

# SUN ODYSSEY 45DS



## OWNER'S MANUAL



JEANNEAU

CROISIÈRE

134913

Index H

<https://www.boat-manuals.com/>



# WELCOME ABOARD

Madam, Sir,

You have just taken delivery of your new JEANNEAU boat and we thank you for the confidence you have shown us in ordering a vessel of our brand. The whole JEANNEAU team welcomes you aboard.

A JEANNEAU is made to last, in order to bring you all the pleasure you expect from a vessel over a period of many years. Each boat is subject to the utmost attention to detail from the design stage right through to launching.

This manual is meant to help you to enjoy your boat comfortably and safely. It includes the boat specifications, the equipment provided or installed, the systems and tips on her operation and maintenance. Some of the equipment described in this manual may be optional.

Your JEANNEAU dealer will be able to help and advise you in the use and maintenance of your boat.

Read this user's guide/owner's manual carefully and get to know your boat before using it.

The better you know your vessel the more pleasure you will get from being at the helm.

The sea is a source for learning. Caution based on a knowledge of one's own limits and those of the boat is the pre-requisite for an accomplished sailor.

Even when your boat has been adapted for them, the sea and wind conditions corresponding to the design categories A, B, C and D may vary, ranging from severe conditions to strong storms subject to the risks of exceptional waves and gusts of wind, this meaning they are dangerous conditions in which only an experienced, fit and well trained crew manoeuvring a well maintained boat can sail in a satisfactory manner.

This user's guide/owner's manual is not a course in safety at sea or about sailing sense. If this is your first boat or if you change to a new type of boat which you are not used to, get some training in boat control and sailing to ensure your safety and comfort. Your dealer, your international sailing association or your yacht club will be very happy to recommend local sailing schools or professional instructors.

Make sure the sea and wind conditions will correspond to the category of your boat and you and your crew are able to handle the boat in these conditions.

Always listen to the weather forecast before you put out to sea.

Keep this user's guide/owner's manual in a safe place and hand it over to the new owner if you sell your boat.

You are advised to keep all the instructions and manuals provided by the boat equipment manufacturers (accessories...) in the same place as this manual



# INTRODUCTION

We share a common passion for the sea: we, JEANNEAU as shipbuilders and you who want to live your passion on the Seven Seas.

We are delighted to welcome you to the great family of JEANNEAU boat owners and we congratulate you on it.

This manual is meant to help you to enjoy your boat comfortably and safely. It includes the boat specifications, the equipment provided or installed, the systems and tips on her operation and maintenance.

Read this manual carefully before you put out to sea so that you can make the most of her and avoid any damage and any trouble. Get to know your boat before you sail.

We keep improving our boats as we want you to benefit from the technological developments, new equipment or materials and our own experience. That is the reason why the specifications and information given are not contractual, they may be modified without prior notice or up dates.

This owner's manual is designed in accordance with the ISO 10 240 standard requirements, it has a general purpose and it may sometimes list some equipment or accessories or deal with some points or questions that are not relevant to your own boat. In case of doubt refer to the inventory list you were given when you bought your boat.

Our network of JEANNEAU authorized dealers will be at your disposal to help you get acquainted with your boat and will be the most qualified to take care of her maintenance.

If this is your first boat or if you change to a new type of boat which you are not used to, get some training in boat control and sailing to ensure your safety and comfort. Your dealer, your international sailing association or your yacht club will be very happy to recommend local sailing schools or professional instructors.

Even if everything has been provided for and designed for the safety of the boat and the safety of her users, don't forget that sailing highly depends on the weather conditions, the sea condition, and that only an experienced and very fit crew, handling a well-maintained boat can sail satisfactorily.

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The sea and wind conditions that correspond to the design categories A, B or C are changeable and are dependent on the hazards of unusually strong waves or gusty winds. Therefore total safety cannot be guaranteed, even if your boat meets the requirements of a category.

Always listen to the weather forecast before you put out to sea.  
Make sure the sea and wind conditions will correspond to the category of your boat and you and your crew are able to handle the boat in these conditions.

The sea and the water are not the natural environment of Man and one has to respect their laws and strength.

Adapt the use of your boat to her condition that wears out with time and use.

Any boat, however solid she may be, may be severely damaged if badly used. This is not compatible with safe navigation. Always adapt the speed and direction of your boat to the conditions of the sea.

The 'COLREG', an international regulation in order to prevent collision at sea, published by the International Maritime Organization, specifies the steering and course regulations, the navigation lights etc. throughout the world Make sure you know these regulations and you have on board a manual that explains them.

In numerous countries, a licence, an authorization or a training course is requested. Make sure you have this legal authorization before you use your boat.

Always use an experienced technician for the maintenance of your boat, the fitting of accessories and the carrying out of small modifications. The written authorization of the builder or his legal representative is compulsory for modifications that alter the specifications of the boat, in particular the vertical layout of the grounds (putting up of a radar, modification of the mast, change of the engine etc.).

For the essential or optional equipment (engine, electronics etc.) refer to their respective manual delivered with your boat.

The different warnings used throughout this guide are broken down as follows



### **DANGER**

Indicates the existence of a serious inherent danger with a high risk of death or serious injury if the appropriate precautions are not taken.



### **WARNING**

Indicates the existence of a danger which could lead to injury or death if the appropriate precautions are not taken.

### **PRECAUTION**

Indicates a reminder of safety practice or draws attention to dangerous practices which could cause injury to persons or damage to the vessel or to its components.

## ADVICE - RECOMMENDATION

Indicates a recommendation or advice for carrying out manoeuvres appropriate for the planned manoeuvres.

The users of the boat are informed of the following:

- The entire crew must be trained properly.
- The boat shall not be loaded more with than the maximum load recommended by the builder, in particular the total weight of the food supplies, of the different equipment that are not supplied by the builder and of the persons on board. The weight of the boat shall be properly distributed.
- The water in the bilge shall be kept at its minimum.
- The stability is reduced when you add weight in the upper parts.
- In case of heavy weather, the hatches, lockers and doors shall be closed in order to minimize the risk of water coming in.
- The stability may be reduced when you tow a boat or when you lift heavy weights with the davits or the boom.
- Breaking waves are a serious threat to stability.
- If your boat is equipped with a liferaft, carefully read the instructions. In the boat there shall be all the proper safety equipment (harness, flares, liferaft etc.) depending on the type of boat, the country, the weather
- The crew must be familiar with the use of all the safety equipment and the emergency safety procedures (MOB, towing etc.).
- Anyone on the deck shall wear a life jacket or a buoyancy aid. Please note that in some countries it is compulsory to wear an homologated buoyancy aid permanently.
- Some of the data is shown on the manufacturer's plate fixed to the boat. The explanation of the data is given in the appropriate chapters of this manual.

Keep this manual in a safe place and hand it over to the new owner if you sell your boat.

## PRECAUTION BEFORE ANY REPAIR

Contact your seller who will give you the best advice and the suitable parts or materials for the repairs you can carry out yourself.

It would be better to have important repairs of the hull or engine done by a professional. Your seller can carry out these repairs or appoint a skilled person to carry them out.



## DANGER

Contact your seller to find out what is possible for you to repair and above all what you must not do !  
You could endanger your safety and lose your warranty.

Some of the equipment described in this manual may be optional.





# HISTORY OF UPDATES

- Index A.....07/2007
- Index B.....Page 11-40-51-55-59-60-79-84.....06/2008
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- Index D.....01/2010
- Index E.....09/2010
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- Index H.....08/2012



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# SPECIFICATIONS AND WARRANTY

*TECHNICAL SPECIFICATIONS*

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*CERTIFICATION*

---

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*YOUR BOAT*

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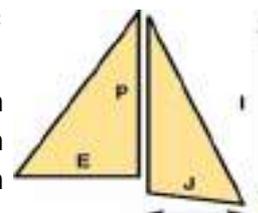
## TECHNICAL SPECIFICATIONS

L.O.A .....	13,75 m/45'1"
Hull length .....	13,41 m/43'12"
L.W.L.....	11,45 m/37'7"
Overall width .....	4,37 m/14'4"
Beam.....	4,37 m/14'4"
Waterline beam.....	3,65 m/11'11"
Air draught - Empty vessel - Classic/Jib reefer .....	19 m/62'4"
Draught Deep draught keel.....	2,05 m/6'8"
Ballast weight Deep draught keel .....	2 954 kg/6 512 lbs
Light displacement - Deep keel.....	9 900 kg/21 826 lbs
Maximum load displacement - deep keel.....	14 000 kg/30 865 lbs
Draught Shallow draught keel.....	1,65 m/5'5"
Ballast weight shallow draught.....	3 160 kg/6 967 lbs
Light displacement - Shallow keel.....	10 106 kg/22 280 lbs
Maximum load displacement - shallow keel.....	14 206 kg/31 319 lbs
Maximum load recommended by the builder .....	4 100 kg/9 039 lbs
Including the mass of the persons who are authorized on board (75 kg/165 lbs per adult), the supplies, the liquids that can be used (fresh water and fuel) in fixed completely full tanks, the additional loads, the optional equipments, the liferaft and the scope for load.	
Total mass of liquids (all tanks full) .....	987 kg
Freshwater capacity.....	635 l/170 US gal
Fuel oil tank capacity .....	240 l/63 US gal
Refrigeration unit capacity .....	260 l/69 US gal
Sewage water capacity .....	2 x 80 l
Maximum power.....	80,9 Kw
Maximum motorisation mass .....	250 kg/551 lbs
Battery capacity .....	4 x 110 Ah
Battery capacity .....	1 x 110 Ah (Engine)
Cabins.....	2/3
Sleeping capacity.....	4+2 / 6+2)

**Note: The capacities indicated are maximum (including options).**

Architect..... Philippe BRIAND, Jeanneau Design

SAILS	CLASSIC	JIB REEFER	PERFORMANCE
Mainsail (classic).....	47,6 m <sup>2</sup>	52 m <sup>2</sup>	51,15 m <sup>2</sup>
Genoa .....	52 m <sup>2</sup>	52 m <sup>2</sup>	52,4 m <sup>2</sup>
Spinnaker.....	120 m <sup>2</sup>		
I.....	16,54 m	16,54 m	16,93 m
J.....	4,65 m	4,65 m	4,65 m
P.....	15,27 m	15,05 m	15,27 m
E.....	5,30 m	5,30 m	5,30 m



The sails are the main propulsion means of the SUN ODYSSEY 45DS.



## CERTIFICATION

CE Category	Persons Maximum
A	8 persons
B	12 persons
C	14 persons
D	14 persons

### DEFINITION OF DESIGN CATEGORIES:

Design category	Wind force (Beaufort scale)	Significant height of waves to be considered (,in metres H 1/3)
Vessel designed for navigation: A - "At high sea" B - "In open sea" C - "Near to the coast" D - "In sheltered waters"	Over 8 Up to and including 8 Up to and including 6 Up to and including 4	Over 4 m Up to and including 4 m Up to and including 2 m Up to and including 0,5 m

The SUN ODYSSEY 45DS model conforms to the directive 2003/44/CE.

## CONSTRUCTION

Your boat is built in GRP.

The inner moulding that is stuck and laminated to the hull distributes the stresses over the whole bottom surface. The iron ballast is fastened to the hull with bolts and backing plates.

The deck is stratified and has hardwood inserts at the points of fixtures and fastenings. The deck to hull joint is made of a polyurethane filler and it is reinforced by the fastening of the teak foot strap.

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### **Category A: At high sea**

This craft is designed to operate in winds that may exceed wind force 8 (Beaufort scale) and in significant wave heights of 4 m and above.

This craft is largely self-sufficient. Abnormal conditions such as hurricanes are excluded. Such conditions may be encountered on extended voyages, for example across oceans, or inshore when unsheltered from the wind and waves for several hundred nautical miles.

### **Category B: In open sea**

This craft is designed to operate in winds up to Beaufort force 8 and the associated wave heights (significant wave height up to 4 m, see Note 1 below).

Such conditions may be encountered on offshore voyages of sufficient length, or on coastal waters when unsheltered from the wind and waves for several dozens of nautical miles.

These conditions may also be experienced on inland seas of sufficient size for the wave height to be generated.

### **Category C: Near to the coast**

This craft is designed to operate in winds up to Beaufort force 6 and the associated wave heights (significant wave height up to 2 m, see Note 1 below). You may meet with such conditions in exposed inland waters, in estuaries and in coastal waters with moderate weather conditions.

### **Category D: In sheltered waters**

This craft is designed to operate in winds up to Beaufort force 4 and the associated wave heights (occasional maximum waves of 0,5 m height).

Such conditions may be encountered in sheltered inland waters, and in coastal waters in fine weather.

#### **NOTE:**

- The significant wave height is the mean height of the highest one-third of the waves, which approximately corresponds to the wave height estimated by an experienced observer. Some waves will be double this height.

- The creation of different design categories results from the need to distinguish between different levels of risk according to the construction of the boats.

The parameters for the characteristics are established to define the conditions of navigation which each category may encounter; they serve purely to evaluate the boat designs and are not to be used to limit the geographical areas in which these boats may operate..

- One boat may be classed in several design categories at the same time, each with their different maximum capabilities.

## YOUR BOAT



### Version

NAME OF THE BOAT .....

NAME OF THE OWNER .....

ADDRESS .....

HULL NUMBER .....

SERIAL NUMBER .....

REGISTRATION NUMBER .....

DELIVERY DATE .....

DOOR KEY NUMBER .....

MAKE OF ENGINE .....

ENGINE SERIAL NUMBER .....

ENGINE KEY NUMBER .....

Your agent

SPECIFICATIONS AND WARRANTY



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# SAFETY

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***SAFETY EQUIPMENT***

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***GENERAL INFORMATION***

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***VALVES***

---

***RECOMMENDATIONS FOR GAS***

---

***FIGHT AGAINST FIRE***

---

***BILGE PUMP SYSTEM***

---

***EMERGENCY TILLER***

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## GENERAL INFORMATION

### DANGERS

The main dangers concern the gas and electrical systems as well as the motorisation.

Please refer to the relevant paragraphs.

### SAFETY EQUIPMENT



Reference 1: Swimming ladder (means of coming back onboard)

Reference 2: Position of the liferaft (not supplied)

**Note: If over 10 persons on board: 2 liferafts compulsory.**



Locker closed



Locker open



Swimming ladder  
(means of coming back onboard)



### **DANGER**



- Fuel leaks or vapour represent a danger of fire and explosion.
- Leave the engine compartment ventilated for a long time before starting the engine.
- There may be danger of fire or explosion if direct or alternating current systems are incorrectly used. Refer to chapter Electricity.
- Some boats are equipped with a retractable ladder or removable. Make sure the ladder is in place and deployed as soon as you are on board.
- Reduce speed in waves.

### **WARNING**



- Before you sail, list the compulsory safety equipment.
- Don't exceed the number of persons indicated in the chapter 'Specifications'.
- When you don't take into account the number of persons, the total weight of the persons and equipment shall never exceed the maximum load recommended by the manufacturer.
- Use the seats provided.

### **ADVICE - RECOMMENDATION**

- When sailing, never padlock or lock the liferaft locker.
- Before putting to sea, carefully read the launching instructions shown on the liferaft.
- Close the deck hatches and portholes before each trip (including the companionway hatch in heavy weather).
- Don't store anything below the floorboards.
- Ensure that movable items are firmly secured when the boat is under way.

Intended maximum life-raft capacity (10 persons)for each position.

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## VALVES

### OPERATION



Open valve



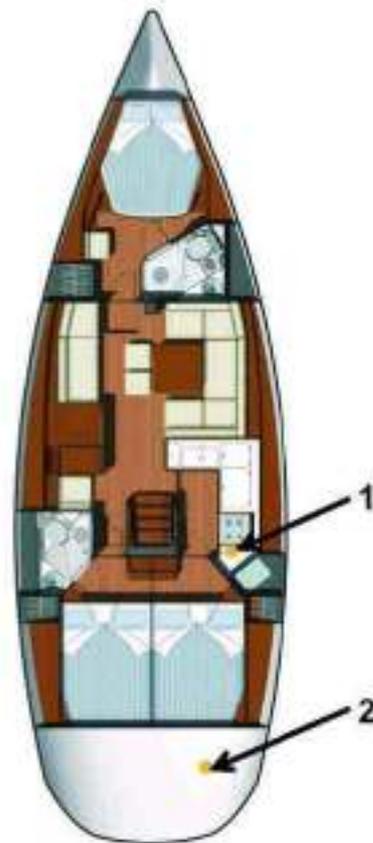
Closed valve



### WARNING

- Don't use a solution containing ammonia.
- Don't use a flame to detect leaks.
- Don't smoke, don't use a naked flame when you change the gas cylinder.

### GAS VALVE



1. Valve on appliance
2. Valve on cylinder

**Note:** Same position for the other layouts.

## RECOMMENDATIONS FOR GAS



Type of cylinder: butane, service pressure 10 kg/cm<sup>2</sup> or according to current standards of your country).

Close the valves on the system and on the cylinder when the appliances are not used.

Close the valves before you change cylinders and immediately in case of emergency.

Never leave unattended an appliance that is working.

Don't install or store flammable materials above or over the stove (curtains, papers, napkins etc.).

Make sure that the valves of the appliances are closed before you open the cylinder or hose valve.

In case you smell gas or find that the burners have gone out (although appliance models cut off automatically if the flames go out), turn off the valves of the appliances. Do ventilate the boat in order to get rid of any residual gas. Find the cause of the problem.

Regularly test the gas system in order to detect any gas leak.

Check all the connections using water and soap or detergent, closing the valves of the appliances and opening the valve on the cylinder.

If you detect a leak, close the valve of the cylinder and repair before you use it again.

The appliances use the oxygen of the cabin and release combustible gases. Ventilate your boat when using appliances. Recommendations for gas

Don't obstruct the air vents and at least leave the door open.

Don't use the oven or stove as back up heaters.

Lock the stove oven when being not used in order to avoid damaging the tubes when sailing.

Never obstruct the fast access to the components of the gas system.

Keep the taps of the empty cylinders turned off and the cylinders disconnected.

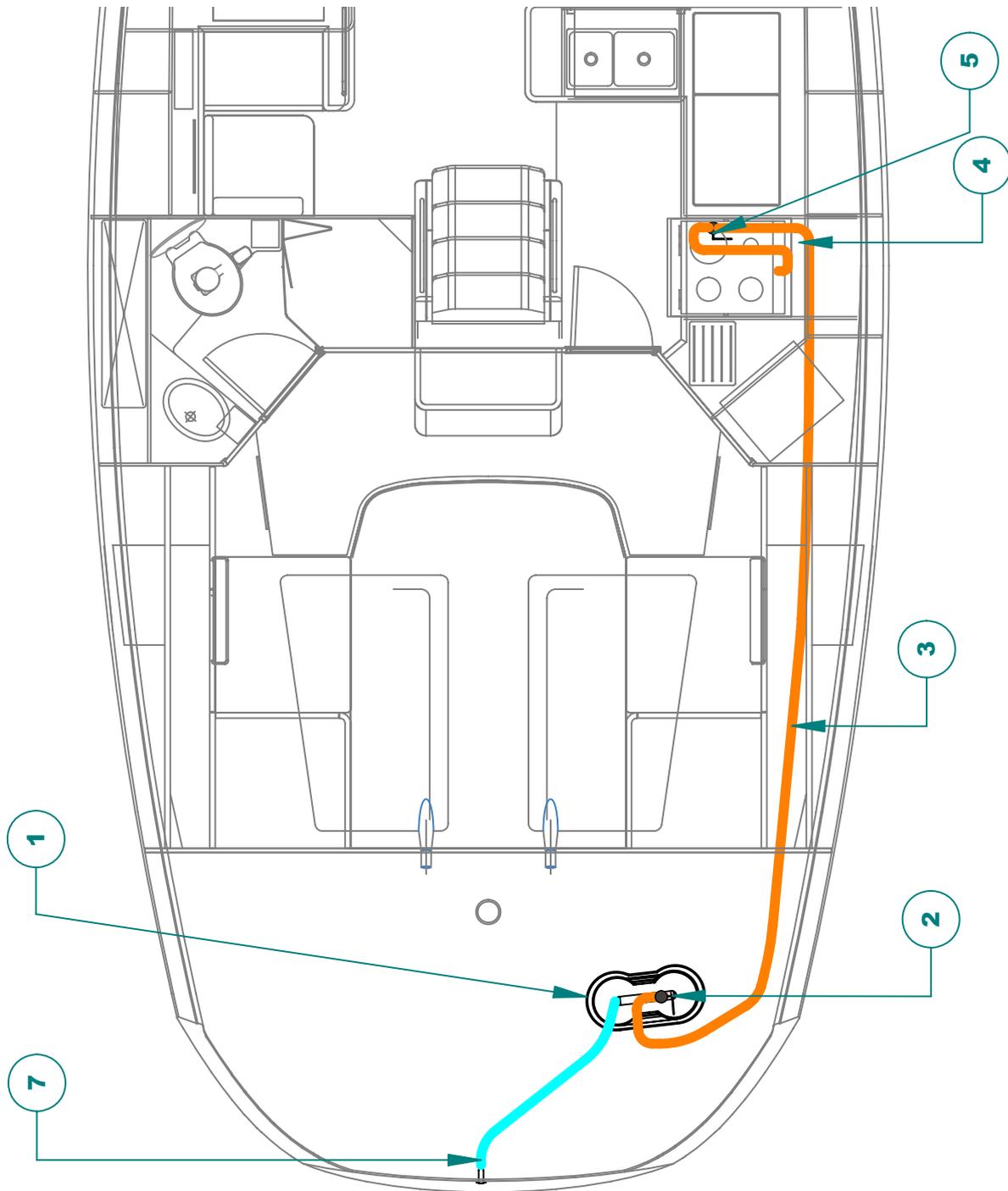
Keep the protection, lids, covers and taps in their places.

