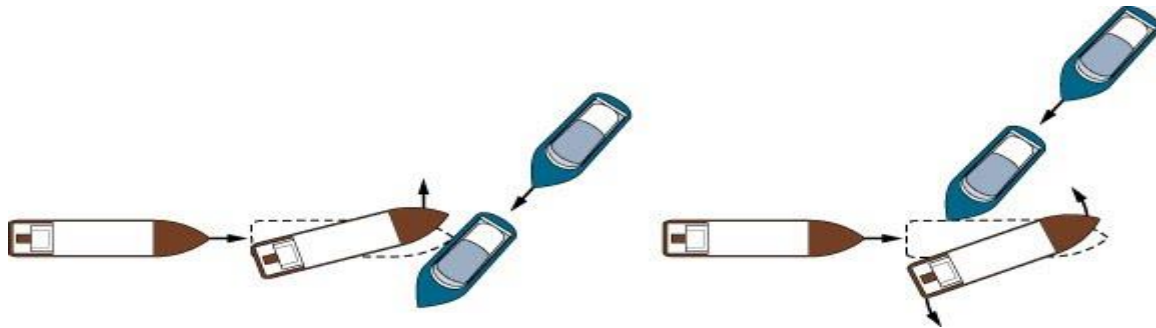
(ii) The latter vessel **may** however **take action to avoid collision by her manoeuvre alone**, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.

When, from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessel alone, she **shall take such action** as will best aid to avoid collision.

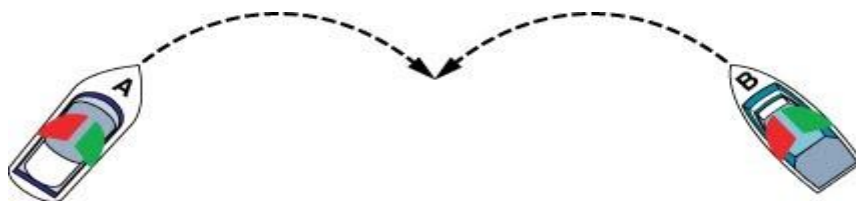
A power-driven vessel which takes action in a crossing situation in accordance with subparagraph (a)(ii) of this Rule to avoid collision with another power-driven vessel shall, if the circumstances of the case admit, **not alter course to port for a vessel on her own port side**.

(d) This Rule does not relieve the give-way vessel of her obligation to keep out of the way.

Once again the Rules use the word 'shall' in its imperative sense. And once again it uses the proviso 'if the circumstances of the case admit'. The Rule accepts that if, for some reason, it is dangerous to turn to starboard, it could be necessary to turn to port. This diagram below illustrates two possible scenarios when a starboard turn could be dangerous.



Having read this far through the Rules, it would now be clear that if you are a stand-on vessel, altering to port is dangerous because the give-way vessel will very likely be on your port side; if she takes action of her own, she would probably turn to starboard, and the two vessels would turn into each other's path.



Assume you are on vessel B in the diagram above. A should have given way but has not done so. If she suddenly makes a late starboard turn, your own port turn would result in collision.

Rule 18 Responsibilities between vessels

Except where Rules 9, 10 and 13 otherwise require:

- (a) A power-driven vessel underway shall keep out of the way of:
 - (i) a vessel not under command;
 - (ii) a vessel restricted in her ability to manoeuvre;
 - (iii) a vessel engaged in fishing;
 - (iv) a sailing vessel.
- (b) A sailing vessel underway shall keep out of the way of:
 - (i) a vessel not under command;
 - (ii) a vessel restricted in her ability to manoeuvre;
 - (iii) a vessel engaged in fishing.
- (c) A vessel engaged in fishing when underway shall, so far as possible, keep out of the way of:
 - (i) a vessel not under command;
 - (ii) a vessel restricted in her ability to manoeuvre.
- (d) (i) Any vessel other than a vessel not under command or a vessel restricted in her ability to manoeuvre shall, if the circumstances of the case admit, avoid impeding the safe passage of a vessel constrained by her draught, exhibiting the signals in Rule 28.
 - (ii) A vessel constrained by her draught shall navigate with particular caution having full regard to her special condition.
- (e) A seaplane on the water shall, in general, keep well clear of all vessels and avoid impeding their navigation. In circumstances, however, where risk of collision exists, she shall comply with the Rules of this Part.
- (f) (i) A WIG craft shall, when taking off, landing and in flight near the surface, keep well clear of all other vessels and avoid impeding their navigation;
 - (ii) a WIG craft operating on the water surface shall comply with the Rules of this Part as a power-driven vessel.

Section III - Conduct of vessels in restricted visibility

Contents

Rule 19 Conduct of vessels in restricted visibility

(a) This Rule applies to vessels not in sight of one another when navigating in or near an area of restricted visibility.

If a vessel looms into view through the mist, you are in sight of one another and must immediately begin to apply the Rules of Section II. You also use different sound signals. Later on we will learn the difference between the fog signals of Rule 35 and those of Rule 34 which apply only if you can see the other vessel

(b) Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A power-driven vessel shall have her engines ready for immediate manoeuvre.

In restricted visibility, own ship's manoeuvrability would be a major influence in choice of speed, including the ability to reduce speed immediately. On some vessels it may take several minutes to prepare the engines for manoeuvring, usually resulting in a slight fall in speed and fuel economy. Exactly how restricted the visibility must be to demand such action is not specified in the Rules and opinions vary. Depending on the stopping power and manoeuvrability of the ship it might be appropriate when visibility has fallen to about 5 miles in areas known to be subject to sudden onset of fog. This requirement also implies hand steering where auto-pilot is normally used.

(c) Every vessel shall have due regard to the prevailing circumstances and conditions of restricted visibility when complying with the Rules of Section I of this Part.

The Rules of Section I are those which apply in 'any visibility'. 'Pay due regard' means 'give adequate attention to'. What this paragraph actually means is that we must give extra consideration to those Rules as a result of the poor visibility. The Rules of Section I particularly affected by this requirement are 5, 7 and 8 - Lookout, Risk of Collision and Avoiding Action. In other words we would be expected to post extra lookouts day or night, probably outside and maybe right forward, so that fog signals or engines of other vessels can be heard.

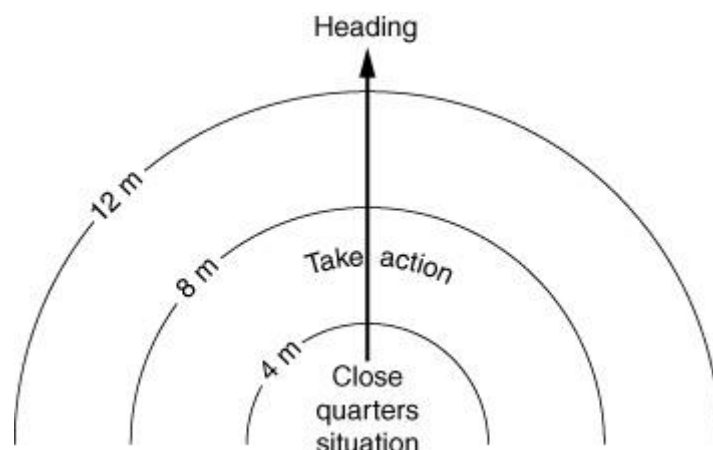
(d) A vessel which detects by radar alone the presence of another vessel shall determine if a close-quarters situation is developing and/or risk of collision exists. If so, she shall take avoiding action in ample time, provided that when such action consists of an alteration of course, so far as possible the following shall be avoided:

Not surprisingly, the courts have found that the phrase 'close quarters situation' is open to argument. Since fog signals (for vessels over 200 metres) have to be audible for 2 miles, this has become the generally accepted distance at which a close quarters situation might be said to begin. For smaller manoeuvrable vessels it could be considered rather less. If we keep to the fog signal analogy it would be half a mile for vessels below 20 metres.

For larger vessels in the open sea it has been suggested that using a 12-mile range scale, targets should be assessed while in the outer third of the screen and if a close quarters situation is developing, action should be taken before they reach the inner third. Smaller vessels might do likewise on a lower range scale.

