PRESTIGE 420S

OWNER'S MANUAL

PRESTIGE YACHTS

165593
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INTRODUCTION

Welcome

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

A PRESTIGE YACHTS 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 PRESTIGE YACHTS dealer will be able to help and advise you in the use and maintenance of your boat.
The initial commissioning of your boat will require a lot of skill and care. The proper working of all your boat's equipment is the result of the quality of the commissioning operations. This is why the initial launch must be overseen by your dealer.

Read this Owner's Manual carefully and take the time to get to know your boat before you use it.

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

Keep this manual somewhere safe and should you sell your boat, hand it to the new owner.

You are advised to keep any user's guides supplied by the manufacturers of any equipment for your boat (accessories...),together with your manual.

For all the equipment on your boat,
please read the instruction manuals provided by the manufacturer.

This manual has been produced to help you enjoy using your boat in all safety. It contains the details of the boat and of all the equipment provided and installed on your boat, as well as the instructions for their use. Read it carefully and really get to know your boat before using it.

This owner's manual is not in any way a navigation or mariner's training manual. If this is your first boat or if you have changed to a type of boat with which you are not familiar, make sure that you learn how to use it and manoeuvre it safely and with ease, before taking the helm alone. Your dealer, or national sailing or motorboat association, or your yacht club will be very happy to tell you about the navigation schools or qualified instructors in your area.

Make sure that the wind and sea conditions forecast are appropriate for the design category of your boat and that you and your crew are capable of manoeuvering the boat in these conditions.

Even with a well-adapted boat, the wind and sea conditions which correspond to the design categories A,B and C range from storm force winds for category A to severe storm conditions at the upper end of category C and would put the boat at risk from massive waves and extreme gusts. These are dangerous conditions in which only an experienced, fit and well-trained crew, manoeuvering a well-maintained boat, could navigate sufficiently well.

This owner's manual is not intended as a detailed maintenance or repairs manual. Should any problems arise please contact your dealer. If a maintenance manual is provided, please use it.

Always use the services of an experienced professional for the maintenance of your boat, for fitting accessories and for any modifications. Any alterations which may affect the safety specifications of the boat must be assessed, carried out and recorded by persons qualified to do so. The boat manufacturer cannot be held responsible for any modifications not approved by them.

Some countries require you to hold a Certificate of Competency or other qualifications, or other specific regulations may be in force.

Always maintain your boat well and make note of any deterioration due to wear and tear or to heavy or inappropriate use.

Any boat – no matter how well-built– could suffer serious damage if used recklessly. This is not compatible with safe navigation. Always adjust the speed and heading of your boat according to the sea conditions.

If your boat is equipped with a life-raft, read the instruction manual carefully. The crew must have available onboard all the safety gear (lifejackets, harnesses etc) appropriate for the type of boat and for the weather conditions etc.. In some countries it is mandatory to have this safety equipment onboard. The crew must be fully familiarised with the use of the safety gear and with emergency manoeuvres (Man Overboard procedures, towing another vessel etc). Sailing schools and clubs regularly run training sessions for these.

It is advised that, when on deck, everyone should wear the appropriate buoyancy aids (lifejackets, personal buoyancy aids) Be advised that in some countries, it is mandatory to wear a buoyancy aid which meets the national regulations at all times.

Notes on reading this manual

The various symbols used throughout the manual for crucial safety information are 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.

WARNING

Indicates either a reminder of safety procedures or alerts you to dangerous manoeuvres or operations, which could result in injuries to those onboard or in damage to the boat or to components of it, or to the environment.

ADVICE-RECOMMENDATION

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

- While some of the information and illustrations in this manual may show details which are slightly different from those found on your boat, the key information remains the same. Future versions of this manual will show any possible modifications as required.

- Due to the constant desire to improve the products, SPBI S.A. reserves the right to make any changes considered necessary to the design or to the equipment.
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 complies with the European Directive 94/25/CE of the 16 June 1994 amended by the European Directive 2003/44/CE of the 16 June 2003;
and with the standard NF EN ISO 10240 of February 2005 .

CE

- This owner's manual is written in several languages. French is the authentic reference language.

- This owner's manual was written and made up into pages by SPBI S.A.. Any reproduction of this manual, direct or indirect, provisional or permanent, by whatever means this may be, whether in whole or in part, and any modification of this manual by a third party for commercial reasons, are forbidden.

1 TECHNICAL SPECIFICATIONS

1.1 CONSTRUCTION

Model ..... PRESTIGE 420S
Architect / Interior design ..... Jernej JAKOPIN / Garroni Design
Builder ..... SPBI S.A
Principal means of propulsion ..... Motor
Deck construction material ..... Laminated sandwich glass / Polyester/ Balsa wood
Hull construction material ..... Laminated sandwich glass / Polyester/ Balsa wood
Application ..... Wet laid fibre

1.2 GENERAL DIMENSIONS

L.O.A (L_{max})* ..... 12,64 m
(Including removable parts that can be dismantled (bow roller, pulpit, bowsprit), without affecting the structure of the boat)
Hull length (L_h)* ..... 11,32 m
(Excluding: removable parts that can be dismantled, without affecting the structure of the boat)
Overall width (B_{max})* ..... 3,97 m
(Including: removable parts that can be dismantled, without affecting the structure of the boat)
Beam(B_h)* ..... 3,93 m
(Excluding: removable parts that can be dismantled, without affecting the structure of the boat)
Air draught – Empty vessel ..... 4,54 m
Draught - Boat fully laden ..... 1,04 m
Wetted surface area ..... Approximately 37 m²

1.3 ENGINE

Nominal maximum propulsion power ..... 518 Kw
Maximum recommended engine size ..... 1 774 kg

1.4 ELECTRICITY

Circuit type - Direct current 12V
Circuit type - AC 220V
Circuit type - AC (US version) 110V

1.5 CAPACITIES

Total mass of the liquid content of fixed tanks when they are full ..... 1 826 kg
Fuel capacity - IPS 500 version: ..... 2 x 550 l
Fuel capacity - IPS 400 version: ..... : 2 x 400 l
Fresh water capacity: ..... Tank 1 (*): 206 l
..... Tank 2 (*): 200 l
Black water capacity (WC): ..... 120 l
Waste water capacity (Washbasin, Shower, Domestic appliances) ..... 200 l
It may not be possible to use these capacities fully depending on the trim and load of the boat.
It is recommended to keep a reserve of 20% in the fuel tanks.
(*): Refer to the corresponding chapter to locate the position of the tank (relationship between the tank number and its position on board).

2 DESIGN CATEGORIES AND DISPLACEMENT

- 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.

- The recommended maximum load includes the weight of all the people onboard, of provisions, personal belongings, of all equipment not included in the weight of the boat in ballast, of the cargo (if relevant) and of all liquids contained in fixed tanks when full (fuel, water, grey water, black water).

- The maximum recommended weight shown on the manufacturer's plate does not include the weight contained in the fixed tanks of liquid when full (fuel, water, grey water, black water).

Design category	B	C	D
Maximum number of people to be allowed onboard	**9**	**11**	**11**
Light displacement	**9 557 kg**		
Recommended maximum load	**3 560 kg**		
Displacement with maximum load	**13 110 kg**		

If some of those onboard are children, the total number of people allowed onboard may be increased, provided that::

- The total weight of the children does not exceed 37,5 kg;

AND THAT

- the total weight of all allowed onboard (based on about 75 kg per adult) is not exceeded.

- Do not exceed the recommended maximum number of people onboard. However many people are onboard, the total, combined load of people and any gear or equipment must never exceed the recommended maximum load.
- Always use the seats or seating areas provided.

- When loading the boat, never exceed the recommended maximum load. Always load the boat with care and distribute the loads in order to maintain the theoretical trim (more or less horizontal).
- Avoid placing heavy loads high up in the boat.

2.1 DESIGN CATEGORIES

Category A: At high sea

The boat is designed to sail in winds that may exceed Beaufort force 8 and in waves of a significant height of 4 metres and more.
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

The boat is designed to sail in winds not exceeding Beaufort force 8 and in corresponding seas (waves of a significant height of less than or equal to 4 metres).
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

The boat is designed to sail in winds not exceeding Beaufort force 6 and in corresponding seas (waves of a significant height of less than or equal to 2 metres). 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

The boat is designed to sail in winds that may exceed Beaufort force 4 and in waves of a significant height of 0,5 metres and more.
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.

3 STABILITY AND BUOYANCY

3.1 STABILITY DATA

- Fully laden displacement was used to evaluate the stability and buoyancy of the boat. The value of this displacement can be found in paragraph ' Technical specifications ' at the beginning of this manual.

- Any changes in the distribution of loads onboard (for example by adding a raised structure for fishing, fitting a radar or in-mast furling, changing the engine etc.) can significantly affect the boat's stability, trim and its performance;

- It is important to keep water in the bilges to a minimum;

- The boat's stability is affected by adding to the weight of the superstructure;

- In heavy weather it is important to close all the hatches, lockers and doors to minimise the risk of water pouring in;

- The boat's stability can be reduced when towing a boat or when using a davit or boom to lift a heavy load;

- Breaking waves are a serious threat to stability.

- Reduce speed in waves.

- Always adjust the speed and heading of your boat according to the sea conditions.

- All of the watertight hatches must remain closed when at sea.

3.2 ACCESS TO THE BOAT

Access to the cockpit

Access to the engine compartment

Access to the saloon

Holding

Access to the machinery compartment

- It is imperative that both the cockpit and the engine compartment are kept closed when at sea.
- When at sea close the guardrail side-opening or openings.
- Slamming an access hatch may cause injury : always close the hatch gently and carefully.
- Do not allow children to open or close the hatches unsupervised.

- It is imperative that the access doors to the saloon are kept closed when at sea.
- Close the deck hatches and portholes before each trip.
- Close all access doors and hatches in heavy weather or when the sea is rough.

ADVICE-RECOMMENDATION

- When under way, keep hull valves and fillers in the closed position to minimise the risk of flooding.

4 MANOEUVRABILITY

- This boat was found to be capable of carrying its crew, even when flooded.
- It is important to take additional precautions in very strong winds or in a confused sea or breaking waves.
- Maximum rated power of boat propulsion: 518 Kw.
- Do not install an engine in this boat with a higher rated power than that indicated on the manufacturer's plate.
- Use a negative trim to make the transition from displacement speed to planing speed, and at lower speeds in choppy seas (applicable to boats equipped with a system for directing the propeller thrust).
- Do not drive the boat at high speed with a negative trim of the propulsion equipment (bow down). This can make the boat heel and cause it to be unstable when turning.
- Do not drive at top speed in areas of heavy boat traffic or in situations of reduced visibility, strong winds or heavy seas. Reduce the boat's speed and wake out of courtesy and for your own safety and the safety of others. Observe speed limits and "NO WASH" signs.
- Observe the rules of priority as defined in the Navigation Rules and imposed by the international regulations for preventing collisions at sea (Collision Regulations - COLREG).
- Ensure that you always have sufficient room to stop or manoeuver if necessary in order to avoid a collision.
- Avoid abrupt manoeuvers at full speed.
- Do not sit on the forward section of the cockpit when the boat is moving at high speed.
- Reduce speed in big waves for your comfort and safety.

4.1 VISIBILITY FROM THE STEERING STATION

Visibility from the steering station may be obstructed when the boat is trimmed at a steep angle or due to other factors caused by one or more of the following conditions:

- Angle of engine trim control switch (in boats equipped with an engine trim control switch);
- Angle of hull trim control switch (in boats equipped with a hull trim control switch or trim tabs);
- Load and load distribution;
- Speed;
- Rapid acceleration;
- Transition from displacement mode to planing mode;
- Sea conditions;
- Rain and mist;
- Darkness and fog;
- Lights on inside the boat;
- Position of the upper and side awnings;
- Persons and removable equipment in the helmsman's field of visibility.

The international rules for preventing collisions at sea (COLREG) and the navigation rules demand constant vigilance and observance of priority rules. Observance of these rules is essential.

- Manoeuvrability is reduced at excessive speeds.
- There is a risk of loss of control during tight turns.
- Reduce speed before making a turn in any direction.

4.1.1 Demister

- The demister runs on DC power.

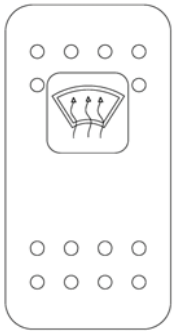
- The demister uses heat recovered from the boat's engine to demist the windscreen. It operates on the port engine cooling circuit exchanger.

- The demister operates only when the engine is warm and running.

- A valve on the engine allows the demister to be isolated from the engine cooling system (for maintenance or to isolate a faulty circuit).

Location: Aft washroom

Control: Steering station



Supply valve - Cooling system - Motor / Demister

4.1.2 Wiper

The windscreen wipers run on DC power.

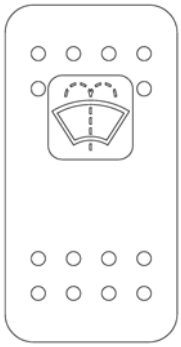
Control: Steering station

Engine access: Deckhead - Forward cabin

4.1.3 Windscreen washer

Reservoir location: Aft washroom

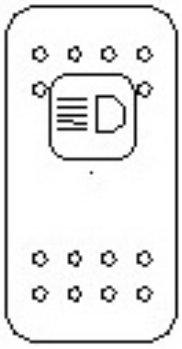
Control: Steering station



4.1.4 Deck searchlight

- The deck searchlight runs on DC power.
- A fuse protects the electrical circuit.

Deck searchlight - aft
Control: Galley



Deck searchlight - forward
Control: Steering station

1. Deck searchlight on/off
2. Deck searchlight directional switch

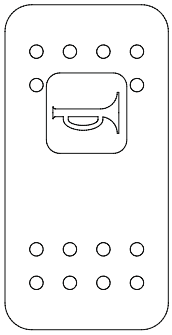
Location: Roof

4.1.5 Horn

The foghorn runs on DC power.

Location: Sportop

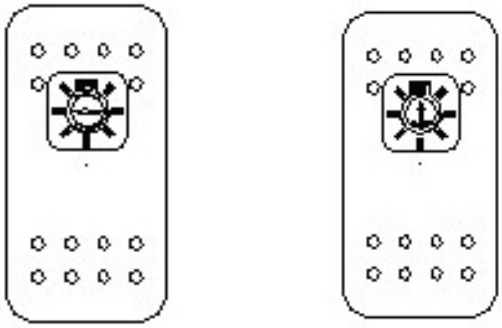
Control: Steering station



4.1.6 Navigation lights

The navigation lights run on DC power.

Control: Steering station



5 SAFETY

5.1 PREVENTING MAN OVERBOARD SITUATIONS AND THE MEANS OF GETTING SOMEONE BACK ONBOARD

5.1.1 Prevention of man overboard

- The zones outside the working deck area are the hatched areas below 

- The ’ working deck ’ means those areas outside where people stand or walk during normal use of the boat.

Ref 1 & 1': Fitting a means of climbing back onboard.

Ref 2: Mooring cleats.

- Use the seats provided.

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.

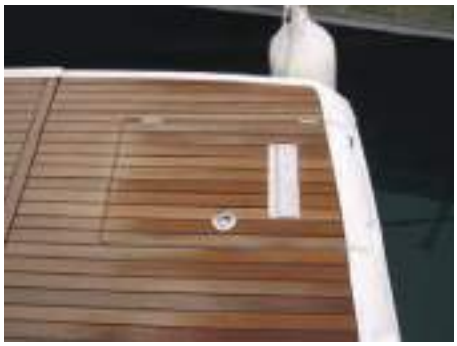
5.1.2 Getting back onboard

The means for getting back onboard must be able to be deployed by one person alone in the water, with no other help.

Fitting a means of climbing back onboard:

Ref 1

Ref 1’



- Some types of equipment for getting back onboard have a locking device when folded up: It is important to keep the means for getting back onboard deployed and ready to use once the boat is in use (at anchor, moored or at sea).
- Make sure that the means for getting back onboard are readily accessible and easy to use by someone alone in the water.

5.2 STORING THE LIFE-RAFT

The life-raft(not supplied) must be stored in the space provided for it (Ref 1). A pictogram helps to locate it easily.

BIB

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

When at sea, never padlock or lock the stowage locker for the life-raft.

