



ISSA

INLAND

SKIPPER

STUDENT

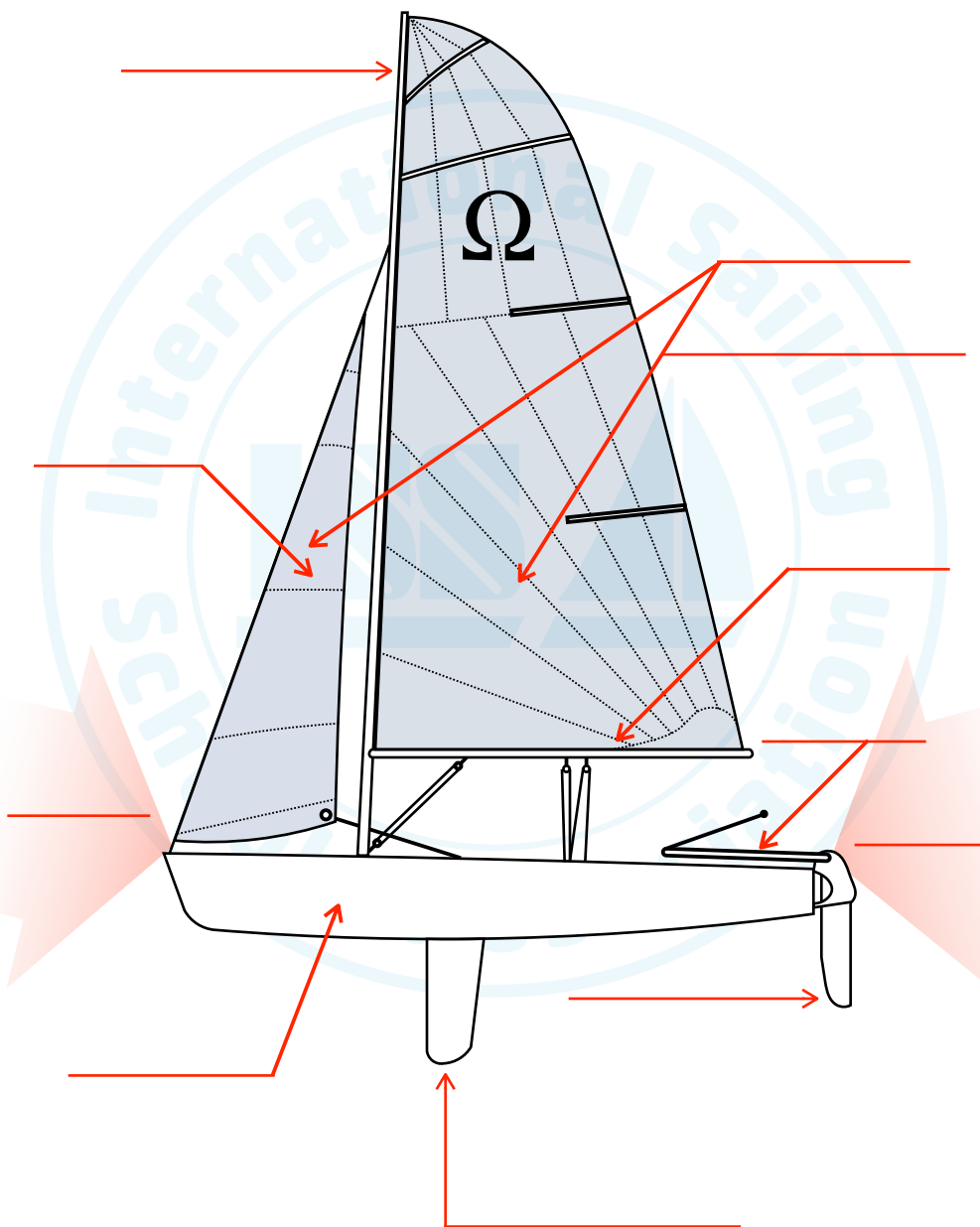
HANDBOOK

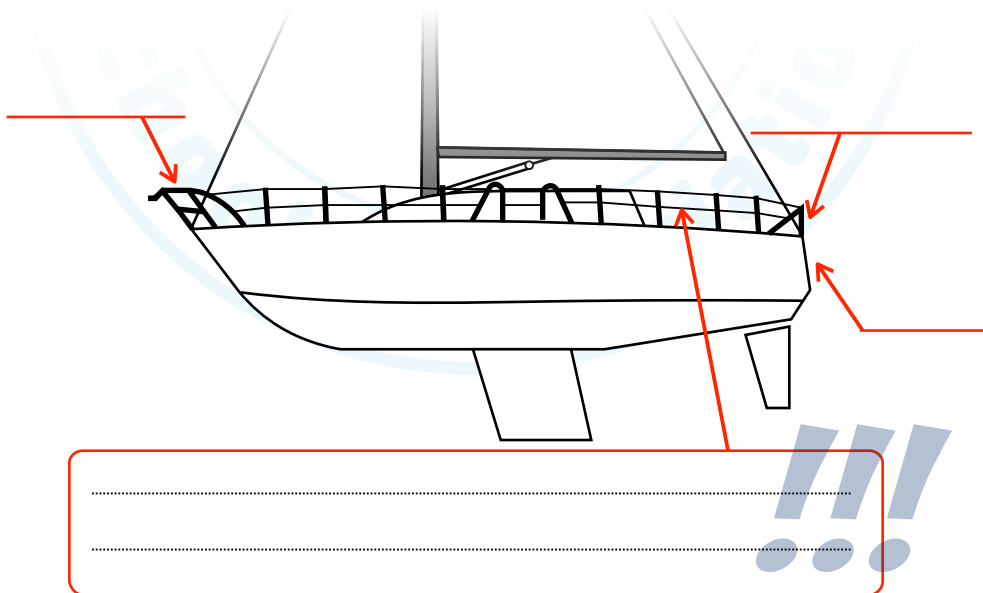
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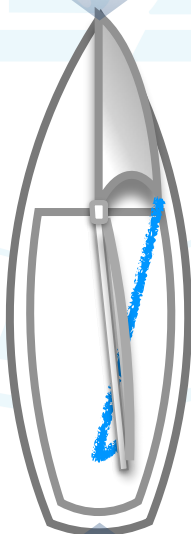
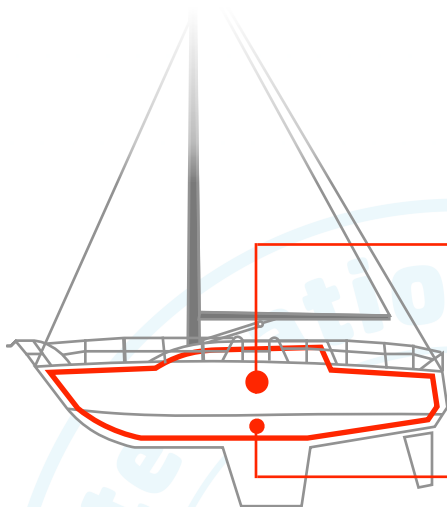
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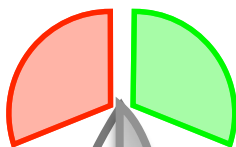
YACHT CONSTRUCTION