Don't use the gas cylinder storage place to store other equipment. Only use the proper locker to store the gas cylinders.

Regularly check and replace the rubber tubings that link the cylinder to one end of the circuit and the stove to the other one, depending on the norms and regulations in force in your country.

Pay particular attention to keep in good condition the screw thread of the cylinder on which the regulator is. Check the condition of the regulator every year and change it if necessary. Use regulators identical to the ones that are fitted.

Have the repairs carried out by someone skilled.





	GAS
	VENT HOLE

**SAFETY**

REF	Designation
1	Gas cylinder locker
2	Gas kill valve on bottle
3	Gas pipe
4	Gas rubber tubing
5	Tap to turn off the gas
7	Gas vent

---

## FIGHT AGAINST FIRE

### RECOMMENDATIONS FOR GAS



#### WARNING

- Keep an extinguisher handy in case the fire should start again.
- Fire fighting equipment (portable extinguishers, fire blankets and buckets) must be permanently and immediately accessible.

It is the owner's or the skipper's responsibility:

- To have the extinguishers checked in pursuance of the instructions given.
- Use extinguisher replacements with equivalent features (same capacity and fire resistance) if the ones in place are out of date or have been used.
- To tell the crew:
  - where the extinguishers are and how they work,
  - where the release aperture is situated in the engine compartment,
  - where the emergency exits are.
- Make sure the extinguishers can be reached easily when people are on board.
- Make sure that the ventilation openings in the engine (and generator, if installed) compartment are well cleared.



#### WARNING

##### NEVER

- Obstruct the ways to the emergency exits.
- Obstruct the safety controls (fuel oil valves, gas valves, power switches).
- Block the extinguishers placed in shelves.
- Leave the boat unattended when a stove or heater is working.
- Use gas lamps in the boat.
- Alter the boat systems (electricity, gas or fuel oil).
- Fill up a tank or change a gas cylinder when an engine is running, a stove or heater is on.
- Smoke while handling fuels or gas..

Keep the bilge clean. Regularly check whether there is fuel oil or gas vapour.

Use only compatible spare parts for the extinguishers. The parts shall have the same specifications or be technically equivalent as to their resistance to fire.

**Always fasten the curtains open when the gas cooker is working.**

Combustible products shall not be stored in the engine compartment. If you store non combustible products in the engine compartment, they shall be fastened so that they cannot fall on the machine and block the way.

Exits other than the doors and hatches of the main companionway, equipped with permanently fitted ladders, are identified with a symbol.



#### WARNING

The **CO<sub>2</sub>** extinguishers shall be used only to fight **electrical fires**. Clear the area immediately after use in order to avoid suffocation. Air before entering..



## EXTINGUISHERS

An extinguisher or a fire blanket shall be set less than 2 m from any flame appliance.

Other locations are possible, the extinguishers shall be less than 5 m from all the berths.

An extinguisher shall be compulsorily set less than 2 m away from the extinguisher aperture.

An extinguisher shall be less than 1 m from the steering station.

The extinguishers must be in position (see "Extinguisher positions" diagram).

Extinguisher, per unit, minimum capacity 5 A/34 B.

For the SUN ODYSSEY 45DS: 20 A/136 B (4 extinguishers at least).



### DANGER

- There may be danger of fire or explosion if direct or alternating current systems are incorrectly used (Refer to chapter Electricity).



### WARNING

The extinguishers are part of the compulsory equipment.

#### Position of portable extinguishers (not supplied)



1. Against pillar
2. Galley
3. In aft cabin
4. In cockpit locker



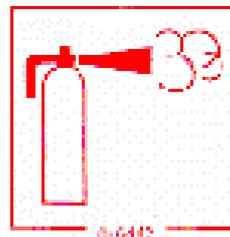
Emergency exits in case of fire

Deck hatch(es) of the forward cabin(s)

Companionway

**Note: Same position for the other layouts.**

### Extinguisher aperture of the engine compartment



A pictogram helps to locate it easily



The engine compartment has a port that makes it possible to inject the extinguishing product inside without opening the usual access hatches.

Instructions to follow in case of a fire in the engine compartment bilge:

- Stop the engine.
- Switch off power and stop fuel supply.
- Inject the extinguishing product through the aperture.
- Wait a minute.
- Open the access hatches and repair.

**SAFETY**

**Supply valve Fuel**



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## BILGE PUMP SYSTEM

### ELECTRIC BILGE PUMPS

You can energize the electric bilge pump from the electrical panel.

Each pump starts automatically thanks to a release mechanism situated in the sump area or in the bottom of the hull.

The first electric bilge pump is located in the sump well.

The second electric bilge pump is located in the plumbing panel behind the starboard mess room backboard.



**Capacity: 50 litre / minute.**



**Capacity: 15 litre / minute.**

#### Operation:

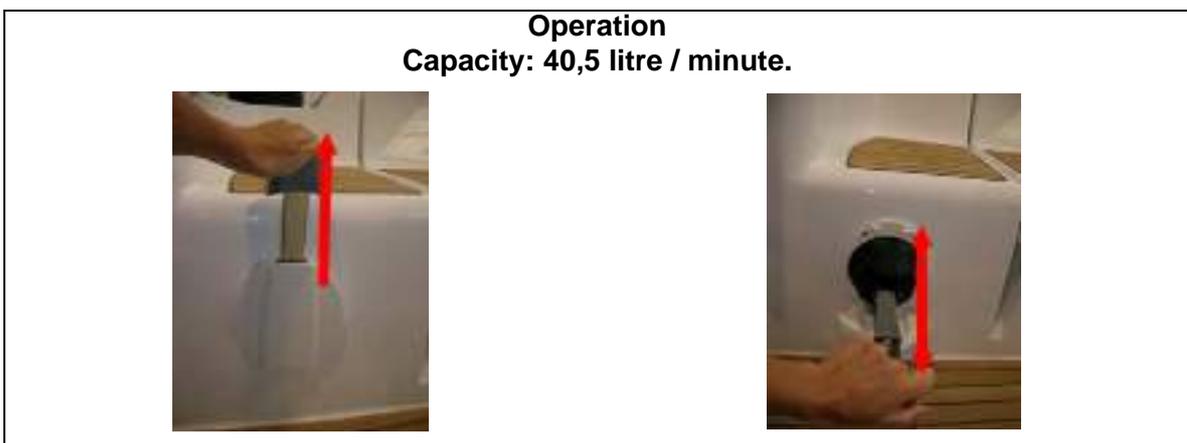
The electric bilge pumps are connected to the 12V service circuit. To enable operation the 12V circuit must be activated by turning on the battery switches.



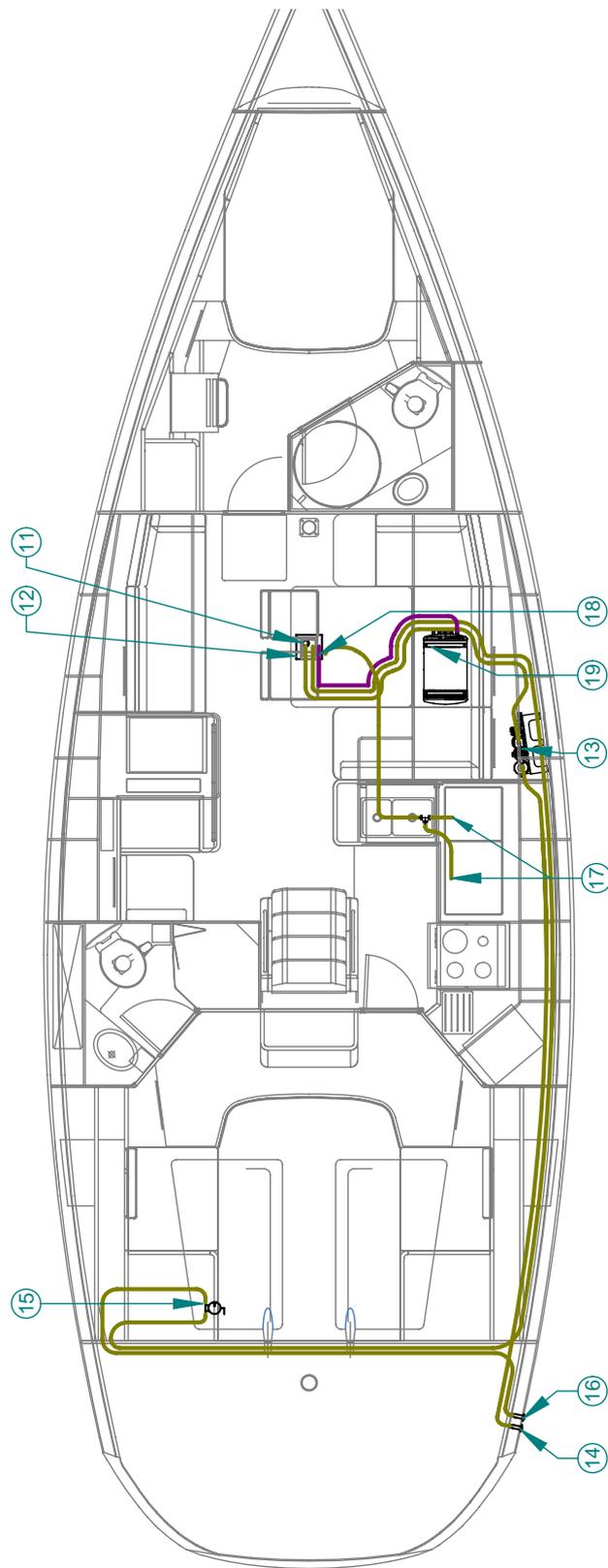
## MANUAL BILGE PUMP

The manual bilge pump is in the cockpit.

The control arm of the pump shall be kept accessible whatever the circumstances.



**SAFETY**





<b>REFERENCES ON DIAGRAMS</b>	<b>FUNCTIONS</b>
11	Bilge pump
12	Sump filter
13	Electric bilge pump
14	Electric bilge pump draining
15	Manual bilge pump + By-pass
16	Bilge pump draining
17	Icebox drainage
18	Boiler draining
19	Water heater

**WARNING**



The bilge pump system is not designed to provide buoyancy to the boat in case of damage.

The bilge pump system is designed to drive out the water being either sea spray or leaks but absolutely not the water coming through a hole in the hull, this hole being the result of a damage.

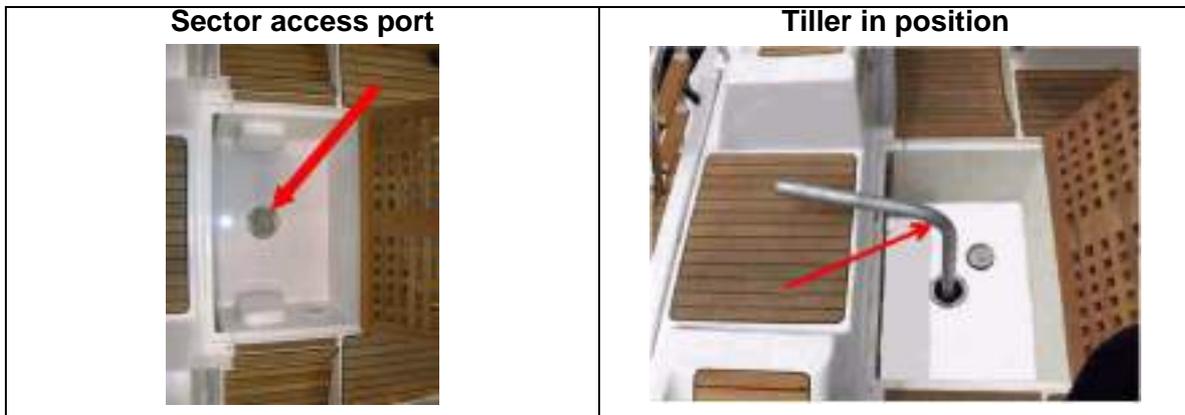
- Do not let the pumps run while dry, this may cause them damage.
- The water in the bilge shall be kept at its minimum.
- Check the functioning of each bilge pump regularly.

**SAFETY PRECAUTIONS**

- Clean off debris which could block the pump intake points or strainers. If the watertight partitions which seal off the fore and aft points are fitted with valves they must be closed at all times and only opened to drain water into the main bilge.

---

## EMERGENCY TILLER



The emergency tiller is in an aft locker and shall be easy to get to.

To operate the tiller:

- Use a winch handle and unscrew the tiller cover situated at the back of the cockpit.
- Insert the tiller into the rudder stock and make sure it is fully secure in the square.

### **ADVICE - RECOMMENDATION**

The emergency tiller is designed only to be able to continue underway at a reduced speed in case of steering gear failure.



# HULL

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## *MAINTENANCE OF THE HULL*

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## *LIFTING*

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## MAINTENANCE OF THE HULL

### ADVICE - RECOMMENDATION

When sailing, never padlock or lock the liferaft locker.

Before putting to sea, carefully read the launching instructions shown on the liferaft.

Close the deck hatches and portholes before each trip (including the companionway hatch in heavy weather).

Don't store anything below the floorboards

Consult the harbourmaster's office to find out the conditions of water use and the maintenance area for cleaning your vessel.

The materials and equipments of your boat have been selected because of their high quality and performance and ease of maintenance. However you shall carry out a minimum maintenance in order to protect your boat from outside attacks (salt, sun, electrolysis ...).

Preferably wash your boat on shore.

Use as few cleaning agents as possible.

Don't use aggressive detergent agents or solvents (read next page).

Don't discharge cleaning agents into the water.

## LIFTING



**Wetted area: 39 m<sup>2</sup>**



Refer to chapter 12 for launching instructions.

A (tin-free) anti-fouling painting every year will make it possible to avoid tedious and frequent careening. An epoxy coat is recommended beforehand. You are reminded that any excessive sanding before your antifouling paint attacks your gel coat and impairs its reliability.

High limit of antifouling: 190mm above the light ship waterline.

### ADVICE - RECOMMENDATION

Gently sand.

Your boat may regain her shine as new if polished. If a lasting and isolated problem arises, contact your dealer.

The builder tested and approved a certain number of biodegradable cleaning and restoring products that protect both material and environment.

### PRECAUTION

Consult the harbourmaster's office to find out the conditions of water use and the maintenance area for cleaning your vessel.

It is necessary to seek the advice of your concessionnaire with regard to gel-coat repairs.

### PRECAUTION

- When applying the anti-fouling paint do not paint over the electronic instrument sensors nor the anodes.

### ADVICE - RECOMMENDATION

- When in dry dock check the anode on the propeller shaft line.
- See "Motorisation" chapter.
- When the boat is stored at a dry dock, the corrosion protection is not as effective due to oxidation of the anodes: even the new anodes oxidize the surface. Before returning the boat into the water, clean the anodes.
- Cleaning anodes: Use sandpaper.  
Do not use metal brushes or steel tools to clean the boat, it may damage the galvanic protection.
- Replacing the anodes: The anodes are fastened with screws and nuts. First, remove the screws and nuts that hold the anode, then clean the contact surface. Press the new anode to obtain a good electrical contact.





# DECK

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*NAVIGATION*

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*MOORING LINES*

---

*TOWING*

---

*STABILITY*

---

*PREVENTION OF MAN OVERBOARD*

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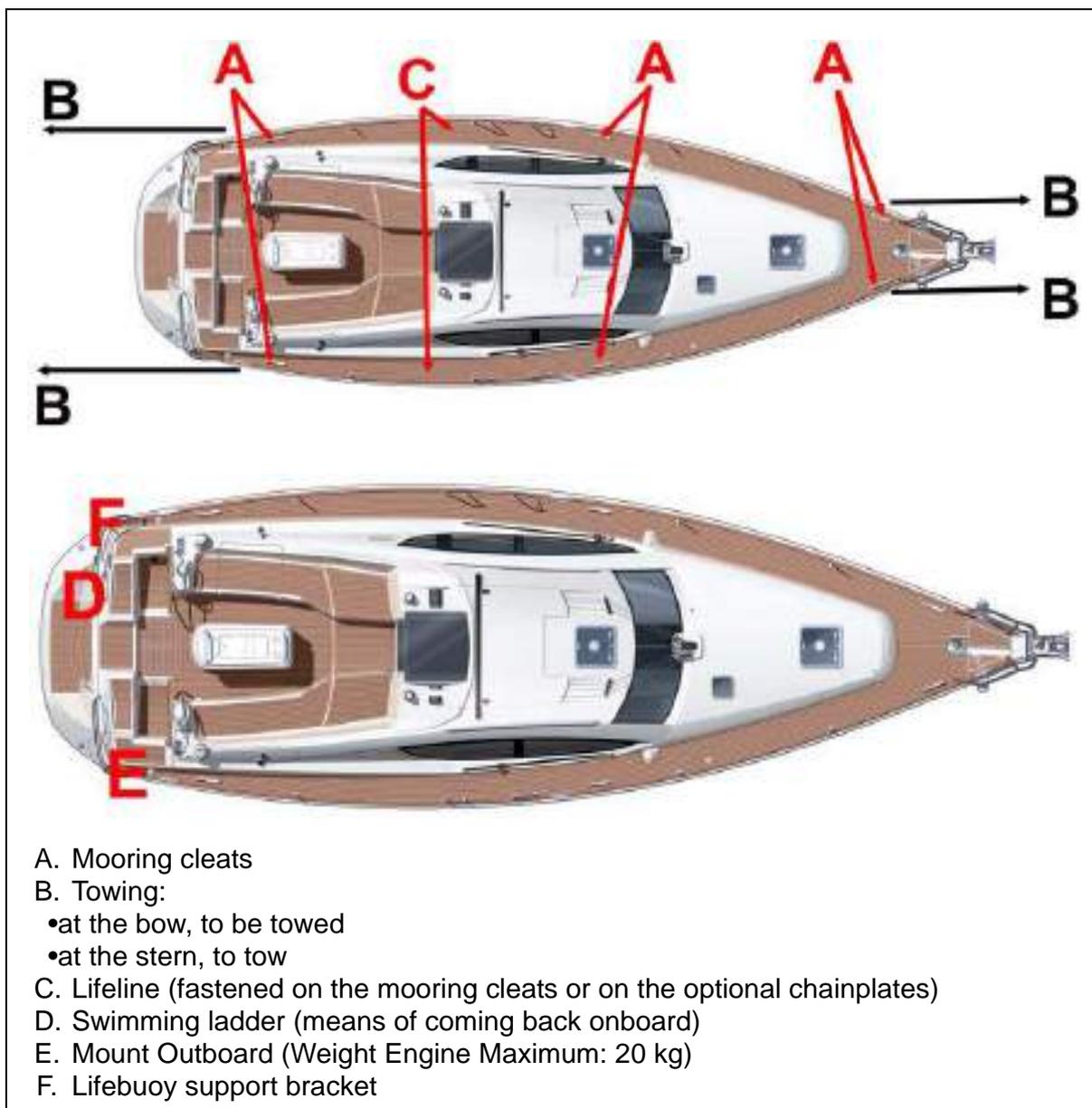
*GROUND TACKLE*

---

*MAINTENANCE OF THE DECK*

## NAVIGATION

### DECK LAYOUT



### DANGER

Wear your life jacket.