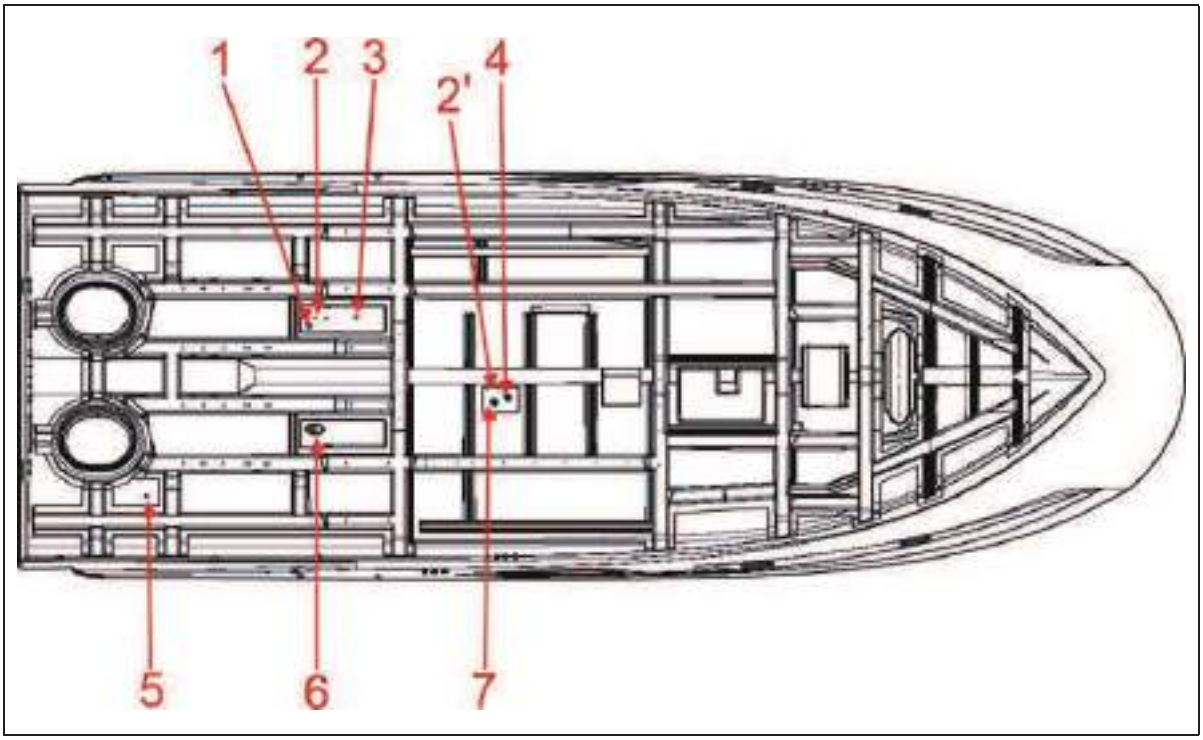
5.3 SECURING MOVEABLE ITEMS

- Ensure that movable items are firmly secured when the boat is under way.
- Don't store anything below the floorboards.

5.4 INFORMATION ABOUT THE RISKS OF FLOODING AND ABOUT THE BOAT'S STABILITY

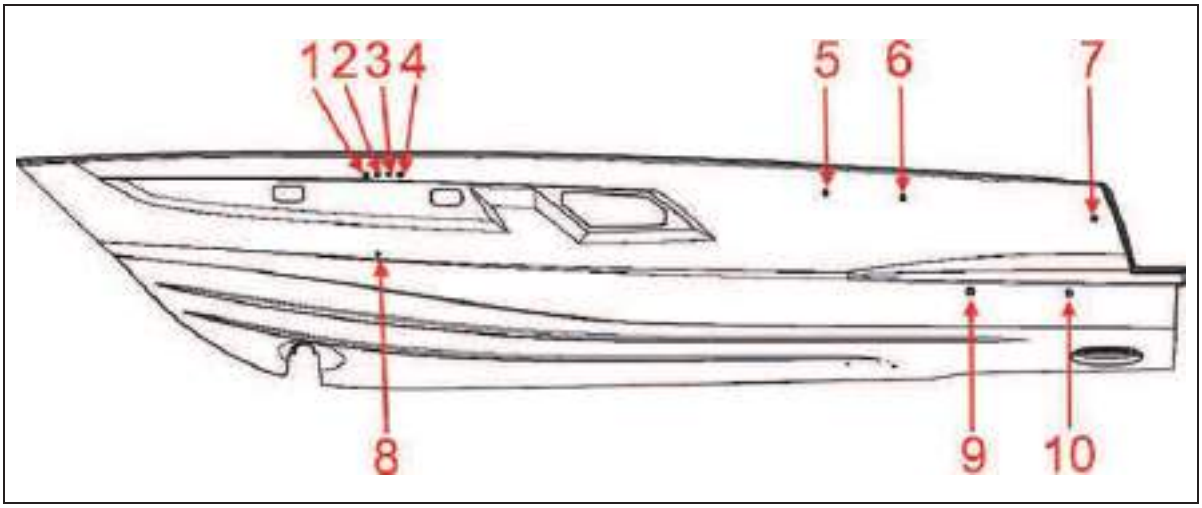
5.4.1 Openings in hull

View - above



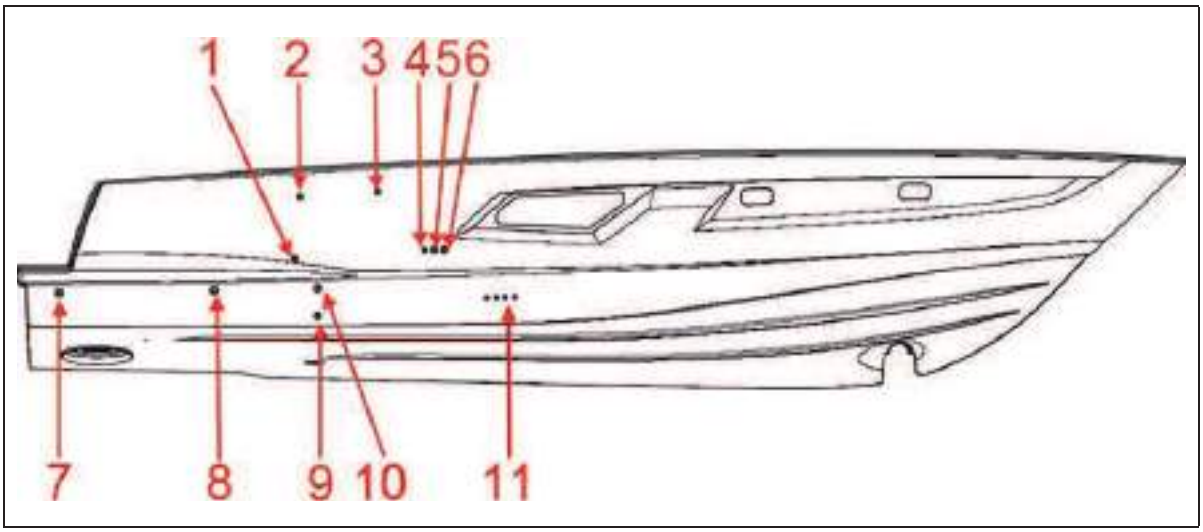
Reference	Designation	Valve
1	Sea water intake - Air conditioning	Yes
2	Generator earthing plate	Not
2’	Earthing plate - DC/AC converter	Not
3	Sea water intake - Generator	Yes
4	Drainage - Collector - Waste water	Yes
5	Sea water intake - Deck wash pump	Yes
6	Sensor	Not
7	WC evacuation to sea	Yes

View - Port side



Reference	Designation	Valve
1	Forward water tank vent	Not
2	Aft water tank vent	Not
3	Vent hole - Collector - Waste water	Not
4	Black water tank (WC)	Not
5	Vent hole - Fuel tank - Port side	Not
6	Heating exhaust	Not
7	Bilge pump draining	Yes
8	Drainage - Air conditioning	Yes
9	Scuppers - Gangway & Flying bridge	Not
10	Cockpit scupper	Not

View - Starboard side



Reference	Designation	Valve
1	Gas locker drain	Not
2	Heating exhaust	Not
3	Vent hole - Fuel tank - Starboard	Not
4	Dishwasher drainage	Yes
5	Bilge pump draining	Yes
6	Galley sink drain	Yes
7	Cockpit scupper	Not
8	Scuppers - Gangway & Flying bridge	Not
9	Seawater discharge - Generator	Not
10	Generator exhaust	Not
11	Drainage - Air conditioning (x4)	Yes

5.4.2 Drainage system

General points

- The inner moulding of the hull has channelling: the drainage channels. The drainage channels allow the water to drain down to the lowest point in the boat, where it can be discharged. So it is important to allow the water to flow freely down to this lowest point of the boat, which includes.

- Regularly cleaning the lowest point of the boat and the drainage channels.

Diagram of the layout - Drainage channels

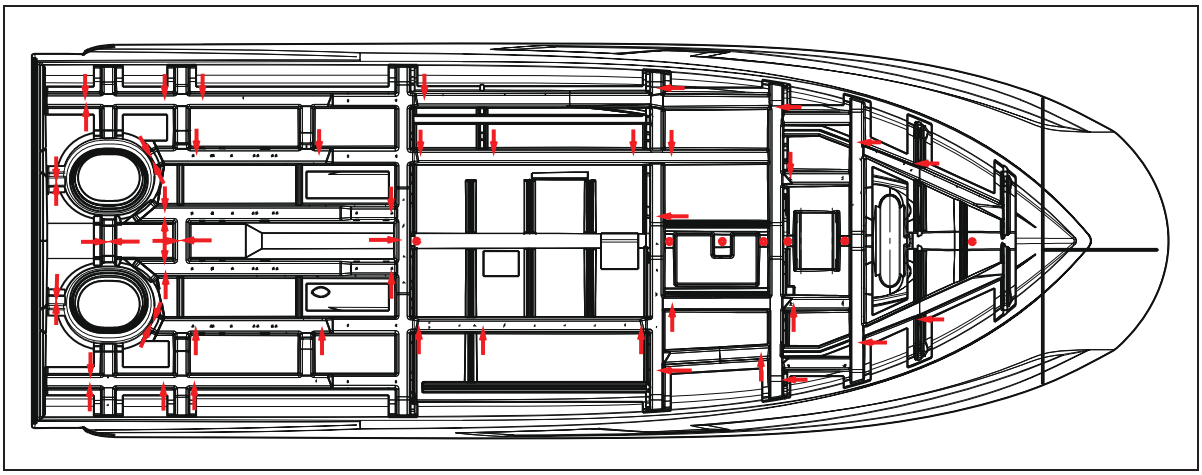


Diagram of the layout - Bilge pumps

Reference	Designation	Rate
1	Manual bilge pump	32p/minute *(*)*
2	Manual bilge pump lever	
3 & 3'	Electric bilge pump	54p/minute
4	Electric bilge pump switch	

(*) 45 strokes/minute

If 70 stroke/minute: rate 35p/minute

Secondary drainage system
Manual bilge pump

The manual bilge pump is in the cockpit (Ref 1).

The bilge pump lever is located close to it (Ref 2).

Operation:

I- Put the lever on the manual bilge pump.

II- Repeatedly work the lever up and down to its fullest extent.

The manual bilge pump lever must remain accessible at all times.

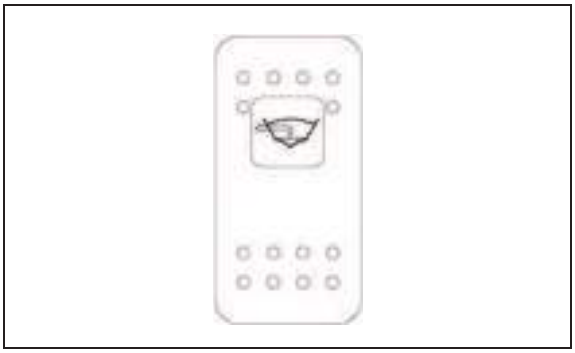
Main drainage system
Electric bilge pumps

- The bilge pumps are powered by DC.
- Location of the electric bilge pumps:

Ref 3:
Engine compartment

Ref 3':
Aft cabin

- The electric bilge pump switch is situated inside the wheelhouse (Ref 4).



- The electric bilge pump must only be used to discharge stagnant water at the bottom of the bilge. It must not be used to pump out any oil-based products (petrol, oil) or inflammable liquids.

Operation:

I- Turn on the battery switches.

II- Switch on the bilge pump (Ref 4).

If the boat is equipped with an automatic bilge pump, the switch has an always-on position.

Bilge pump no. 3 (Engine compartment) is connected directly to the batteries.

Bilge pump maintenance

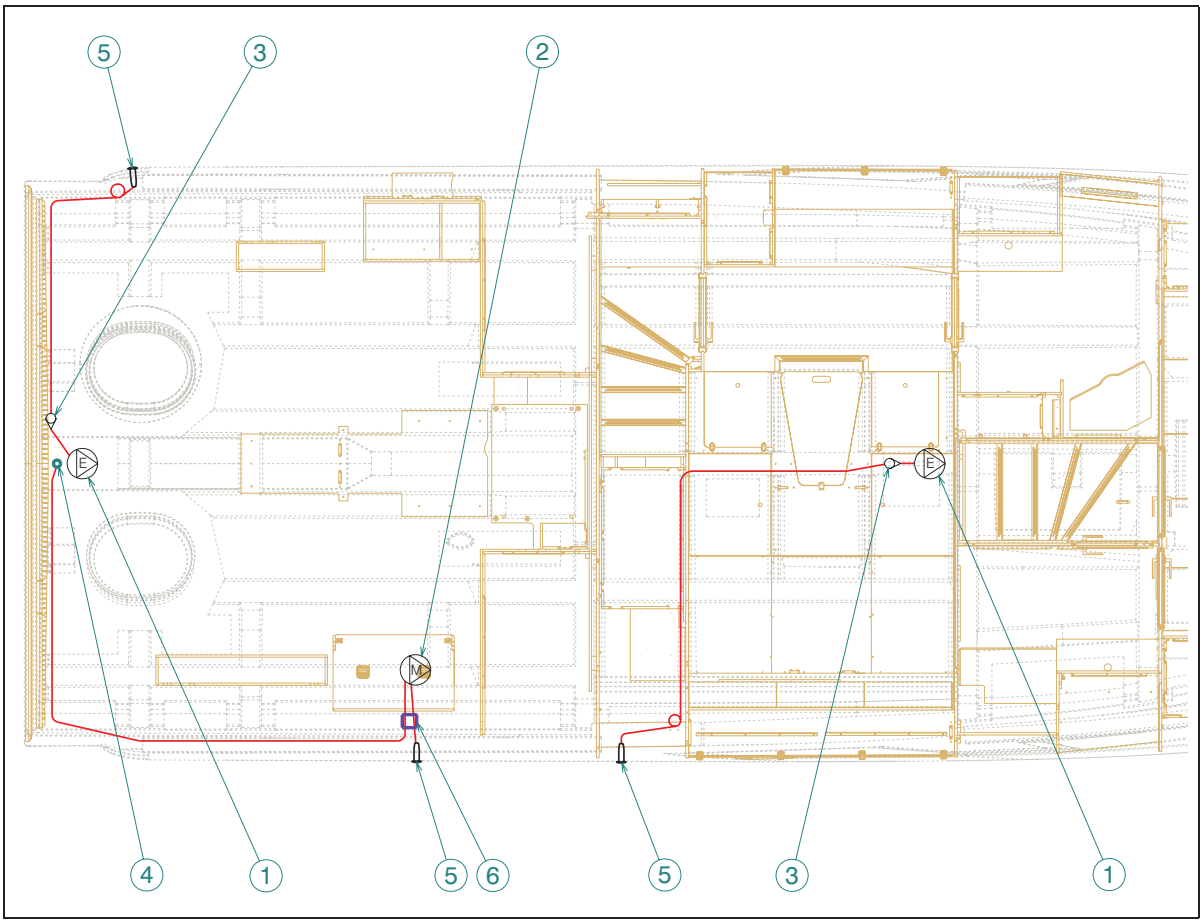
Please refer to the manufacturer's notes on the instructions for checking and maintaining the bilge pumps.

- The drainage system is not designed to control water coming from breaches in the hull.
- Keep the water level in the bilges to the minimum.
- Never store anything right at the bottom of the boat: Allow bilge water to flow freely down to the lowest point of the boat.