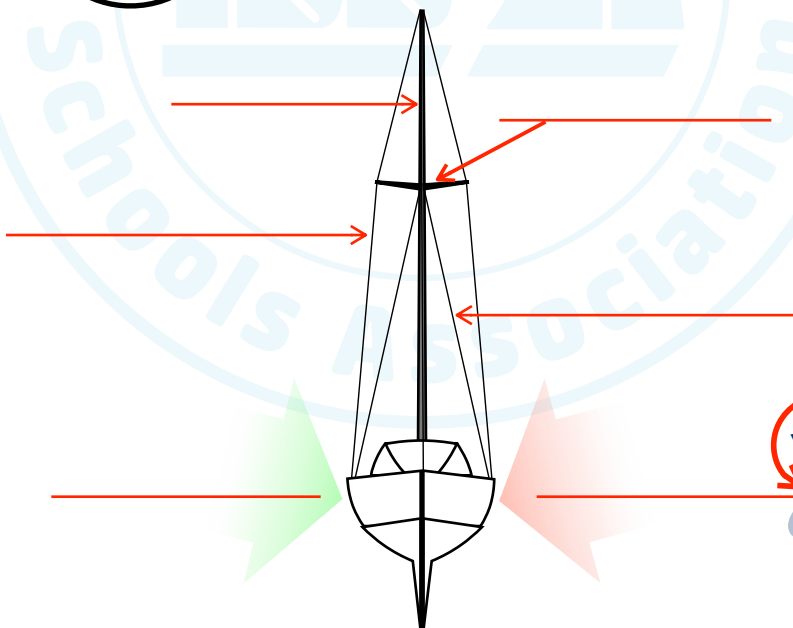
Yacht Construction



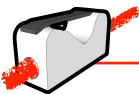
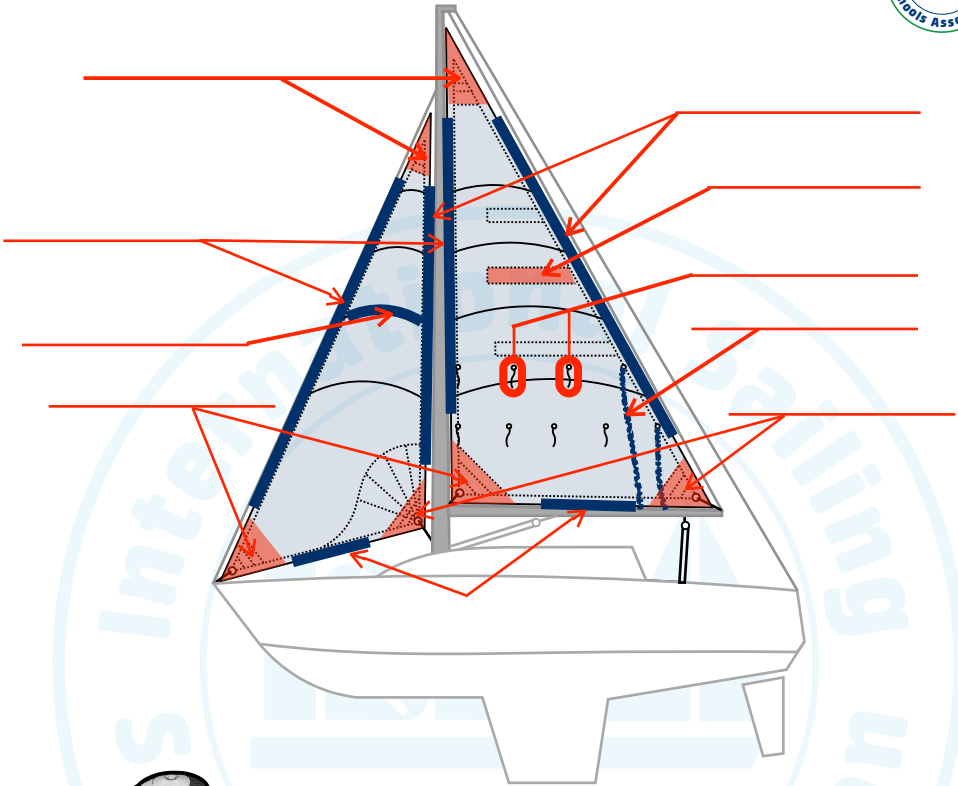








Yacht Construction



SAFETY ON BOARD



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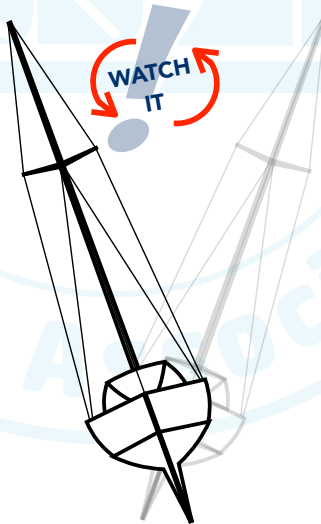
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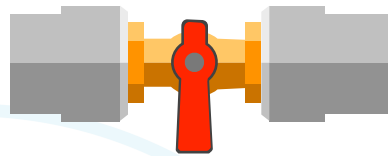
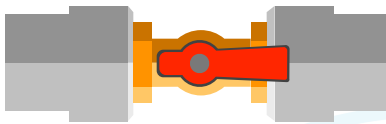
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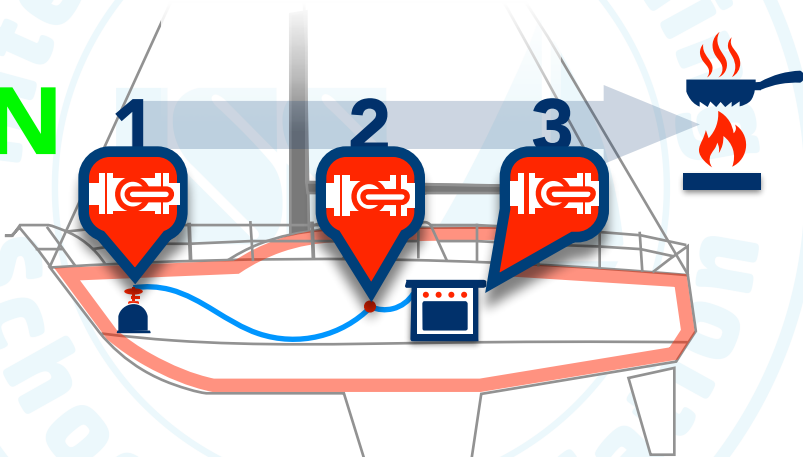
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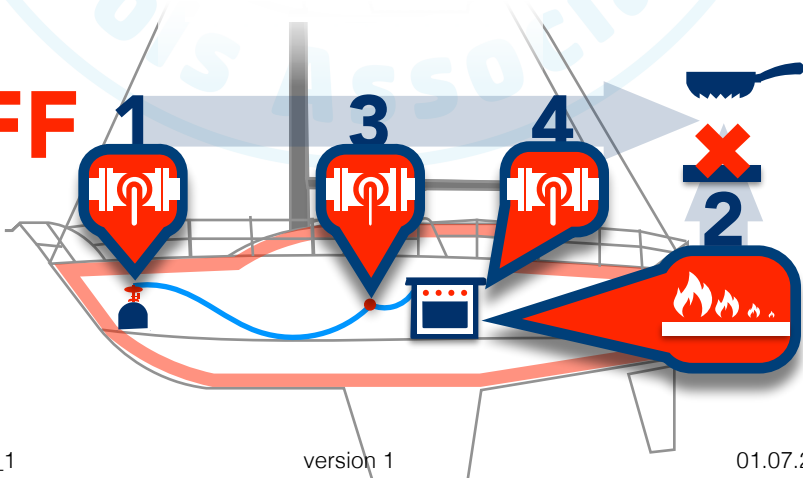