It should always be remembered that small timber or fibreglass vessels often do not return an echo until they are quite close to the 'searching' radar, an area of the screen which may be obscured with sea clutter. A good radar lookout includes frequent changes of range to determine whether this is happening. Small vessels should deploy properly designed radar reflectors whenever possible.

On some large vessels, the conning position and radar scanner can be more than 200 metres from the bow. This creates a long 'shadow' sector where small craft can not be seen either visually or by radar.

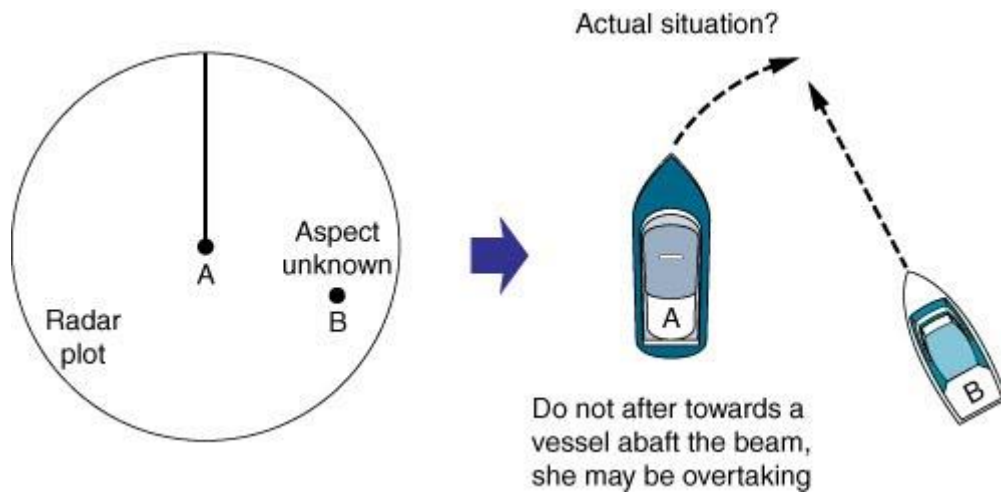


There is no 'stand-on' or 'give-way' in Rule 19. That applies only when vessels are in sight of one another. In restricted visibility, every vessel must take avoiding action—not only if there is a risk of collision but also if a close quarters situation is developing. Close quarters situations can develop from astern as well as ahead.

- (i) an alteration of course to port for a vessel forward of the beam, other than for a vessel being overtaken;
- (ii) an alteration of course towards a vessel abeam or abaft the beam.

The words 'so far as possible' are included in case an alteration to port is necessary due to lack of sea room or the presence of other vessels. Such action must be made as early as possible and as boldly as possible. 'Abeam' means at right angles anywhere along the ship's length.

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There is no 'stand-on' or 'give-way' in Rule 19. That applies only when vessels are in sight of one another. In restricted visibility, every vessel must take avoiding action—not only if there is a risk of collision but also if a close quarters situation is developing. Close quarters situations can develop from astern as well as ahead.

- (e) Except where it has been determined that a risk of collision does not exist, every vessel which hears apparently forward of her beam the fog signal of another vessel, or which cannot avoid a close quarters situation with another vessel forward of her beam, shall reduce her speed to the minimum at which she can be kept on her course. She shall if necessary take all her way off and in any event navigate with extreme caution until danger of collision is over.

The Rule phrases this in such a way as to emphasise that you have specifically determined by use of radar that there is no risk of collision, and ensured that any fog signals from forward of the beam have been positively identified and do not pose a threat - that they are, in fact, from the vessel which you think they are from, remembering that the direction of sound in fog can be very deceptive.

It tells us exactly what to do if:

- (1) we hear a fog signal apparently forward of the beam

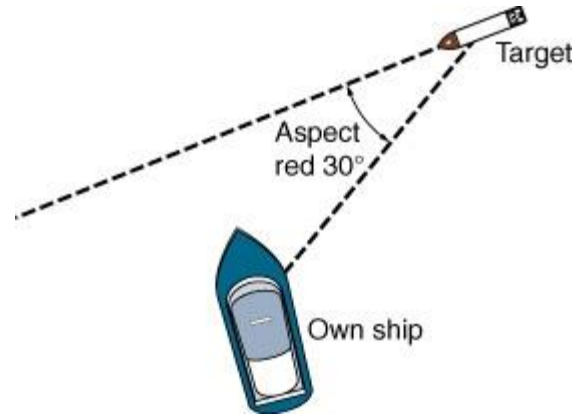
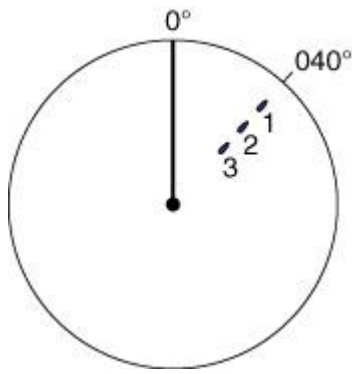
OR

- (2) we can not avoid a close quarters situation with another vessel forward of the beam.

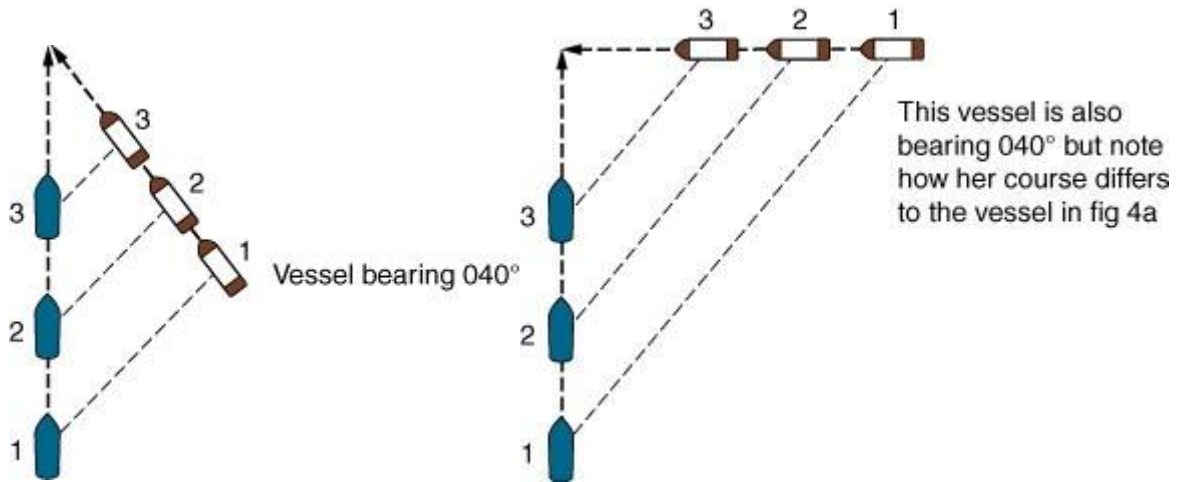
We must:

- (1) Reduce speed to steerage way
- (2) Take all way off if necessary, AND
- (3) Navigate with extreme caution.

Before altering course to avoid a collision, you need to know which way the other ship is heading with respect to your own vessel. This is called her aspect and it can not be determined from a fog signal. It is also difficult to determine quickly from a radar target. A radar plot as shown could represent a vessel with aspect Red 30° as sketched next to it.



On the other hand, it could also represent the two situations below.



If radar indicates an unavoidable close quarters situation with a vessel approaching from ahead or within about 30° of the bow, a vessel would be expected to reverse engines and take all way off, while remaining head on to the danger so as to present a smaller target.