SAFETY PRECAUTIONS

- Check that each bilge pump is working at regular intervals.
- Clear the bilge pump points or strainers of any debris that could clog them.
- 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.

Diagram of the layout - Drying out the bilge



	Pipe - Bilge pump system (20 mm diameter)
	Pipe - Bilge pump system (25 mm diameter)

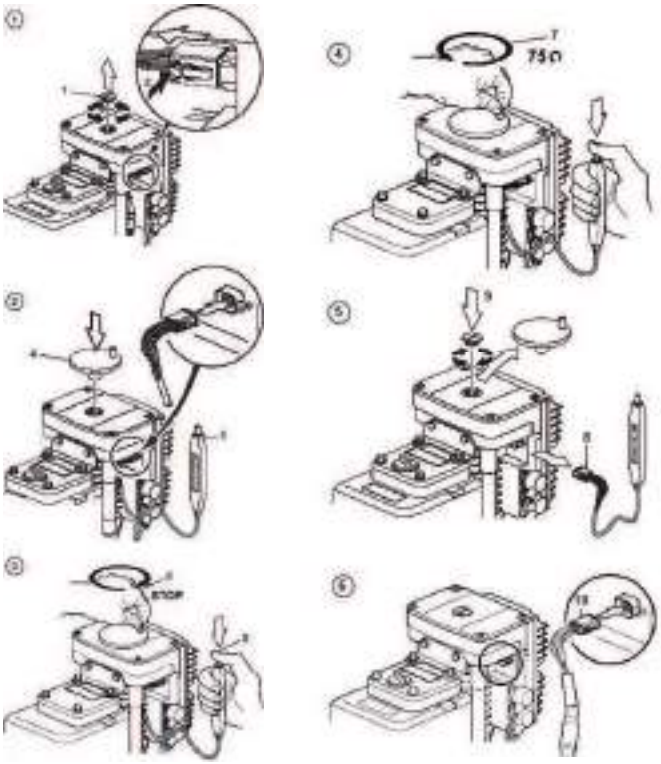
Reference	Designation
1	Electric bilge pump (Engine compartment)
2	Manual bilge pump
3	Non-return valve
4	Intake strainer
5	Thru-hull fitting - Bilge pump draining
6	Connector

5.5 EMERGENCY SYSTEMS IN CASE OF STEERING GEAR FAILURE

On a twin-engined vessel the emergency tiller system works on the difference in drive between the port and starboard engines (difference in throttle and/or forward/aft). The direction works only when the engines are running.

INSTRUCTIONS IN THE EVENT OF STEERING GEAR FAILURE

In the event of damage to the helm preventing the boat from being steered with the wheel, it is possible to align the bases manually to put them in line with the boat. Then steer the boat using the control lever.



Procedure for aligning the motor bases manually:

Picture 1:
Remove the screw (Ref 1). Disconnect the cable (Ref 2).

Picture 2:
Connect the connector (Ref 3). Put the handle arm in position (Ref 4).

Picture 3:
Press the button (Ref 5) and keep it pressed whilst turning the handle arm (Ref 6) until it comes to a stop. Do not force it once it has reached the stop.

Picture 4:
Turn the handle arm about 75 turns: The base is now aligned with the boat's axis.

Picture 5:
Remove the handle arm. Disconnect the connector (Ref 8). Put back ref 9 in place.

Picture 6:
Reconnect the cable (Ref 10).

Emergency steering using the engine control lever (Once the bases have been aligned according to the above procedure).

- Refer to the manufacturer's instructions for detailed use of the system.

6 INFORMATION RELATING TO FIRE RISKS AND RISKS OF EXPLOSION

6.1 PROPULSION ENGINES AND OTHER FUEL-BURNING EQUIPMENT

The risks associated with motorisation are described in the MOTORISATION chapter.

The risks associated with other fuel-burning equipment are described in the OTHER FUEL-BURNING EQUIPMENT chapter.

6.2 ELECTRICAL SYSTEM

The risks associated with the electrical systems are described in the ELECTRICITY chapter.

6.3 GAS SYSTEM

The risks associated with the gas system are described in the GAS chapter.

6.4 FIRE-PREVENTION AND FIRE-FIGHTING EQUIPMENT

6.4.1 Fire-fighting equipment

Portable fire-extinguishers and fire blanket (not supplied)

- When in use, this boat must be equipped with portable fire extinguishers of the following extinguishing capacity and located in the following places:

The location of the portable fire extinguishers is shown by the pictogram below:

Reference	Designation	Location	Minimum extinguishing capacity
1	Portable fire extinguisher	Aft cabin closet	5A / 34B
2	Portable fire extinguisher	Forward cabin closet	5A / 34B
3	Portable fire extinguisher	Interior steering staion	5A / 34B

- When in use, this boat must be equipped wih a fire blanket to protect the cooking equipment and/or the galley, installed in the following place: near the cooking equipment.

Maintenance of the fire-fighting equipment

The owner/person operating the boat must:

- Get the fire-fighting equipment checked at the frequency shown on the equipment;
- Replace portable fire extinguishers, if outdated or discharged, by extinguishing apparatus of equal capacity;
- Provide at least one fire bucket with a lanyard, in a readily accessible place, for protection on deck;
- Get the fixed fire extinguishing systems filled or replaced if they are discharged or have expired.

Responsibility of the owner/boat operator

It is the responsibility of the owner/boat operator to:

- Ensure that the fire-fighting equipment (portable extinguishers, bucket and fire blanket) is readily accessible when there are people onboard;
- Ensure that the engine compartment fire extinguisher discharge port is readily accessible;
- Show the members of the crew:
    - The location and use of the fire-fighting equipment;
    - Location of discharge ports in engine compartment;
    - The location of evacuation routes and fire exits.

Notes for the attention of the boat user

General points

- Check that the bilges are clean and frequently check that there are no fuel/gas vapours or fuel leaks.
- In the case of replacement of components of the fire-fighting equipment, use only the appropriate components of the same code designation or having the equivalent technical capacity and fire resistance.
- Do not install free-hanging curtains or other fabrics near or above the cooking appliances or other equipment with a naked flame.
- Do not store combustible materials in the engine compartment. If non-combustible materials are stored in the engine compartment they must be secured so there is no danger of them falling on machinery and they do not obstruct access to and from the compartment.
- The fire exits other than the door or main companionway are identified by the following symbol:

- The **CO2** extinguishers shall be used only to fight **electrical fires**.

6.4.2 Fixed extinguishing system with manual control

- This boat is fitted with a fixed fire extinguishing system protecting the engine compartment.
- Procedure to follow in the event of fire in the engine compartment:
    - Stop the engine and fan,
    - Switch off power and stop fuel supply,
    - Close access to the compartment,
    - Pull the extinguisher remote control for 20 seconds,
    - Wait,
    - Ventilate the compartment after the fire has been extinguished,
    - Open the access hatches and repair.

Ref 1: Fixed extinguisher
Location: Engine compartment

Ref 2: Remote pull switches
Location: Steering station

The position of the remote control handles is indicated by the pictogram shown below:

To enable functioning of the fixed fire extinguishers, the safety pins on each extinguisher must all be removed completely.

- To avoid suffocation, leave the area before discharge. After discharge, ventilate before entering. After discharge, ventilate before entering.
- Refer to the manufacturer's instructions for use and maintenance.

6.5 EMERGENCY EXITS IN CASE OF FIRE

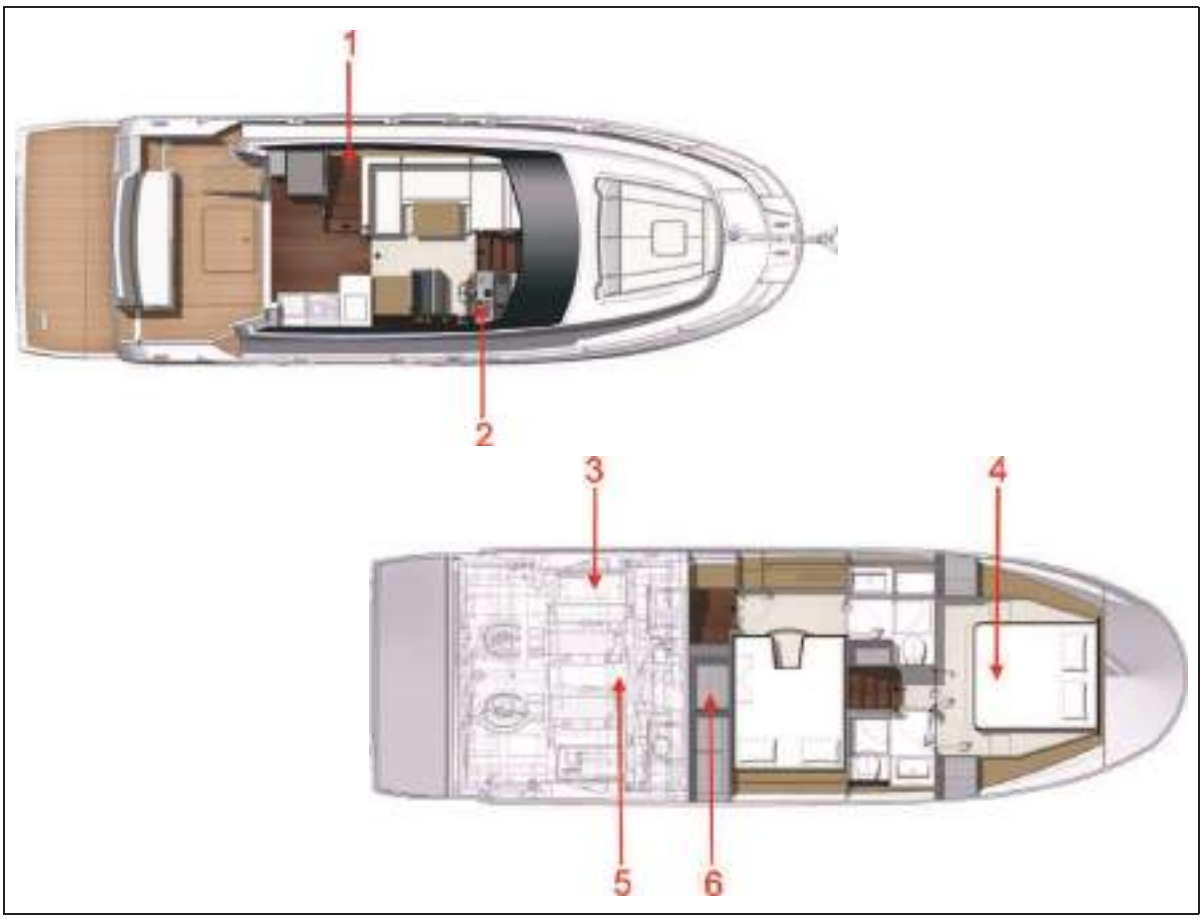
Designation	Location
Emergency exit	Companionway
Emergency exit	The forward cabin deck hatch
Emergency exit	Sliding hatch

NEVER:

- Obstruct the passages leading to the emergency exits and the hatches;
- Obstruct or block safety controls, for instance fuel shut off valves, gas taps, electrical system circuit-breakers;
- Obstruct the access to the portable extinguishers stored in lockers;
- Leave the boat unsupervised when cooking equipment and/or heating equipment is in use;
- Modify any of the boat's installations (especially the electrical, fuel or gas installations) or allow unqualified personnel to proceed with modifying these installations;
- Fill the fuel tanks or replace gas bottles while the engine is running or while cooking or heating equipment is in use;
- Use gas lamps in the boat;
- Smoke when handling fuel or gas.

7 ELECTRICAL SYSTEM

7.1 GENERAL INFORMATION ABOUT THE ELECTRICAL SYSTEM



Reference	Designation
1	Battery switch control, DC breakers, Touch screen, Service batteries
2	Switches / DC breakers
3	Power unit (Power distributor, Fuses, Relay box, Battery switch)
4	Bow thruster batteries
5	Batteries - Generator & Motor
6	Battery charger

- The risks of fire or explosion may result from careless use of the DC and AC systems.
- The risks of electrocution may result from careless use of the AC system.

NEVER:

- work on a live electrical system;
- modify the elecrical system of the vessel or the relevant diagrams: It is important that the installation, maintenance and any modifications be carried out by a technician qualified in marine electricity;
- change or modify the strength of the safety devices protecting against power surges;
- install or replace electrical equipment or materials with components which exceed the system's nominal electrical power capacity;
- leave the boat unsupervised when the electrical system is live, apart from when the automatic bilge pump and the boat's fire protection and security systems are in use.

7.2 DC INSTALLATION (12 V OR 24 V)

7.2.1 Battery use and distribution

General points

The electricity onboard is direct current.

The boat's electrical system comprises service batteries and the engine battery or batteries. The service batteries serve as the power supply for all the boat's electrical components. The engine battery is used solely to power the engine's starter motor.

The boat may also be equipped with:

- a generator powered by its own battery;
- a bow thruster, powered by its own battery bank.

the batteries are charged either by a load distributor or:

- by the alternator linked to the engine when the engine is running,
- by the battery charger (if the boat has one).

It is imperative that when the boat is first launched, a professional engineer connects the batteries.

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

The battery banks are isolated from one another by a charge divider (see below).

Battery set

Engine battery: 2 x 110A

Generator battery: 80A

Propeller battery: 2 x 50A

Service batteries: 3 x 80A
Spare service batteries: 1 x 80A

Maintenance

- Avoid charging batteries to a voltage greater than 14,6 V.
- Keep the batteries clean and dry.
- Regularly check that the terminals and connection cables are clean. If necessary, apply a thin coating of paraffin on the terminals, to prevent corrosion.
- Regularly recharge all of the batteries onboard.
- Continuously maintain the charged batteries: this determines their length of life.
- Avoid long periods of electrical inactivity (for example when wintering the boat).

- All work carried out on a battery must only be carried out by someone qualified to do so. Whenever working on a battery, wear safety goggles and protective clothing.
- Never smoke or produce a spark near a battery: risk of an explosion.
- If any acid accidentally splashes on your skin or in your eyes thoroughly rinse it off immediately with fresh water. See a doctor immediately.
- Never touch the battery terminals: danger of electric shock.
- Refer to the manufacturer's instructions for use and maintenance.

- IT IS IMPERATIVE TO DISCONNECT THE BATTERY CHARGER BEFORE DISCONNECTING THE BATTERY TERMINALS FOR MAINTENANCE.

Maintenance of lead batteries

- Every year check the water levels in the batteries, and if they are low top them up with distilled water.
- Keep all metallic objects away from the batteries.
- Lead batteries contain sulphuric acid: Be careful not to knock them over whenever handling them.

Maintenance of watertight batteries

- This type of battery needs no maintenance and does not produce any gas during normal use. No ventilation is needed.
- The optimum temperature for use is between 10 degree C and 30 degrees C. Lower temperatures will reduce the available capacity. Higher temperatures will increase the batteries' self-discharge rate.
- Never open watertight batteries.
- Never add acid or distilled water.
- The pressure valves are used to seal the batteries and cannot be opened without being destroyed.
- If the batteries overheat, a build-up of gas may develop: Keep away from the batteries.

7.2.2 Battery switch

- Manual battery switches: to make the system live, manually turn the positive and negative battery isolator switches.

Positive battery isolator switch

Battery switch of negative terminal

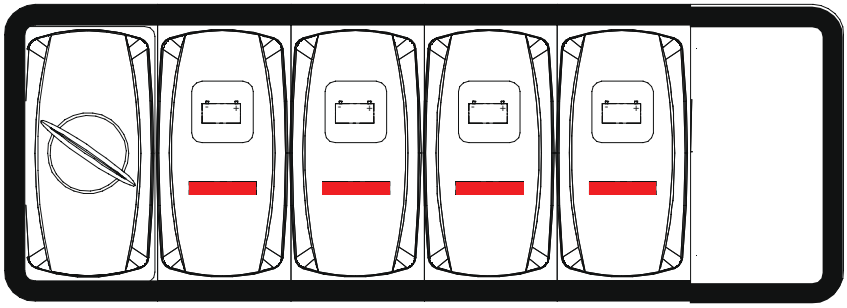
- Electrically controlled battery breakers: press the switches on the breaker control panel. In the event of electrical failure, it is possible to press down the button on top of the battery breaker manually to activate it.