In heavy weather, wear your safety harness and fasten yourself to the boat.  
When sailing, close and lock the door or doors giving access to the transom extension.

### ADVICE - RECOMMENDATION

Close the deck hatches and portholes before each trip (including the companionway hatch in heavy weather).



## MOORING LINES

A sufficient number of mooring lines suitably sized and suitable for the environment shall be on board for mooring your boat.

- Always manoeuvre your boat using the engine.
- Make allowance for the current and wind when you handle your boat.
- Protect your boat to the highest degree with suitably sized fenders.
- Always keep the mooring ropes unfouled and stored away.
- Handle your boat at a reduced speed.
- Always pass the mooring rope through the fairlead intended for this purpose.



DECK



### DANGER

- Don't try to stop the boat with your foot, your hand or a boat hook.

### AFTER MOORING

- Protect the mooring lines against chafing with plastic sleeves.
- Make allowance for the variations in tides if need be.

## TOWING

### TOWING BOAT

- Tow another boat at a reduced speed and as smoothly as you can.
- Pay particular attention when you throw or catch the towing rope (it may foul on the propeller).

**Note: The stability may be reduced when you tow a boat.**

### TOWED BOAT

- Keep steering your boat and see to it that you stay in the wake of the towing boat.
- Inappropriate towing can damage your vessel, do not tow at more than 6 knots.

---

## STABILITY

During sailing keep all the portholes, windows and doors closed.

- The stability is reduced when you add weight in the upper parts.
- The stability may be reduced when you tow a boat or when you lift heavy weights with the davits or the boom.
- Breaking waves represent a serious danger for stability and for taking in water. Close the companionway doors and hatches in heavy seas.

## PREVENTION OF MAN OVERBOARD

Certain vessels are equipped with a retractable swimming ladder. The swimming ladder must be in position as soon as you are onboard.

Regularly check the guard-rails:

- With metal guard-rails, watch for corrosion particularly at connecting points.
- With synthetic guard-rails, change them as soon as they show signs of wear due to chafing or UV.

Areas forbidden when sailing:

- Aft quarterdeck.
- Roof.



## GROUND TACKLE

As a rule, set the anchor in at least 3 times the depth of water.

### PRECAUTION

Before anchoring check the depth of water, the power of the current and the nature of the sea bed.

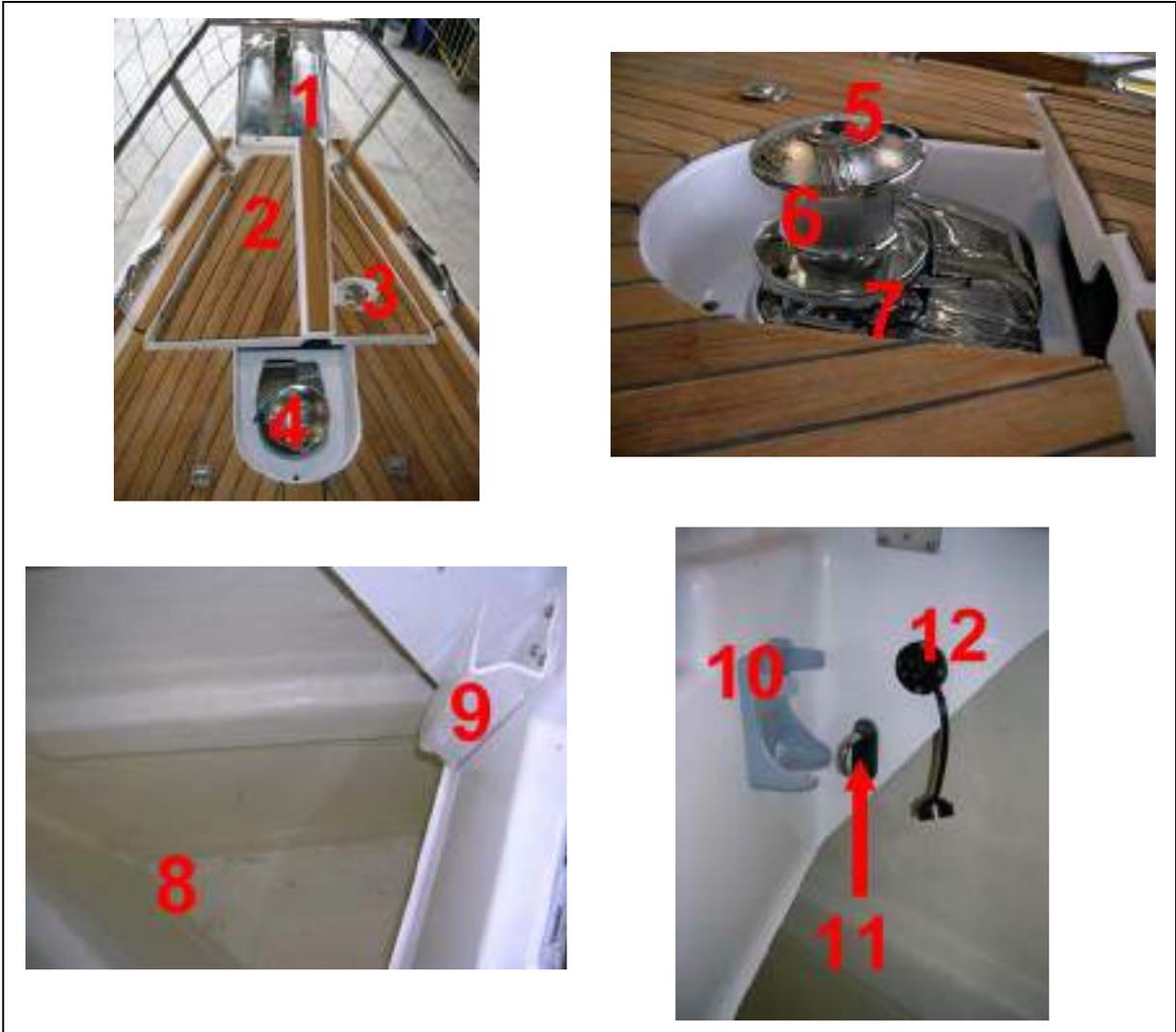
- Have your boat pointed into the wind and without speed.
- Pay out the chain while moving back slowly.
- Secure the cablet on the mooring cleat.



LOCATION

DECK ELECTRIC WINDLASS - BREAKER - FUSE

DECK



1. Bow fitting
2. Chain locker
3. Chain locker opening
4. Windlass 12V 1000 W
5. Handle position
6. Smooth gypsy head
7. Chain lifter 10 diameter
8. Drain scuppers - Chain locker
9. Forward station where the handle is stored
10. Position for remote control
11. Clinch
12. Connection Remote control

---

## OPERATION

The windlass is linked to the engine battery.

Master operation relay situated on the engine



Location of cutouts and circuit breaker in rear port cabin below the berth.

1. - Common
2. + Engine
3. Windlass circuit breaker 25A



**Operation relay**  
**Under the bed - Forward cabin**



## WARNING

Refer to the manufacturer's instructions for use and maintenance.



## HEAVING UP THE ANCHOR

- Lock the cable lifter snubber.
- Ensure the chain is properly set on the cable lifter.
- Slowly go near the anchor, using your engine (Don't use your windlass to winch the boat).
- Heave the anchor completely.
- Visually check the last meters till the anchor gets into contact with the davit.
- If you just change berth, check the position of the anchor on the stem fitting.
- When sailing, store the anchor in the chain locker.
- With an electric windlass, switch the power off as soon as the chain is fast.

## STERN ANCHORING

Stern anchoring shall be performed with the engine declutched.

- Secure the required length of cable on the mooring cleat.
- Pay out the anchor line slowly.
- Take care not to damage the propeller or the rudder.

### WARNING



Windlass operations are dangerous:

- Always keep the anchor line unfouled and free.
- Always proceed with care, using gloves and always wearing shoes.
- If your boat is equipped with the twin control optional extra, make sure you use **only one** control at the same time.

## MAINTENANCE

### ADVICE - RECOMMENDATION

After each trip rinse the windlass and anchor chain or rode with fresh water.

Refer to the manufacturer's instructions for windlass maintenance at the beginning or end of the season.



**Mechanism Opening / Closure - Cockpit table**



**Fastener Swimming ladder**

Be careful to leave the swim ladder unfastened while sailing so that someone may fold it out from the water if necessary.



**hand rail - Aft quarterdeck**



**Access to companionway**

1. Sliding hatch
2. Lock and key
3. Access door to companion ladder



**Safety -  
Keeps the life raft locker closed**



## MAINTENANCE OF THE DECK

### PRECAUTION

Consult the harbourmaster's office to find out the conditions of water use and the maintenance area for cleaning your vessel.

Preferably wash your boat on shore.

Use as few cleaning agents as possible.

Don't use solvents or aggressive detergent agents (Refer to chapter 3 "Hull").

Don't discharge cleaning agents into the water.

Regularly brush the deck with a degreasing shampoo and fresh water.

### ADVICE - RECOMMENDATION

Use only products similar to the ones that are included in the maintenance case you have been delivered with your boat.

### DECK FITTING

- Rinse thoroughly all your equipments with fresh water.
- Periodically lubricate turnbuckles, winches, tracks and travellers with water-repellent grease.
- Thoroughly and frequently wash off the pulleys and sheaves with clear water.
- Clean and polish with "Rénovateur chrome et inox Jeanneau" (supplied in the maintenance case) the stainless steel parts that may have small rusty spots or minor oxidation pits.

---

### **SOLID WOOD ON EXTERIOR WOODEN PANELLING**

Regularly clean the woodworks with fresh water using a sponge (if need be add some gentle soap).

#### **ADVICE - RECOMMENDATION**

Don't use a pressure washer.

### **PLEXIGLAS**

- Rinse plexiglas with fresh water.
- Use polish paste to remove scratches.

#### **PRECAUTION**

Don't use solvent, alcohol, acetone on plexiglas.

### **EXTERIOR CUSHIONS**

Bring the removable cushions inside (washed with soapy water then dried) when the vessel is unoccupied.

### **STAINLESS STEEL**

Stainless steel is not incorruptible and requires a minimum of upkeep:

- The use of chrome tools is preferable whenever handling stainless steel.
- Re-nourish the protective film regularly with passivation paste (consult your dealer).



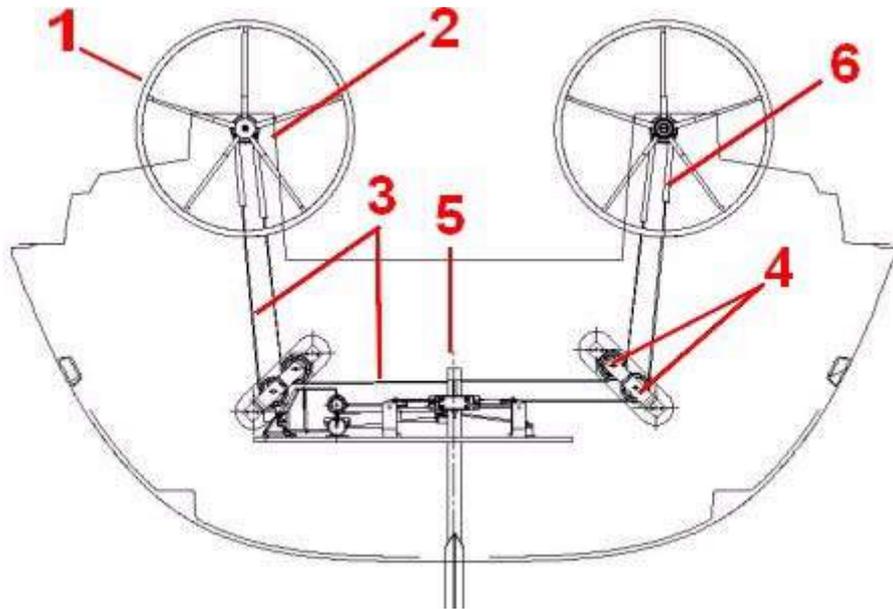
# STEERING SYSTEM

## *STEERING GEAR*

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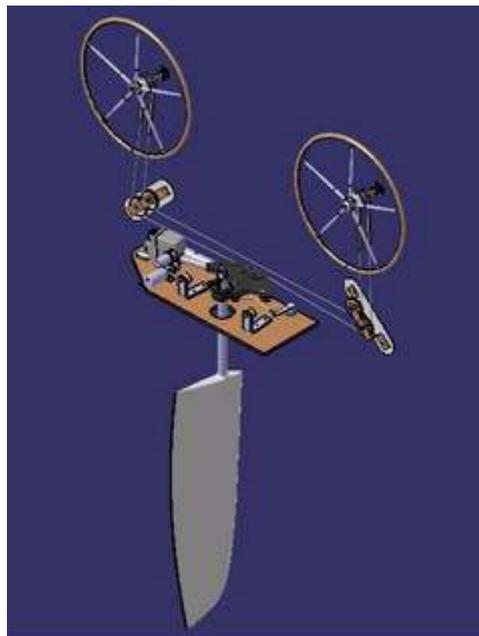
## STEERING GEAR



Access to the steering cables through the aft cockpit locker (helmsman's seat)

1. Steering wheel
2. Wheel column
3. Steering cable
4. Cable adjustment
5. Emergency tiller

## VIEW OVERALL





## MAINTENANCE

- Regularly check:
  - The tension in the steering cables.
  - The tightness of the steering system components..
- Don't tighten the steering cables excessively.
- Lubricate all the elements.

Maintain the nylon, ertalon or teflon bushes with only a suitable lubricant.

**Note: In case of doubt consult your concessionaire.**



### WARNING

- Refer to chapter 2 "Safety" for use of the emergency tiller.
- Learn how to judge the necessary distance of deceleration for the vessel to come to a complete stop.
- The reverse gear is not a brake.

### ADVICE - RECOMMENDATION

The emergency tiller is designed only to be able to continue underway at a reduced speed in case of steering gear failure.

## CABLE ADJUSTMENT - STEERING SYSTEM

The steering gear is assembled and pre-adjusted at the factory, however, only actual use at sea will enable the steering cable to find its definitive position around the wheel drum.

For this reason, it is necessary to re-adjust the gear after the first few sea outings.

The adjustment is made on the nut and bolt system integral with the steering cable at the join with the profile. To check the adjustment exert a perpendicular force on the cable between the wheel drum and the return sheaves located on the hull. The slack in the cable should not exceed 10 mm. The adjustment is carried out in the same way on the 2 sides of the cable (See diagram).



### WARNING

- The steering system is a feature of sailing safety and for this reason must be verified at least once a year.
- **The steering cable must be changed every 10 years.**





# RIGGING AND SAILS

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***STANDING RIGGING***

---

***RUNNING RIGGING***

---

***WINCHES***

---

***SETTING THE SAILS***

---

***SAILS***

---

## STANDING RIGGING



Reference	Designation	Number
1	Forestay	1
2	Backstay	2
3	V2/D3	2
4	V1	2
5	D2	2
6	D1	2

## STANDING RIGGING



Your JEANNEAU dealer was responsible for stepping the mast of your boat.

After masting your vessel and after having sailed for the first time it is necessary to seek the help of a qualified specialist in order to carry out a rigging check.

### MAINTENANCE

Before each trip, carefully inspect the mast from top to bottom.

Periodically check the rigging tightening and the lock nut or pin locking (you should check it for the first time after a few days sailing in all types of weather).

Secure and lubricate the bottle screws with tallow, graphite grease or other.

Never lubricate the bottle screws with silicone.

Check the bottle screw tightening. Inspect the bottle screws for possible wear (due to the chainplate friction if the rigging is slack).

Change any shroud or stay with severed wires or kinks.

Regularly check the chainplates and inside tie rods for condition.

### DANGER



To hoist a crew member up to the top of the mast, make a bowline with the halyard directly on the bosun's chair ring (never use the halyard snap shackle or shackle).  
Do not hoist a crew member when sailing in heavy weather.

### ADVICE - RECOMMENDATION

Your JEANNEAU dealer can carry out all the maintenance operations.

---

## RUNNING RIGGING CLASSICAL MAINSAIL



	<b>Rope designation</b>	<b>Number</b>
1	Reef 3 (Optional equipment)	1
2	Reef 2 (Automatic)	1
3	Reef 1 (Automatic)	1
4	Foot tuning line	1
5	Kicking strap	1
6	Mainsail sheet	1
7	Traveller adjustment	2
8	Main halyard	1

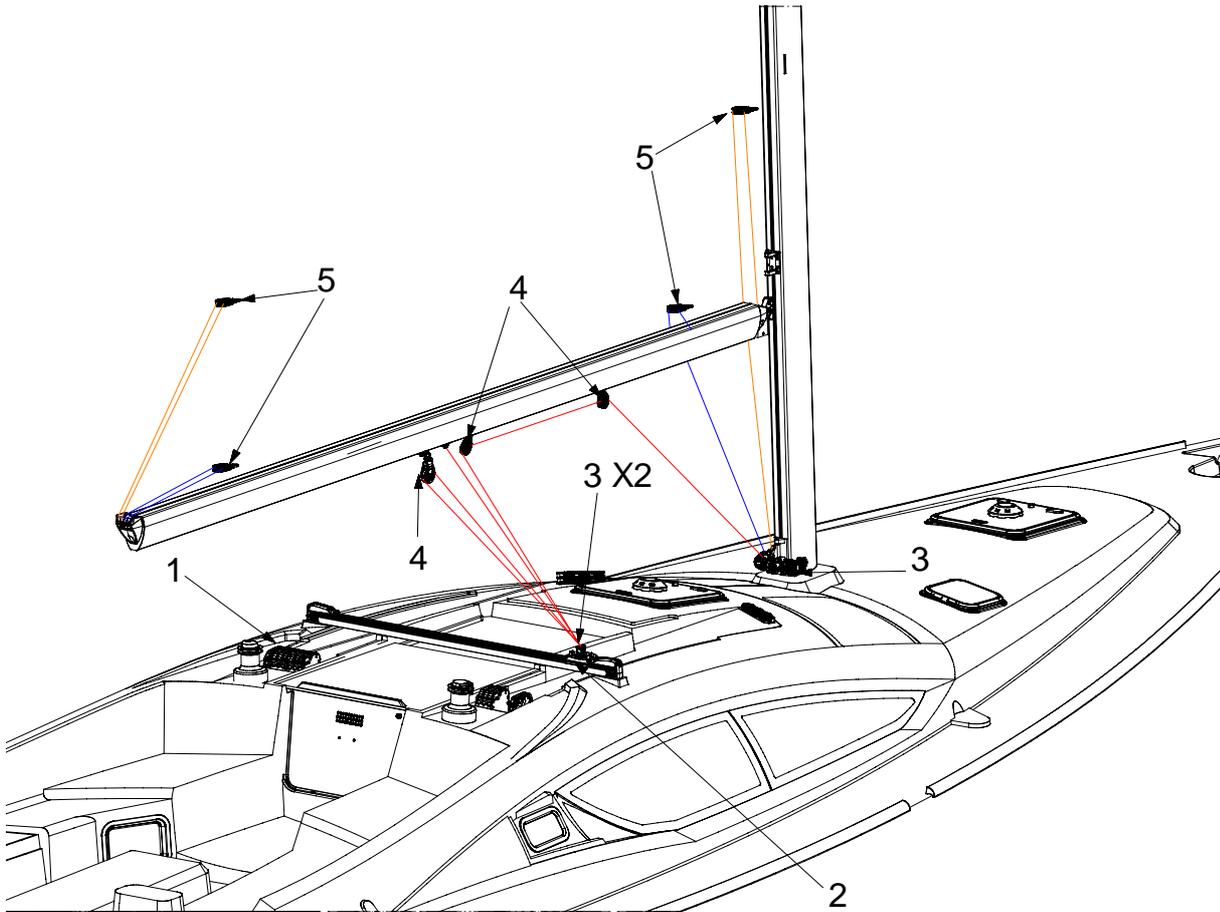


## RUNNING RIGGING FURLING MAINSAIL



	Rope designation	Number
1	Foot tuning line	1
2	Main furling line	1
3	Kicking strap	1
4	Mainsail sheet	1
5	Traveller adjustment	2
6	Main halyard	1

## RUNNING RIGGING MAINSAIL (CLASSIC) PERFORMANCE



	Rope designation	Number
1	Single clutch	2
2	Traveller Mainsail (classic)	1
3	Swivel single pulley	5
4	Single frame pulley	3
5	Single frame pulley	4

## RUNNING RIGGING FOR THE GENOA



Version: Classic / Jib reefer

	Rope designation	Number
1	Genoa furler	1
2	Genoa sheet	2
3	Traveller adjustment	2
4	Genoa halyard	1

---

## RUNNING RIGGING - SYMMETRIC SPI



	<b>Rope designation</b>	<b>Number</b>
1	Spinnaker sheet	2
2	Spinnaker guy	2
3	Spinnaker boom downhaul	1
4	Spinnaker boom topping lift	1
5	Spinnaker halyard	1



## RUNNING RIGGING

### MAINTENANCE

Change any distorted or dented sheave. Inspect the pins of the sheaves at the top of the mast once a year.