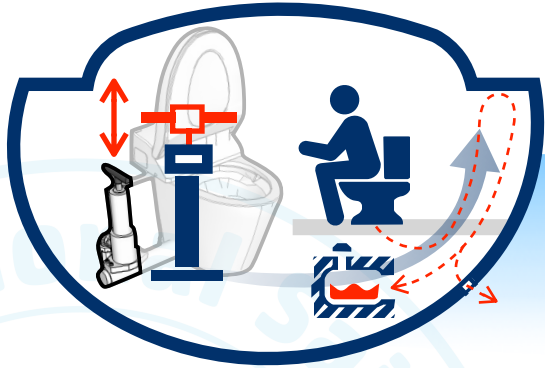


ON



OFF






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1 SOS

2  —



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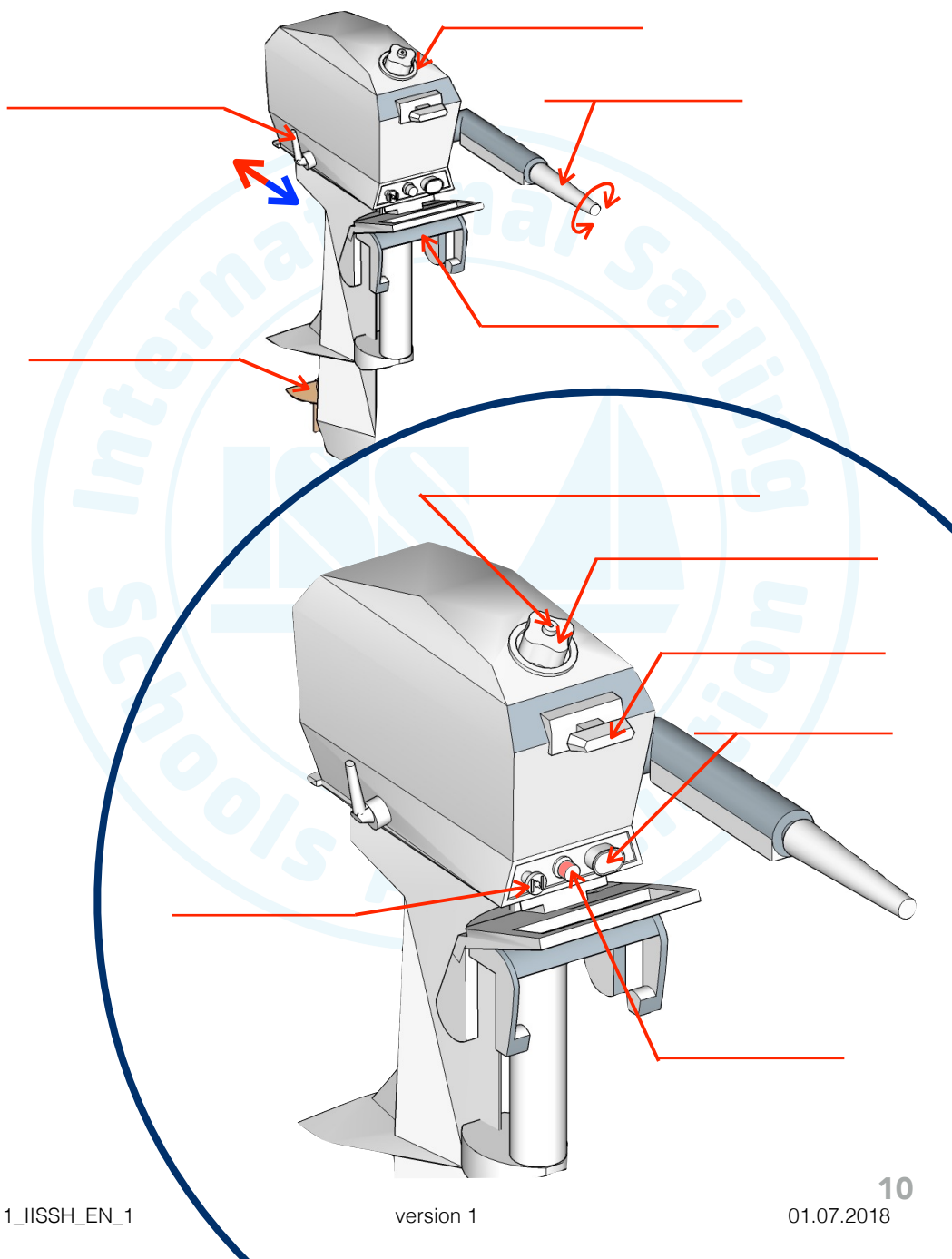
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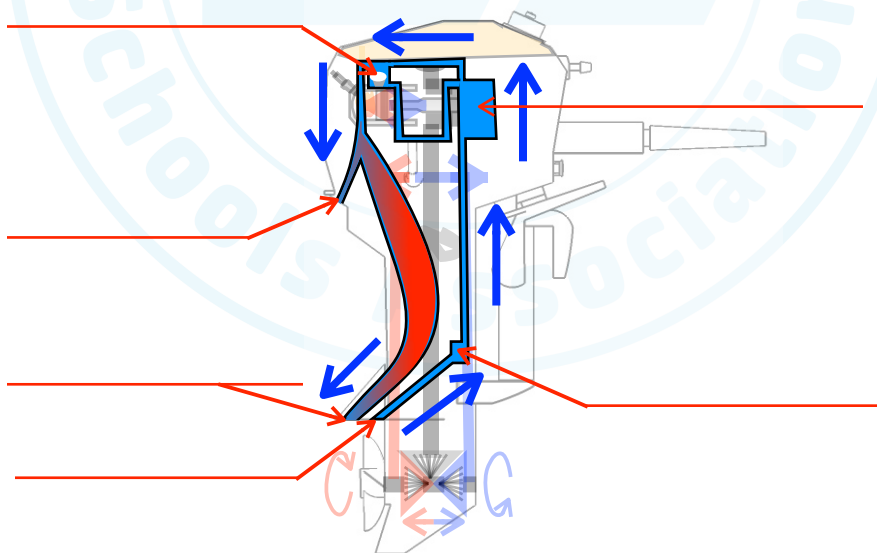
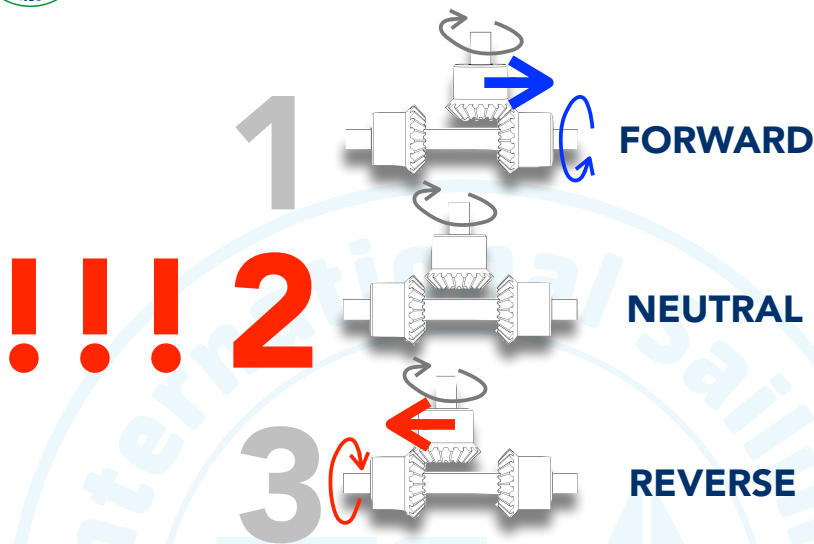
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OUTBOARD ENGINE







OR



OR



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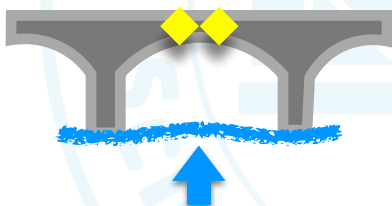
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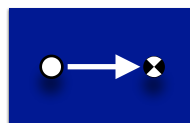














OR



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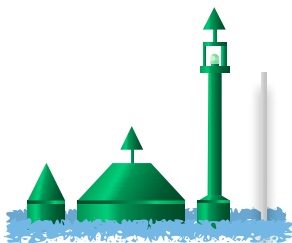
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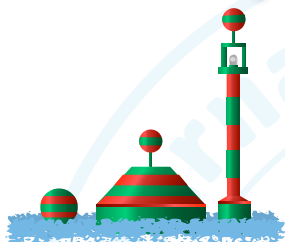
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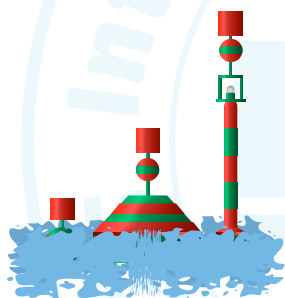
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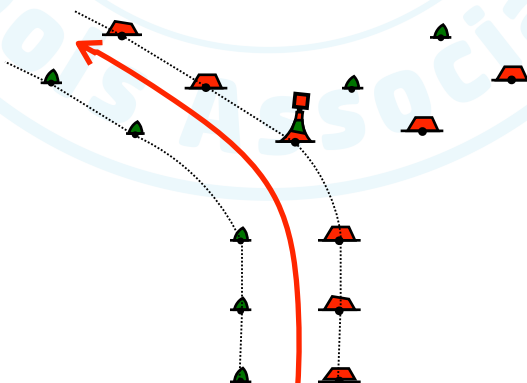
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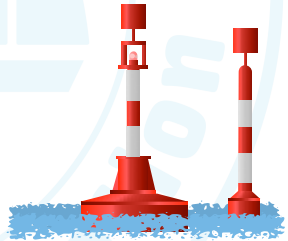
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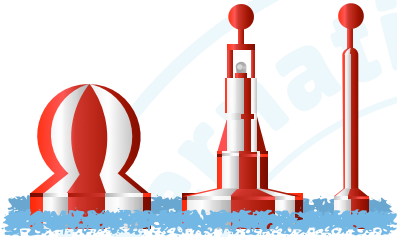
CEVNI