Part C - Lights and shapes

Application, Definition & Visibility of Lights

Rule 20 Application

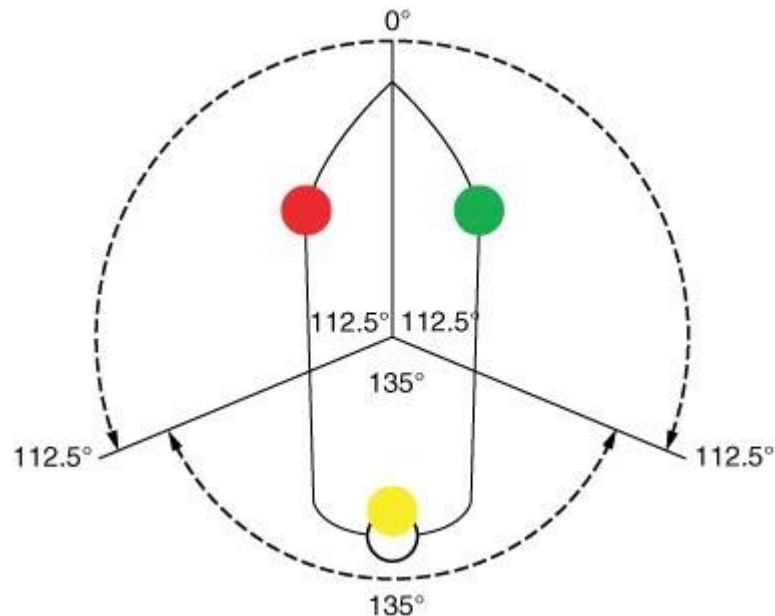
- (a) Rules in this part shall be complied with in all weathers.
- (b) The Rules concerning lights shall be complied with from sunset to sunrise, and during such times no other lights shall be exhibited, except such lights as cannot be mistaken for the lights specified in these Rules or do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.
- (c) The lights prescribed by these Rules shall, if carried, also be exhibited from sunrise to sunset in restricted visibility and may be exhibited in all other circumstances when it is deemed necessary.
- (d) The Rules concerning shapes shall be complied with by day.
- (e) The lights and shapes specified in these Rules shall comply with the provisions of Annex I to these Regulations.

Rule 21 Definitions

- (a) *Masthead light* means a white light placed over the fore and aft centreline of the vessel showing an unbroken light over an arc of the horizon of 225 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on either side of the vessel.

Notice the requirement for an 'unbroken arc' of visibility. The masthead light does not actually have to be on a mast, as long as it is above and clear of all other lights and obstructions

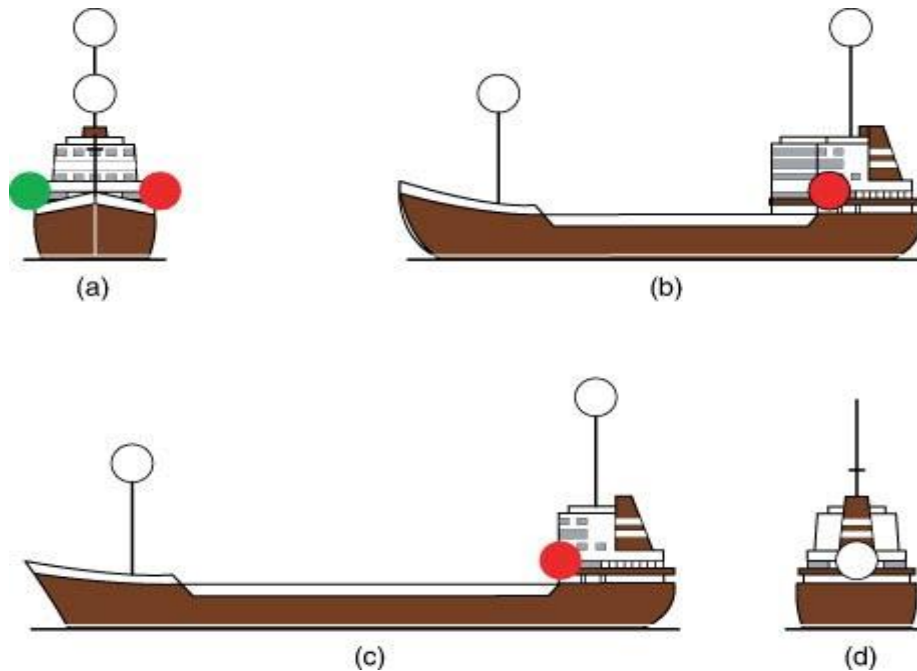
- (b) *Sidelights* means a green light on the starboard side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on its respective side. In a vessel of less than 20 metres in length the sidelights may be combined in one lantern carried on the fore and aft centreline of the vessel.



- (c) *Sternlight* means a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135 degrees and so fixed as to show the light 67.5 degrees from right aft on each side of the vessel.
- (d) *Towing light* means a yellow light having the same characteristics as the *sternlight* defined in paragraph (c) of this Rule.
- (e) *All-round light* means a light showing an unbroken light over an arc of the horizon of 360 degrees.
- (f) *Flashing light* means a light flashing at regular intervals at a frequency of 120 flashes or more per minute.

This refers to the flashing yellow light carried by hovercraft. The high flashing rate is to distinguish it from buoys, which usually do not flash more than 60 per minute.

The relative positions of the lights enable us to determine which way a ship is heading, as sketched in the diagram below.



In above figure (a) the vessel is viewed from head on. As she turns to starboard, the masthead lights 'open out'. The green light disappears and the red port light appears between the masthead lights. Vessels with only one masthead light must have the forward one (Rule 23). As she continues to turn, the aspect continues to change and the red port light and the masthead light(s) will remain visible until she has turned $22\frac{1}{2}^{\circ}$ past the beam, so that she is heading slightly away from us (not shown). At that point these lights will quickly fade and the stern light will come into view. Sketch figure (d) shows the view from astern.

Rule 22 Visibility of lights

The lights prescribed in these Rules shall have an intensity as specified in Section 8 of Annex I to these Regulations so as to be visible at the following minimum ranges:

- (a) In vessels of 50 metres or more in length:
- a masthead light, 6 miles;
 - a sidelight, 3 miles;
 - a sternlight, 3 miles;
 - a towing light, 3 miles;
 - a white, red, green or yellow all-round light, 3 miles.
- (b) In vessels of 12 metres or more in length but less than 50 metres in length:
- a masthead light, 5 miles; except that where the length of the vessel is less than 20 metres, 3 miles;
 - a sidelight, 2 miles;
 - a sternlight, 2 miles;
 - a towing light, 2 miles;
 - a white, red, green or yellow all-round light, 2 miles.
- (c) In vessels of less than 12 metres in length:
- a masthead light, 2 miles;
 - a sidelight, 1 mile;
 - a sternlight, 2 miles;
 - a towing light, 2 miles;
 - a white, red, green or yellow all-round light, 2 miles.
- (d) In inconspicuous, partly submerged vessels or objects being towed:
- a white all-round light, 3 miles.

There are four paragraphs to this Rule. There are various ways of remembering them. It is probably best to invent your own way. As a starting point, our own summary is given below:

(a) For big ships 50 m or more in length, all lights are visible for 3 miles, except the masthead light is 6 miles.

(b)-(c) For smaller vessels, all lights are visible for 2 miles

except:

- Below 12 metres, the sidelight is just 1 mile.
- From 12-20 metres the masthead light is 3 miles.
- From 20-50 metres the masthead light is 5 miles.

The above is a slight approximation for the purpose of memorising the ranges. You will see from the full wording of the Rule that a vessel of exactly 12, 20 or 50 metres has to fit lights with the greater range.