The electrically-controlled battery breakers use very little electricity when they are on: **It is imperative to turn off all the battery breakers during lengthy absences, to prevent the batteries from slowly and irreversibly discharging.**

Location - Battery switch: Engine compartment

Control panel for electrically controlled battery breakers

Location: Companionway - aft



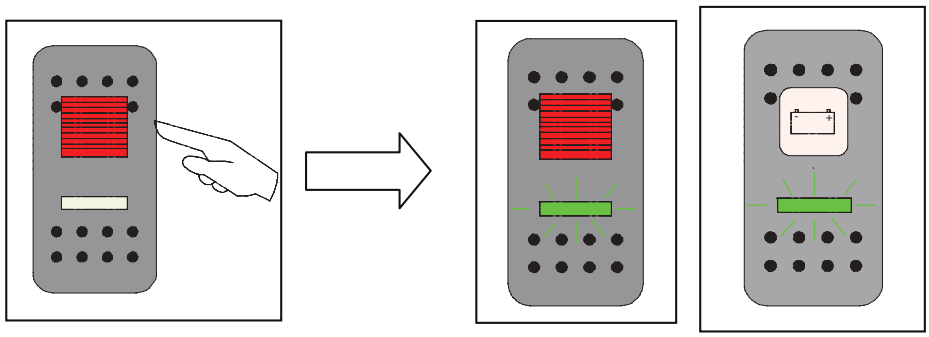
from left to right:

- Locking key
- Control - Battery switch "common negative"
- Control - Battery switch "service positive"
- Control - Battery breaker - "positive terminal - engine" - Starboard
- Control - Battery breaker - "positive terminal - engine" - Port side

- Turn off all battery breakers before leaving the vessel: **risk of complete discharging of whole battery bank**.
- Avoid touching the battery breakers when they are live.
- Never switch off the battery breakers when the boat's engine is running (risk of serious damage to the charging circuit).

Operation

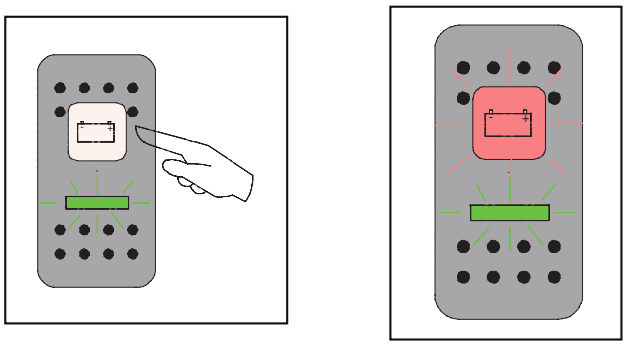
- A locking switch prevents accidental operation of the battery breaker control panel. To allow use of the battery breakers, unlock the locking switch.



- The green light illuminates on the locking switch and on all the battery breaker control switches. This indicates that control of the battery breakers is enabled.

- Activate the push button of the battery breaker you wish to operate: the red light on the switch illuminates. This means that the battery isolator is ON (actuated).

- To turn off the battery breaker, press the push button again. When the red light goes out, the battery breaker is OFF (turned off).



7.2.3 Power distributor

- The electronic charge dividers isolate the battery banks from each other and allow the charge to be directed automatically to the battery with the lowest charge. They give the advantage of preventing a drop in voltage.

- The charge divider is electronic. It is designed to distribute the charging current with a low voltage drop between the battery banks (engine and service batteries). It prevents the current from circulating from one battery to another. When the voltage of the charger or alternator is available, the charge divider's green indicator comes on.

Location: Engine compartment

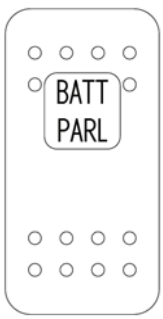
7.2.4 Connection of battery set

If one of the engine batteries is low on power, use the battery link function by actuating the linking system.

Linking switch

Hold the switch down while starting the engine. Release the switch once the engines are running.

Control: Steering station



7.2.5 Battery charger

General points

- The battery charger runs on AC power.
- A breaker protects the electrical circuit.
- The battery charger charges all of the batteries onboard, while keeping the service battery bank isolated from the engine's battery bank.
- Within its power limits, the DC equipment can be supplied directly.

Access: Technical room

Operation

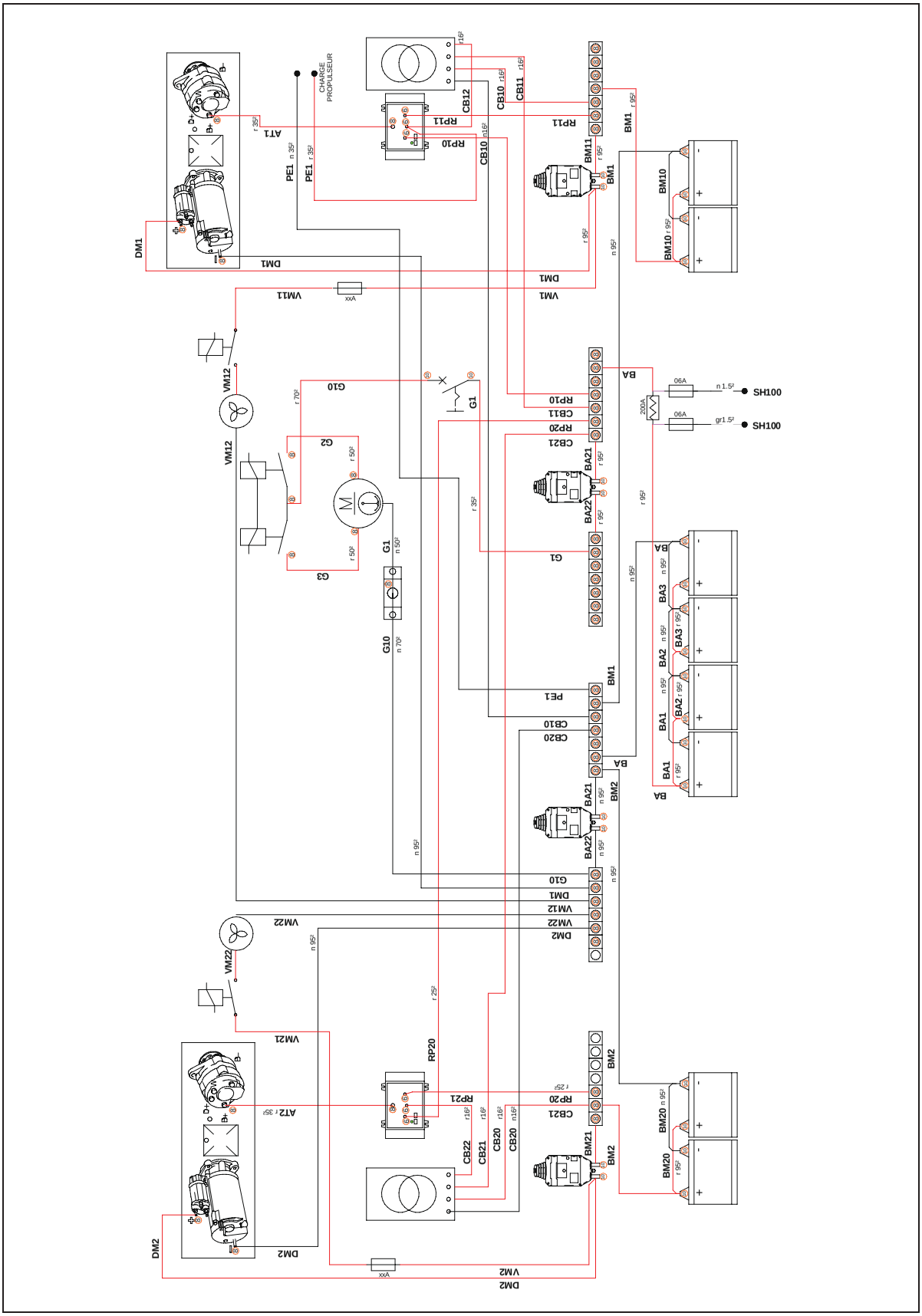
- The charger runs fully automatically. It can remain permanently connected to the batteries and does not need to be disconnected when starting the engine.
- In some electrical circuits, there may be battery chargers coupled in parallel.

Maintenance

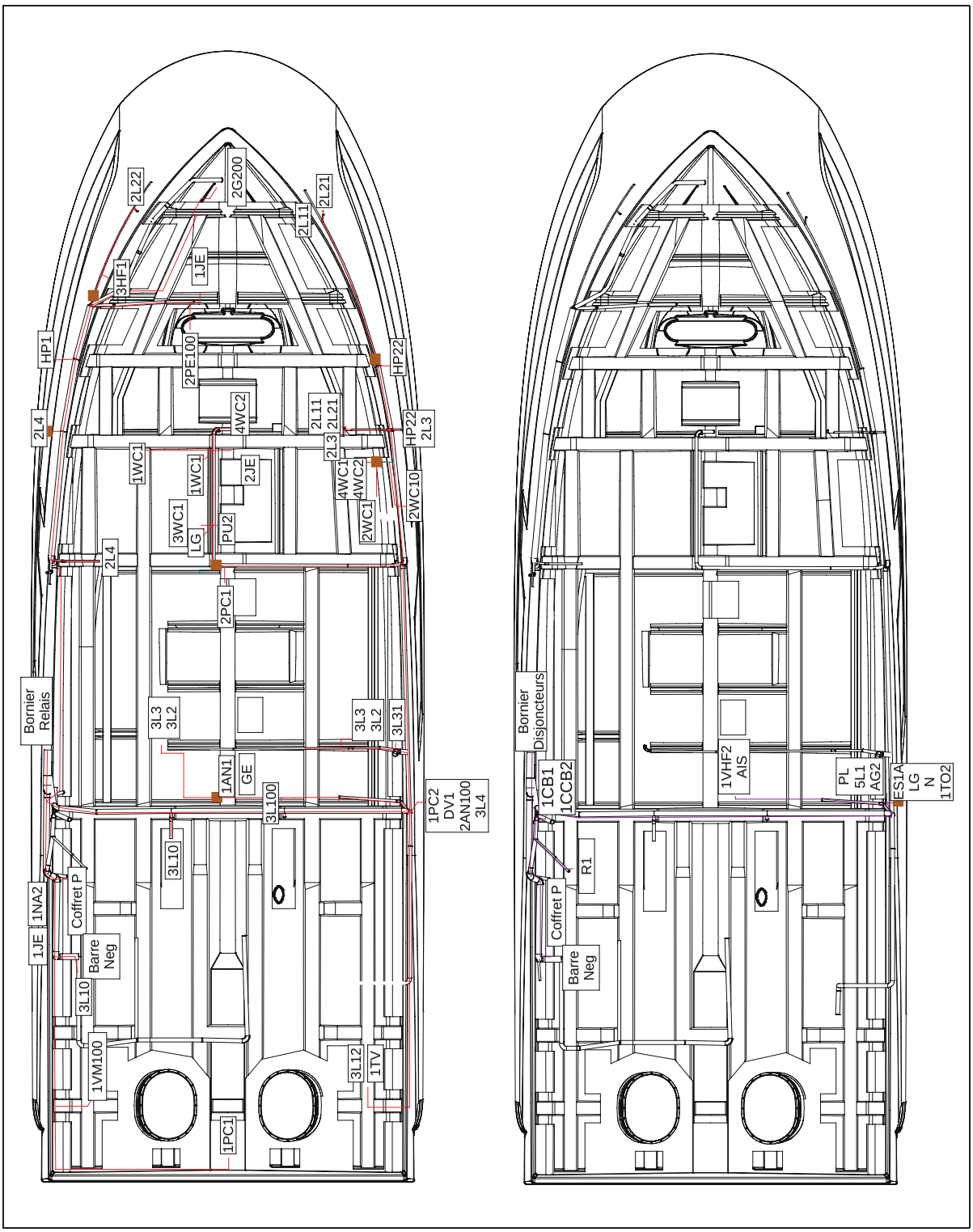
- Before doing any maintenance, cut the AC supply.
- Regularly vacuum out any dust particles which may accumulate in the charger. An annual check of the tightness of the nuts and bolts is necessary to ensure the correct operation of the charger.

IT IS IMPERATIVE TO DISCONNECT THE BATTERY CHARGER BEFORE DISCONNECTING THE BATTERY TERMINALS FOR MAINTENANCE.