Regularly check the condition of the jam cleat jaws.

Inspect the halyards for wear and condition.

Regularly clean the blocks (waste grease, corrosion spot).

Slightly lubricate the block pins.

Avoid untimely gybes in order to reduce the premature wear on the sheets and attachment points.

## WINCHES

### OPERATION

Avoid rope jamming during winch handling. Do not leave loose ropes on the winches but make them fast on cleats.

Adjust the winches on receipt of your boat (rinse them regularly during the season). The winches should rotate freely, they need overhaul as soon as it slightly seizes.

### MAINTENANCE



#### WARNING

Refer to the manufacturer's instructions to remove the winches and put them back.

- Improper refitting may result in accidents (e.g. kick of the crank handle).

#### ADVICE - RECOMMENDATION

Carry out the complete maintenance of the winches regularly (before and during the sailing season).

- Remove the drums and clean them.

Lubricate the drums with a film of white grease or Teflon to reduce the friction and fight against corrosion (this type of grease is clean, non toxic and biodegradable).

---

## SETTING THE SAILS

### CLASSICAL MAINSAIL

With the mainsail being on the deck:

- Screw the pins of the mast sliders for battens into their boxes.
- Slide in the battens through the leech.
- Screw the box cap until you get the required tension (the tightening screw shall not project beyond the sail).
- Do not forget the small locking screw.
- Put the mainsail into the lazy-bag.
- Set the boom ring in velcro about level with the clew.
- Fit the mainsail onto its slides, begin with the headboard and finish with the tack.

### **ADVICE - RECOMMENDATION**

Weather permitting, hoist the mainsail gradually.



## FURLING GENOA

Before getting under way take advantage of a windless period of time and hoist the genoa.

Hand pre-roll the drum to set the furling line on it.

Pay attention to the drum winding direction: The sacrificial strip of the genoa shall be wrapped outside.

- Secure the head and halyard to the swivel. Secure the tack to the drum and sheets.
- Insert the bolt rope into the hole and hoist it and take care that you do not tear it.
- Have the halyard taut enough but hoist less taut than a sail on a normal stay. Hoist it until the horizontal creases disappear (Adjust the tension of the luff after a few sea trips).
- Pull on the line from the cockpit to furl the genoa.

Never force it in case it seizes when you furl or unfurl the head sails. Make sure a halyard is not jammed in the furler.

### ADVICE - RECOMMENDATION

When you are not sailing, slacken the genoa halyard.

## MAINTENANCE

- Regularly rinse the drum and swivel.
- Lubricate the bearings if recommended by the manufacturer.
- Remove the sails if your boat is not to be used for a long time.

## LAZY-BAG

- Spread out the lazy-bag on the deck.
- Slide the battens in and close the batten pockets.
- Hank on the lazy-bag until you have the front part about level with the gooseneck.
- Fasten the lazy-bag to the tack with the strap provided.
- Stretch the lazy-bag from the back before you fasten the lazy-jacks.
- Put the mainsail into the lazy-bag.
- Tighten up the starboard side.

### ADVICE - RECOMMENDATION

Install the lazy-bag before the mainsail.

---

## FURLING MAINSAIL

- Remove the hatch giving access to the furling mechanism.
- Spread out the sail on the deck.
- Fasten the head (strap) to the shackle of the upper swivel. Pay attention to the winding direction.
- Insert the foot adjustment line into the clew block.
- Slowly hoist the sail. Guide the bolt rope (sometimes the groove leading edges may be insufficiently smoothed off).
- When the sail is up, tack it to the lower shackle.
- Gently sweat up the halyard.
- Refit the hatch.
- Furl the sail facing the wind and keeping a very slight tension on the foot. The mainsail downhaul and sheet shall be eased off.

### **ADVICE - RECOMMENDATION**

When the sail is unfurled, adjust the halyard tightness.

Too much tightness may cause furling problems. After sailing, slightly slacken the halyard.

## SAILS



The working life of a sail mainly depends on its being regularly maintained.

### ADVICE - RECOMMENDATION

At the end of the sailing season, and if possible before winter, leave your sails to a specialist to have efficient maintenance and repairs.

When sailing, trim the sails properly in accordance with the stresses in order to reduce the harmful strains on the fabric.

Avoid wear and tear: Use protective items against chafing on the the accessories with rough surfaces (protective items for spreaders, stanchions etc.).

Between two sea trips, slacken the halyard (for the sails on furler) and the mainsail foot tuning line.

Have a sail maker's kit and a user's manual so that you may carry out the emergency repairs waiting for the sailmaker's assistance.

### CLEANING AND MAINTENANCE

Rinse the sails with fresh water from time to time and dry quickly in order to avoid mildew.

Avoid drying the sails to windward when on the mast (when the sails lift, the seams are worn, the sails may be torn by the rigging).

To remove grease stains: Use trichlorethylene then immediately rinse with water.

### SAIL STORAGE/FOLDING

Avoid storing a wet sail to prevent the appearance of mould and mildew.

Flake the sail parallel to the foot, then roll it up to the bag dimensions.

### PROTECTION

UV rays are harmful to polyester and nylon. If the sails remain on the mast, even for 24 h, protect them with a cover or a protection fabric placed on the leech and foot of the furled sails.

Our agents' network offers you accessories that have been selected by the yard and are consistent with your needs.





# INTERIOR

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***INTRODUCTION***

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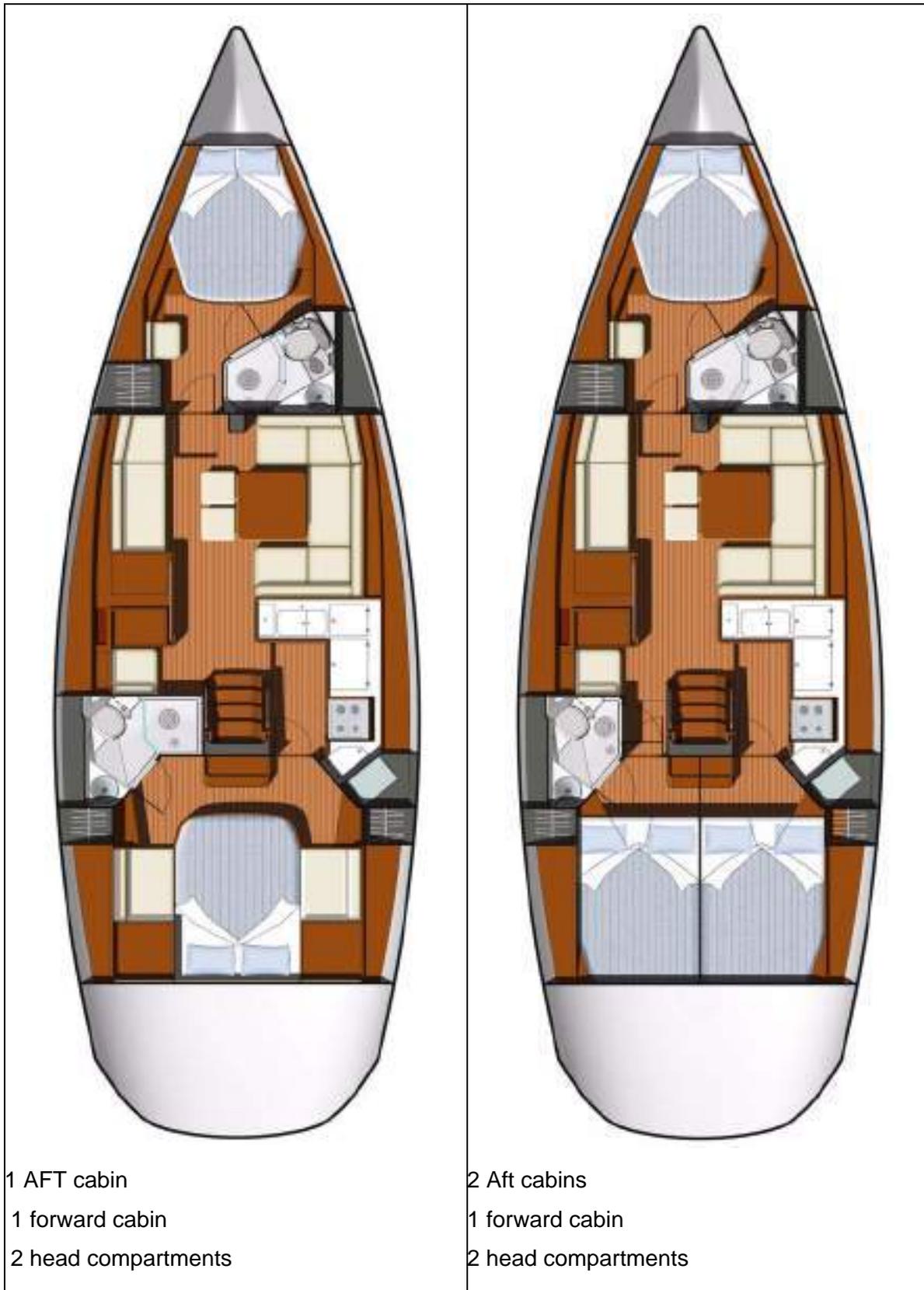
***INTERIOR MAINTENANCE***

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***MAINTENANCE OF FABRICS***

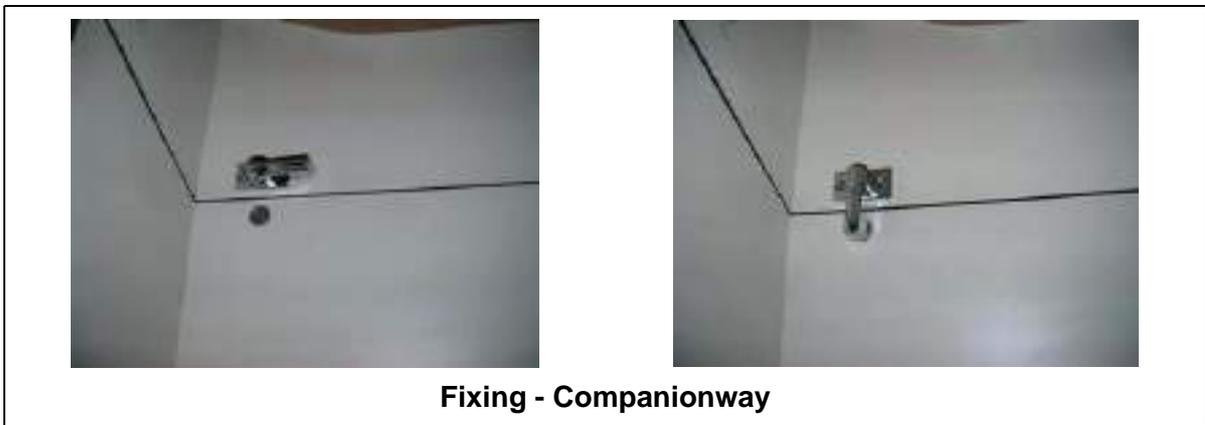
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## INTRODUCTION





INTERIOR





**Sink - Cutting board**



**Access - Under the bed -  
Forward cabin**



**Extension saloon**



## **INTERIOR MAINTENANCE**

### **INTERIOR**

- Take advantage of the fine weather to take the settee and berth cushions out.
- Put the cushions vertically if you leave the boat for long.
- Use blinds to protect the inside of the boat against UV rays.
- Carefully remove all crumbs.
- Make sure the bilges are clean and dry.
- Defrost the fridge regularly / Cool boxes.
- During long absence leave the fridge and icebox doors open to avoid mould developing.

### **INSIDE VARNISH**

- Rinse the inside varnish with fresh water mixed with spot remover and shampoo.
- Polish the interior varnishing with a chamois leather.

### **ADVICE - RECOMMENDATION**

Preferably wash your boat on shore.

Use as few cleaning agents as possible.

Don't discharge cleaning agents into the water.

Regularly brush off the non-slip parts with a mild liquid detergent so as to avoid dirt becoming embedded.

The alloy sections are cleaned in the same way (care must be taken with the quality of the detergents used, a too strong product will tend to deteriorate anodisation).

Take the removable upholstery inside when the vessel is not being used.

Place protective covers/awnings.



## MAINTENANCE OF FABRICS

### ADVICE - RECOMMENDATION

Mark up each cover and foam when dismantling.

#### STAIN REMOVAL

- Remove as much stain as you can with a knife blade (from the edge towards the centre).
- Dab with a clean rag.
- Remove the stain with solvent on a clean rag. Never pour the solvent directly over the stain.
- Rub with a clean and dry rag.
- Brush the fabric against the grain.
- Use the vacuum cleaner when the fabric is dry.

#### PVC OR COATED FABRICS

- Use a sponge and water and soap (household soap type).

### PRECAUTION

For the PVC fabrics, don't use any solvent or solvent based product (pure alcohol, acetone, trichloroethylene).

---

### **100% POLYESTER/DRALON JACQUARD**

If you cannot remove the fabric:

- Clean with the vacuum cleaner.
- Clean with a foam for synthetic fabrics (please refer to the product instructions).

If you can remove the fabric:

- Hand wash with an ordinary washing powder at 30° C.

In both cases, dry cleaning is possible. Remove the stains as soon as possible with a damp rag.

### **COTTON JACQUARD**

- Dry clean.
- Do not iron.
- Do not use hypochlorite.
- Remove the stains with fractionated petrol.

### **ALCANTARA**

- Wash in warm water with a neutral pH soap.
- Dry it naturally.
- Dry clean with perchloroethylene.

### **LEATHER**

- Use a leather cream for ordinary care.
- Do not use detergent.
- Do not use silicone based products.
- Clean with a sponge and soapy water.
- Remove ball point pen marks with methylated spirit.
- Remove the grease stains with an absorbent powder (e.g. talcum powder).

### **ADVICE - RECOMMENDATION**

The builder tested and approved a certain number of biodegradable cleaning and restoring products that protect both material and environment.

The related technical data is available at your JEANNEAU dealer.



# WATER AND SEWAGE WATER

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*WATER TANKS*

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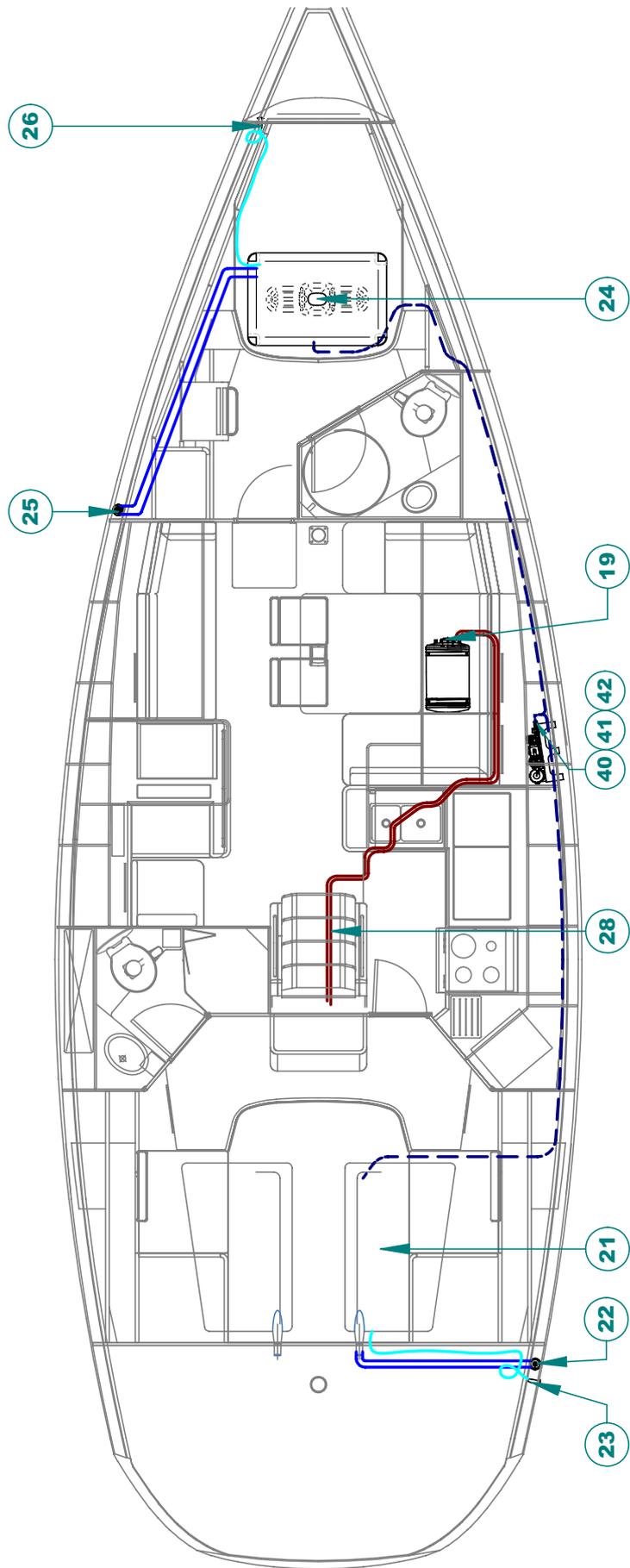
*WATER SYSTEM - DISTRIBUTION*

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*WATER SYSTEM - DRAINAGE*

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*SEWAGE*



70/142



REFERENCES ON DIAGRAMS	FUNCTIONS
19	Water heater
21	Aft water tank
22	Filler of the aft water tank
23	Aft water tank vent
24	Forward water tank
25	Filler of the forward water tank
26	Forward water tank vent
28	Hoses for engine coolant
40	Reservoir valve 1
41	Reservoir valve 2
42	Valve (optional)

 <p><b>Filler cap - Port catwalk</b></p> <p>Capacity of forward water tank = 380 litre</p>	 <p><b>Filler cap - Starboard catwalk</b></p> <p>Capacity of aft water tank = 235 litre</p>
---	---

**Note:** It may happen that the capacity of the fresh water tank or tanks indicated on the page "Specifications" cannot be completely used depending on the trim and load of the boat.



## WATER TANKS



### OPERATION

In order to prevent any handling mistakes, never fill the water and fuel tanks at the same time.

During filling, avoid handling contaminants near the fillers.

Open and close the filler caps with the suitable key.

Check the filler cap seals for condition during filling.

The tanks are fitted with overflow outlets and vents.