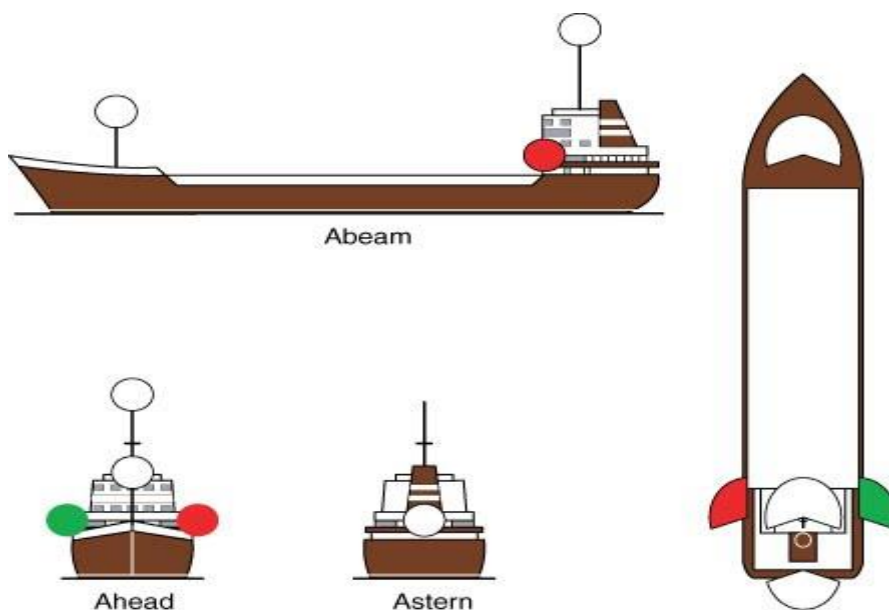
(d) Inconspicuous, partly submerged vessels/objects being towed—3 miles.

These are the minimum ranges at which the lights must be 'visible'.

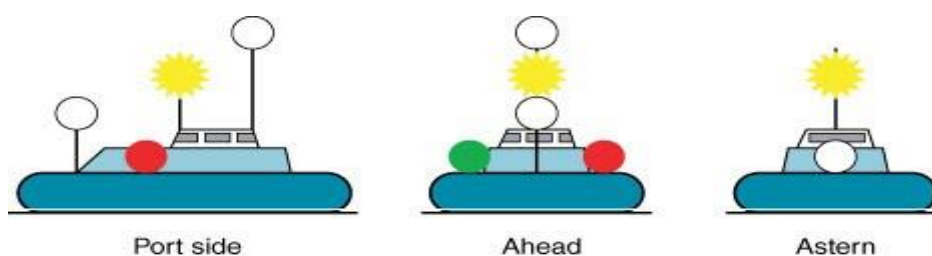
Rule 23 - Power-driven vessels underway

(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 metres in length shall not be obliged to exhibit such light but may do so;
- (iii) sidelights;
- (iv) a sternlight.



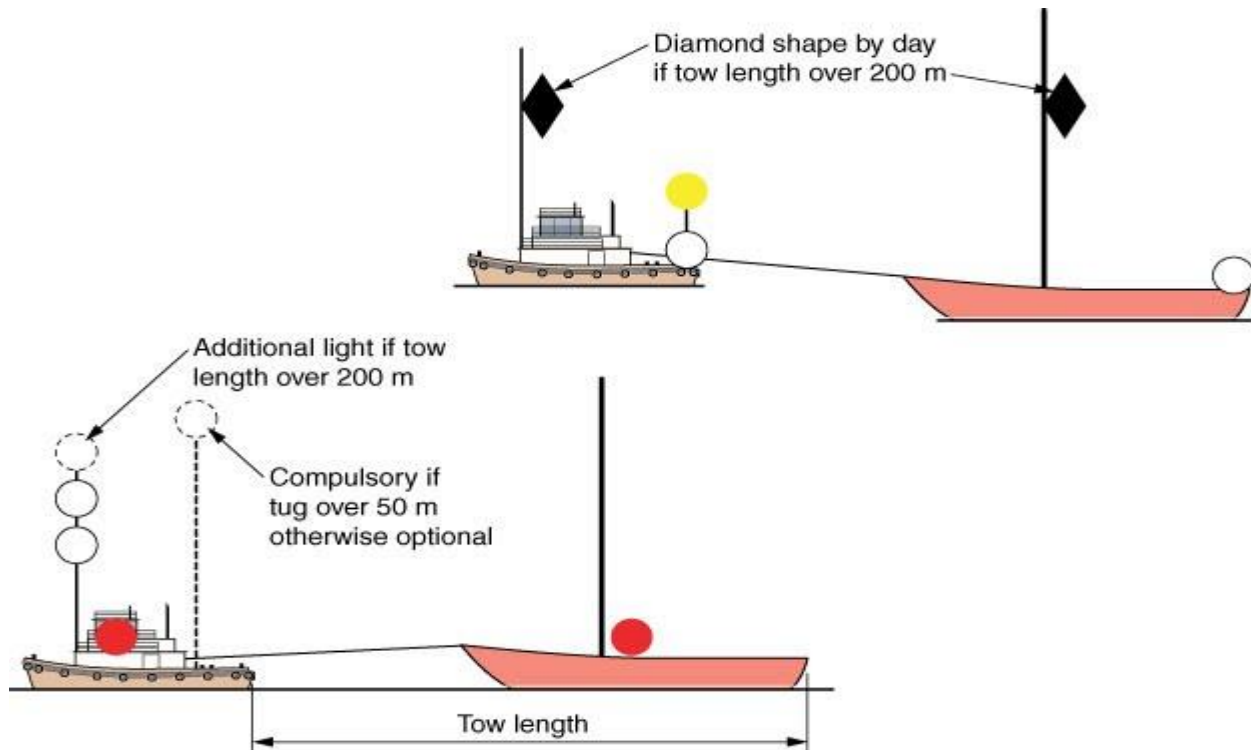
(b) An air-cushion vessel when operating in the non-displacement mode shall, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit an all-round flashing yellow light.



- (c) A WIG craft only when taking off, landing and in flight near the surface shall, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit a high intensity all-round flashing red light.
- (d) (i) A power-driven vessel of less than 12 metres in length may in lieu of the lights prescribed in paragraph (a) of this Rule exhibit an all-round white light, and sidelights;
- (ii) a power-driven vessel of less than 7 metres in length whose maximum speed does not exceed 7 knots may in lieu of the lights prescribed in paragraph (a) of this Rule exhibit an all-round white light and shall, if practicable, also exhibit sidelights;
- (iii) the masthead light or all-round white light on a power-driven vessel of less than 12 metres in length may be displaced from the fore and aft centreline of the vessel if centreline fitting is not practicable, provided that the sidelights are combined in one lantern which shall be carried on the fore and aft centreline of the vessel or located as nearly as practicable in the same fore and aft line as the masthead light or the all-round white light.

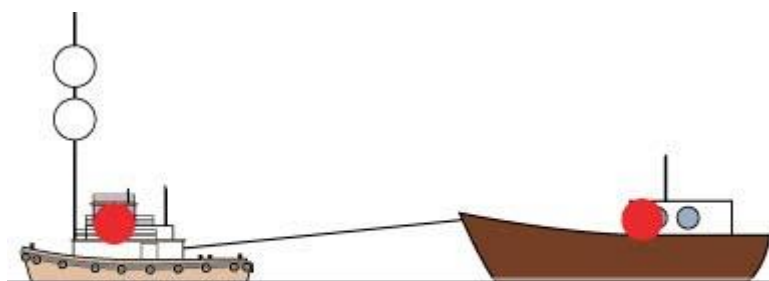
Rule 24 - Towing and pushing

- (a) A power-driven vessel when towing shall exhibit:
 - (i) instead of the light prescribed in Rule 23(a)(i) or (a)(ii), 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 metres, three such lights in a vertical line;
 - (ii) sidelights;
 - (iii) a sternlight;
 - (iv) a towing light in a vertical line above the sternlight;
 - (v) when the length of the tow exceeds 200 metres, a diamond shape where it can best be seen.