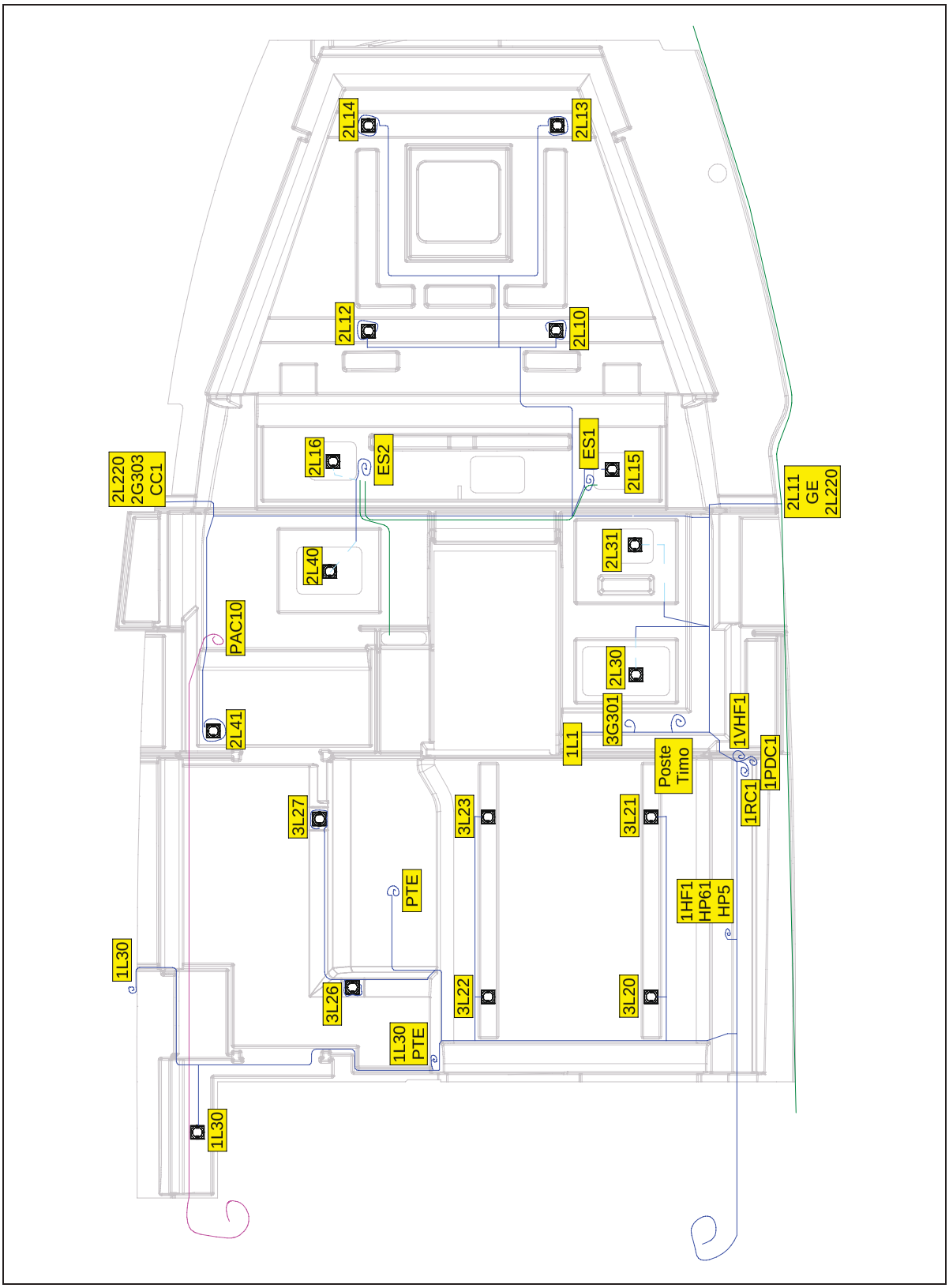
Layout diagram - Battery cables



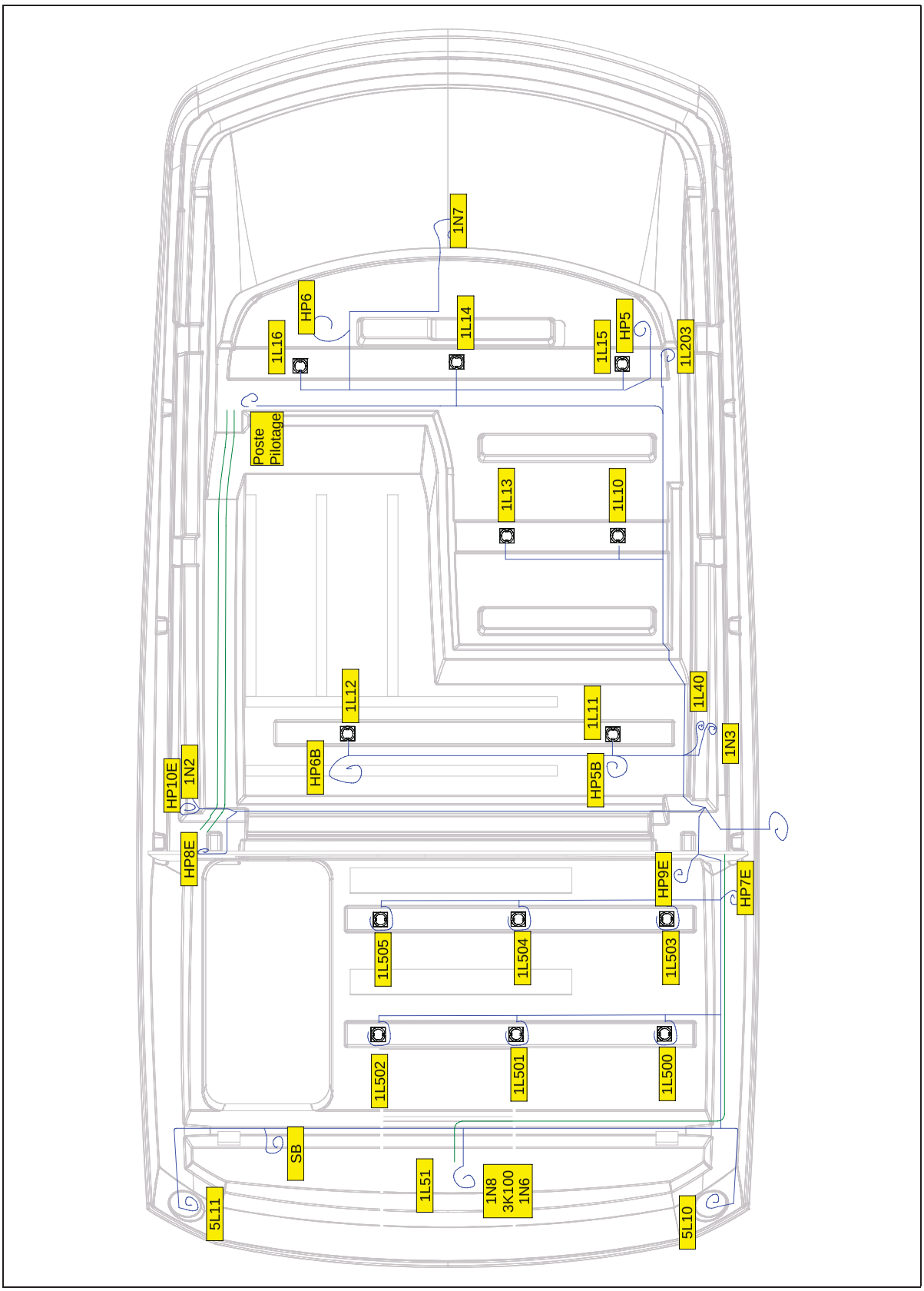
7.2.6 Layout of the wiring looms in the hull - DC circuit



7.2.7 Layout of the deck wiring looms - DC circuit

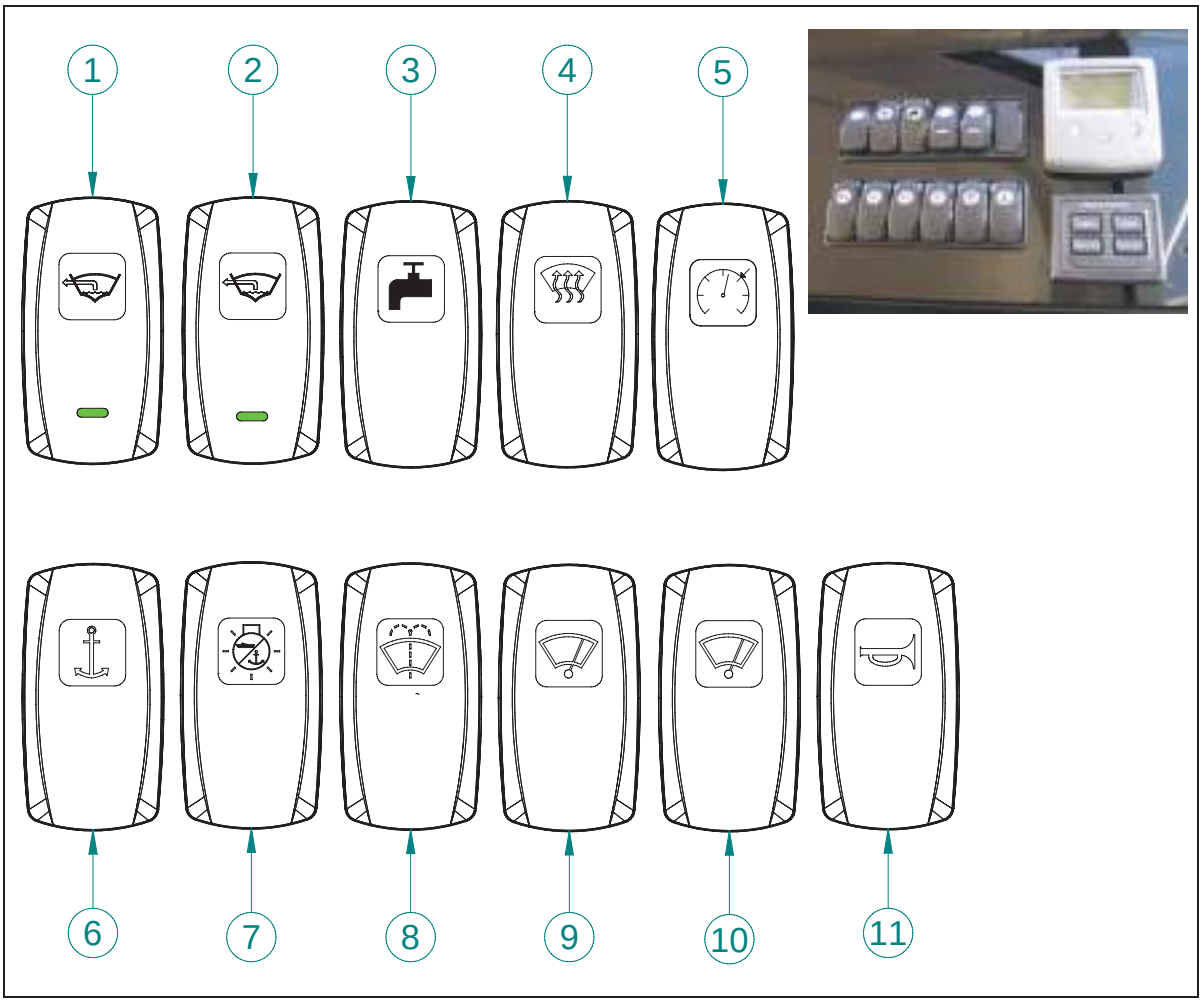


7.2.8 Diagram of flying bridge wiring looms - DC circuit



7.2.9 Switches / Circuit breakers

Synoptic - Steering station

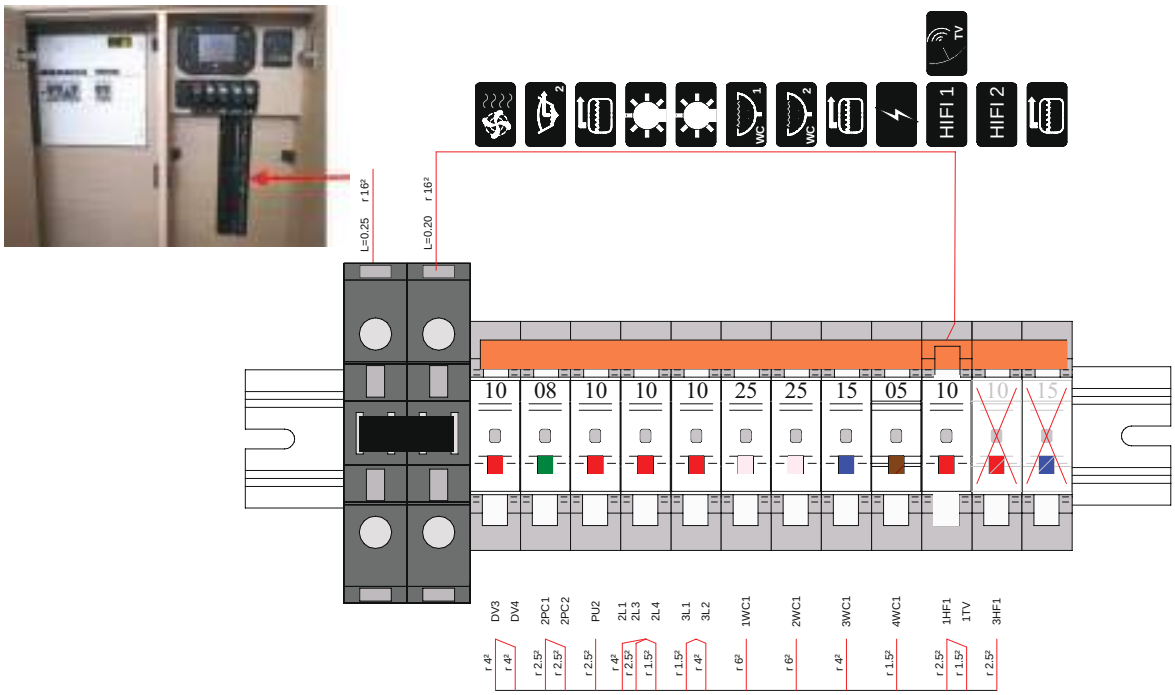


Reference	Designation
1	Aft electric bilge pump
2	Forward electrical bilge pump
3	Water unit
4	Demister
5	Navigation electronics
6	Windlass
7	Navigation lights
8	Windscreen washer
9	Port windscreen wiper
10	Starboard windscreen wiper
11	Horn

7.2.10 Circuit breakers

A circuit-breaker can be re-set (manually press the black button to restart it).

Location: Companionway



from left to right:

- Demister
- Forward bilge pump
- Drainage pump - Collector - Waste water
- Lighting
- Lighting
- Electric toilet - forward
- Electric toilet - aft
- Masher (Drainage pump - Sewage - to sea)
- Black water tank gauge (WC)
- Hifi - saloon & TV Antenna
- Hifi - Forward cabin
- Drainage pump - Waste water tank

Location: Companionway - aft

120A: Windlass circuit breaker
80A: Breaker - DC/AC converter (700VA)
200A: Breaker - DC/AC converter (2000VA)

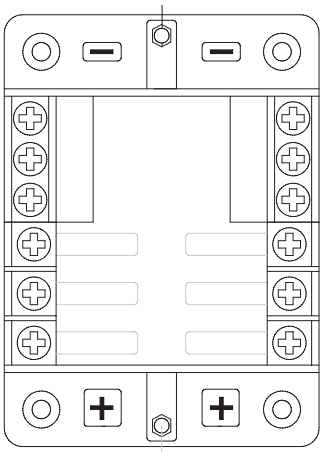
7.2.11 Fuses

- A fuse protects an electrical circuit from a power surge. If it blows, you must replace it with another fuse of the same rating.

Location: Engine compartment

Power unit

Location: Technical room



Element	Rating
HUB	1A
Radar	15A
System	5A
Auto pilot	5A

When replacing fuses/circuit-breakers, always ensure replacements are of the right capacity (see the colour-codes)

7.2.12 Touch screen

The touch screen allows the boat's auxiliary functions to be driven and displayed:

- Battery voltage,
- Fresh water gauge.
- Management of boat's AC supply sources.

Location: Companionway - aft

Source selectors:

Location: Cockpit locker.

A handle allows the selector to be engaged manually.

1. Source selector: "House" - is fitted if the boat is fitted with a generator.
2. Source selector: "Air conditioning" - is fitted if the boat is fitted with air conditioning.

Handle

Touch screen operation

- Battery measurement menu access

- Fresh water tank level menu access

- AC supply distribution menu access

- Interior lighting menu access

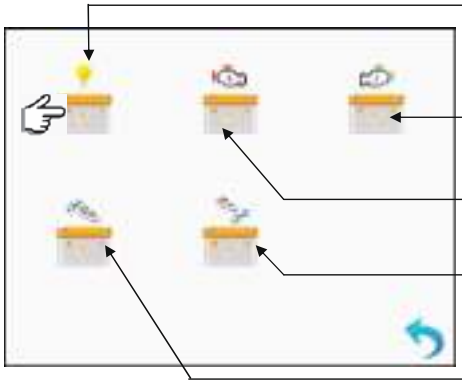
- Adjustment menu access (Access to it is restricted by a code supplied on request to the yard)

- CAN network display (Controller Area Network)
- Parameterization of lighting
- Configuration of the 'gauge' pack
- Configuration of source selectors

Return to preceding page

Battery menu

A press of the finger on the required menu icon allows access to a sub-menu.



Access to service battery charge and discharge voltage display

Access to starboard engine battery voltage display

Access to port engine battery voltage display

Access to bow thruster battery voltage display

Access to battery voltage display - Stern thruster (if fitted on board)

Service battery voltage

Current charge (green) or discharge (red) measurement

BATTERY MENU - PORT ENGINE

Battery voltage - Port engine

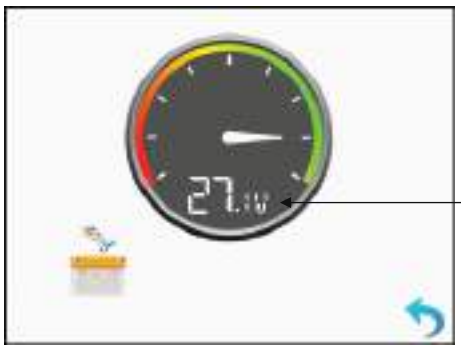
BATTERY MENU - STARBOARD ENGINE

Battery voltage - Starboard engine

BATTERY MENU - STERN THRUSTER

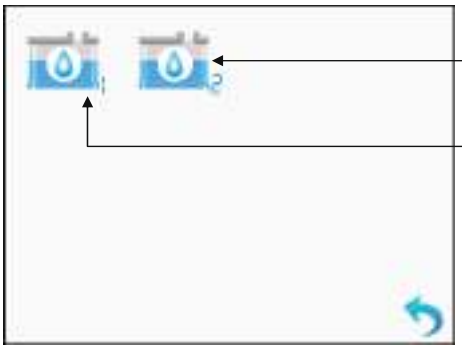
Battery voltage - Stern thruster

BATTERY MENU - BOW THRUSTER



Battery voltage - Bow thruster

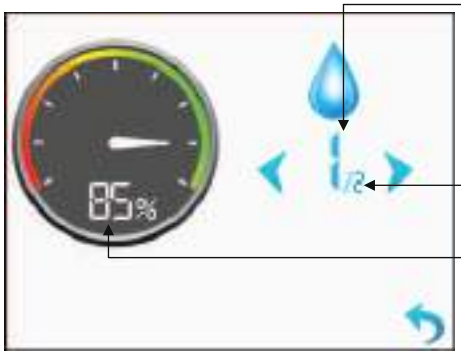
MENU ACCESS: - WATER GAUGE



Access to the 2 tank gauge

Access to the 1 tank gauge

MENU: - WATER GAUGE



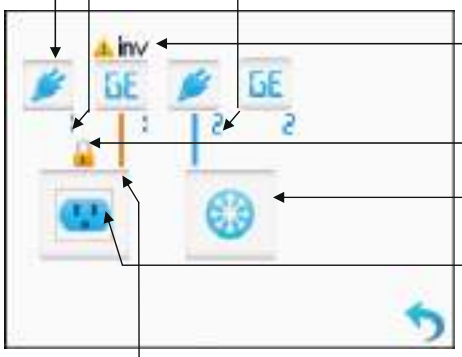
Tank No.