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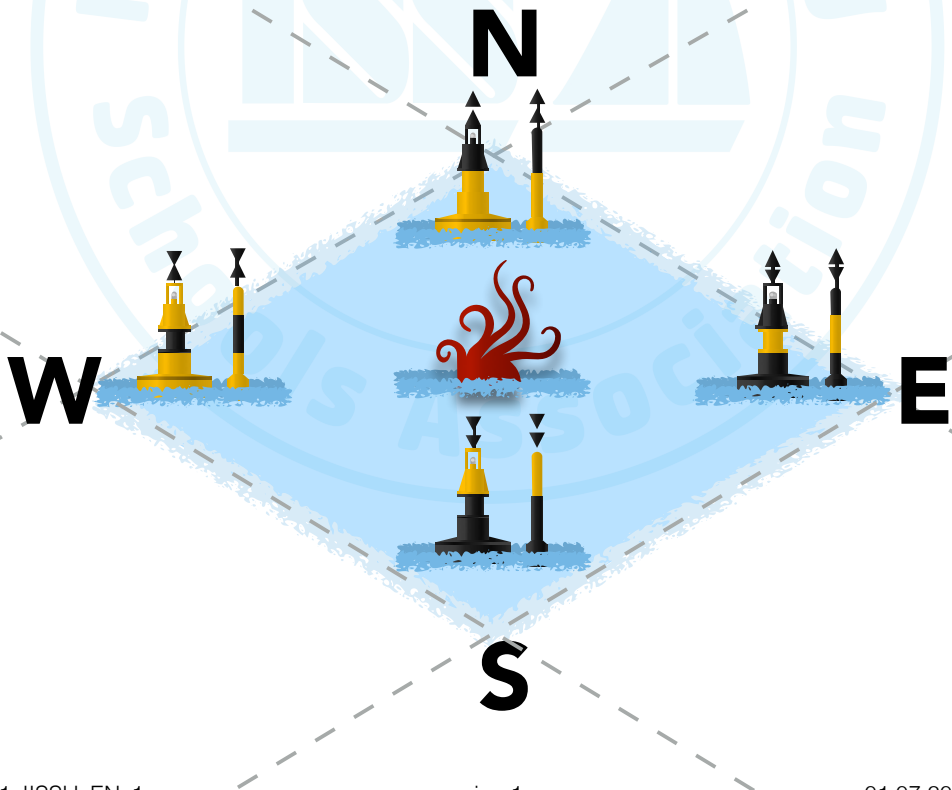
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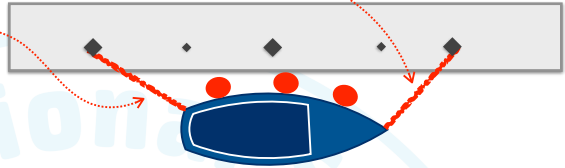


BERTHING

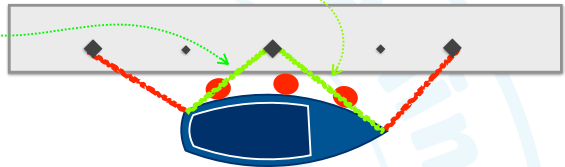
DOCK LINES

Each line used for docking a boat has a different function.

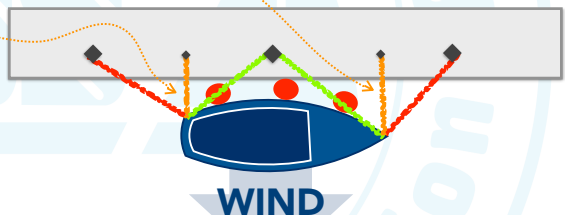
Bow line & stern line are the main docking lines. They keep the boat from running away from the dock but **DO NOT STOP the boat's FORWARD and BACKWARD** movement



Bow spring & stern spring are additional docking lines. They keep the boat from moving forward and backward. Always use them when leaving the boat longer at the dock

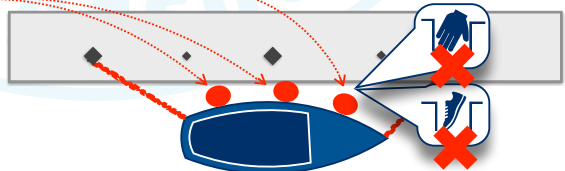
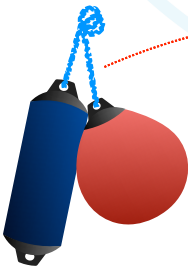


Bow breast & stern breast keep the bow and stern close alongside, particularly in case of a strong offshore wind. They are not essential when bow and stern lines and springs are also used.



FENDERS

Fenders are usually made of plastic and are hung from the grabrails or lifelines over the side of the boat to prevent it making contact with the bulkhead, dock or another boat along side. They are made in a variety of shapes to suit different situations. You should use at least three fenders when berthed alongside.

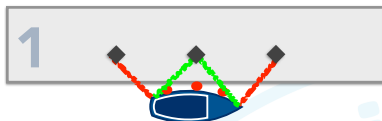


NEVER twist the fender rope around your hand when handling fenders.

NEVER Use your hands or feet to push away the boat from the bulkhead.

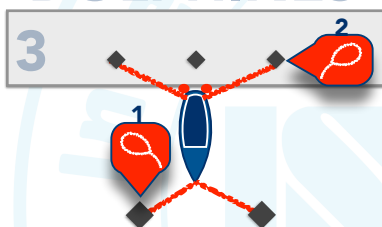
TYPES OF BERTHS

LONGSIDE



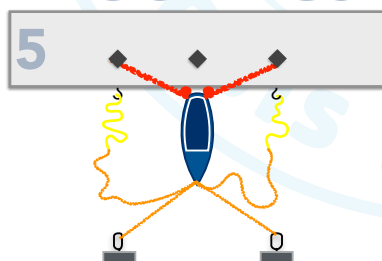
The most typical type of berth. Use at least bow and stern line. Adding just one spring line will better stabilize the boat.

DOLPHINES



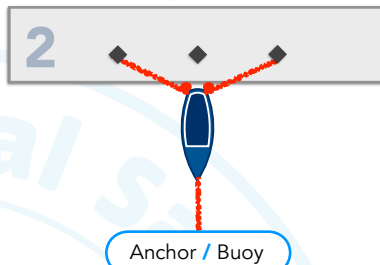
In some marinas you might encounter docking piles, called dolphins (large wooden or metal stakes driven into the seabed). When approaching the berth first fix the lines on the piles and then ashore.

MOORINGS



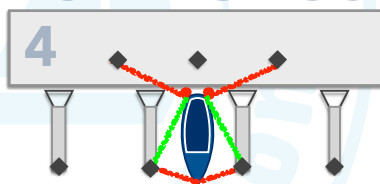
Usually there is a lazyline secured to an underwater mooring. The lazyline is **picked up from the shore side** on arrival and **led to bow (or stern, depending on how you want to dock) and fixed from the open water side**. Twin moorings secure the boat.

BOW/STERN

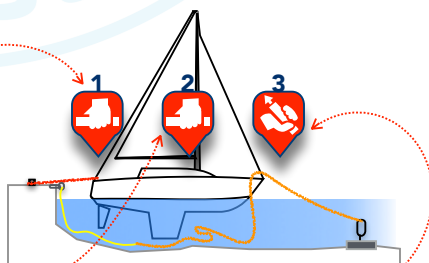


To berth with your bow or stern you will need to attach the boat to the docking buoy (if there is one) or to use your anchor to stabilize the boat.