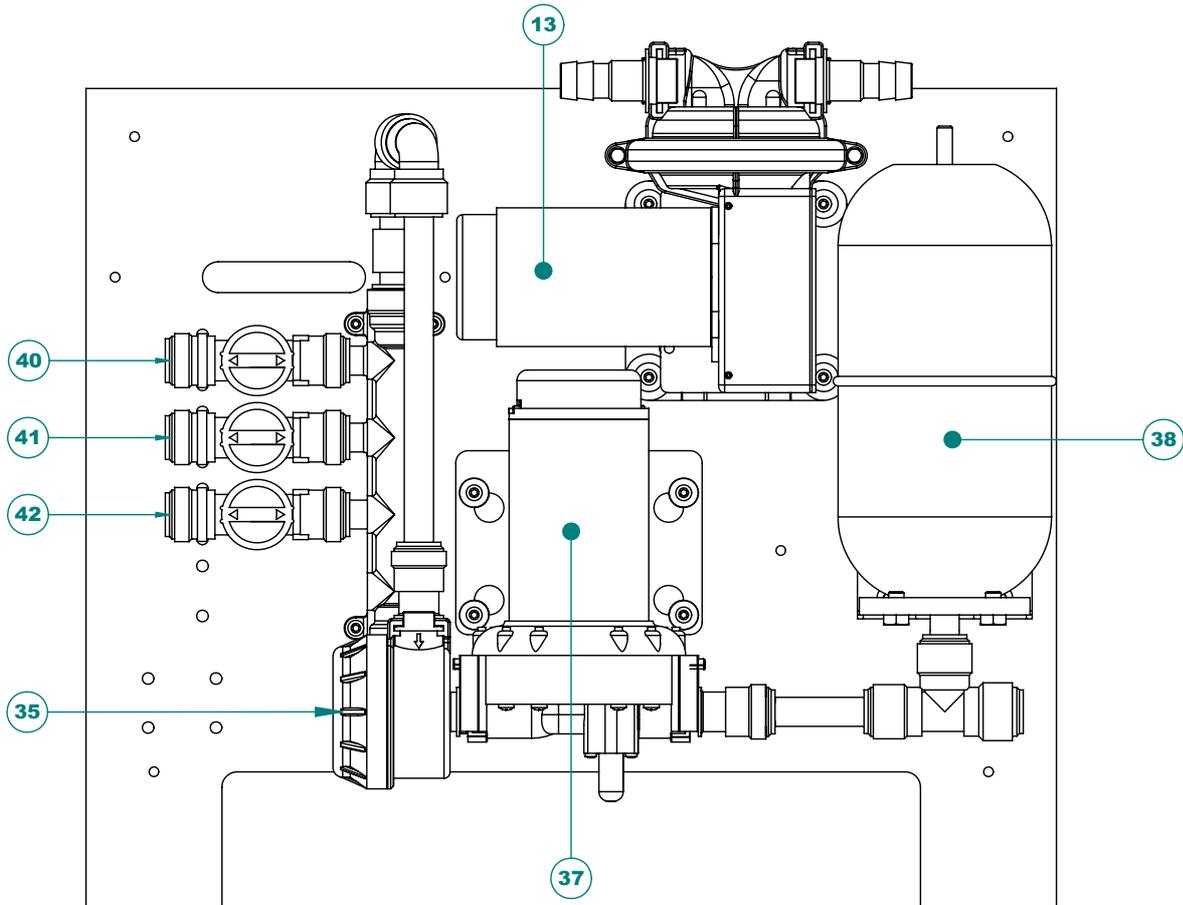
Never insert the water filling hose deep down into the system in order to prevent any over-pressure in the systems.

### MAINTENANCE

#### ADVICE - RECOMMENDATION

- Pay attention to the quality of the water for the filling up. Check if it is drinking water.
- It is possible to sterilize the tanks with a Clonazione tablet (sold at the Chemist's).
- If the boat is not used for long, purify the tanks and pipes with acetic acid (or white vinegar).
- Inspection ports are provided on tanks and make possible the cleaning of the inside.
- Do not use chlorine-based products (they may spoil the quality of the pipework stainless steel).
- For winter storage instructions and precautions, refer to Chapter 13.

## PLUMBING BOARD

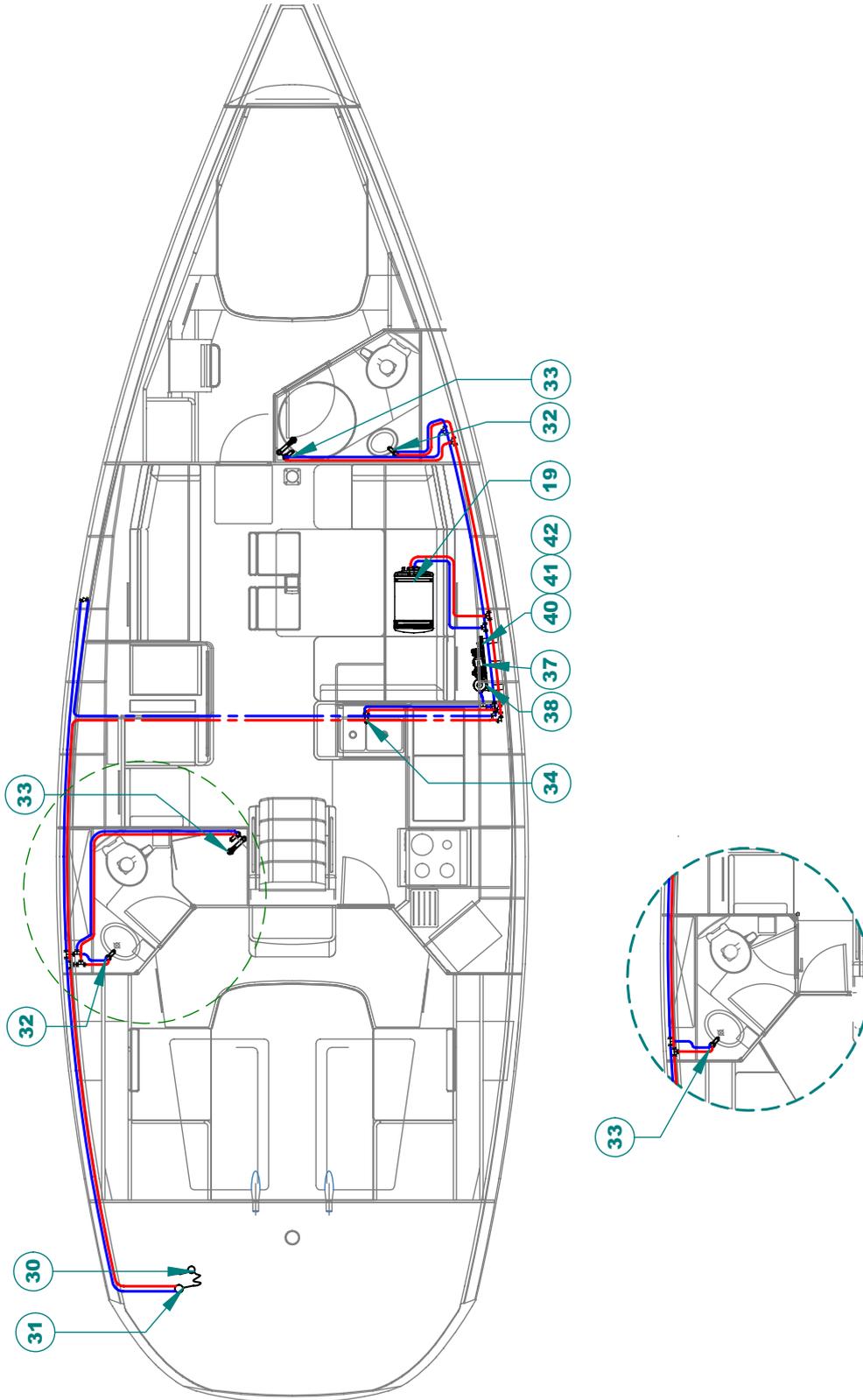


REFERENCES ON DIAGRAMS	FUNCTIONS
13	Electric bilge pump
35	Fresh water filter
37	Water unit
38	Accumulator tank
40	Reservoir valve 1
41	Reservoir valve 2
42	Valve (optional)



Location :Backrest - Starboard saloon

## WATER SYSTEM - DISTRIBUTION



REFERENCES ON DIAGRAMS	FUNCTIONS
19	Water heater
30	Deck shower
31	Deck shower mixer tap
32	Washbasin mixer tap
33	Mixer tap + Shower
34	Sink mixer tap
37	Water unit
38	Accumulator tank
40	Reservoir valve 1
41	Reservoir valve 2
42	Valve (optional)



**Cockpit shower spray - With mixer -  
Location: Stern deck**

### PRECAUTION

- Never operate the water system equipment when the valve is closed or the tank is empty (the electrical equipment may be damaged).
- Check the water filter for condition (refer to manufacturer's instructions).
- Close the taps of empty tanks.



### WARNING

Turn off the shore freshwater supply valve before leaving the vessel.  
Bleed the cockpit shower water system to avoid freezing.

## WATER SYSTEM - DRAINAGE



### OPERATION

Waste water from the sink, washbasins and heads is drained off by thru-hull fittings with ball valves (the valve is closed when the valve handle is perpendicular to the hose, the valve is open when the valve handle is in line with the hose).

All the floors have holes (limber holes) for the water flow.

A watertight bilge tray under the engine receives the possible oil leaks.

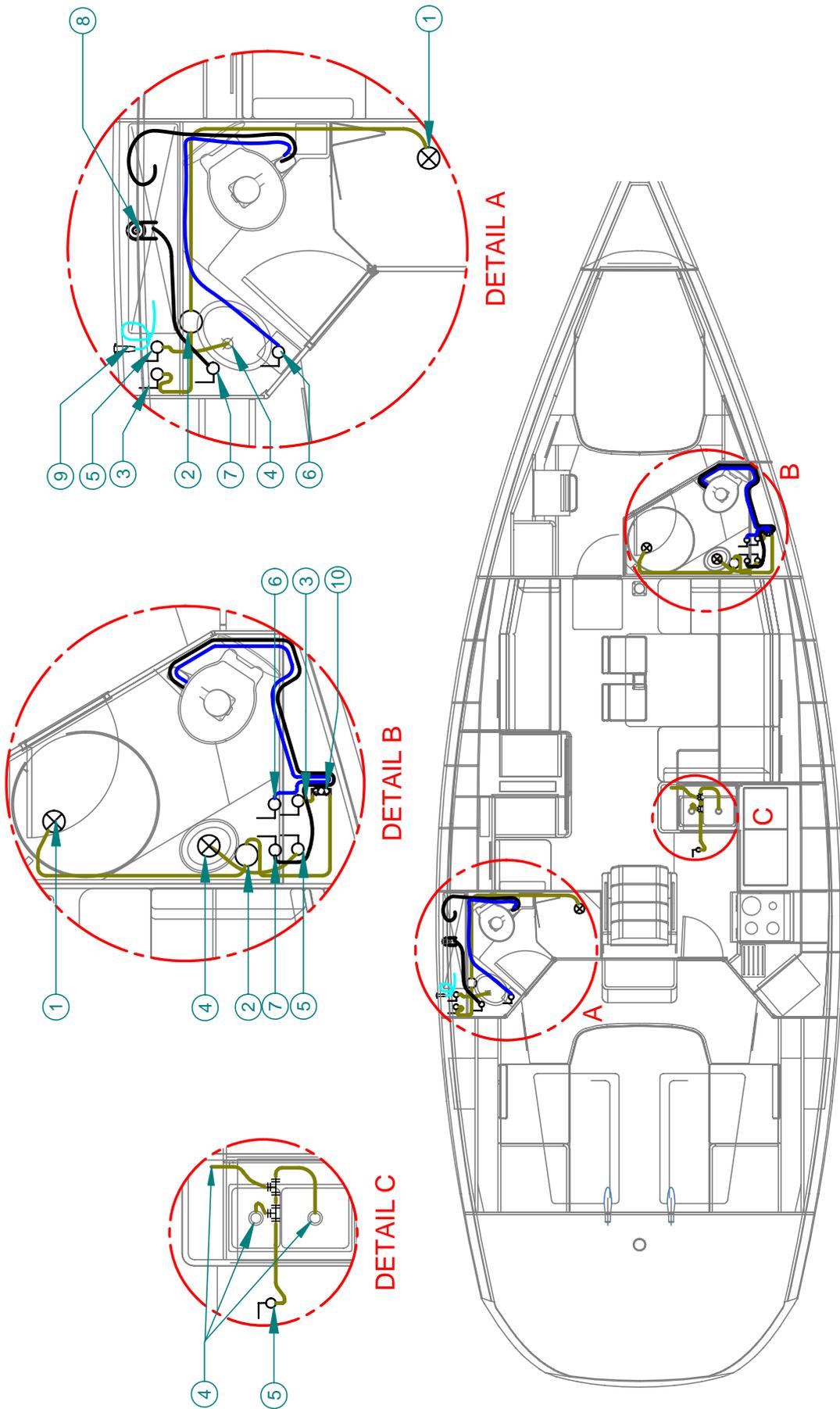
A main sump above the ballast collects the water coming from the boarded floor.

The main sump is partially drained by an electric or a manual pump. Regularly dry the sump with a sponge.



### WARNING

The tanks' nominal capacity cannot be fully used due to the load and the need to maintain the correct trim. A 20% reserve should be kept.





<b>REFERENCES ON DIAGRAMS</b>	<b>FUNCTIONS</b>
1	Shower plug hole
2	Shower pump
3	Hand spray evacuation valve
4	Sink plug hole / Draining rack
5	Sink drainage valve
6	WC seawater suction valve
7	Draining valve WC or WHT
8	WHT drainage pump
9	WHT vent
10	Anti-siphon valve

---

## GALLEY DRAINING



**Collector - Draining rack + Sink**

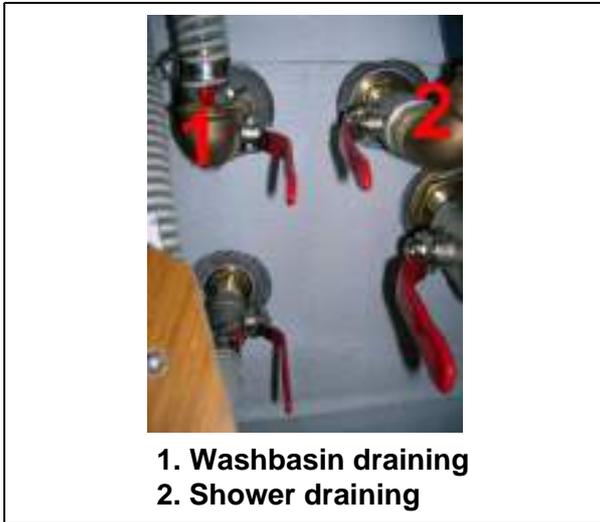


**Drain outlet + Sink -  
Under galley floor**

### **ADVICE - RECOMMENDATION**

- Regularly check the valves and thru-hull seacocks for proper operation and watertightness.
- Turn off the valves when the water system is not in use.
- Visually check the water pump flow.
- Check the clamps and flexible hose connections for tightness.
- Pay attention to the seals for condition.
- Regularly make sure that the strum box and bilge are perfectly clean.
- Immediately switch off the electric system in case a pump is running while all the water supplies are turned off.
- In case of a leak check the system.

### WASHROOM DRAINING FORWARD



WATER AND SEWAGE WATER

### DRAINAGE AFT WASHROOM





## SEWAGE



### USE OF THE WASHBASINS AND SHOWERS

- Close the valves and turn off the taps after use.
- Operate the pump switch to drive the water out of the shower.

### ADVICE - RECOMMENDATION

When you are in a marina, use the club-house sanitary facilities (if there are).

- Since it is prohibited to discharge the waste waters in some marinas or countries, you shall use a waste holding tank (WHT).

### USE OF THE MARINE HEADS

Before you use the heads, check that the water intake valve and draining valve are open.

To empty the bowl:

- Set the control lever of the pump slantwise (FLUSH).
- Operate the pump.

To dry the bowl:

- Set the lever back vertical (DRY).
- Operate the pump.

In order to avoid clogging the heads, use absorbent paper exclusively.

Schedule a regular rinsing through of the heads with fresh water.

Close the valves after each use (in particular when the boat is unattended).

### RESPECT OF THE ENVIRONMENT

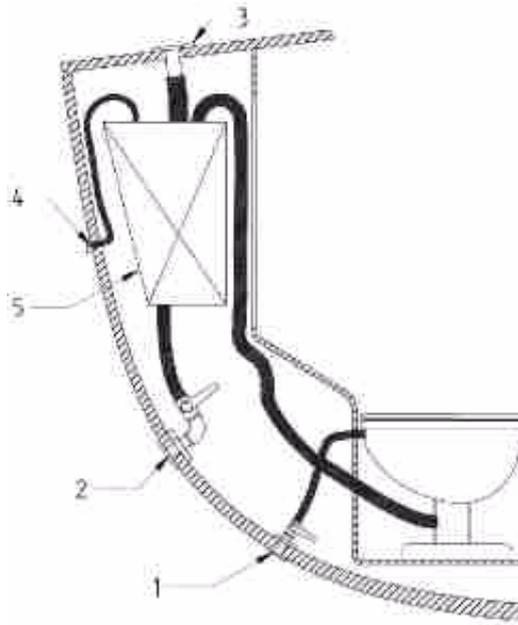
- Remain informed of local regulations concerning the environment and follow the codes of best practice.
- Do not drain the contents of the sewage tank near the coast or in zones where it is forbidden.
- Make use of the port or marina pump facilities to drain the sewage tank before leaving port.
- Find out the international regulations against marine pollution (Marpol) and follow them as far as possible.

### ADVICE - RECOMMENDATION

- Completely empty the black water system before leaving the vessel unattended in temperatures below freezing.

---

## SCHEMATIC DIAGRAM - SEWAGE TANK



1. Heads water intake hose with a thru-hull fitting and a valve
2. Tank draining hose with a thru-hull fitting and a valve
3. Heads filler
4. Tank vent hole
5. Waste holding tank (WHT)

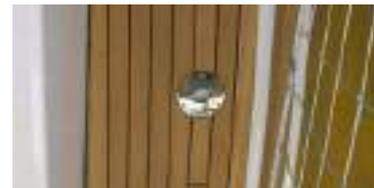
## FORE WASHROOM



1. Seawater inlet
2. Drainage Tank - to sea



Excrement tanks -  
Capacity 80 litre



Drainage Tank -  
Filler cap (Starboard  
catwalk)



### WARNING

The tanks' nominal capacity cannot be fully used due to the load and the need to maintain the correct trim. A 20% reserve should be kept.



## AFT WASHROOM



**Access Valves**



**Seawater inlet**



**Drainage Tank -  
to sea**



**Drainage Tank -  
Filler cap (Port catwalk)**



**Excrement tanks -  
Capacity 80 litre**

**WATER AND SEWAGE WATER**

---

## USE OF MARINE HEADS EQUIPPED WITH A WASTE HOLDING TANK (WHT)



### WARNING

Ask for information about the laws in force in your country or your marina about discharging your waste waters into the sea.

Open the water intake valve (ref. 1) (valve handle parallel to the pipe).

In the case of a direct discharge into the sea: Open the draining valve (ref. 2).

In case you store the waste waters in the tank: Make sure the draining valve is closed (ref. 2) (valve handle perpendicular to the pipe).

To drain the bowl, set the control lever of the pump slantwise (FLUSH) then operate the pump.

To dry the bowl, set the lever vertical (DRY) then operate the pump.

In order to avoid clogging the heads:

- Use absorbent paper exclusively.
- Schedule a regular rinsing through of the system with fresh water.

### PRECAUTION

- Close the valves after each use and above all when the boat is unattended.

To empty the tank:

- In an authorized area, open the draining valve (ref. 2).
- In a marina equipped with a system to suck the waste waters, put the sucking hose into the tank through the deck filler (ref. 3). Start the pump of the sucking system. The filler caps are opened and closed with an appropriate key. When the tank is empty, check the cap seal for condition then close the filler.

### PRECAUTION

- Regularly check how full the tank is. High pressure due to too high a level may cause leaks or more unpleasant troubles.
- To prevent odors caused by organic waste in pipes one should clarify the circuit after each use. For this procedure, drive about ten times the manual pump of the toilet or for a minute if it is an electrical pump.
- When you leave the ship for several days, flush the toilets circuit assembly with fresh water. Purify with specific products (for example a health additive to clean, disinfect and neutralize odors).



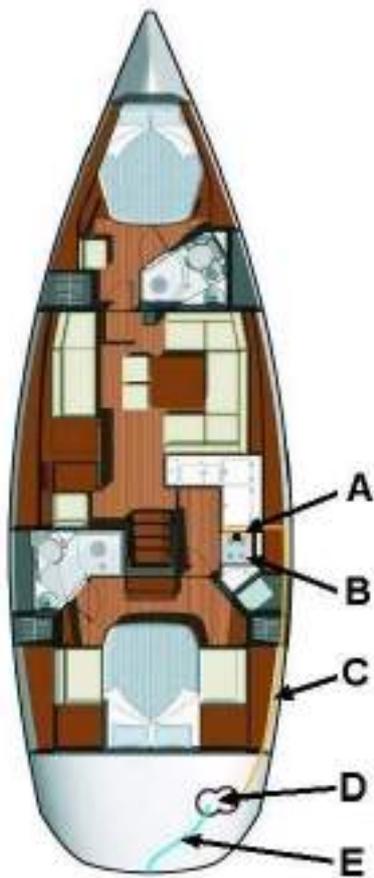
# GAS

## *GAS SYSTEM*

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## GAS SYSTEM



- A = Gas cooker
- B = Gas valves
- C = Gas system
- D = Position of gas bottle
- E = Vent hole



### WARNING

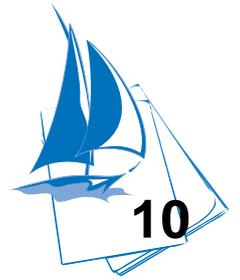
For all recommendations concerning gas: Refer to chapter 2, "Safety".