Number of tanks in the boat

Tank level

Menu: - AC source "Air conditioning"

This menu allows the AC current origin (shore supply or generator) to be chosen for operating the air conditioning.
This function drives an electromagnetic inverter located in the engine room *.



1 - Supply line "House"

2 - Supply line "Air conditioning"

Shore supply blue-tinted: The socket is connected and supplied. Access to the shore supply voltage display

Reversal of polarity (only for the 110V)

Padlocks: Indicates that the handle on the source selector is engaged

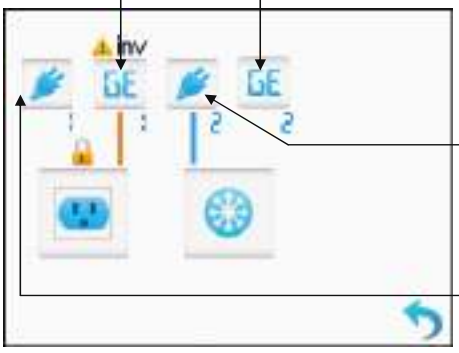
Menu access: - Power supply - air conditioning

Menu access: - Supply to on-board circuit

Grey: Non current carrying

Blue: On-board circuit live

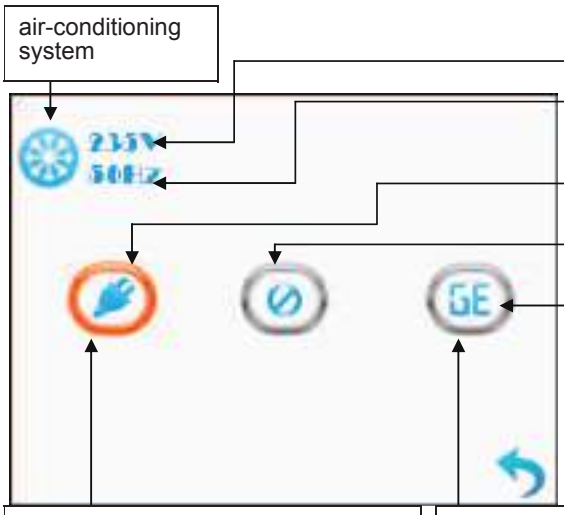
Orange: On-board circuit live but locked by setting the handle on the source selector



Access the generator start menu by pressing the GE button

Access the air-conditioning shore power supply menu by pressing on the "2 socket" button

Access the shore power supply menu by pressing on the "1 socket" button

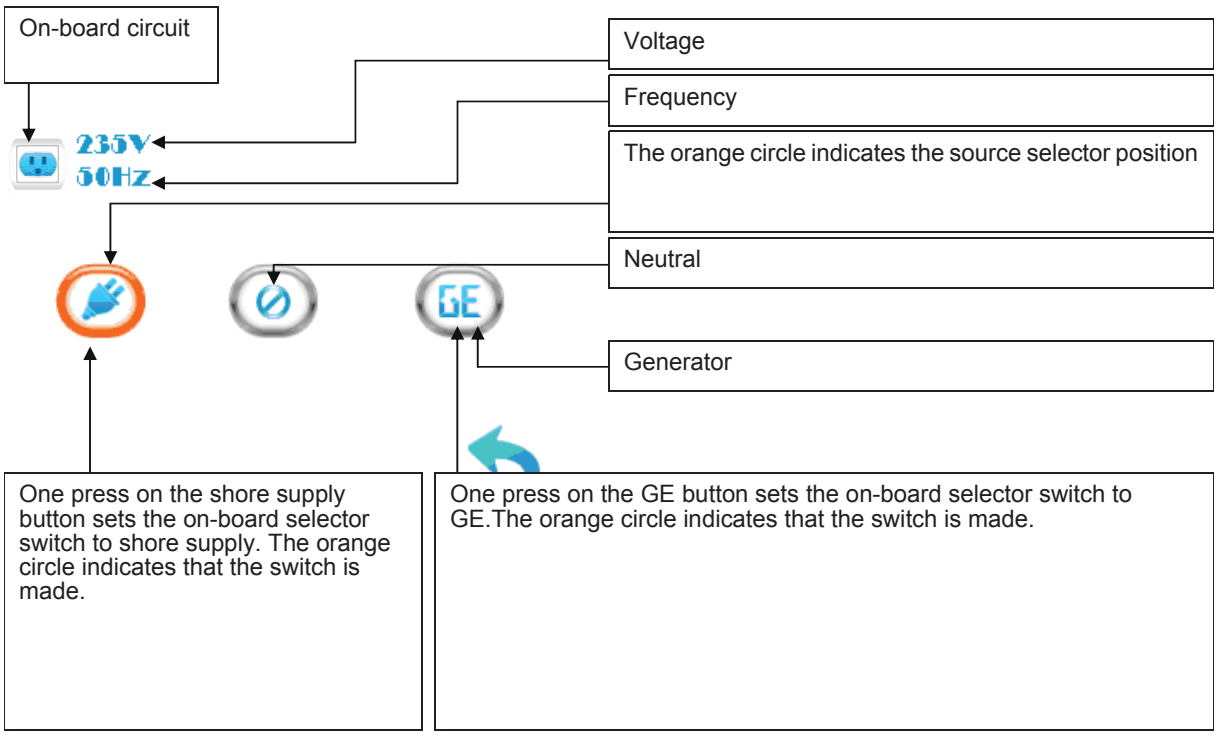


One press on the shore supply button sets the air-conditioning selector switch to shore supply. The orange circle indicates that the switch is made.

One press on the GE button sets the air-conditioning selector switch to the generator.The orange circle indicates that the switch is made.

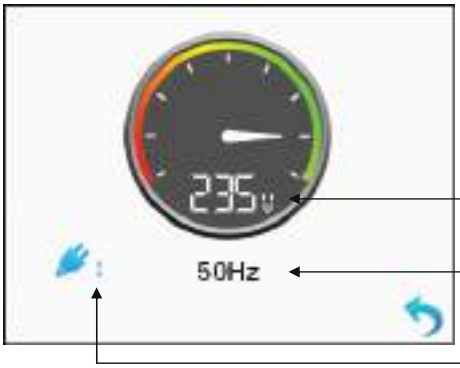
Menu: - On-board circuit source

This menu allows the AC current origin (shore supply or generator) to be chosen for operating the air conditioning.
This function drives an electromagnetic inverter located in the engine room *.



*** The source inversion packages installed in the engine room also have a removable handle to alter the source origin manually.**

Menu access: - Shore supply source



Shore power supply voltage

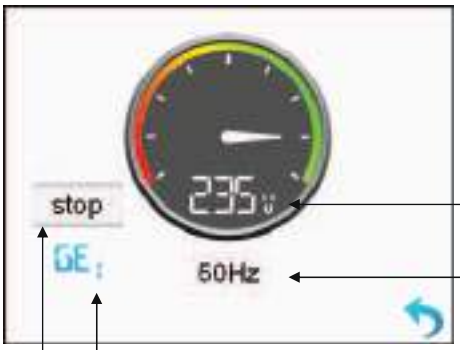
Shore power supply frequency

1 - Shore power supply

Air conditioning shore supply voltage

Air conditioning supply frequency

2 - Air conditioning shore power supply



Voltage provided by the generator for on-board supply

On-board supply frequency

1 - On-board AC

Starting or stopping the generator

Voltage supplied by generator to air conditioning

Air conditioning supply frequency

2 - AC air conditioning

Starting or stopping the generator

Access to settings for network maintenance (boatyard access only)

Error - lighting module has no coding resistance

Error - several lighting modules with the same coding n°

Error - the on-board source selector configuration is not up to date.

Confirm or cancel up-date

Dismantling the touch screen

The touch screen is clipped to an aluminium support

7.3 AC SYSTEM (110 V OR 220 V)

- 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.
- Do not work on a live AC system.

To reduce the risks of electric shock and of fire:

- Turn off the shore supply with the onboard cut-off switch before connecting or disconnecting the vessel/shore supply line.
- Connect the ship/shore power cable on the boat before plugging it into the socket onshore.

- Disconnect the ship/shore power cable at the shore socket first.
- If the reverse polarity indicator is activated immediately disconnect the cable.
- After using the socket onshore, close its protective cover tightly.
- Do not modify the connections of the ship/shore power cable: only use compatible connections.

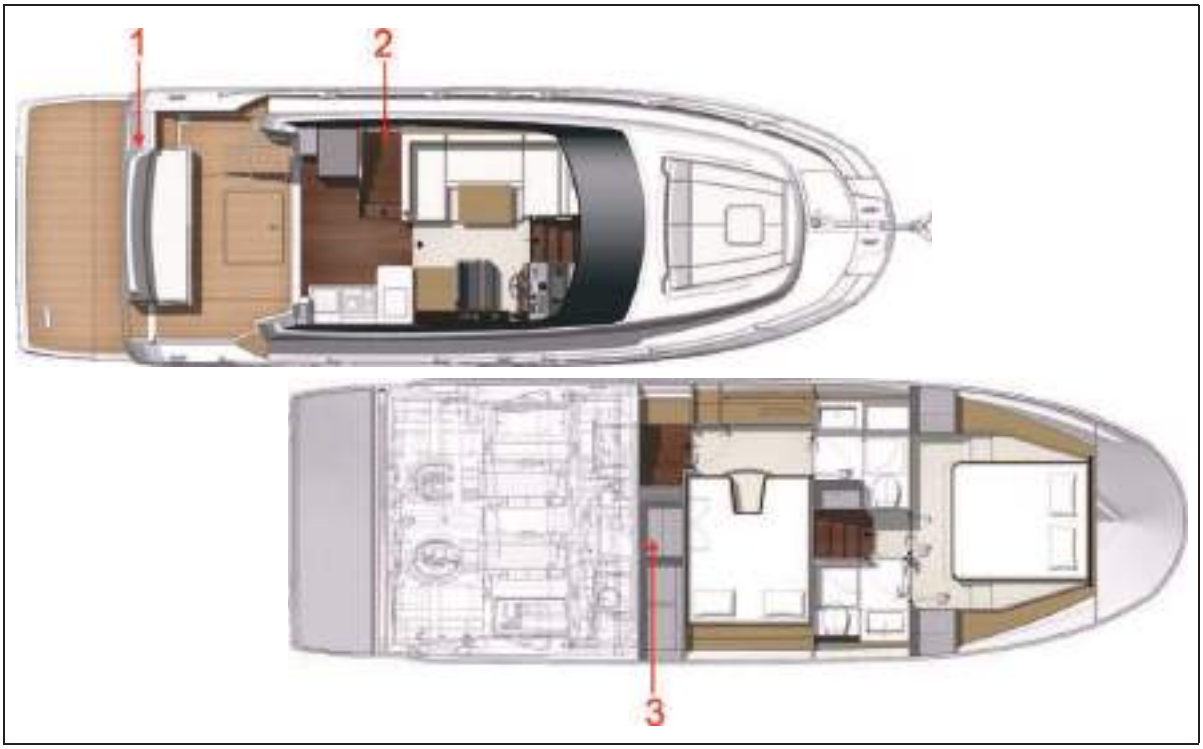
DO NOT MODIFY THE CONNECTIONS ON THE SHIP/SHORE POWER CABLE.

- Do not modify the vessel's electrical installation nor its relating diagrams. The installation, maintenance and any modifications must be carried out by an electrician qualified in marine electricity. Check the system at least every two years.
- Disconnect the boat's shore power when the system is not in use.
- Connect the relay cans or metal casing of the electrical equipment installed to the boat's protective conductor (green or green with yellow stripe conductor).
- Use double insulated or earthed appliances.
- If the reverse polarity indicator is activated, do not use the electrical installation. Rectify the polarity fault before using the vessel's electrical installation (this applies only to polarised circuits with a polarity indicator).

- If a DC/AC converter is fitted on board: it is essential to switch of the DC and AC circuits before working on the cabin AC sockets.

7.3.1 AC shore socket

location of components



AC shore socket
Location: Aft quarterdeck

Ref 1

AC breakers
Location: Companionway - aft

Ref 2

Bipolar circuit breaker
Location: Technical room

Ref 3

Operation

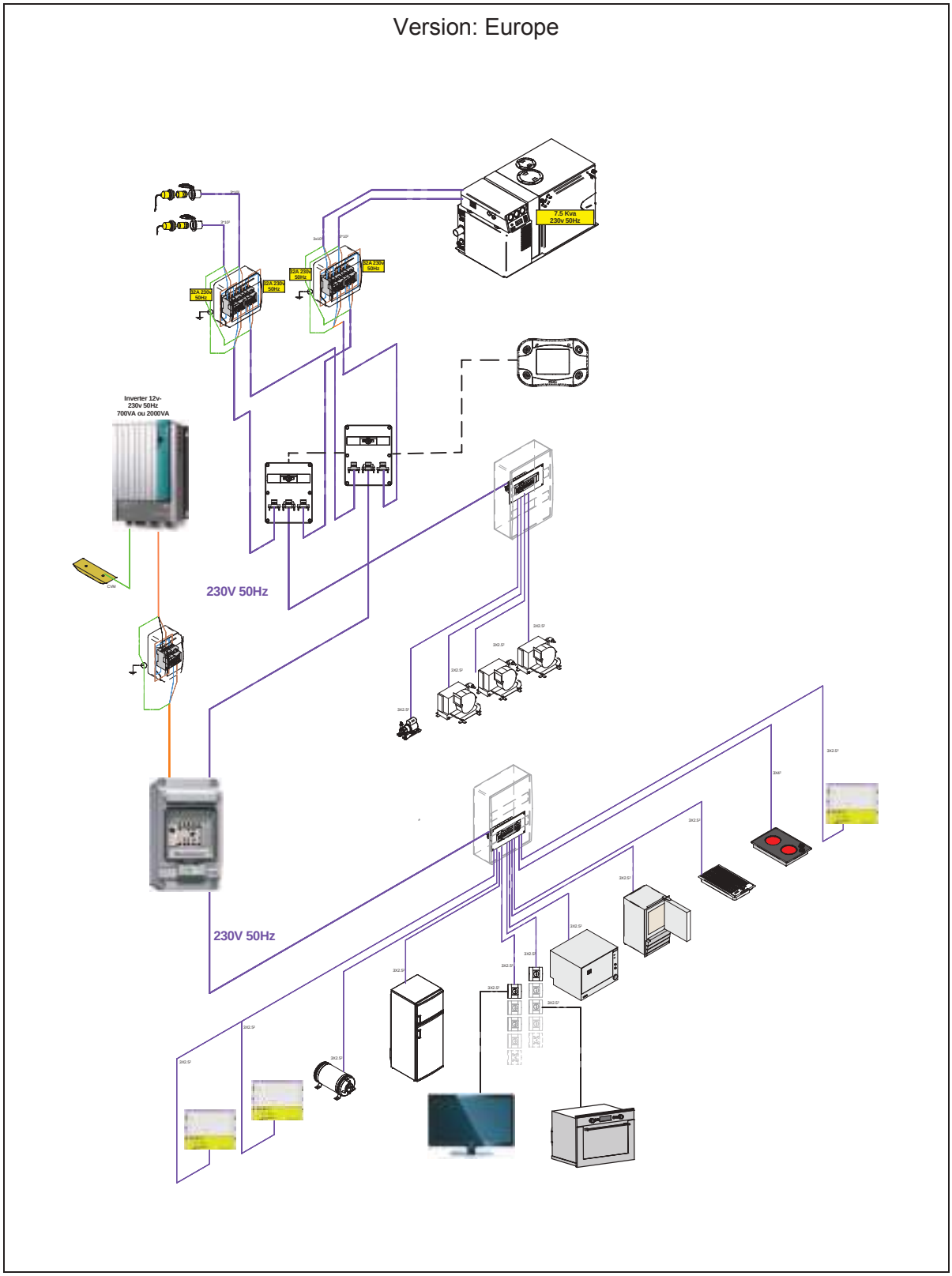
First plug the extension cable into the AC socket on the boat, then into the socket onshore.

First unplug the extension cable from the socket onshore, then from the AC socket on the boat.