FLOATING DOCK

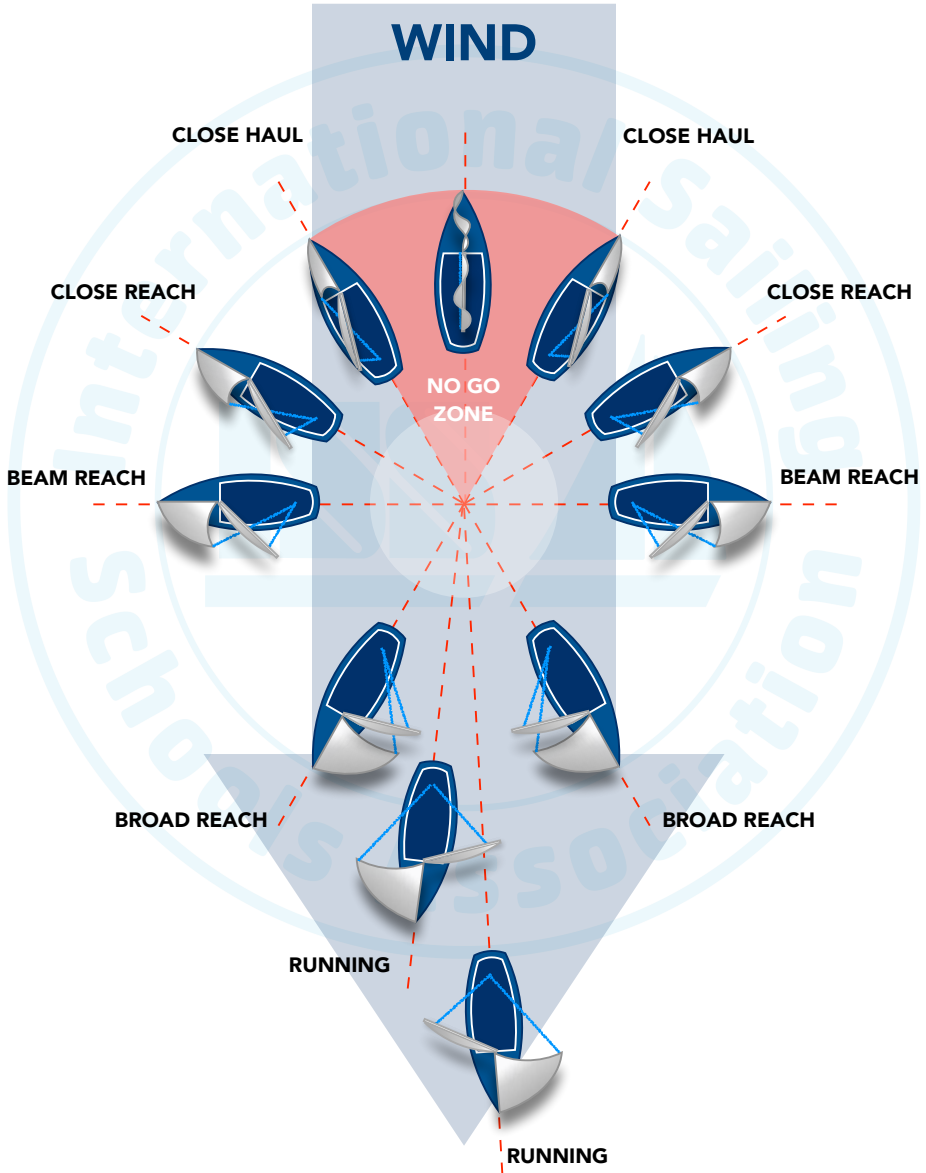


Modern marinas offer platforms or ramp supported by pontoons that are called floating docks. They allow a convenient berth. ramps are usually shorter than the boats. Use spring in order to prevent the boat of hitting the bulkhead.



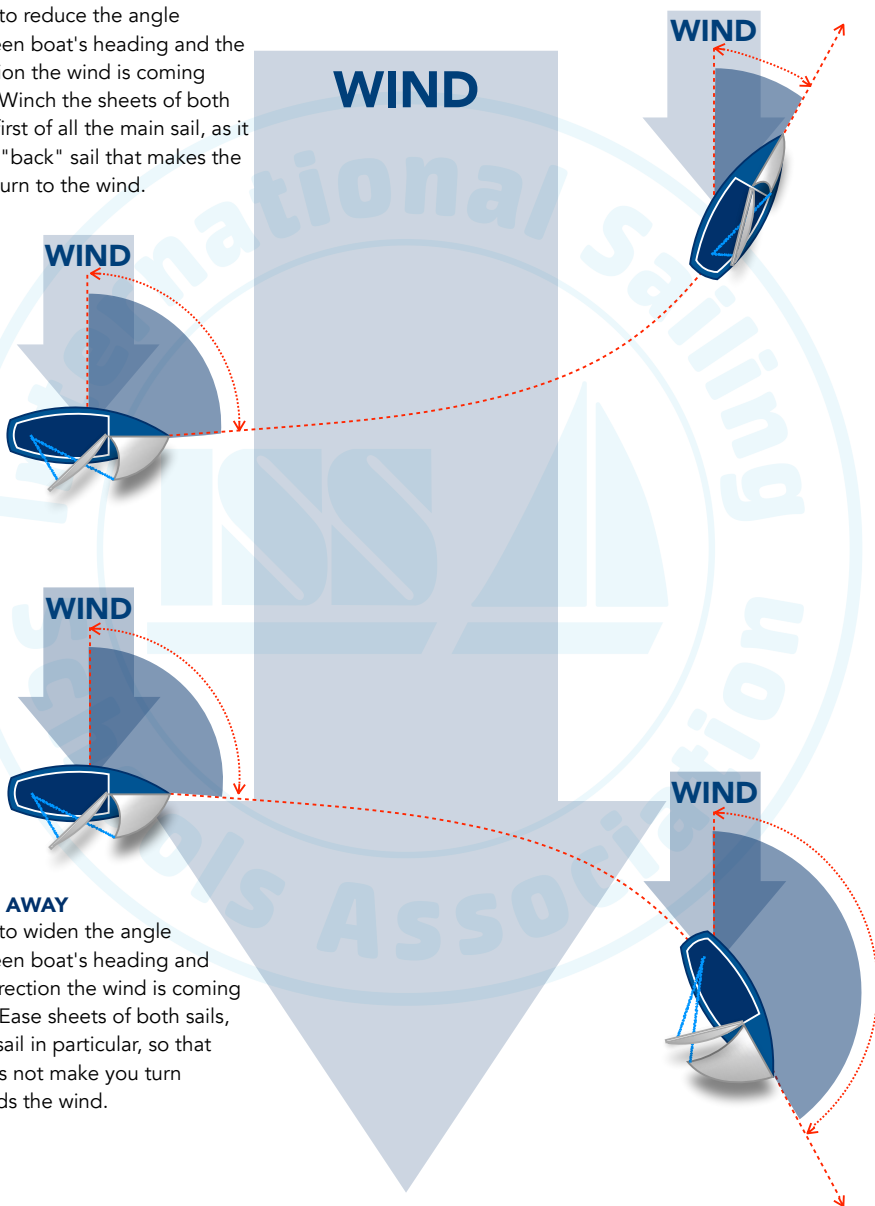
SAILING

POINTS OF SAIL



LUFF UP

Steer to reduce the angle between boat's heading and the direction the wind is coming from. Winch the sheets of both sails, first of all the main sail, as it is the "back" sail that makes the boat turn to the wind.



BEAR AWAY

Steer to widen the angle between boat's heading and the direction the wind is coming from. Ease sheets of both sails, main sail in particular, so that it does not make you turn towards the wind.

TACKING

GYBING

3

When you pass the "No go zone" the mainsail fills up with wind. Straighten the tiller and winch in the other tack jib sheet

2

Once you enter the "No go zone" let go of the working jib's sheet. No need to adjust the mainsail sheet.