- Don't use a solution containing ammonia.
- Don't use a flame to detect leaks.
- Don't smoke, don't use a naked flame when you change the gas cylinder.

When removing the bottle replace the cap on the threaded part of the regulator (to avoid corrosion).

### ADVICE - RECOMMENDATION

- Shut off the gas safety valve and the regulator tap when the stove is not in use.



# ELECTRICAL EQUIPMENT

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## *GENERAL INFORMATION*

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### *12-24 V DC SYSTEM*

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### *110-230 V AC SYSTEM*

---

## *ELECTRICITY*

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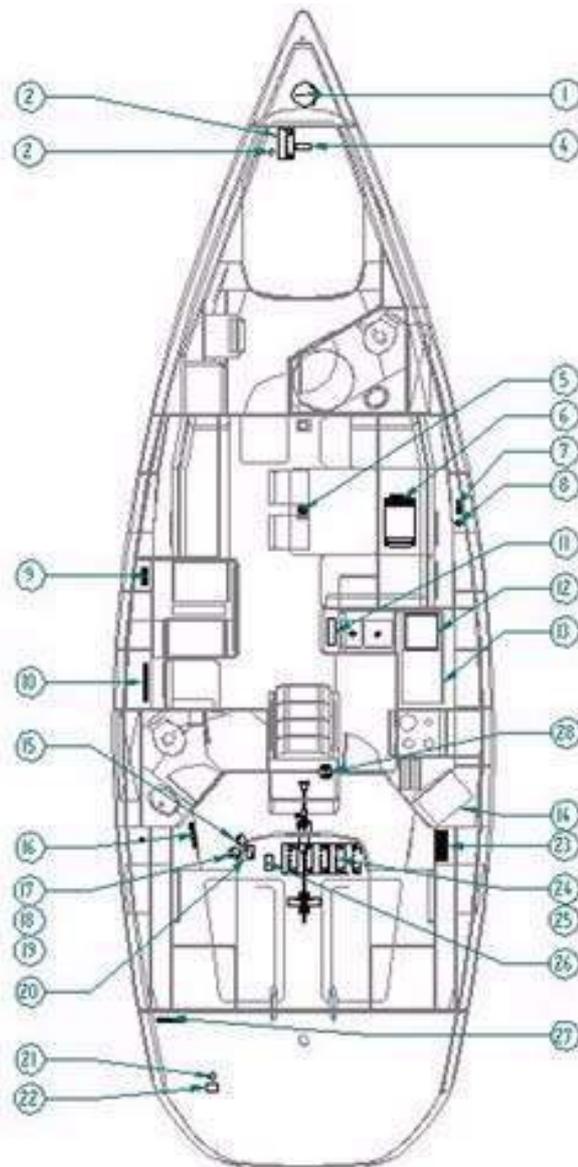
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## ELECTRICAL LAYOUT



1. Battery switch + Engine
2. Battery switch -
3. Battery switch + House

**Note: Same position for the other layouts.**



- |                              |                                      |
|------------------------------|--------------------------------------|
| 1. Windlass                  | 15. Windlass circuit breaker         |
| 2. Battery Thruster          | 16. Panel Optional equipment         |
| 3. Fuse Thruster             | 17. Battery switch of house system - |
| 4. Thruster                  | 18. Battery switch of house system + |
| 5. Bilge pump                | 19. Engine battery switch            |
| 6. Water heater              | 20. General fuse                     |
| 7. Electric bilge pump       | 21. Shore power socket               |
| 8. Water unit                | 22. 200/110 V breaker                |
| 9. Radio and CD player       | 23. Battery charger                  |
| 10. Electrical panel         | 24. Engine battery                   |
| 11. Refrigeration compressor | 25. Service battery                  |
| 12. Fridge                   | 26. Electric winch circuit breaker   |
| 13. Refrigeration unit       | 27. Engine panel                     |
| 14. Microwave                | 28. Engine compartment ventilator    |

---

## GENERAL INFORMATION

### GENERAL RECOMMENDATIONS

All functions on the electrical panel where the voltage is not specified operate on 12 or 24 volts.



### DANGER

- There may be danger of fire or explosion if direct current systems are incorrectly used.

### ELECTRICAL EQUIPMENT

#### Electrical circuit, 12-24 V

- Never work on a live electric fitting.
- The batteries must be strongly fastened.
- Do not block the battery ventilation ducts, some of them may give off hydrogen which represents a danger of explosion.
- The batteries must be handled with care. In the case of contact with electrolyte thoroughly rinse off the affected part of the body and consult a doctor.
- To avoid short-circuiting between the battery poles do not store conducting objects near to the batteries (metal tools, etc...).
- Turn off the battery switches when installing batteries or during their connection/disconnection.
- Never modify the specifications of power overload protection devices.
- Never modify an installation. Use the services of a qualified marine electricity technician.
- Never install or replace the electric appliances (or any electric equipment) by components exceeding the capacity (amperage) of the circuit (Watt for bulbs).
- Never leave the vessel unattended when the electrical installation is under power, with the exception of the automatic bilge pump and the fire and theft protection circuits
- Certain lights represent a significant heat source, be careful of surrounding objects.

Note that the 12 V circuit wires are red for positive and black for negative.

Those of the 24 V circuit are white or brown for positive and blue for negative.

#### Electrical circuit, 110-230 V

Certain vessels are equipped (as either standard or optional features depending on the model) with a 110 V or 230 V circuit.

The following measures are recommended in order to avoid the danger of electrical shock and fire:

- Never work on a live electric fitting.
- Plug in the boat/shore supply cable in the boat before you plug it into the shore supply socket.
- Never let the end of the boat/shore supply cable hang in the water.
- When the shore supply is connected there may be a difference between the "earth" of the vessel and that of the mains supply, this could create a danger of a counter balance current and therefore electrocution (particularly for any swimmers in the vicinity)
- Turn off the shore supply with the onboard cut-off switch before connecting or disconnecting the vessel/shore supply line.
- Disconnect the ship/shore power cable at the shore socket first.
- If the reverse polarity indicator is activated immediately disconnect the cable. Rectify the polarity fault before using the vessel's electrical installation.



- Close the shore supply input cover firmly.
- Do not modify the vessel/shore supply line connections; only use compatible connections.
- Do not modify the vessel's electrical installation nor its relating diagrams. The installation, modifications and maintenance must be carried out by a qualified marine electricity technician. Check the system at least twice a year.
- Disconnect the vessel supply when the system is not being used. This is to prevent the danger of fire.
- Connect the metallic covers or boxes of the electric appliances that are installed to the protective conductor of the boat (green conductor with yellow stripes).
- Use double insulated or earthed appliances.

Note that the live wires are brown, the neutral ones are blue and the earth wires are green and yellow.

### Batteries

The a.c. generator connected to the engine is used to charge the battery.

### PRECAUTION

- Never run the engine when the circuit to charge the batteries is disconnected (it may destroy the a.c. generator).

Keep the batteries charged enough (essential to ensure them a correct service life).

The discharge of the batteries must not exceed 70 % of the rating.

Use the battery charger when in a marina in order to start sailing with properly charged batteries.

Always check the condition of the batteries and charge system before putting to sea.

Location: Under the bed -  
Aft cabin

Battery set:

Engine : 1 x 110A

Service: 3 x 110A

Spare battery: 1 x 110A



---

## BATTERY CHARGER

### Operation

The battery charger operates based on a signal processor that converts alternating current (220V or 110V) into a direct current (12V). The operation of the charger is fully automatic, after selecting the type of battery and load type (Refer to the instructions for use).

## BATTERY SWITCH

The electricity onboard is 12 V DC.

The electrical system consists of service batteries. The batteries supply power to all the functions on board. The engine has its own battery.

Switch on by turning the battery switches (12 V).



**Location: Port aft cabin**

1. Positive Service
2. Common negative
3. Positive engine

## PRECAUTION

- Turn off all battery switches when the vessel is unoccupied.

## Electronic

Wire runs are available to complete the boat equipment.

Do not install electronic instruments or repeaters less than 1,50 m away from the radio loudspeakers.

**Advice:** For further information refer to the appliance instructions.

## ADVICE - RECOMMENDATION

- It is recommended that you switch off all electrical devices before turning off the battery switches.



## ELECTRICAL PANEL



### WARNING

- Never work on a live electric fitting.
- Do not touch battery terminals, risk of electric shock.

The electrical switchboard does not require any routine maintenance.

### PRECAUTION

- Never leave the boat unattended when the electric fitting is on (except the safety equipments directly connected to the battery and protected by a circuit breaker).
- Disconnect the 230 V before you open the electric panel or cupboard.

In case an electric appliance is not energized, check:

- The main power supply (batteries, battery switches).
- The switches and circuit breakers on the line.
- the relevant electrical unit.

You can use the automatic reset switch to read the fuel gauge (to avoid electrolytic problems).

### PRECAUTION

- Never modify an electric fitting and relevant diagrams yourself.
- Call in a technician skilled in marine electricity to carry out any electric modification.
- Never change the breaking capacity (amperage) of the overcurrent safety devices.
- Never install or replace the electric appliances (or any electric equipment) by components exceeding the capacity (amperage) of the circuit (Watt for bulbs).

---

## MAST HARNESS CONNECTION

Connect the mast harness after stepping the mast.

You have access to the harness at the level of the mast, between the deck and inner moulding.

## MAINTENANCE



### WARNING

- Handle the batteries with care (Please refer to the manufacturer's instructions).
- In case of electrolyte splashing, thoroughly rinse the part of the body that has been in contact with it.
- Obtain medical advice.

### ADVICE - RECOMMENDATION

- Keep the batteries clean and dry in order to avoid premature wear.
- Periodically check the electrolyte level. Add some distilled water if need be.
- Have the acidity level of the battery checked if unused for long.
- Tighten and maintain the terminal connectors by greasing them regularly.
- Disconnect the batteries and remove them if winter stored or unused for long.

## ELEMENTS 12V

### WINCHES ELECTRIC



**Electrical contactors  
(upward - Companionway)**



**Winch negative terminal -  
Under the bed -  
Port aft cabin**



**125A breaker -  
Port aft cabin**

## BOW THRUSTER

 <p><b>Location - Forward cabin</b></p> <ol style="list-style-type: none"> <li>1. Operation relay</li> <li>2. Battery set (2 x 50A)</li> <li>3. 315A fuse</li> </ol>	 <p><b>Nozzle</b></p>	 <p><b>Engine - Bow thruster</b></p>
---	---	---

## OPERATION

The thruster works with the vessel's engine running.

 <p><b>125A breaker - Port aft cabin</b></p>	 <p><b>Controls in the cockpit - Port side</b></p>
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## WARNING



- Refer to the apparatus instructions for use and maintenance.

---

## **EARTH**

The line shafting bracket takes the conductive parts on board.



**Access: Under the bed - Starboard aft cabin**

## FUSE BOARD



**Under the bed - Port aft cabin**

1. General fuse - House
2. Fuse - Engine compartment ventilator
3. Fuse - Auto pilot



**Back of electrical panel**

Refer to the plans at the end of the handbook for the detail

20A 15A 10A 5A 3A



### WARNING

Always replace a fuse with one of the same size.

---

## 110-230 V AC SYSTEM

### GENERAL INTRODUCTION

Power diagram with battery wiring + wire colouring.

(As far as possible) use electric appliances with double insulation or with three conductors (Neutral-Live wire-Ground).

Connect the metallic covers or boxes of the electric appliances that are installed to the protective conductor of the boat (green conductor with yellow stripes).

### SHORE POWER SOCKET



### DANGER

- Never let the end of the boat/shore supply cable hang in the water: The result may be an electric field liable to hurt or kill the swimmers nearby.
- There may be danger of electrocution if alternating current systems are incorrectly used.



### ADVICE - RECOMMENDATION

In order to reduce the risks of electric shock and fire:

- Before you plug in or unplug the boat/shore supply cable, switch off the shut off device connected to the shore supply.
- Plug in the boat/shore supply cable in the boat before you plug it into the shore supply socket.
- Unplug the boat/shore supply cable on shore first. Close the shore socket cover.
- Do not modify the connections of the boat/shore supply cable.

### ELECTRICAL PANEL



### WARNING

- Never work on a live electric fitting.

The electrical switchboard does not require any routine maintenance.

### PRECAUTION

- Never leave the boat unattended when the electric fitting is on (except the safety equipments directly connected to the battery and protected by a circuit breaker).
- Disconnect the 230 V before you open the electric panel or cupboard.

In case an electric appliance is not energized, check:

- The main power supply (batteries, battery switches).
- The switches and circuit breakers on the line.
- the relevant electrical unit.

You can use the automatic reset switch to read the fuel gauge (to avoid electrolytic problems).

### PRECAUTION

- Never modify an electric fitting and relevant diagrams yourself.
- Call in a technician skilled in marine electricity to carry out any electric modification.
- Never change the breaking capacity (amperage) of the overcurrent safety devices.
- Never install or replace the electric appliances (or any electric equipment) by components exceeding the capacity (amperage) of the circuit (Watt for bulbs).

---

**ELEMENTS 220V**

**MICROWAVE**



**220V socket**



**Location**

**Position of the lead lines**



**Lead lines (Log and speedometer)**



***Note: Same position for the other layouts.***



# ENGINE

---

***GENERAL INFORMATION***

---

***ENGINE FITTING***

---

***MAINTENANCE***

---

***360° DOCKING VERSION***

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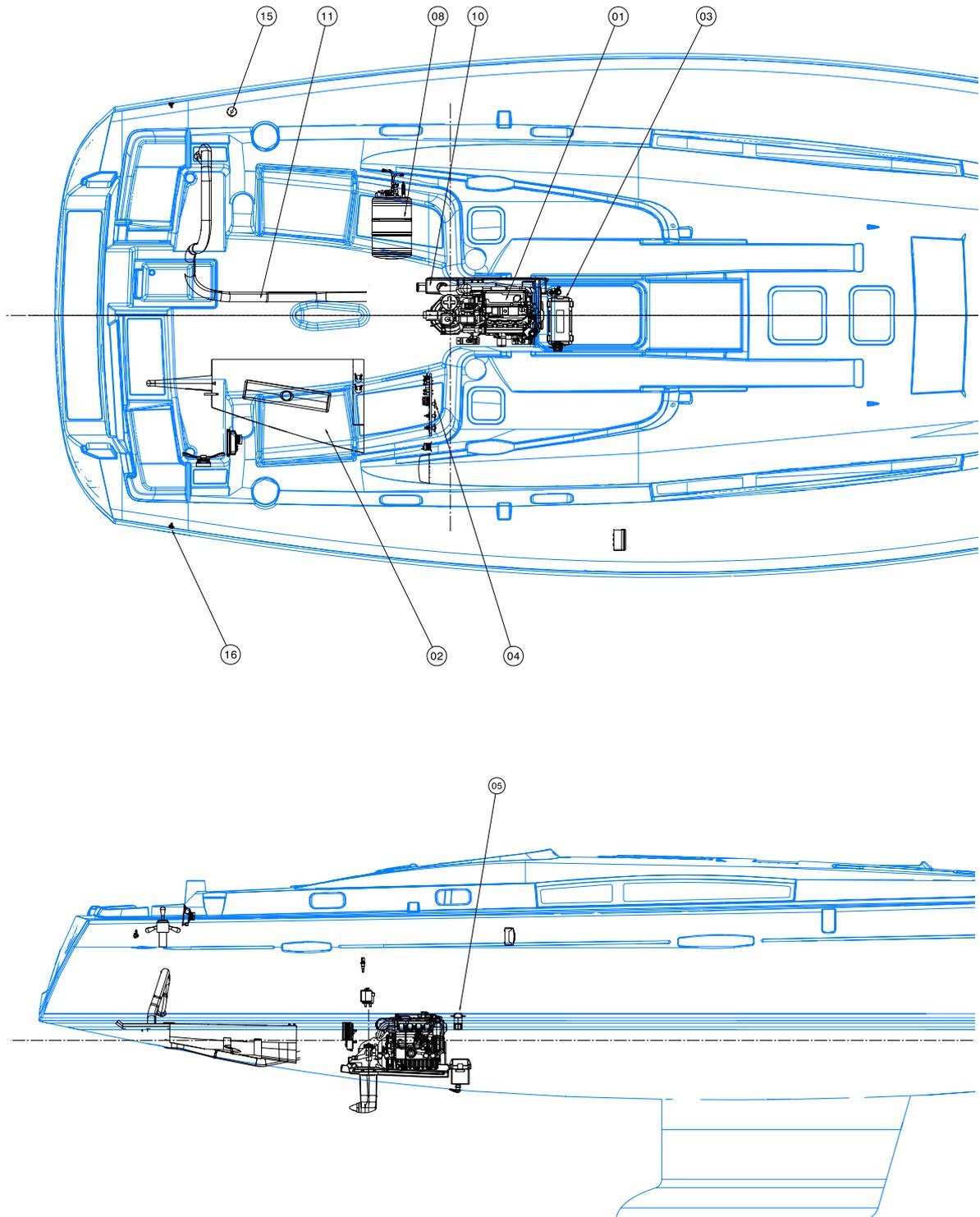
## ENGINE FITTING

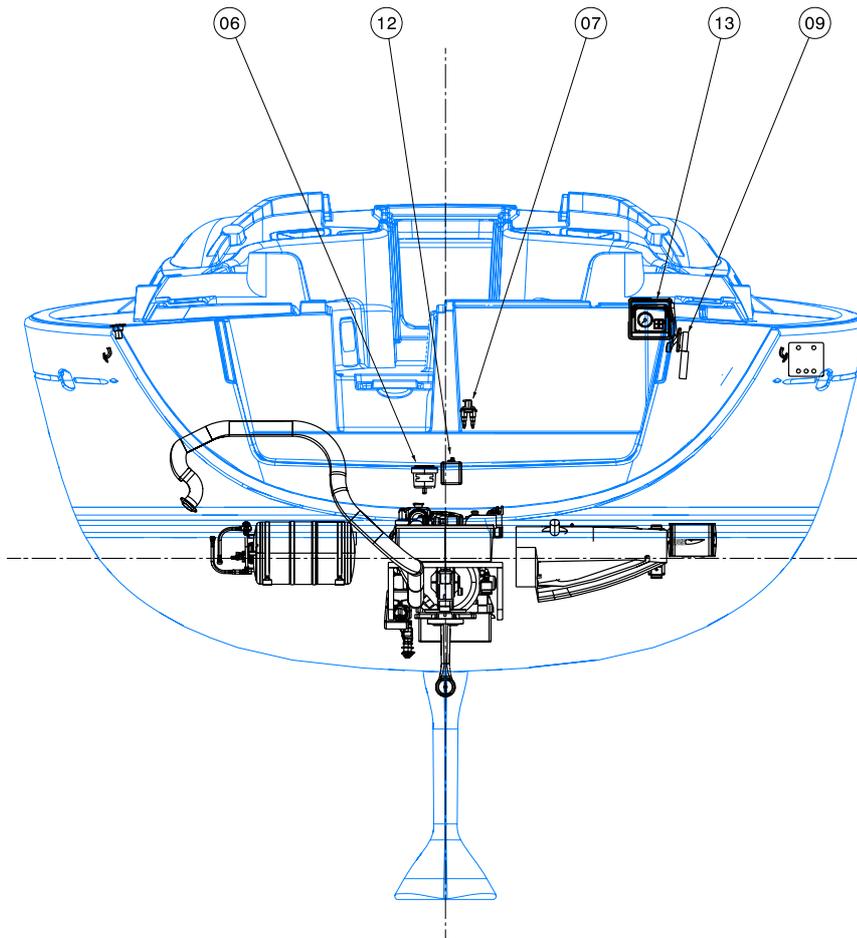




# DIAGRAM - LOCATION

# ENGINE



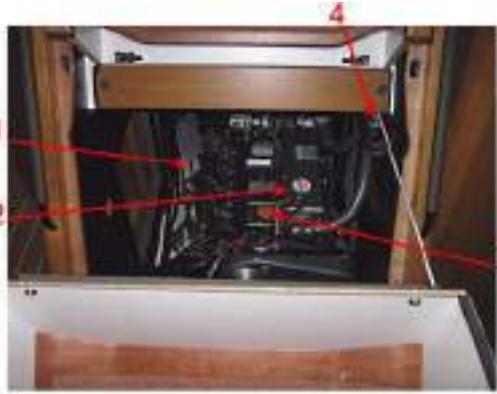


REF	Designation
1	Sail-drive engine
2	Fuel tank
3	Engine battery
4	Battery isolation switch set
5	diesel filter
6	Sea water filter
7	Anti-siphon valve
8	Water heater
9	Engine control lever
10	Water trap
11	Outlet
12	Accumulator tank
13	Engine panel
15	Fuel filler
16	Fan

## IN BOARD ENGINE



ENGINE



- 1. Dipstick
- 2. Cap - Cooling liquid
- 3. Cap - Tank - oil
- 4. Anti-siphon valve

- 5. Ventilator
- 6. diesel filter
- 7. Accumulator tank



- 8. Sea water filter





## GENERAL INFORMATION

### TYPE OF MOTORISATION

Your vessel is fitted with an in-board diesel engine.