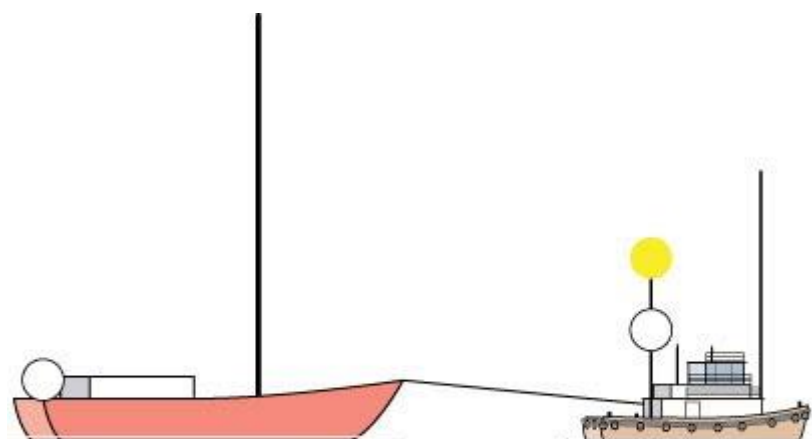


- (b) When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit they shall be regarded as a power-driven vessel and exhibit the lights prescribed in Rule 23.
- (c) A power-driven vessel when pushing ahead or towing alongside, except in the case of a composite unit, shall exhibit:
 - (i) instead of the light prescribed in Rule 23(a)(i) or (a)(ii), two masthead lights in a vertical line;
 - (ii) sidelights;
 - (iii) a sternlight.

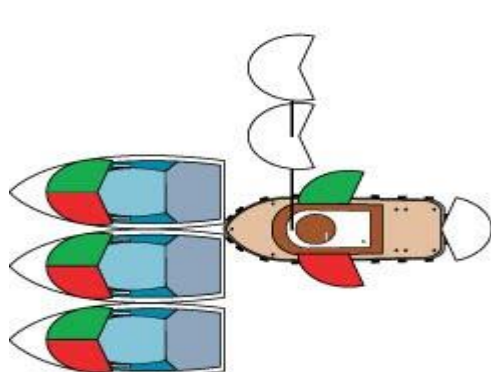
- (d) A power-driven vessel to which paragraph (a) or (c) of this Rule applies shall also comply with Rule 23(a)(ii).
- (e) A vessel or object being towed, other than those mentioned in paragraph (g) of this Rule, shall exhibit:
 - (i) sidelights;
 - (ii) a sternlight;
 - (iii) when the length of the tow exceeds 200 metres, a diamond shape where it can best be seen.
- (f) Provided that any number of vessels being towed alongside or pushed in a group shall be lighted as one vessel,
 - (i) a vessel being pushed ahead, not being part of a composite unit, shall exhibit at the forward end, sidelights;
 - (ii) a vessel being towed alongside shall exhibit a sternlight and at the forward end, sidelights.



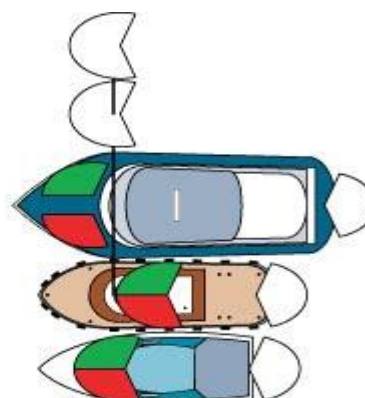
Vessel towing less than 50 m in length,
length of tow less than 200 m



Vessels engaged in towing seen from
more than 22.5° abaft the beam



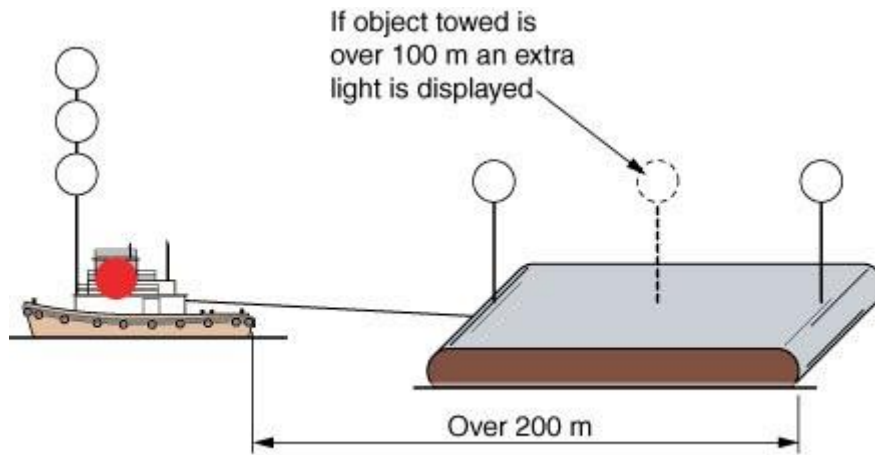
Group of vessels pushed from ahead
*Note no towing light is shown



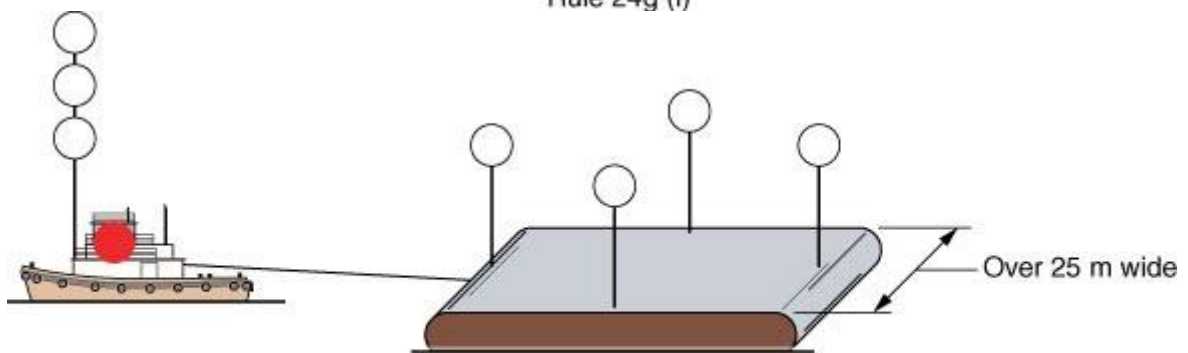
Two vessels towed alongside

(g) An inconspicuous, partly submerged vessel or object, or combination of such vessels or objects being towed, shall exhibit:

- (i) if it is less than 25 metres in breadth, one all-round white light at or near the forward end and one at or near the after end except that dracones need not exhibit a light at or near the forward end;
- (ii) if it is 25 metres or more in breadth, two additional all-round white lights at or near the extremities of its breadth;
- (iii) if it exceeds 100 metres in length, additional all-round white lights between the lights prescribed in subparagraphs (i) and (ii) so that the distance between the lights shall not exceed 100 metres;

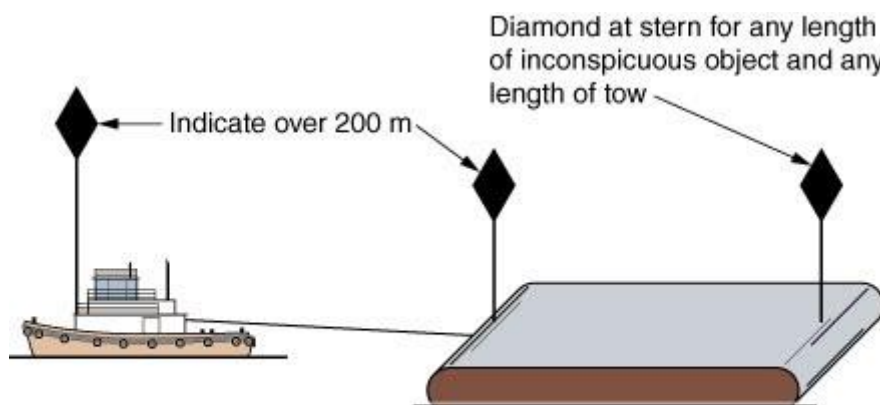


Rule 24g (i)



Rule 24g (ii)

- (iv) a diamond shape at or near the aftermost extremity of the last vessel or object being towed and if the length of the tow exceeds 200 metres an additional diamond shape where it can best be seen and located as far forward as is practicable.