1

Sufficient speed is crucial for the manoeuvre. You might need to bear away a bit to gain it. When ready turn the boat's tiller distinctively - at last 30 degrees

WIND

1

To start the manoeuvre turn the tiller gently and winch in the main sail sheet quickly to bring the boom as close to the boat's centre line as possible

2

Keep the tiller slightly turned. Once you pass the wind line, pull the other tack jib sheet gradually while slowly releasing the initial tack jib sheet. Release the main sail sheet to its working position

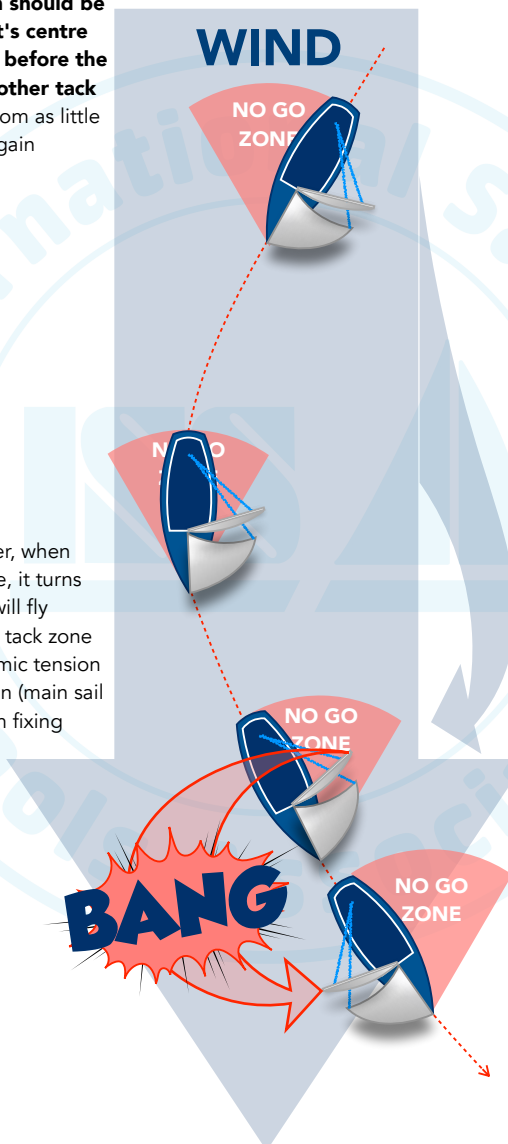
3

Straighen up the tiller . Trim the sails. It might be wise to install a preventer

DANGEROUS GYBE

It is crucial to control the main sail sheet. **The boom should be brought to the boat's centre as close as possible before the boat passes to the other tack zone**, leaving the boom as little room as possible to gain momentum.

If the boom is away from the boat's center, when crossing the wind line, it turns into a doom tool. It will fly violently to the other tack zone putting a lot of dynamic tension on boat's construction (main sail sheet, shrouds, boom fixing points)



ANCHORING

TYPES OF ANCHORS

There is a number of different types of anchors and each has its own advantages and disadvantages. Below the most common types you might encounter:



Bruce: Universal, but poorly keeps on clay and heavy mud.



Fisherman's: It holds well on the rocks, but it is difficult to store.



Delta: Holds well on most substrates. Weaker only on the rocks.



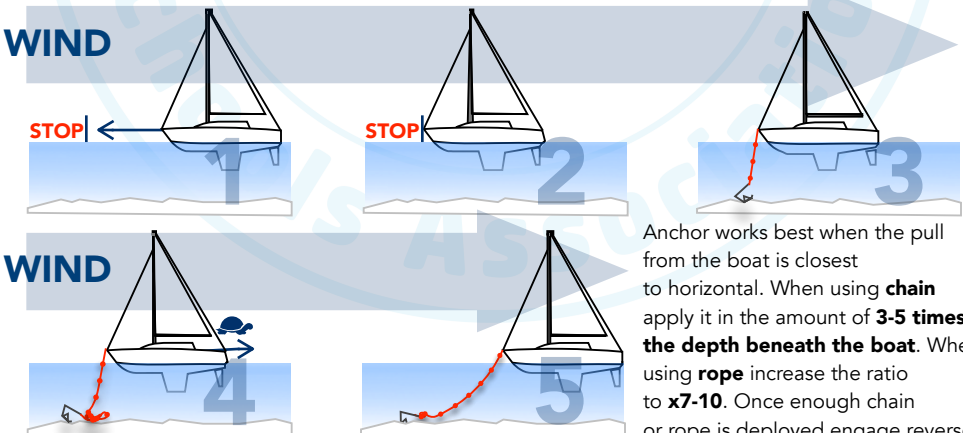
Mushroom: Good for long-term anchoring



Danforth's: Holds well on the sand and in the mud. It occupies little space.

DROPPING THE ANCHOR

Look at how other boats are oriented on the approach to the site. (1) Always go against the wind when dropping an anchor. (2) Ensure you have stopped. (3) Start easing the anchor. (4) Go slowly backwards, (5) until the chain/rope stretches.

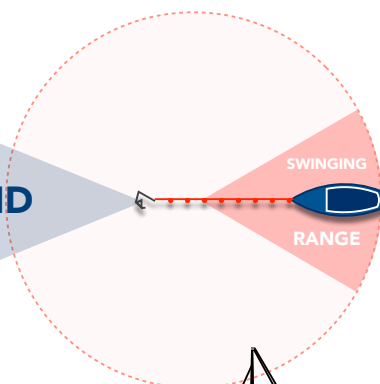


Anchor works best when the pull from the boat is closest to horizontal. When using **chain** apply it in the amount of **3-5 times the depth beneath the boat**. When using **rope** increase the ratio to **x7-10**. Once enough chain or rope is deployed engage reverse gear and with high revs for 2-3 seconds, check if the anchor holds well.

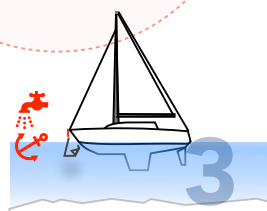
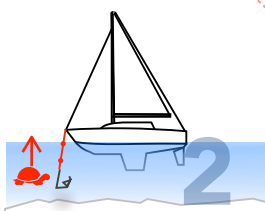
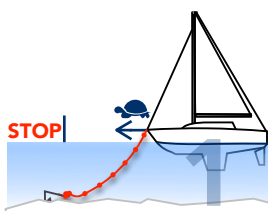
SWINGING CIRCLE

Bear in mind the swinging circle, which is around one third of the part of chain or rope that is laying on the seabed. Ensure your **swinging range** clears obstructions. In order to check if the anchor is holding observe your swing. **Keep in mind the possible change in wind direction.**

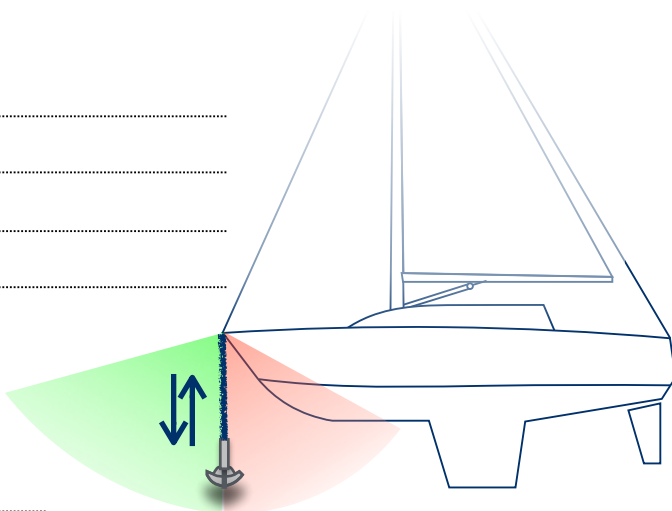
WIND



RAISING THE ANCHOR



- (1) Slowly move towards the anchor. **Watch for the chain/rope not to get beneath the hull.**
- (2) When near vertically above, start pulling the anchor.
- (3) Rinse it and carefully get in aboard.
- (4) Secure the anchor aboard and you are free to go.



IRPCS

The **International Regulations for Preventing Collisions at Sea 1972 (Colregs)** are published by the International Maritime Organisation (the IMO) and set out, among other things, the "rules of the road" or navigation rules to be followed by ships and other vessels at sea to prevent collisions between two or more vessels.