Transmission type is: Sail Drive (Sail Drive version).

The transmission is POD type (360 Docking version).

### PRECAUTIONS OF USE, OPERATING ADVICE

#### General point

- In this vessel, do not install an engine with a greater power and weight than that recommended, this will create a danger for its stability.
- Fuel which is stored elsewhere than in the fuel-tanks (portable tanks, jerrycans, etc...) must be kept in a ventilated space.
- Make sure that the engine compartment is clean and dry.
- Avoid contact between inflammable substances and the hot parts of the engine.
- Locate the extinguisher hole which allows access to the engine compartment if a fire should break out. (Refer to chapter 2).

#### Filling

Fill the fuel tank using the filler. In order to protect the deck from possible fuel splash, wet the area around the filler with sea water before you remove the filler cap. In case of splashes, rinse the deck thoroughly (after fitting back the filler cap).

	<b>DANGER</b>
	<ul style="list-style-type: none"><li>- Stop the engine and refrain from smoking during fuel tank filling.</li><li>- Make sure that the ventilation openings in the engine (and generator, if installed) compartment are well cleared.</li></ul>

The level of fuel is transmitted to the indicator on the engine panel thanks to the dipstick.

- Refill before the fuel tanks have almost run dry (the fuel system may be stopped for lack of fuel).
- Make sure you have enough fuel before sailing.

Fuel oil tank capacity ..... 240 l/63 US gal

---

## Engine

### PRECAUTION

Never run the engine when the boat is hauled out.

These instructions give detailed explanations on proper operation of the engine.

### ADVICE - RECOMMENDATION

Carefully read the instructions given with your boat.

### Access to the engine

You have access to the engine via the companionway hatch.

You can check the main parts thanks to side hatches.

### PRECAUTION

Stop the engine before you open the companionway hatch and side hatches.  
In case of an intervention when the engine is running:

- Stay away from belts and mobile parts.
- Be careful with full clothes, long hair, rings etc. (you may be caught).
- Wear appropriate clothes (gloves, caps etc.).

### VALVE - ENGINE WATER INTAKE VALVE

Location



Interior - Engine compartment



Exterior - on the housing





## Engine water intake valve

The water inlet valve of the engine is essential in the engine operation.

- Hold the strainer on the base in the best possible state of cleanliness.
- Brush the strainer whenever the boat is lifted out.
- Do not cover the strainer with antifouling paint.

This valve must be open before starting the engine (risk of quick damage of the exhaust muffler and of great damage of the engine).

### ADVICE - RECOMMENDATION

Get used to checking immediately after starting the engine if water is expelled with the exhaust gases.

If water does not flow out:

- Stop the engine immediately.
- Check that the valve is open.

Close the water inlet valve if the boat is unattended for long.

Inspect and clean the water filter regularly.

## Engine operation

Before starting the engine:

- Turn on the fuel valve.
- Open the valve of the engine cooling system and the valve of the stuffing box.
- Operate the battery switches and energise the electric system.
- Disengage the reverse gear (it will make the acceleration possible when in neutral).



### DANGER

- Always start the engine with the control lever in neutral.



### WARNING

Never switch off or de-energise the electric system when the engine is running. Imperatively operate the stop pull handle (or button) before using the ignition key to switch off and smother a diesel engine.

---

## Fuel valve



1. Fuel oil valve for engine



**Note:** Same position for the other layouts.



### WARNING

The tanks' nominal capacity cannot be fully used due to the load and the need to maintain the correct trim. A 20% reserve should be kept.



## Fuel filter

Engine running problems may have different origins, including dirty fuel. The injection pump may wear out if there is water in the system.

The water results either from the condensation resulting from an insufficiently filled tank, or from a filler cap either not closed properly or with a damaged seal.

In order to prevent any water infiltration, the fuel runs through two filters:

- One filter is an integral part of the engine, its role is to filter fuel very finely. To know when you have to intervene and how frequently you have to change it, please refer to the engine's manual.
- The second filter is on the pipe that links the tank to the engine, it plays the role of a water decanter and prefilter.

Drain by undoing the knurled screw at the base of the decantation bowl (but not removing it).

Allow to flow into a box till the fuel looks clean.

Do this several times a year.

Change the pre-filter at least once a year (access to it when you remove the bowl).

As for the procedures in case of fire, refer to Chapter 2.



### **DANGER**

Never obstruct the fuel valve.

---

## Control panel/control lever

The instrument panel has all the testing functions of the engine and it does not require any special precaution (refer to engine leaflet).

Check the clutch and accelerator cables (lubricate the end fittings and forks).



## Visibility from the steering station

The international regulations to prevent collision at sea (COLREG) and the course regulations make mandatory a permanent and proper surveillance and the respect of priority.

Make sure there is no other boat on your way.

The visibility from the steering station may be obstructed in the following conditions:

- Speed.
- Position of the upper and side awnings.
- Boat heeling over, the sails reduce visibility under wind.
- Load and load distribution.
- Sea conditions, rain, spray, fog or darkness.
- Lights on inside the boat.
- Persons and removable equipment in the helmsman's field of visibility.

## Navigation

### ADVICE - RECOMMENDATION

- When the engine is running, avoid making noise and chops near the other users.
- Respect speed limits.
- If this boat is equipped with a fixed blade propeller, when sailing at speeds over 8 knots it is essential to leave the reverse gear control in neutral.
- To start the engine again, reduce the speed of the boat when sailing (in order to be able to disengage the clutch before starting it again).



## Stability

During sailing keep all the portholes, windows and doors closed.

- The stability is reduced when you add weight in the upper parts.
- The stability may be reduced when you tow a boat or when you lift heavy weights with the davits or the boom.
- Breaking waves represent a serious danger for stability and for taking in water. Close the companionway doors and hatches in heavy seas.

## Prevention of man overboard

Certain vessels are equipped with a retractable swimming ladder. The swimming ladder must be in position as soon as you are onboard.

Regularly check the guard-rails:

- With metal guard-rails, watch for corrosion particularly at connecting points.
- With synthetic guard-rails, change them as soon as they show signs of wear due to chafing or UV.

## Propeller

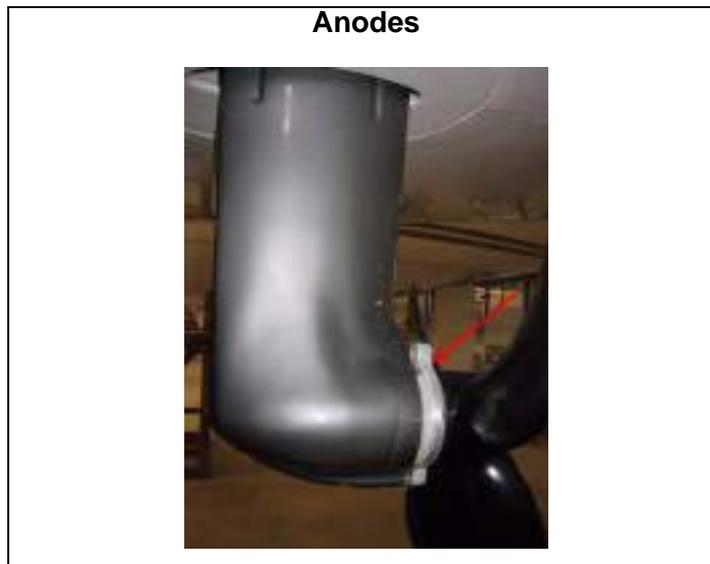
The propeller supplied as a standard with your boat is the result of tests carried out jointly with the engine manufacturer.

### PRECAUTION

Do not change the propeller without specialist's advice.

---

## Anode



### **ADVICE - RECOMMENDATION**

- Change the anode if necessary. (Before it lost 50% of its weight).
- Use anodes corresponding to the zone of navigation of the boat (fresh water / sea water).
- Have the whole driving and steering systems checked and maintained by a professional.
- Refer to the manufacturers' instructions supplied with your boat.
- Regularly check the O ring of the filler for good condition (in order to prevent water entries).
- Do not turn off the fuel tap after each use (except in case the boat is unattended for long).
- Keep the fuel tank as full as possible (to avoid condensation).
- Every year check the fuel system for condition (hose, valves, etc.).
- Have a professional to carry out the works on the damaged parts of the fuel system.
- Be careful with any possible risk of oil and fuel spillage.

### **WARNING**



- Change systematically anodes at the end of the first 3 or 4 months of launch of the new boat: their wear is accelerated during this period.



## MAINTENANCE

### ADVICE - RECOMMENDATION

Have the whole driving and steering systems checked and maintained by a professional. Refer to the manufacturers' instructions supplied with your boat.

- Regularly check the O ring of the filler for good condition (in order to prevent water entries).
- Do not turn off the fuel tap after each use (except in case the boat is unattended for long).
- Keep the fuel tank as full as possible (to avoid condensation).
- Every 5 years clean the tank to remove possible sludge deposition.
- Do not use chlorine-based products (they may spoil the quality of the tank stainless steel).
- Every year check the fuel system for condition (hose, valves, etc.).
- Have a professional to carry out the works on the damaged parts of the fuel system.

Refer to the manufacturer's manual given with your boat.

Be careful with any possible risk of oil and fuel spillage.

- Check the exhaust gas colour.

ENGINE

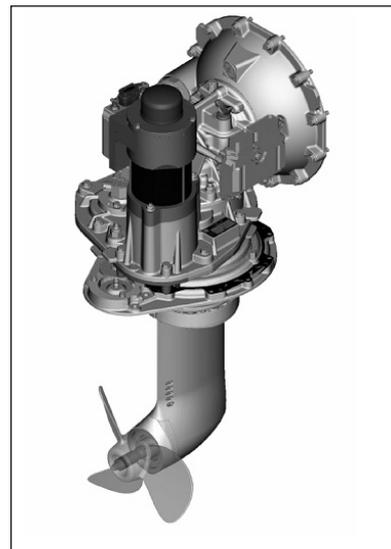
**Note: The capacity of the fuel tank or tanks indicated in the page "Specifications" cannot be completely used according to the trim and load of the boat. Always keep 20 % fuel as a reserve.**

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## 360 Docking version

### General points

- This type of transmission operates without a reverse gear, reversing is achieved by rotating the POD 180 degrees.
- The 360 Docking system is supplied by the service circuit and its motor: the battery bank must be sufficiently charged to enable the system to run well. An insufficiently charged battery bank (at the start of a new season, for example) risks damaging the onboard electrical system.
- The forward and reverse travel of the boat are controlled by the engine control lever. In passing from forward into reverse POD rotates 180°.
- The POD's orientation in all directions is carried out by the joystick.
- The joystick controls the propeller and the bow-thruster. By moving the joystick on the X and Y axes, the boat moves on these axes.
- Rotating the joystick makes the boat rotate around its centre.



The effects of the 360 Docking system's rotation will be noticeable to a greater or lesser extent depending on the boat's way.

Rotating motor  
(Ref 2)



Clutch actuator  
(Ref 3)



Safety box  
(Ref 5)



TCU housing  
(Ref 6)



VMU housing  
(Ref 7)



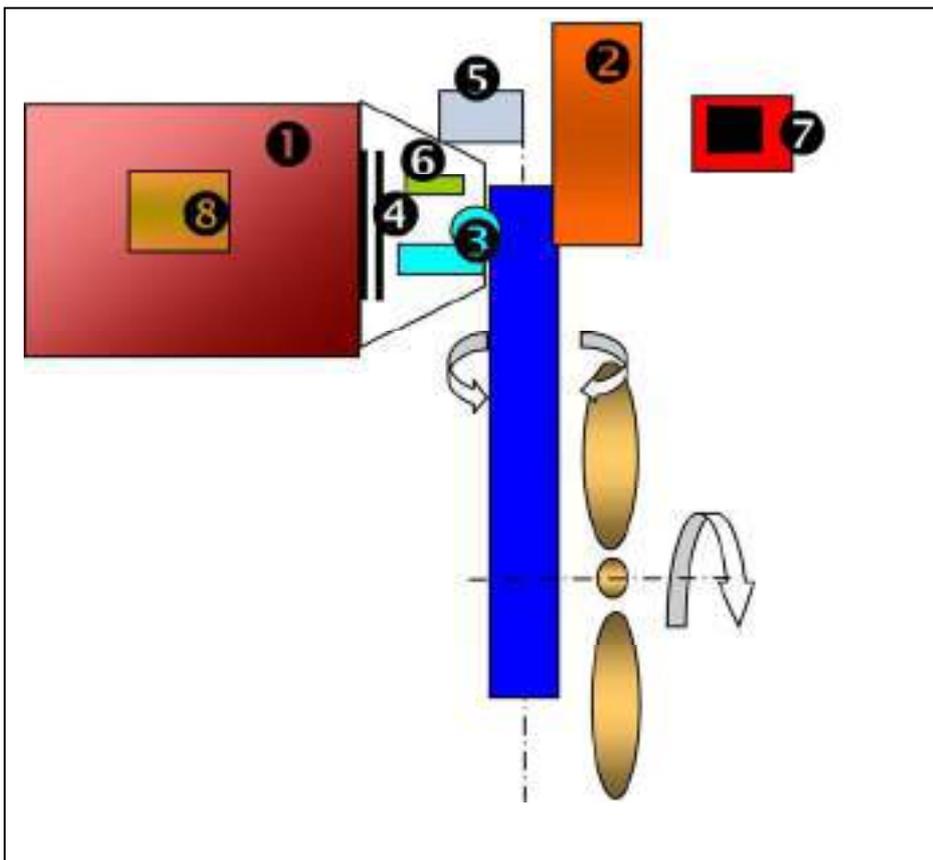
Motor actuator  
(Ref 8)



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## Diagrammatic view

- 1 **Heat engine**
- 2 **POD rotary motor:** Make the POD under the waterline turn 270 to starboard
- 3 **Clutch actuator:** enables gear engagement and disengagement
- 4 **Clutch:** Mechanical linkage between the engine and the propeller shaft
- 5 **Safety box:** enables you to shunt the system when it fails (see ZF manual)
- 6 **TCU:** interface between the clutch activator and the VMU
- 7 **VMU (Vehicle Management Unit):** the brains of the system, it gathers all the info from the system(joystick, control lever, TCU, POD..) and tells it what to do
- 8 **Motor actuator:** electric accelerator interface between the electric control and the fuel pump





## Operation

### 1. General points

- The "360 Docking" system is a manoeuvring aid to facilitate coming alongside and leaving the dock. This system must not in any circumstances be used as a means of navigation, even during approach manoeuvres in port.
- In some use modes of the system, especially sideways movement, the bow thruster has to work very hard. This leads to a significant power draw on the bow thruster battery bank and raises the temperature of the bow thruster motor.
- For its protection, the bow thruster is equipped with a temperature alarm which gives 5 short beeps 10 seconds before cutting off the power to the bow thruster. When the bow thruster cuts out, keep your hand on the joystick with the bow thruster out of operation. You need to wait until it has cooled sufficiently before restarting it manually by pressing both buttons on the bow thruster control simultaneously.
- To avoid this inconvenience and to protect the bow thruster we advise you not to use the bow thruster for more than 30 seconds at a time and to allow it to cool between each use.

NOTE: Once the bow thruster has cut out due to overheating you should allow around 4 hours for it to return to ambient temperature. If it does overheat you can start using it again without waiting 4 hours but the possible usage time will be reduced.

- After each manoeuvre using the bow thruster, be sure to maintain the charge of the bow thruster battery bank: either by connecting your boat to the mains socket on the dock, or by keeping the engine at a cruising speed of at least 1700 rpm (engaged or disengaged) for at least 30 minutes after the last manoeuvre.

---

## 2. Propeller

- The "360 Docking" system can only be equipped with a fixed ZF brand propeller or a folding Flex'o'Fold brand propeller. These are the only two brands which have been approved by ZF and Yanmar for use in this system, provided that they are of the correct dimensions.
- If the boat has a fixed propeller, this cannot be locked to prevent it from turning while under sail.
- If the boat has a folding propeller, the engine stopping procedure locks the propeller shaft for a few seconds after the engine is stopped to allow the propeller to fold before releasing the shaft.
- However, if the folding propeller starts turning again during a long voyage under sail you should switch the engine on and start it following the procedure given below and then stop it and cut the power again so that the shaft locks for a few seconds and the propeller folds up again.



### 3. Operation

- Turn on all battery switches.
- Turn on bow thruster battery switches.
- Open the fuel supply valve(s) from the fuel tank(s).
- Open the engine water inlet valve.
- Switch on the navigation electronics (Electrical panel).

The cockpit display automatically indicates 'MOTORISED HELM' when the joystick is operated (SD Raymarine).

When using the joystick, press 'POWER' on the cockpit display to engage the autopilot (Simrad).

- Check that the engine control lever is in neutral.
- Switch on the engine.

---

#### 4. Joystick



The joystick is on standby.

The «Ready» LED is a steady red. The engine is controlled by the engine control lever.

Place a hand on the joystick and press the button for 1 second. The green LED lights up when the button is released.

The 2 LEDs are illuminated as steady green lights (not flashing).



The joystick is operational, the control lever is out of action.

The wheel turns to lock the helm and rudder along the longitudinal axis of the boat.

**Be careful to keep arms clear of wheel as it turns.**

The pilot display shows =

«MOTORISED HELM» version Raymarine.

«POWER» version Simrad.



Whenever an instruction is given to the joystick (here in forward) the LED «control» illuminates red.

#### ADVICE-RECOMMENDATION

The joystick button must be released to operate the joystick.

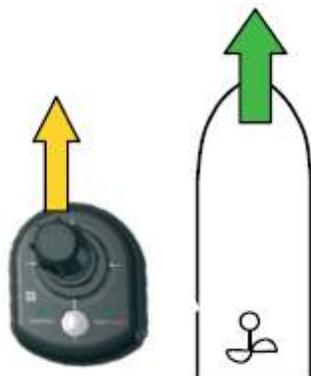


The wheel will spin quickly and may catch your arm, clothes, hands as it does so: keep away from the wheel when the system is running.



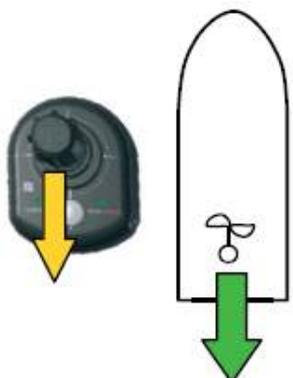
If you activate the joystick while the rudder blade is not in the same position as the boat's axis, it will automatically move itself to the correct position.

## USING THE JOYSTICK



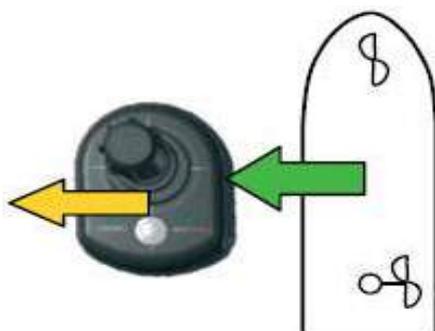
Push the joystick forwards.

The boat moves forwards. The acceleration is proportional to the position of the joystick.



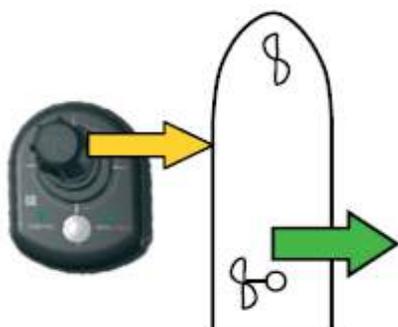
Push the joystick back.