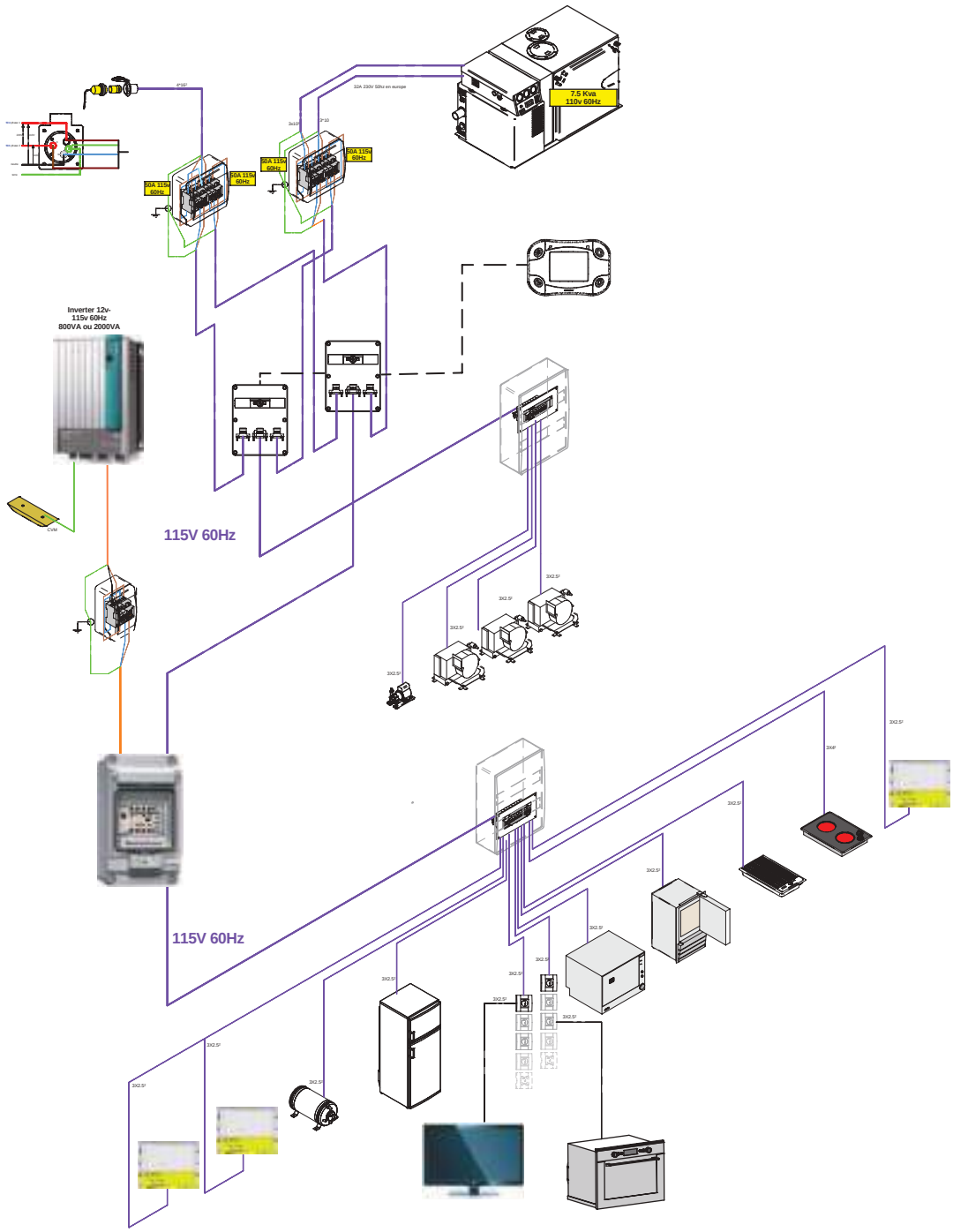
7.3.2 Layout diagram

AC electrical system

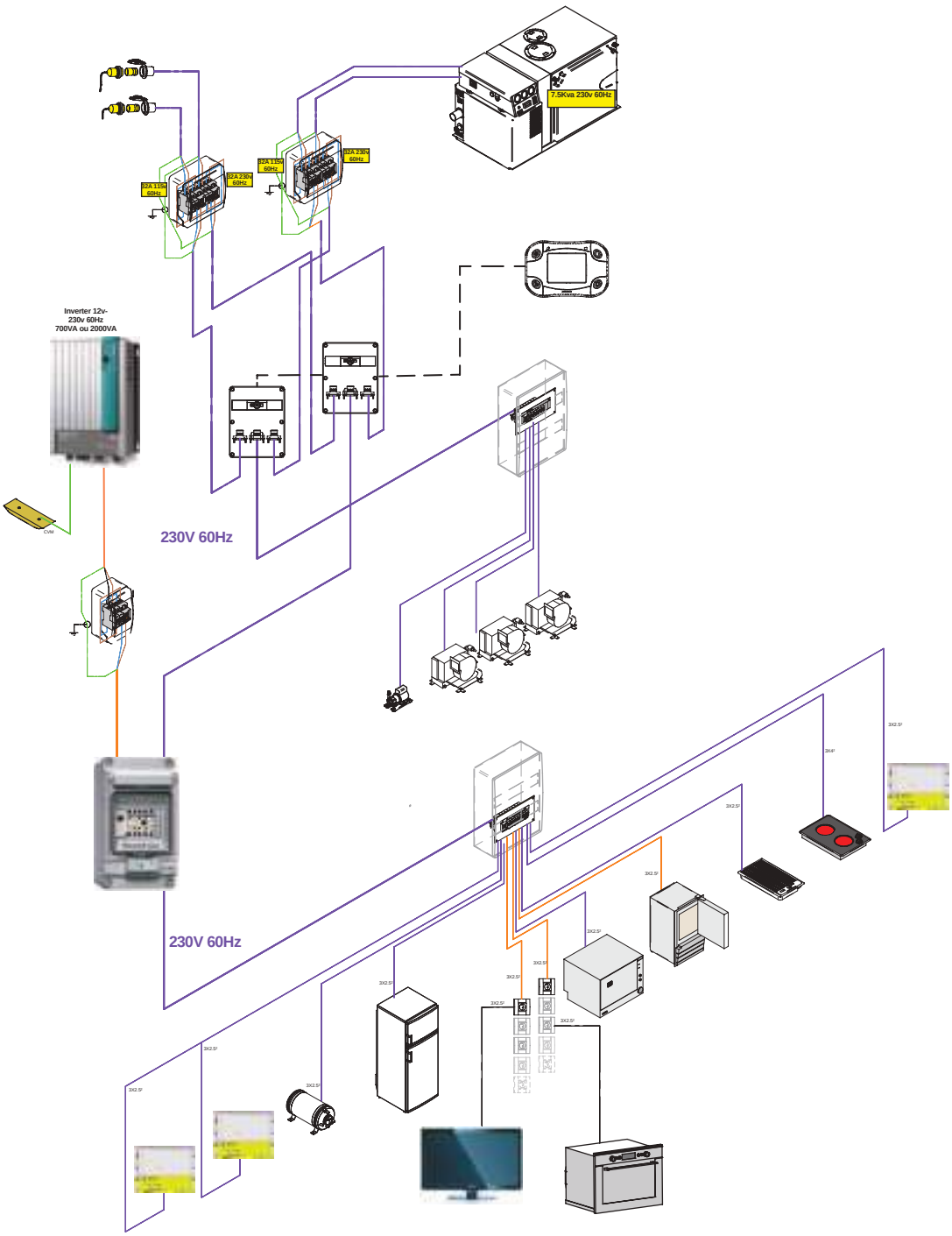
Version: Europe



Version: US

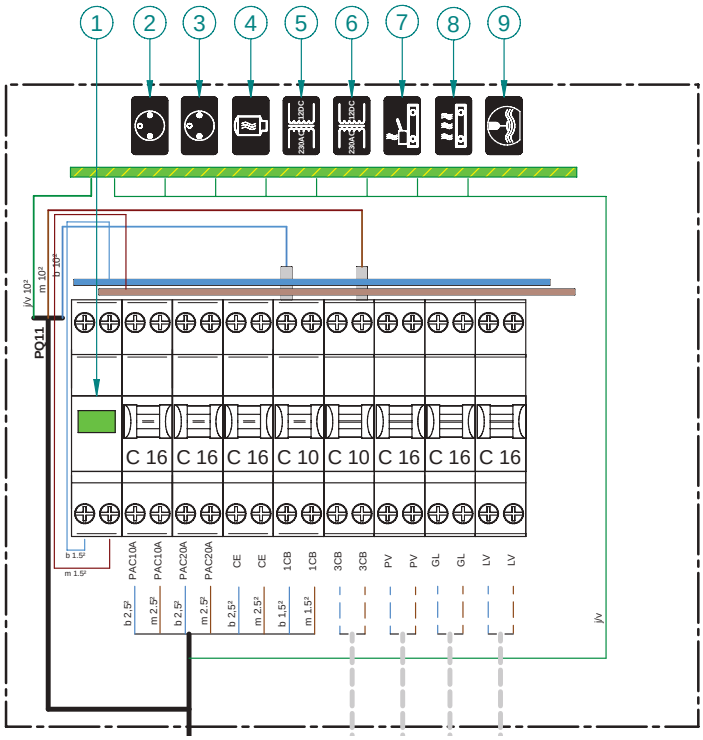


Version: BRASIL



Circuit breakers - AC elements

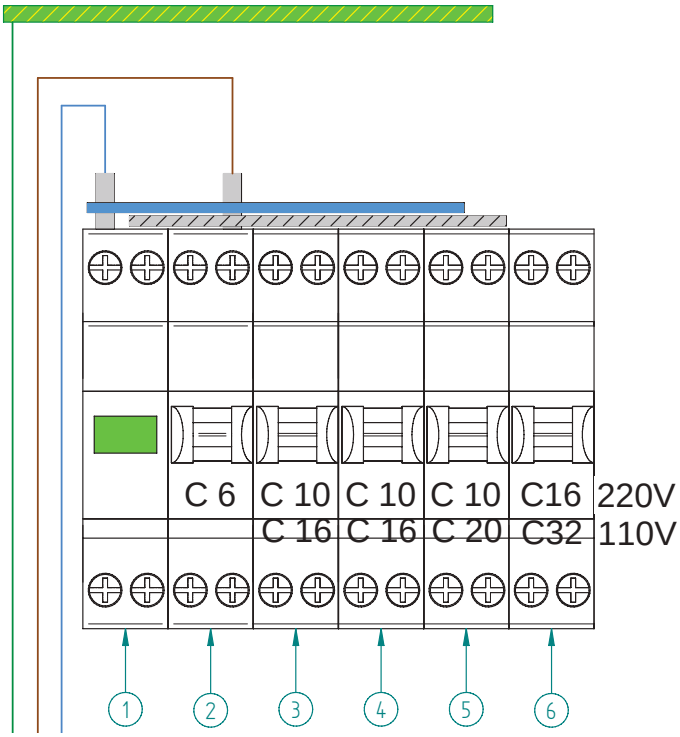
Location: Companionway - aft



1. Supply - overall
2. AC socket - Hull
3. AC socket - Hull
4. Water heater
5. Battery charger (Service & Motor)
6. Battery charger (Generator)
7. Ceramic hob
8. External grill
9. Dishwasher

Circuit breakers - Air conditioning

Location: Companionway - aft



1. Supply - overall
2. Pump sea water
3. Compressor - Aft cabin
4. Compressor - Forward cabin
5. Compressor - Wheelhouse (Mediterranean)
6. Compressor - Wheelhouse (Tropical)

7.3.3 DC/AC converter

Description

- The inverter converts the DC voltage of the service battery bank to AC voltage. The circuit between the inverter and the batteries is protected by a fuse or a circuit-breaker.

- The inverter is earthed by an earthing plate located under the hull (see earthing plate chapter).

Operation

Power supply for the AC electric sockets 220 V in the cabins:

Once there is sufficient nominal voltage coming from the AC switch panel, AC power is supplied by the socket onshore or by the generator.

If there is insufficient nominal voltage coming from the AC switch panel, the AC power supply automatically switches over to the inverter. In this way, the power for the 220 V sockets in the cabins can be supplied by the inverter, itself being supplied by the service battery bank. Be careful to disconnect the inverter circuit, to prevent the AC power supply automatic switching over and to prevent the accidental discharge of the service battery bank:

- either by putting the inverter's circuit-breaker in the OFF position,
- or by putting the switch located on the inverter in the OFF position.

Simply cutting the AC power supply at the switch panel does not cut the AC power supply to the cabins: it is also necessary to disconnect the DC supply.

Operation

- The inverter is fully automatic.

- A remote control is located near the boat's switch panel. To start the converter put the switch on the invertor in the "REMOTE" position then put the switch located on the remote control in the "ON" position.

- If the switch on the inverter is in the "OFF" position, you cannot use the remote control to start it.

NOTE: The inverter does not supply the following AC equipment:
- Microwave,
- Ceramic hob.

Maintenance

- Check at least once a year that the inverter cables and connections are properly bundled.
- Clean the inverter by removing any accumulated dust to ensure good ventilation.

Inverter - 2 000 W

The control located on the equipment

Remote control

Inverter - 700 W

The control located on the equipment
Location: Aft cabin

Remote control
Location: Companionway

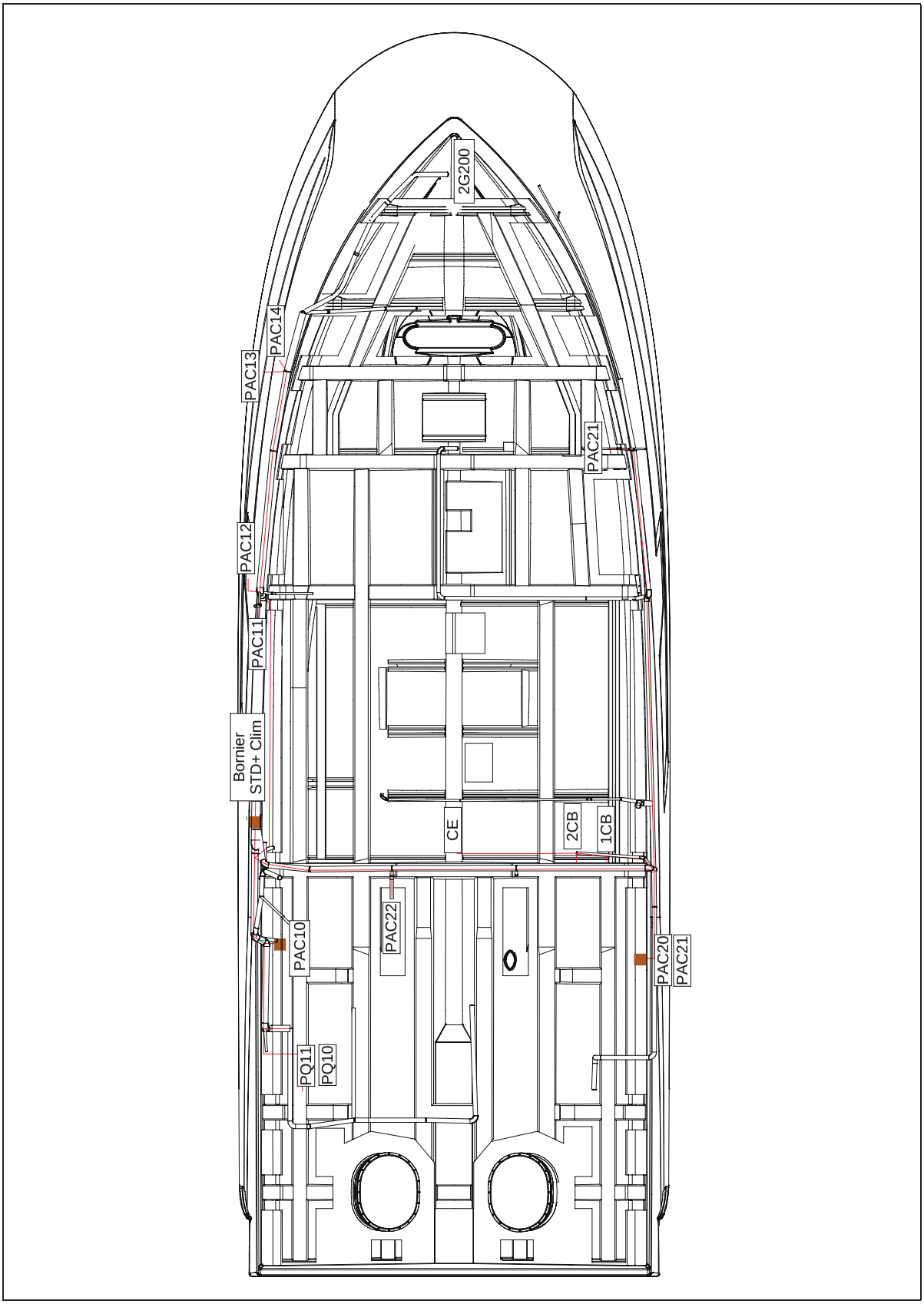
The power to the inverter must only be supplied by lead batteries.