FUNDAMENTAL RULES

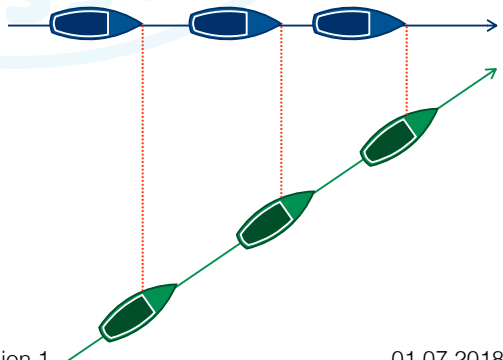
- 1 **KEEP A WATCH** by all appropriate means (look, listen, radar, AIS)
- 2 **NO ONE** has **'RIGHT OF WAY'**
- 3 One vessel is the give way, the other is the stand on vessel.
BOTH remain **RESPONSIBLE** to avoid a collision
- 4 Travel at a **SAFE SPEED** for the conditions
- 5 In a narrow channel **KEEP TO STARBOARD** (right)
- 6 **GIVE WAY** = **EARLY & SUBSTANTIAL** action
- 7 **STAND ON** = **MAINTAIN COURSE AND SPEED** until it is clear the other vessel is not taking action and only then take avoiding action

RISK OF COLLISION

When there is deemed to be a risk of collision

- One vessel is the **GIVE WAY** vessel
- The other is the **STAND ON** vessel

If there is a **CONSTANT BEARING** between the two vessels which are approaching each other there is a risk of collision.



SAILING RULES

UNDER SAIL

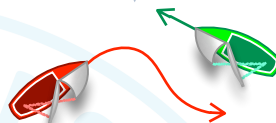


Starboard Tack Rule

Wind on the Starboard side of the vessel

- **STARBOARD TACK** boat is the **STAND ON** vessel.
- **PORT TACK** boat is the **GIVE WAY** vessel.

WIND



UNDER SAIL



Windward Rule

The boat nearest the wind is the Windward boat. The boat furthest from the wind is the Leeward boat

- **LEEWARD** boat is the **STAND ON** vessel.
- **WINDWARD** boat is the **GIVE WAY** vessel.

WIND

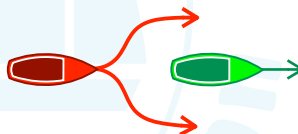


UNDER SAIL OR POWER

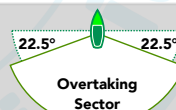


Overtaking Rule.

- The vessel **BEING OVERTAKEN** is the **STAND ON** vessel.
- The **OVERTAKING** vessel is the **GIVE WAY** vessel



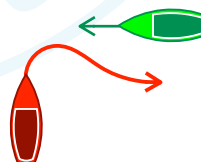
Overtaking is defined as coming from more than 22.5° abaft the beam (the angle a stern light becomes visible).



UNDER POWER



Vessels meeting at an angle but not when one is overtaking the other, give way to vessels on your **STARBOARD BOW**.



UNDER POWER



Vessels meeting head on – both turn significantly to **STARBOARD** and pass Port to Port.

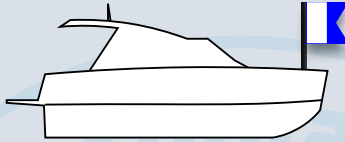


SHAPES AND SOUNDS

VISUAL DAY SIGNAL

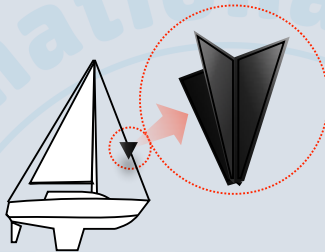
FOG SIGNAL

**Vessel engaged
in diving
operation**



Efficient sound signal
at intervals not exceeding
2 mins

**Vessel motor
sailing**



At intervals not exceeding
2 mins:

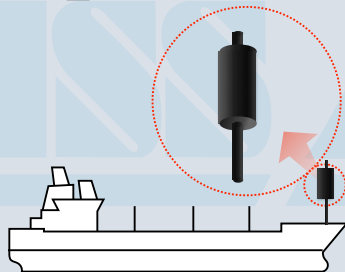
If making way



If not making way



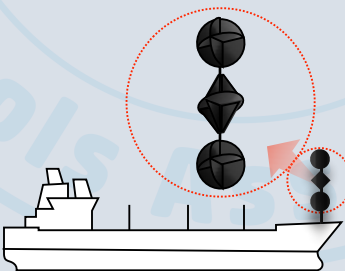
**Power driven
vessel
constrained by
draught**



At intervals not exceeding
2 min



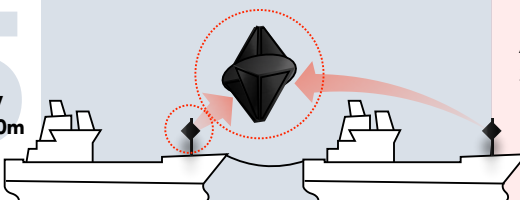
**Power driven
vessel with
restricted ability
to manoeuvre**



At intervals not exceeding
2 min



**Vessel towing
and tow.
Length of tow
more than 200m**



At intervals not exceeding
2 mins:

towing vessel



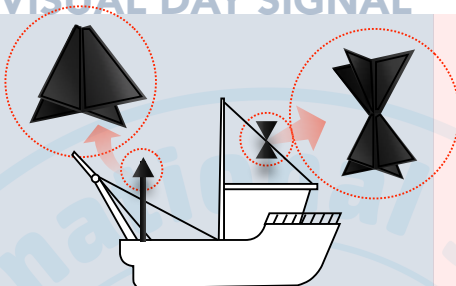
towed vessel



VISUAL DAY SIGNAL

FOG SIGNAL

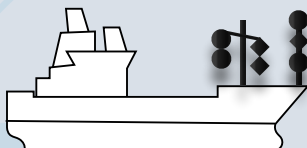
**Fishing Vessel
gear extending
more than 150m
horizontally**



At intervals not exceeding
2 min



**Carrying out
underwater
operations
(Restricted ability
to manoeuvre)**



At intervals not exceeding
2 min



Vessel at Anchor



Rapid bell at intervals not
exceeding 1 min. If over
100m followed by rapid
gong. May also sound
MORSE A on whistle



**Vessel not under
command**



At intervals not exceeding
2 min



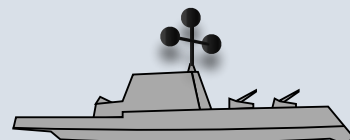
Vessel aground



3 bell strokes
+ rapid ringing
+ 3 bell strokes
+ (gong if 100m plus).
At intervals not exceeding
1 min. May also sound
Morse R on whistle



**Vessel engaged
in mine clearing
operations**



At intervals not exceeding
2 min



LIGHTS

Sailing vessels

Under 20m a combined all-round mast light can be used

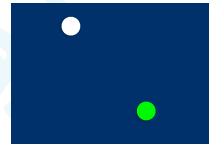
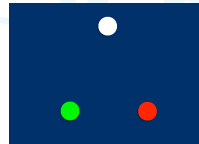
AFT

FORWARD

STARBOARD

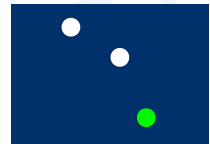
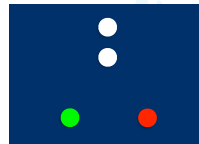


Power vessel <50m



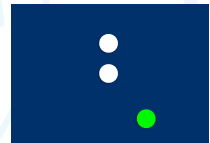
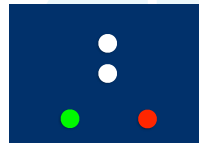
Power vessel >50m

When seen from forward it is impossible to distinguish this from a towing vessel < 50m with tow < 200m



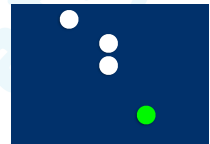
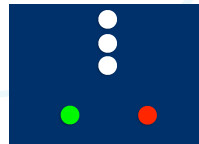
Towing Vessel < 50m (tow < 200m)

When seen from forward it is impossible to distinguish this from a power vessel > 50m or a power vessel < 50m showing the optional second masthead light

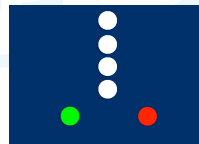


Towing Vessel > 50m (tow < 200m)

When seen from forward or aft it is impossible to distinguish this from a towing vessel < 50m with a tow > 200m



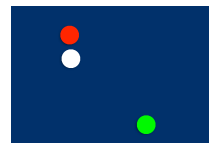
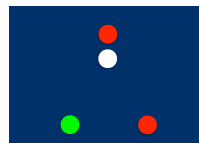
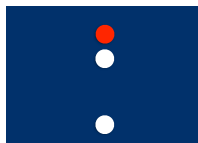
Towing Vessel < 50m (tow > 200m)