Rule 24g (iii)

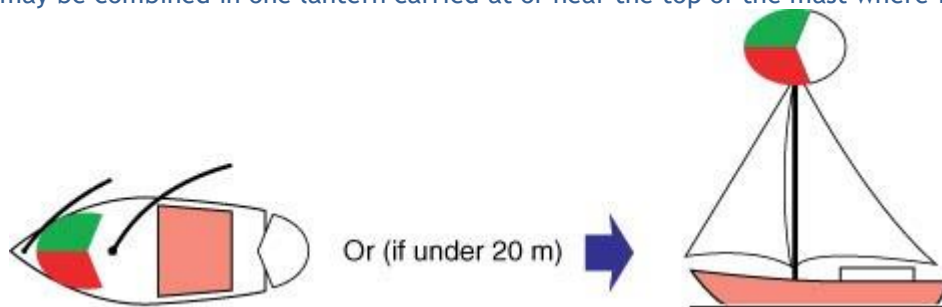
- (h) Where from any sufficient cause it is impracticable for a vessel or object being towed to exhibit the lights or shapes prescribed in paragraph (e) or (g) of this Rule, all possible measures shall be taken to light the vessel or object towed or at least to indicate the presence of such vessel or object.
- (i) Where from any sufficient cause it is impracticable for a vessel not normally engaged in towing operations to display the lights prescribed in paragraph (a) or (c) of this Rule, such vessel shall not be required to exhibit those lights when engaged in towing another vessel in distress or otherwise in need of assistance. All possible measures shall be taken to indicate the nature of the relationship between the towing vessel and the vessel being towed as authorized by Rule 36, in particular by illuminating the towline.

Rule 25 - Sailing vessels underway and vessels under oars

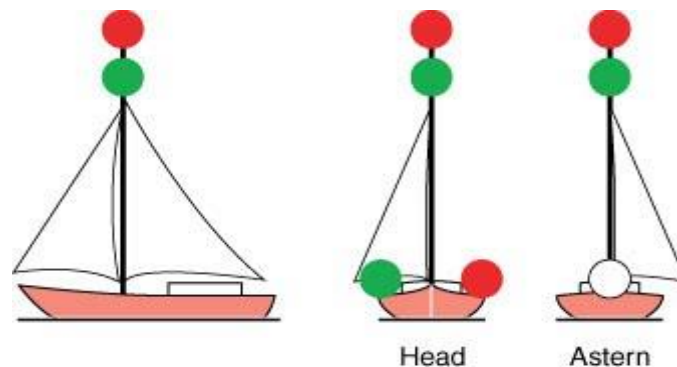
(a) A sailing vessel underway shall exhibit:

- (i) sidelights;
- (ii) a sternlight.

(b) In a sailing vessel of less than 20 metres 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.



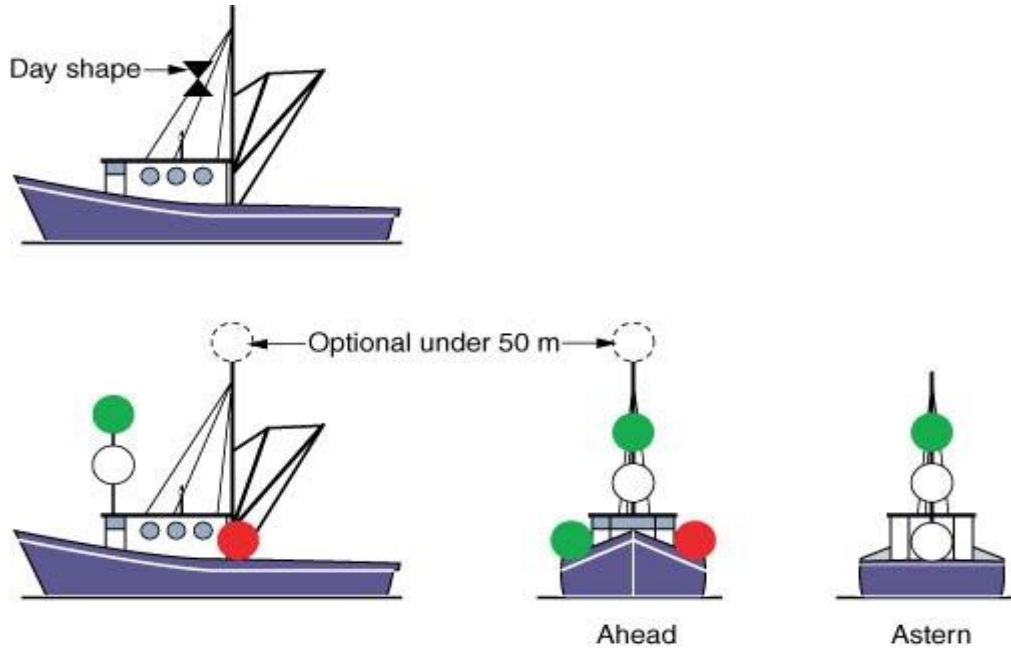
(c) A sailing vessel underway may, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit at or near the top of the mast, where they can best be seen, two all-round lights in a vertical line, the upper being red and the lower green, but these lights shall not be exhibited in conjunction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



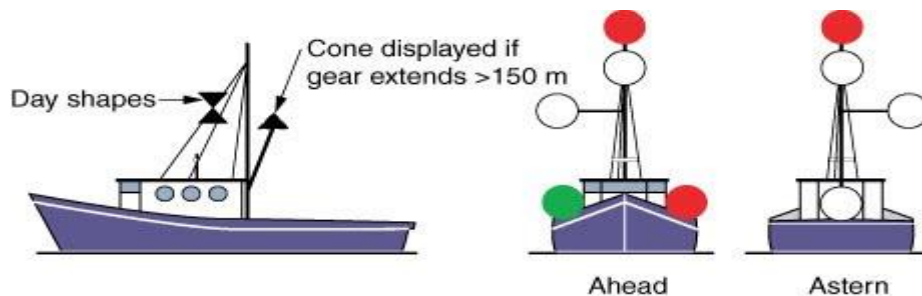
- (d) (i) A sailing vessel of less than 7 metres in length shall, if practicable, exhibit the lights prescribed in paragraph (a) or (b) of this Rule, but if she does not, she shall have ready at hand an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.
- (ii) 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.
- (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 downwards.

Rule 26 - Fishing vessels

- (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 metres in length shall not be obliged to exhibit such a light but may do so;
 - (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.



- (c) A vessel engaged in fishing, other than trawling, shall exhibit:
 - (i) two all-round lights in a vertical line, the upper being red and the lower white, or a shape consisting of two cones with apexes together in a vertical line one above the other;
 - (ii) when there is outlying gear extending more than 150 metres horizontally from the vessel, an all-round white light or a cone apex upwards in the direction of the gear;
 - (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.



- (d) The additional signals described in Annex II to these Regulations apply to a vessel engaged in fishing in close proximity to other vessels engaged in fishing.

Annex II has been summarised below:

Shooting nets	<i>white over white</i>	<i>(Flag Z by day)</i>
Hauling nets	<i>white over red</i>	<i>(Flag G by day)</i>
Nets caught on bottom	<i>red over red</i>	<i>(Flag P by day)</i>
Pair trawling	<i>searchlights on water</i>	<i>(Flag T by day)</i>
Purse Seiners	<i>yellow over yellow, flashing alternately</i>	

These are 'all-round' lights at least 900 mm apart. They are carried at a lower level than the fishing lights (ie the green-over-white or red-over-white), and of lesser intensity (but still visible for at least 1 mile).