The boat moves backwards. The acceleration is proportional to the position of the joystick.



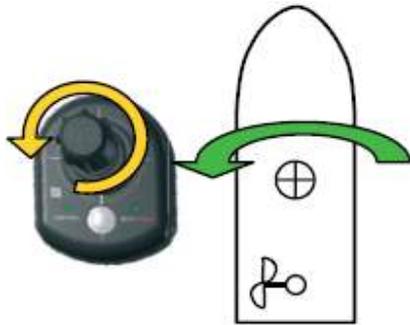
Push the joystick to port.

The boat moves to port. The acceleration remains at a fixed level and the bow thruster operates.



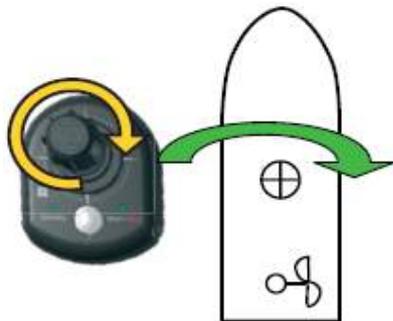
Push the joystick to starboard.

The boat moves to starboard. The acceleration remains at a fixed level and the bow thruster operates.



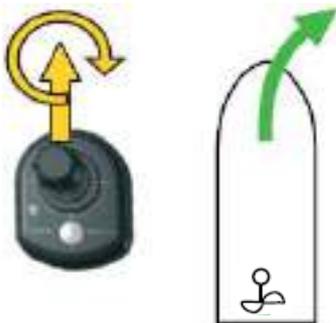
Turn the joystick anti-clockwise.

The boat turns to port (virtually around its keel) . The acceleration is proportional to the position of the joystick.



Turn the joystick clockwise.

The boat turns to starboard (virtually around its keel) . The acceleration is proportional to the position of the joystick.



Push the joystick forwards + turn clockwise.

The boat moves forward and turns to starboard.

The acceleration is proportional to the position of the joystick.

Do the same manoeuvre turning anti-clockwise.

The boat moves forwards and turns to port.

The acceleration is proportional to the position of the joystick.

Push the joystick back + turn clockwise

The boat moves backwards and turns to port.

The acceleration is proportional to the position of the joystick.

Do the same manoeuvre turning anti-clockwise.

The boat moves backwards and turns to starboard.

The acceleration is proportional to the position of the joystick.



Several movements can be combined

Push the joystick to starboard + Turn the joystick clockwise.

The boat moves to starboard but the bow swings more quickly than the stern.

Push the joystick to starboard + Turn the joystick anti-clockwise.

The boat moves to starboard but the stern swings more quickly than the bow.

You can do the same to port:

Push the joystick to port + Turn the joystick anti-clockwise.

The boat moves to port but the bow swings more quickly than the stern.

Push the joystick to port + Turn the joystick clockwise.

The boat moves to port but the stern swings more quickly than the bow.



The effects of the 360 Docking system's rotation will be noticeable to a greater or lesser extent depending on the boat's way.

---

Quit joystick mode.



Press the button for 1 second.

The autopilot goes from 'motorised helm' mode to 'standby' mode and the bow thruster stops, giving out 2 beeps. (**Raymarine version**).

The autopilot goes from "POWER" mode to 'standby' mode and the bowthruster stops, giving out 2 beeps. (**Simrad version**).



The joystick goes into standby.

The «Ready» LED is a steady red.

The system switches automatically to control lever function.

If the lever is not in the neutral position it must be put into neutral before using.



To retake control with the engine control lever, it is essential to disengage the joystick by pressing the button behind the joystick.



## 5. MODE WARM UP (warming up the engine)

- To engage the 'warm up' position, press the button and keep it pressed whilst moving the throttle to the first forward notch, then release the button. Warm-up is only possible in forward gear.



- The wheel will spin quickly and may catch your arm, clothes, hands as it does so: keep away from the wheel when the system is running.

## 6. Mode stand-by

If this is incorrectly handled or if the system isn't working properly, the electronic control will put the whole system in "stand-by" mode. In this case, stop and then re-start the engine.

- If this was a purely temporary malfunction, the system will again be operational ;
- If the malfunction is permanent, the system will remain in "stand-by" mode. In this event, follow the emergency procedure (please refer to the manufacturer's handbook).
- You have to start the engine to be able to activate the joystick. To activate the joystick press the button behind the joystick for 1 or 2 seconds. The two indicators in front of the joystick are green, the drive indicator is green and the pilot goes to "motorised wheel" mode. In motorised wheel mode the rudder blade is blocked in the position of the boat's axis. The system is operating.
- The bow-thruster will start automatically when the joystick is activated.

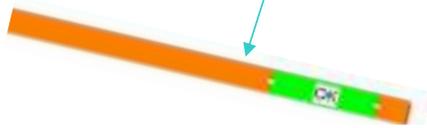
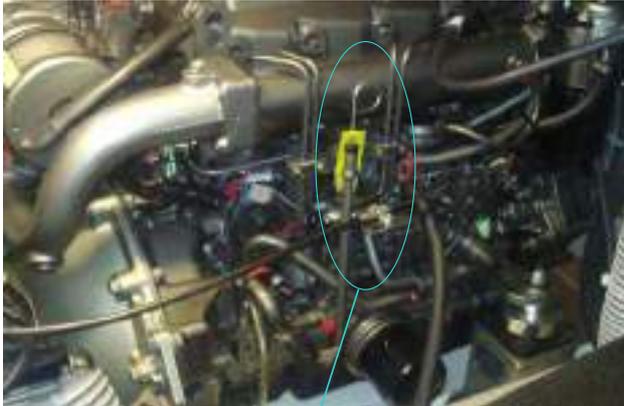
## 7. Procedure for shutting down the engine:

**Put the control lever in neutral AFTER ENGAGING FORWARD GEAR FOR A FEW SECONDS, so the POD is properly located in the ahead position.**

**Wait 10 seconds before switching off the engine.**

---

## 8. Maintenance



Check engine oil level.

The level must be between the 2 marks on the gauge (see engine manual).



Check POD base oil level.

The level must be taken by inserting the dipstick in the hole (without screwing it down).

The level must be between the 2 marks on the gauge (see ZF manual).

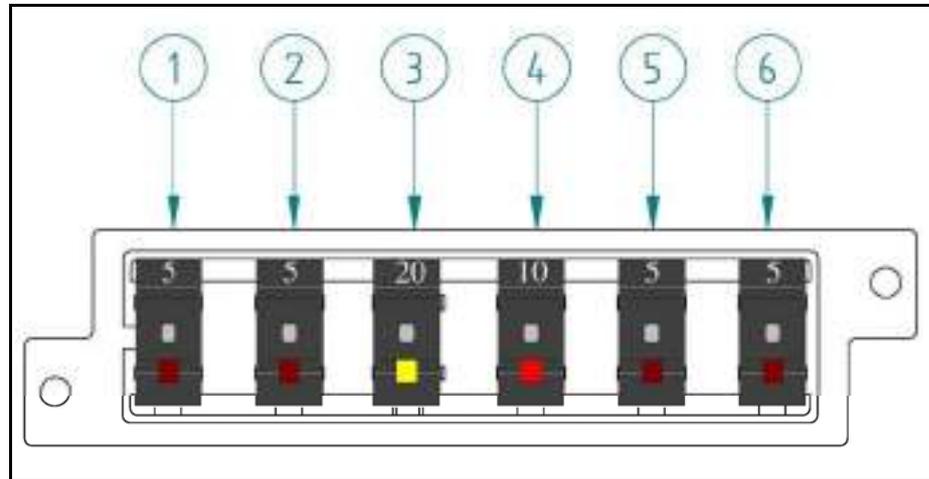


- After every 250-hours of use, or once a year depending on the level of use, the boat must be lifted out to change the POD oil.
- During crantage: it is imperative to engage forward gear for several seconds to position the engine base of the boat correctly under the crane before stopping the boat's engine (see the chapter Handling).
- Every 7 years, replace the POD's packing.

9. Protection components of the 360 Docking system

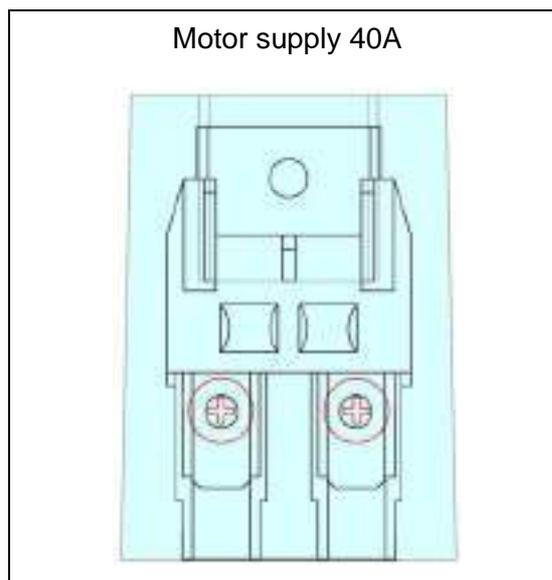
Circuit breakers & Fuses

Location: Chart table.

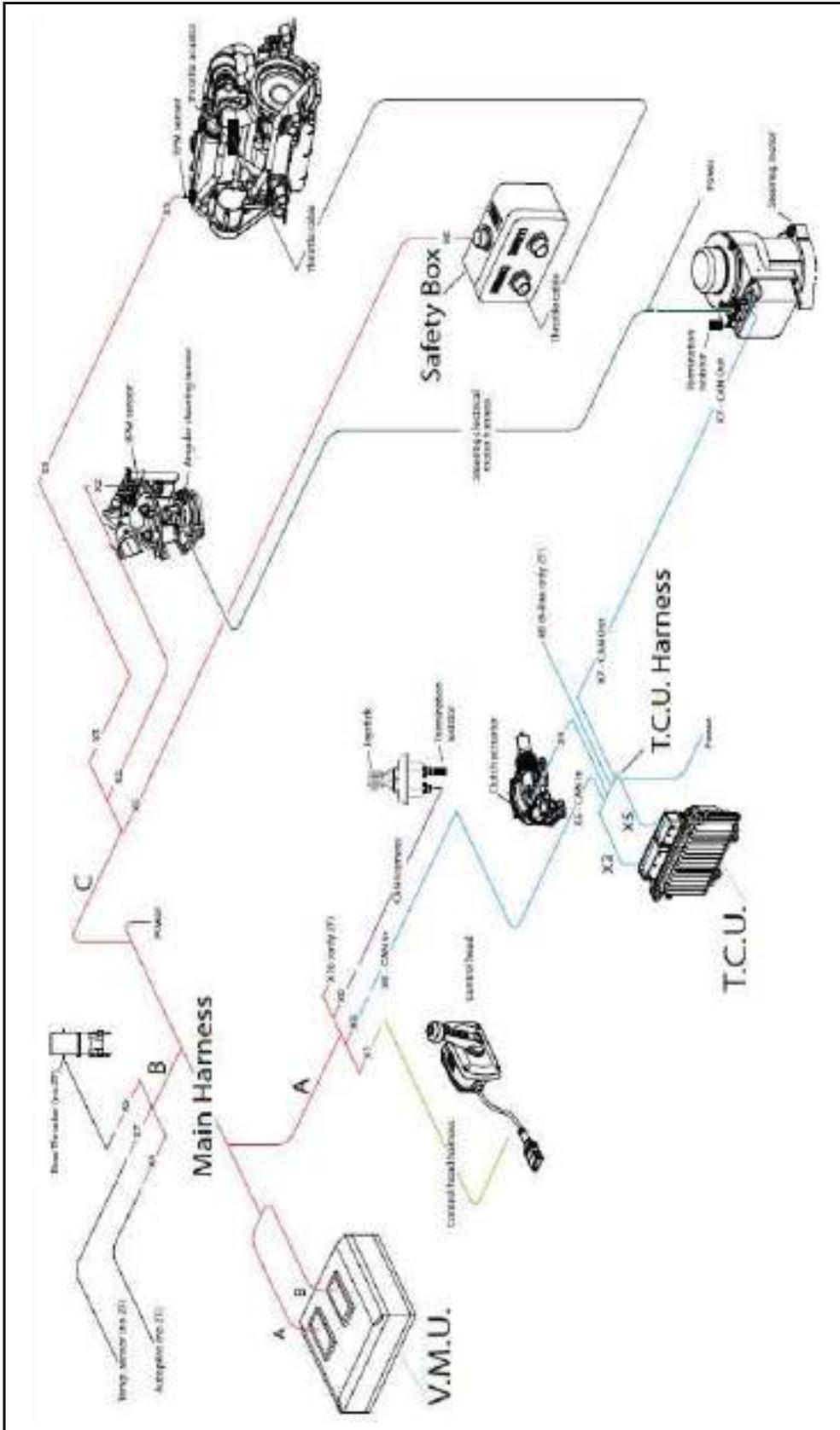


ENGINE

Reference	Designation
1	VMU power supply VMU
2	VMU power supply TCU 1
3	VMU power supply TCU 2
4	VMU power supply VMU '+ After switching on'
5	VMU power supply TCU '+ After switching on'
6	VMU power supply POD '+ After switching on'



## 10. Layout diagram





# LAUNCHING

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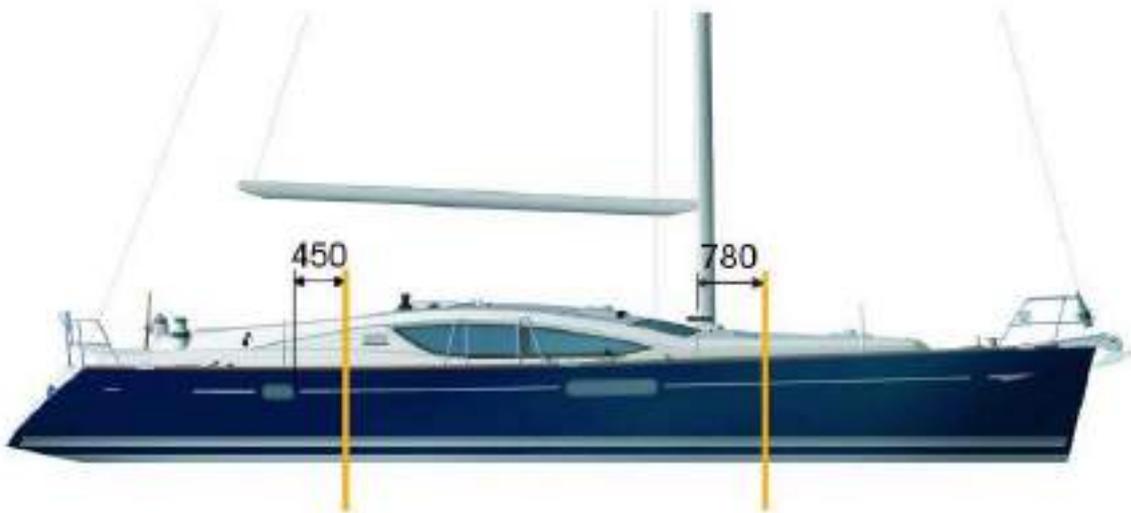
*LAUNCHING RECOMMENDATIONS*

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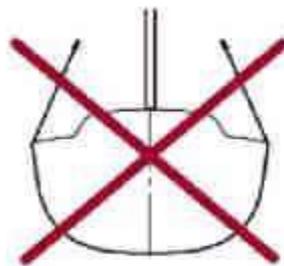
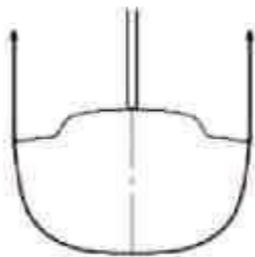
*STEPPING THE MAST*

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## POSITION OF HOISTING CRADLE AND STRAPS



**Note:** Measurements are expressed in mm.





## LAUNCHING RECOMMENDATIONS

A lot of skill and care is required to commission your JEANNEAU boat. The proper working of all your boat's equipment is the result of the quality of the commissioning operations.

The initial launching and the first tests of the different equipments shall be carried out by your JEANNEAU dealer or agent so you can expect to enjoy the warranty in case of some equipment failure.

If later you have to launch your boat yourself, you should take the following precautions:

### BEFORE LAUNCHING

- If your boat is to be fitted with sounder and speedometer, allow for the relevant fittings and their installation.
- Check the water intake strain box for cleanliness.
- Check the engine and reduction gear oil levels (refer to engine manual).
- Turn off the engine cooling water drain valves.
- All the optional accessories shall be sealed with paste.
- Retract the speedometer into its housing (it may be damaged by the handling belts).
- For the on-line engines, check the anode at the end of the shaft is in place. Check the nut tightening (the lock washer shall be turned over onto the nut). The anode shall not be painted.
- Turn off all the water inlet and drain valves (sink, washbasin, heads, engine).

---

## HANDLING

- Install a fore rope, a rear rope and fenders.
- When craning, check that no device is crushed by the belts (sounder, speedometer, shaft, etc.).
- Mark the belt position with adhesive tape on the toe rail (most of the boats are already fitted with these stickers). The belt position will be useful during the craning for a future launching.
- The crane hook will be fitted with a gantry or a spacer with two belts. The belts shall not be hooked directly on the hook, since it would result in unusual compressive stresses on the hull.
- Hoist slowly. Control the movement of the boat with ropes.

### WARNING



Do not stay on board or under the boat during hoisting.

360 Docking version:

Put the control lever in neutral AFTER ENGAGING FORWARD GEAR FOR A FEW SECONDS, so the POD is properly located in the ahead position

## AFTER LAUNCHING

- Check the sounder and speedometer fittings for tightness if need be.
- Open the valves and make sure that they are tight with the hull and relevant hose.
- Check the stuffing box for watertightness (Refer to chapter 11 "Stuffing box").
- Before starting the engine, refer to chapter 11 "Engine".

## STEPPING THE MAST

Refer to chapter 6 "Rigging and sails".



# WINTER STORAGE

*LAYING UP*

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*PROTECTION AND MAINTENANCE*

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## LAYING UP

- Take ashore all the ship's log, the ropes that are not used for mooring, the galley equipment, supplies, clothes, the safety equipment, batteries, the gas cylinder.
- Mark again the safety equipment, check the expiration dates, have the liferaft overhauled.
- Take advantage of this laying up to draw up a complete inventory of the equipment.

## PROTECTION AND MAINTENANCE

### INTERIOR

- Drain all the fresh water pipes and rinse them with water and vinegar (do not use a chlorine based product).
- Lubricate and close all the water inlet valves and thru-hull fittings. Rinse and completely drain the heads bowls and pumps.
- Remove the depth sounder and log sensors.
- Seal air inlets as much as you can.
- Install in the square a dehumidifier by taking care of leaving all the doors of communication opened (bathroom, cabin and square) as well as the doors of cupboards and iceboxes.
- Leave the cushions outside for long before putting them back into the boat in the upright and side position in order to have minimum contact surfaces.
- During long absence leave the fridge and icebox doors open to avoid mould developing.

### EXTERIOR

- Thoroughly rinse the hull and deck.
- Grease all moving and mechanical parts (latches, hinges, locks, etc).
- Protect all ropes and mooring lines against chafing.
- Protect the boat as well as possible with fenders.
- Make sure the boat is properly moored.
- Bring the removable cushions inside (washed with soapy water then dried) when the vessel is unoccupied.

This is not an exhaustive list of recommendations. Your dealer will give you the advice you need and will carry out the technical maintenance of your boat.



## ENGINE

The engine winterization shall be carried out by a professional. Depending on the boat location, afloat or ashore, winterization is different.

Here are a few major tasks to carry out:

### Afloat

- Drain the cooling system and fill it with antifreeze.
- Shut off the battery switches, grease the terminals and check the battery voltage.
- Change the anode.
- Fill the fuel tanks to a maximum in order to avoid condensation.
- Please refer to the engine manual for anything relating to the engine.

### Ashore

- Take the batteries ashore and keep them on maintenance charge.
- Drain all the cooling, exhaust, oil and fuel systems.
- Carry out the winterization operations specified by the manufacturer, keeping in mind that the freeze hazard is more significant when the boat is ashore.
- Remove and lubricate the thru-hull fittings with valves of the cooling systems, leave them open and check the hoses.

Slacken the a.c. generator and pump belts.