Fishing Vessel

Memory Aid:

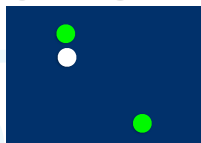
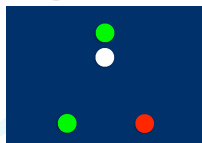
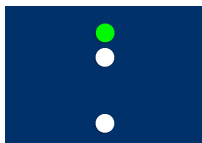
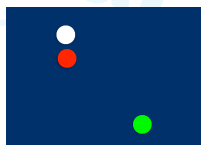
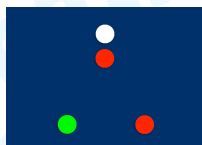
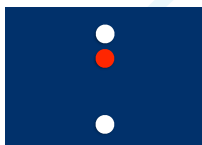
Red Over White = Fishing At Night



AFT

FORWARD

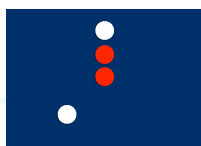
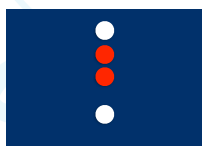
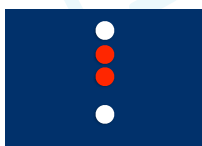
STARBOARD

**Trawling Vessel****Vessel engaged in pilotage duties**

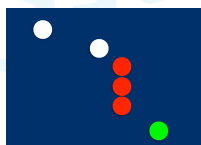
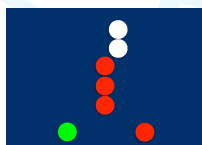
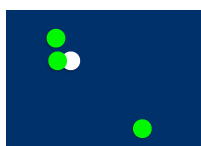
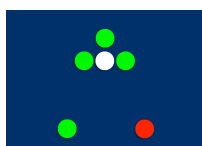
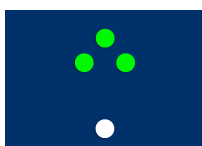
Memory Aid:
White over Red = Pilot Ahead

**Vessel < 50m At Anchor**

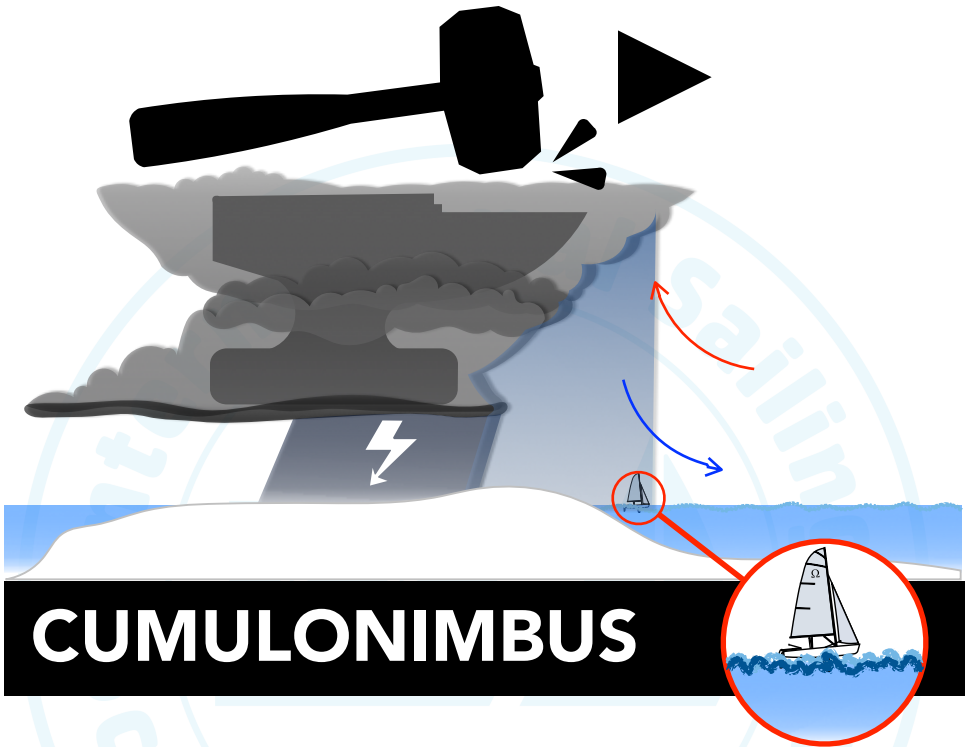
Remember, it is impossible to tell in many cases when only a single white light is seen - what this may mean (stern light? vessel at anchor? distant vessel where only the masthead light is visible over the horizon? etc...)

**Vessel > 50m At Anchor****Vessels Not Under Way - Vessel Aground**

Since the rule does not specify exactly where the two red lights should appear in relation to the anchor light they may appear either above or below the forward anchor light.

**Vessel Constrained by her Draft****Vessel engaged in mine clearance operations**

METEOROLOGY



CUMULONIMBUS

Weather forecast



Environmentally Responsible Sailing



Holders of the International Sailing Schools Association **certificates** are the **elite** that knows how to sail safely and should also **care about the environment**. Help us promote Environmentally Responsible Sailing and preserve the nature for future sailors generations **by applying these few simple rules**.

Use your sails as much as possible therefore reducing energy consumption



Sailing is a very environmentally friendly form of transport as it harnesses the wind and sea without detriment to the environment. Maximise the use of sails subject to safety and operational requirements.

Segregate garbage for recycling purposes wherever possible



Recycling is an alternative to "conventional" waste disposal that can save material and help lower greenhouse gas emissions. Recycling prevents the waste of potentially useful materials and reduce the consumption of fresh raw materials, thereby reducing: energy usage, air pollution (from incineration), and water pollution. Search for segregated garbage bins in every marina.

Strictly enforce no waste being thrown overboard.



This is not even a matter of ecology but personal culture. Oceans and seas are huge, but that does not mean that another piece of paper thrown into the water does not make a difference. It does. It is your attitude that matters.

Leave any beach or shore line you visit cleaner than when you arrived.



Leisure sailing can take you to many beautiful, paradise-like places. The community of sailors grows every year and it is constantly harder and harder to visit places untouched by a human hand. Some people do not regard that as a value and leave their trash behind them there. React and help to keep those places safe.

Educate sailing guests on the ecology of the sea and shore.

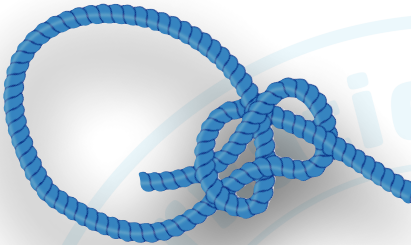


You are the skipper. It is your responsibility to educate your crew on how to properly behave during your leisure yachting experience.

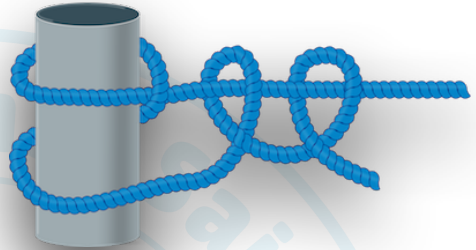


KNOTS

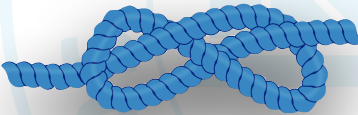
BOWLINE



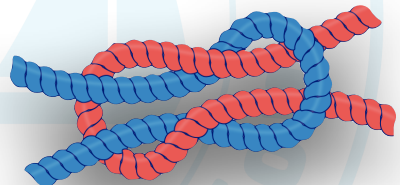
ROUND TURN & TWO HALF HITHES



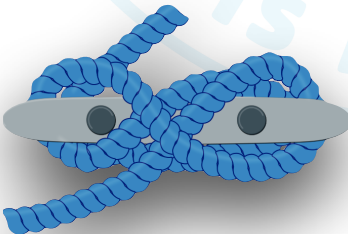
EIGHT



REEF



HORN CLEAT KNOT



CLOVE HITCH





ISSA.global

Wherever You Sail