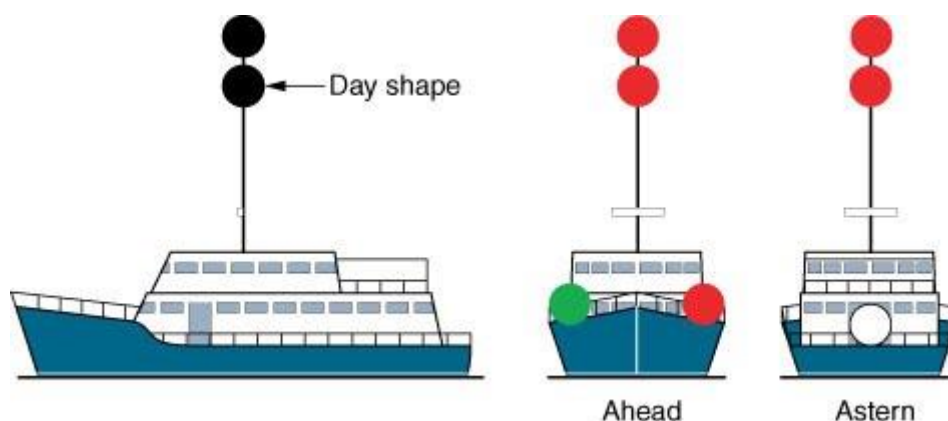
(e) A vessel when not engaged in fishing shall not exhibit the lights or shapes prescribed in this rule, but only those prescribed for a vessel of her length.

This rule is often ignored. Vessels often incorrectly show fishing lights when transiting to or from fishing grounds. If you have any doubt however, remember Rule 7(a) 'If there is any doubt about risk of collision, such a risk shall be deemed to exist'.

Rule 27 - Vessels not under command or restricted in their ability to manoeuvre

(a) A vessel not under command shall exhibit:

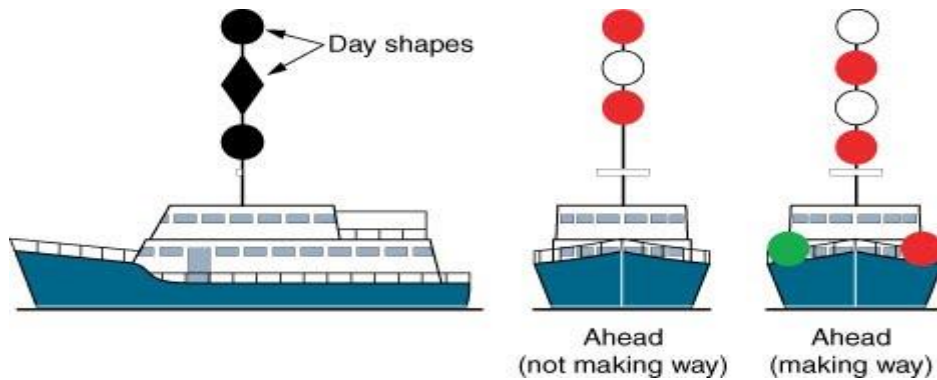
- (i) two all-round red lights in a vertical line where they can best be seen;
- (ii) two balls or similar shapes in a vertical line where they can best be seen;
- (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.



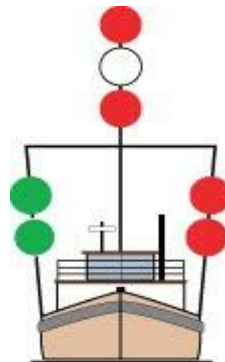
(b) A vessel restricted in her ability to manoeuvre, except a vessel engaged in mine clearance operations, shall exhibit:

- (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 sternlight, in addition to the lights prescribed in subparagraph (i);

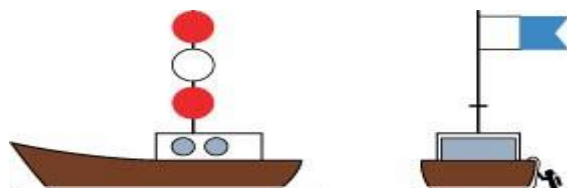
- (iv) when at anchor, in addition to the lights or shapes prescribed in subparagraphs (i) and (ii), the light, lights or shape prescribed in Rule 30.



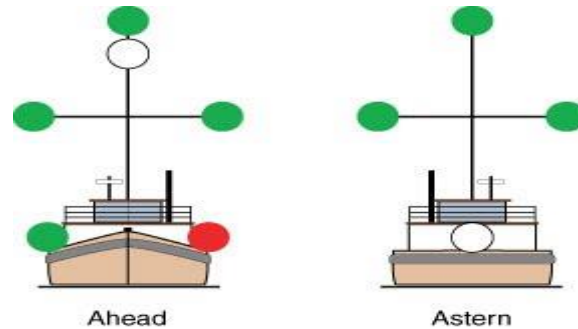
- (c) A power-driven vessel engaged in a towing operation such as severely restricts the towing vessel and her tow in their ability to deviate from their course shall, in addition to the lights or shape prescribed in Rule 24(a), exhibit the lights or shapes prescribed in subparagraphs (b)(i) and (ii) of this Rule.
- (d) A vessel engaged in dredging or underwater operations, when restricted in her ability to manoeuvre, shall exhibit the lights and shapes prescribed in subparagraphs (b)(i), (ii) and (iii) of this Rule and shall in addition, when an obstruction exists, exhibit:
- (i) two all-round red lights or two balls in a vertical line to indicate the side on which the obstruction exists;
 - (ii) two all-round green lights or two diamonds in a vertical line to indicate the side on which another vessel may pass;
 - (iii) when at anchor, the lights or shapes prescribed in this paragraph instead of the lights or shape prescribed in Rule 30.



- (e) Whenever the size of a vessel engaged in diving operations makes it impracticable to exhibit all lights and shapes prescribed in paragraph (d) of this Rule, the following shall be exhibited:
- (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) a rigid replica of the International Code flag "A" not less than 1 metre in height. Measures shall be taken to ensure its all-round visibility.



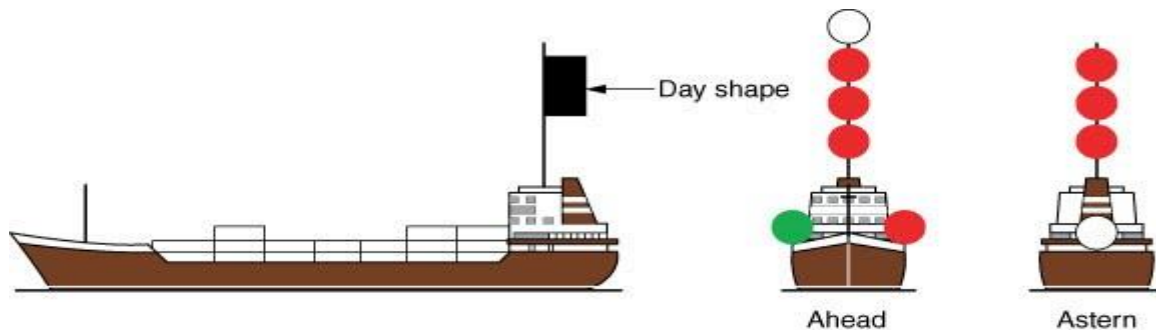
- (f) A vessel engaged in mine clearance operations shall in addition to the lights prescribed for a power-driven vessel in Rule 23 or to the lights or shape prescribed for a vessel at anchor in Rule 30 as appropriate, exhibit three all-round green lights or three balls. One of these lights or shapes shall be exhibited near the foremast head and one at each end of the fore yard. These lights or shapes indicate that it is dangerous for another vessel to approach within 1000 metres of the mine clearance vessel.



- (g) Vessels of less than 12 metres in length, except those engaged in diving operations, shall not be required to exhibit the lights and shapes prescribed in this Rule.
- (h) 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.

Rule 28 - Vessels constrained by their draught

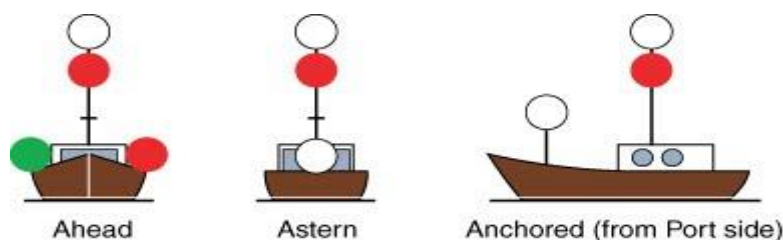
A vessel constrained by her draught may, in addition to the lights prescribed for power-driven vessels in Rule 23, exhibit where they can best be seen three all-round red lights in a vertical line, or a cylinder.



Note the Rule says these 'may' be shown, not 'shall' be shown, ie it is not compulsory to show the CBD lights.

Rule 29 - Pilot vessels

- (a) A vessel engaged on pilotage duty shall exhibit:
- at or near the masthead, two all-round lights in a vertical line, the upper being white and the lower red;
 - when underway, in addition, sidelights and a sternlight;
 - when at anchor, in addition to the lights prescribed in subparagraph (i), the light, lights or shape prescribed in Rule 30 for vessels at anchor.
- (b) A pilot vessel when not engaged on pilotage duty shall exhibit the lights or shapes prescribed for a similar vessel of her length.

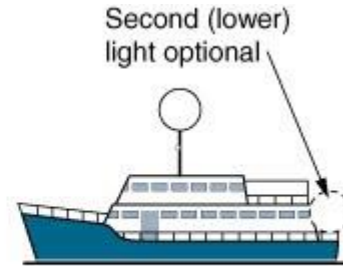


Rule 30 Anchored vessels and vessels aground

- (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 metres 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.

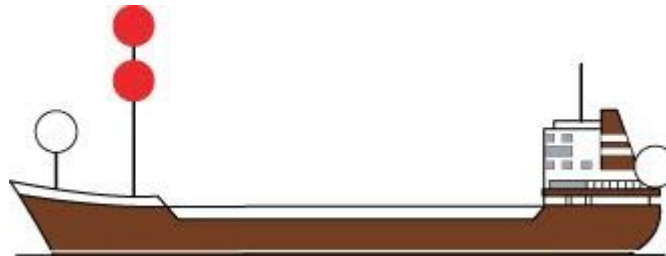


Length 50 m or more



Length under 50 m

- (c) A vessel at anchor may, and a vessel of 100 metres and more in length shall, also use the available working or equivalent lights to illuminate her decks.
- (d) A vessel aground shall exhibit the lights prescribed in paragraph (a) or (b) of this Rule and in addition, where they can best be seen:
 - (i) two all-round red lights in a vertical line;
 - (ii) three balls in a vertical line.



- (e) A vessel of less than 7 metres in length, when at anchor, not in or near a narrow channel, fairway or anchorage, or where other vessels normally navigate, shall not be required to exhibit the lights or shape prescribed in paragraphs (a) and (b) of this Rule.
- (f) A vessel of less than 12 metres in length, when aground, shall not be required to exhibit the lights or shapes prescribed in subparagraphs (d)(i) and (ii)

Rule 31 - Seaplanes

Where it is impracticable for a seaplane or a WIG craft to exhibit lights and shapes of the characteristics or in the positions described in the Rules of this Part she shall exhibit lights and shapes as closely similar in characteristics and position as is possible.

Part D - Sound And Light Signals

Rule 32 Definitions

- (a) The word *whistle* means any sound signalling appliance capable of producing the prescribed blasts and which complies with the specifications in Annex III to these Regulations.
- (b) The term *short blast* means a blast of about one second's duration.
- (c) The term *prolonged blast* means a blast of from four to six seconds' duration.

Rule 33 Equipment for sound signals

- (a) A vessel of 12 metres or more in length shall be provided with a whistle, a vessel of 20 metres or more in length shall be provided with a bell in addition to a whistle, and a vessel of 100 metres 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 specification in Annex III to these Regulations. The bell or gong or both may be replaced by other equipment having the same respective sound characteristics, provided that manual sounding of the required signals shall always be possible.
- (b) A vessel of less than 12 metres in length shall not be obliged to carry the sound signalling 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 - Manoeuvring and warning signals

- (a) When vessels are in sight of one another, a power-driven vessel underway, when manoeuvring as authorized or required by these Rules, shall indicate that manoeuvre 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, whilst the manoeuvre 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 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.
- (c) 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.
- (d) 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.

- (e) 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.
- (f) If whistles are fitted on a vessel at a distance apart of more than 100 metres, one whistle only shall be used for giving manoeuvring and warning signals.

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 manoeuvre, a vessel constrained by her draught, 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 manoeuvre 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 metres 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 metres or more but less than 20 metres 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 metres 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.

There are ten paragraphs to this Rule, summed up below.

	Signal	Interval
(a) Power-driven vessel making way (‘Here I come, sounding one’)	— 1 long	(2mins)
(b) Power-driven vessel stopped in water	— — 2 long	(2 mins)
(c) NUC, RAM, CBD, SAIL, EIF, TOW Long-short-short is the same as Morse Code D (think ‘D for danger’)	— ·· 1 long, 2 short	(2 mins)
(d) RAM and EIF at anchor (when anchored, these vessels may be surrounded by gear and obstructions)	— ·· 1 long, 2 short	(2 mins)
(e) Towed Vessel, if manned The tug signal alone does not indicate the presence of a tow. Rule 2(a) ‘precautions’ would require that, in fog, the towed vessel should be manned for this purpose especially if it is over 200 metres. Conversely, a tug made fast to a vessel is really not much different to an outboard engine; the tug should keep silent and the vessel should sound its own signal for making way or not making way as appropriate.	— ··· 1 long, 3 short	(2 mins)
(f) Composite unit pushing ahead (same as PDV).	— 1 long	(2mins)
(g) Vessel at anchor below 100 metres 100 metres or more Optional whistle to warn approaching vessel Use it when other vessels come too close, bell/gong might not be loud enough	5 sec. bell ring 5 sec. bell ring (forward) followed by 5 sec. gong (aft) ·—· Short-Long-Short	(1 min)
(h) Aground: same as ‘anchored’ plus 3 strokes before and after bell ring.	3 distinct strokes on the bell before and after rapid ringing	(1 min)
May also sound an ‘appropriate’ whistle signal such as the signal for U. Short-short-long is Morse Code for the letter ‘U’. Whistle signals often correspond to the single-letter flag signals which you will meet in the Section 9. Signal letter ‘U’ means ‘You are running into danger’, whether it be signalled by flag, sound or light.	··— Short-Short-Long	
(i) Vessel 12m to 20m - no bell signals required at anchor or aground.	Efficient sound signal - eg ·— · and anchor and ··— when aground	2 mins
(j) Less than 12 metres: As above, or	Efficient sound signal	(2 mins)
(k) Pilot vessel: Same as for PDV however may also sound 4 short blasts as an optional identity signal	— (PDV) ···· optional	

Rule 36 - Signals to attract attention

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. Any light to attract the attention of another vessel shall be such that it cannot be mistaken for any aid to navigation. For the purpose of this Rule the use of high intensity intermittent or revolving lights, such as strobe lights, shall be avoided.

Rule 37 - Distress signals

When a vessel is in distress and requires assistance she shall use or exhibit the signals described in [Annex IV](#) to these Regulations.

ANNEX 4 - 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-signalling apparatus;
- (c) rockets or shells, throwing red stars fired one at a time at short intervals;
- (d) a signal made by any signalling 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-coloured smoke;
- (k) slowly and repeatedly raising and lowering arms outstretched to each side;
- (l) a distress alert by means of digital selective calling (DSC) transmitted on:
 - (i) VHF channel 70; or
 - (ii) MF/HF on the frequencies 2187.5 kHz, 8414.5 kHz, 4207.5 kHz, 6312 kHz, 12577kHz
- (m) a ship-to-shore distress alert transmitted by the ship's Inmarsat or other mobile satellite service provider ship earth station;
- (n) signals transmitted by emergency position-indicating radio beacons;
- (o) approved signals transmitted by radio communication systems, including survival craft radar transponders.

1. The use or exhibition of any of the foregoing signals, except for the purpose of indicating Distress and in need of assistance and the use of other signals which may be confused with any of the above signals, is prohibited.

2. Attention is drawn to the relevant sections of the International Code of Signals, the International Aeronautical and Maritime Search and Rescue Manual, Volume III and the following signals:

- (a) a piece of orange-coloured canvas with either a black square and circle or other appropriate symbol (for identification from the air);
- (b) a dye marker.