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

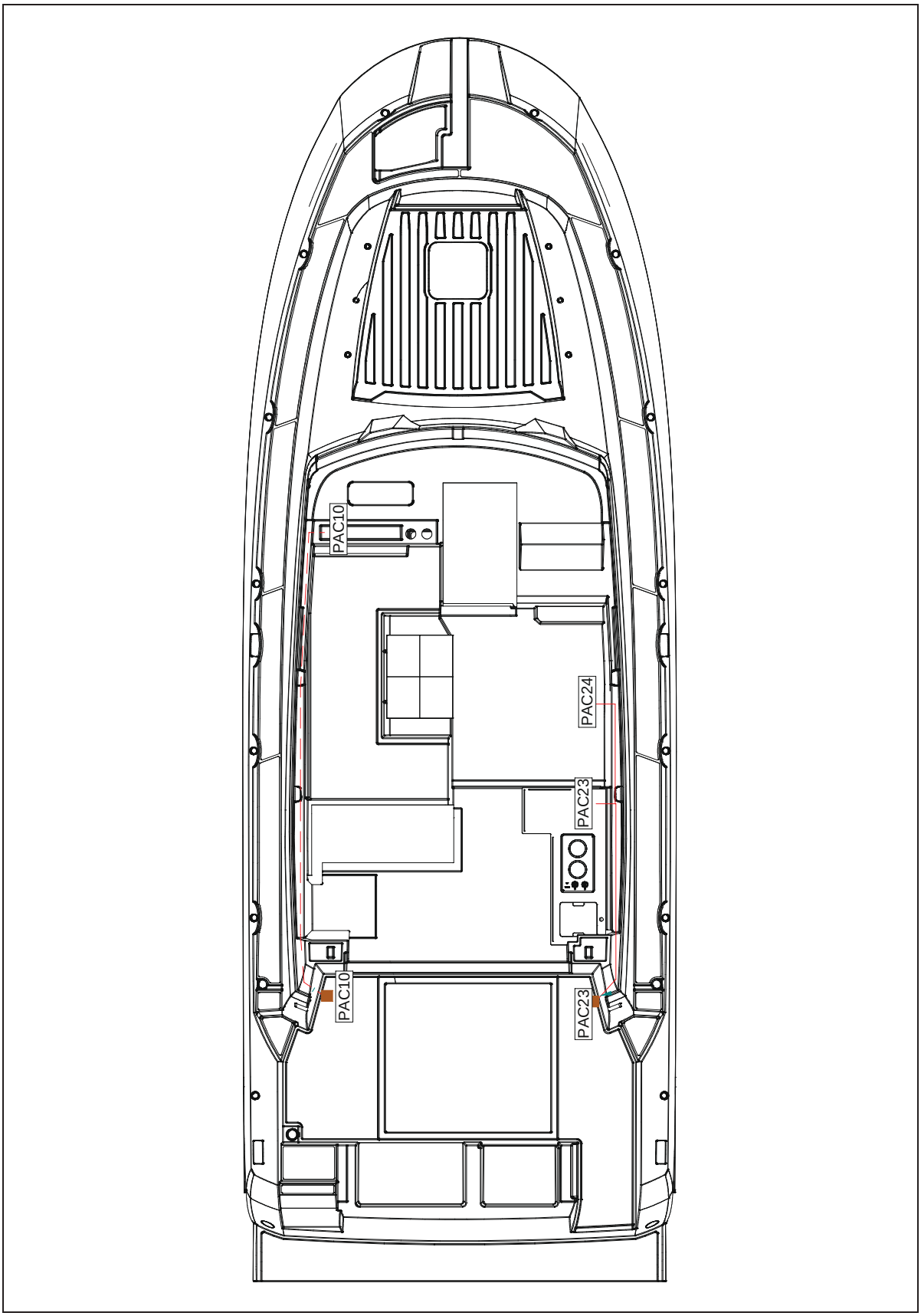
NEVER:

- connect the invertor AC lead to an AC terminal or to the generator onboard.
- disconnect the wiring from the inverter when in use.
- open the inverter.

7.3.4 Layout of the wiring looms in the hull - AC circuit



7.3.5 Layout of the deck wiring looms - AC circuit



7.3.6 Anodes

General points

- The sacrificial anodes protect the boat's metal components from electrolysis.
- A sacrificial anode is an expendable part, that by eroding (oxydisation), allows the current to flow. The anodes used are made of a metal that is more readily reductive than the metal they are protecting.
- On a new boat, all the underwater metallic components try to be at the same electric potential, which leads to the rapid deterioration of the anodes in the first few weeks in the water.
- You can put several anodes on the hull.

Maintenance

- At least 2 times a year, check the corrosion on all of the anodes. Change the anode if necessary (Before it lost 50% of its weight).
- Use the appropriate anodes for the cruising area: fresh water/magnesium anodes; Sea water/zinc anodes.
- 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.

- Never cover the anodes in antifoul.
- During the first few weeks that the boat is in the water, check the anodes and if necessary replace them: they erode very rapidly during this period.

Location: Aft quarterdeck

1. Anode - Port engine
2. Anode General
3. Anode - Starboard engine

Anode - Tenderlift

Anode - Flaps

Anode - Bow thruster

7.3.7 Earthing plates

- An earthing plate is a shot-peened plate mounted on the hull to recreate an earth neutral point on the electrical circuit of the equipment supplying AC power (generator and AC/DC convertor). The earthing plate earths this equipment.

The earthing plate is not an anode: it must not be allowed to deteriorate.

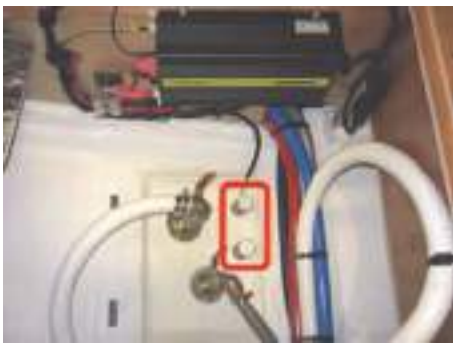
- If it deteriorates, consult a professional immediately to determine the cause. As the earthing plate is mounted across the hull below the waterline, if the earthing plate deteriorates the boat is at risk of sinking.

Location:

1. Earth -Generator
2. Earth - DC/AC converter

Outside view

Inside view

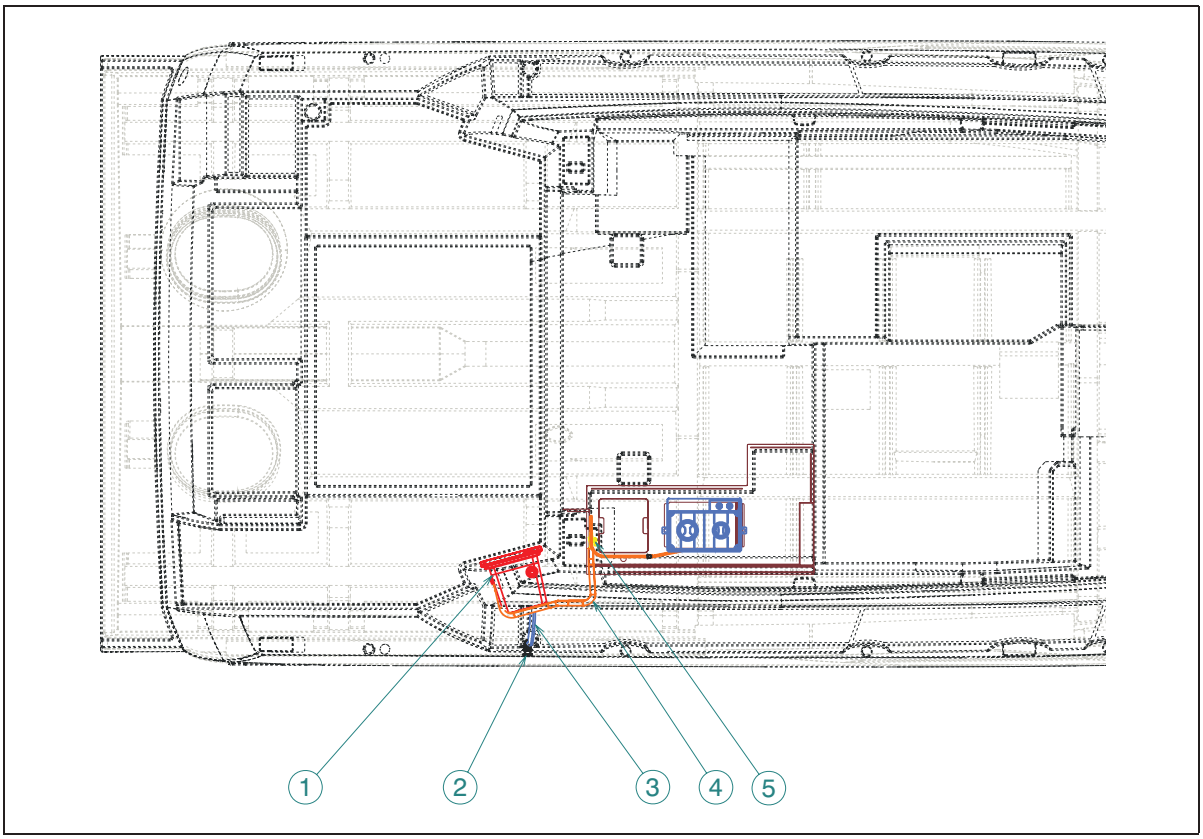


- Never antifoul over the earthing plates.

8 LIQUEFIED PETROLEUM GAS(LPG)SYSTEM (LPG)

8.1 THE ONBOARD GAS SYSTEM

location of components



Reference	Designation
1	Gas cylinder locker
2	Gas locker outlet
3	Drain
4	Gas system
5	Gas supply valve

- Systematically store the gas bottles only in the lockers or storage places provided for these.

- It is recommended that you ensure good ventilation when using gas powered equipment, to prevent asphyxiation.

Use and maintenance of the installation

- Please refer to the manufacturer's notes for the use and maintenance of the LPG cooker.

- When the equipment is not in use close the taps on the LPG hose and on the gas bottles. Close the taps before changing the bottles and immediately in an emergency.

- Make sure that the taps on the equipment are closed before opening the one on the bottle.

- Before using the LPG installation, check it thoroughly for gas leaks. Check that all of the connections are gas-tight in the following way:

    - Before each use, close the taps on the equipment;
    - Open the tap of the LPG bottle;
    - Allow the pressure of the pressure-gauge mentioned to stabilise;
    - Close the tap on the LPG bottle;
    - Watch the value shown on the pressure-gauge next to the tap on the bottle for 3 minutes. It is important that this value remains constant to establish the absence of leaks. **If the value shown on the pressure-gauge decreases, then there is a leak. Do not use any LPG powered equipment.**
    - Find and repair the leaks before any further use.

- Regularly observe the bubble leak detector (if there is one); or

- Carry out a manual search by applying a foaming solution, or soapy water or a detergent (with the taps of the burners closed and those of the installation and of the gas bottle staying open). The foaming solutions for detecting leaks in the gas installations conforming to the EN 14291 meet these requirements;

- If there is a leak, close the tap on the bottle and get the installation repaired before using it again. The repairs must be carried out by someone proficient in this.

- Do not in any way block the access to the components of the gas-powered installation.

- Make sure that the taps on the empty bottles are closed and put out of circuit. Keep in place the protection devices, the caps or stoppers. Store the spare bottles in ventilated housing on deck or in the lockers provided for this, gas-tight and with an external vent.

- Do not use the housings or the LPG bottle lockers to store other equipment.

- The flexible pipes of the LPG powered installation must be regularly checked, at least once a year and replaced if they have deteriorated.

- Check the vent pipes at least once a year. Replace them if they have deteriorated or split.

- Do not use the hot plate if the regular roll angles or heeling angles are likely to be significant. (if the boat does not have a gimballed hotplate).

To change an LPG bottle

1. Close the tap on the LPG bottle
2. Detach the LPG bottle
3. Replace the LPG bottle
4. Attach the new LPG bottle
5. Open the tap on the LPG bottle

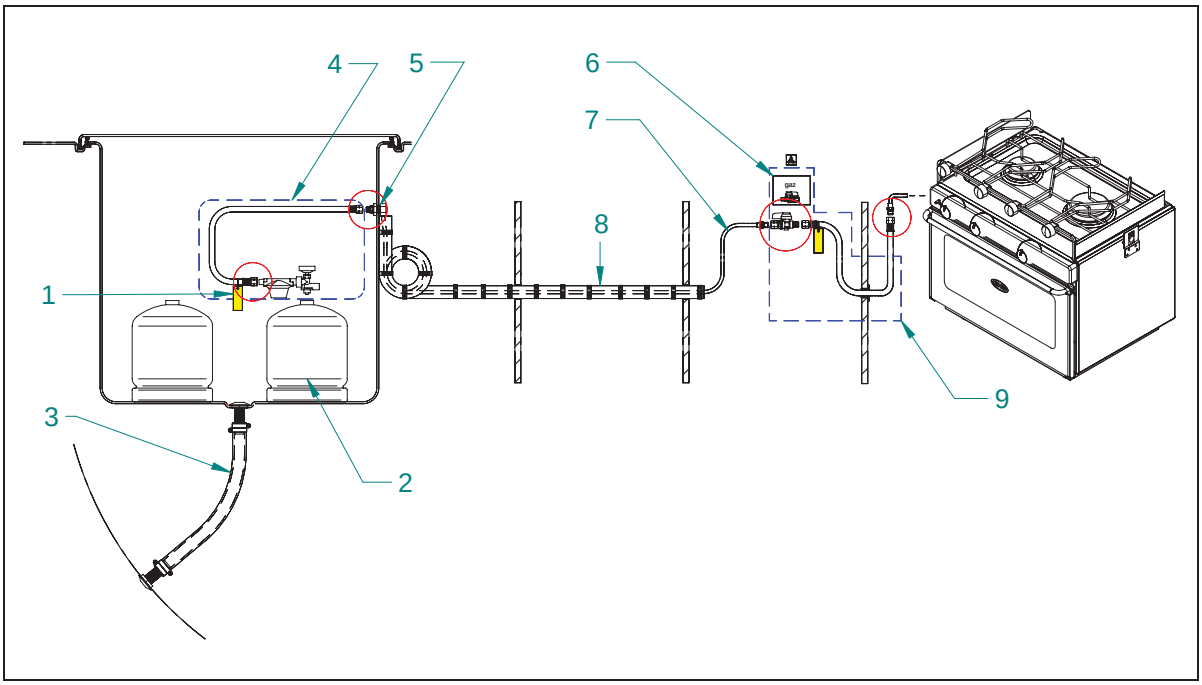
When the cooker is on, ventilate well to prevent any risk of asphyxiation.
Do not use the cooker as a means of heating.

- Never use a naked flame to check for leaks.
- Do not use a hotplate or an oven to heat the living areas.
- Equipment with a naked flame burning fuel consumes the oxygen in the cabin and gives out combustion residue in the boat. Ventilation is necessary when this equipment is used. Open the vents provided for this when using this equipment. Do not use a hotplate or an oven to heat the living areas. Never obstruct the vents provided for ventilation.
- Never leave the boat unsupervised when equipment using LPG with a naked flame is on.
- Do not smoke or use a naked flame when replacing LPG bottles. Close the tap on the empty bottle before detaching it to replace it.
- To ensure sufficient ventilation, make sure that you open the hatches or ports near the hotplate when using it.

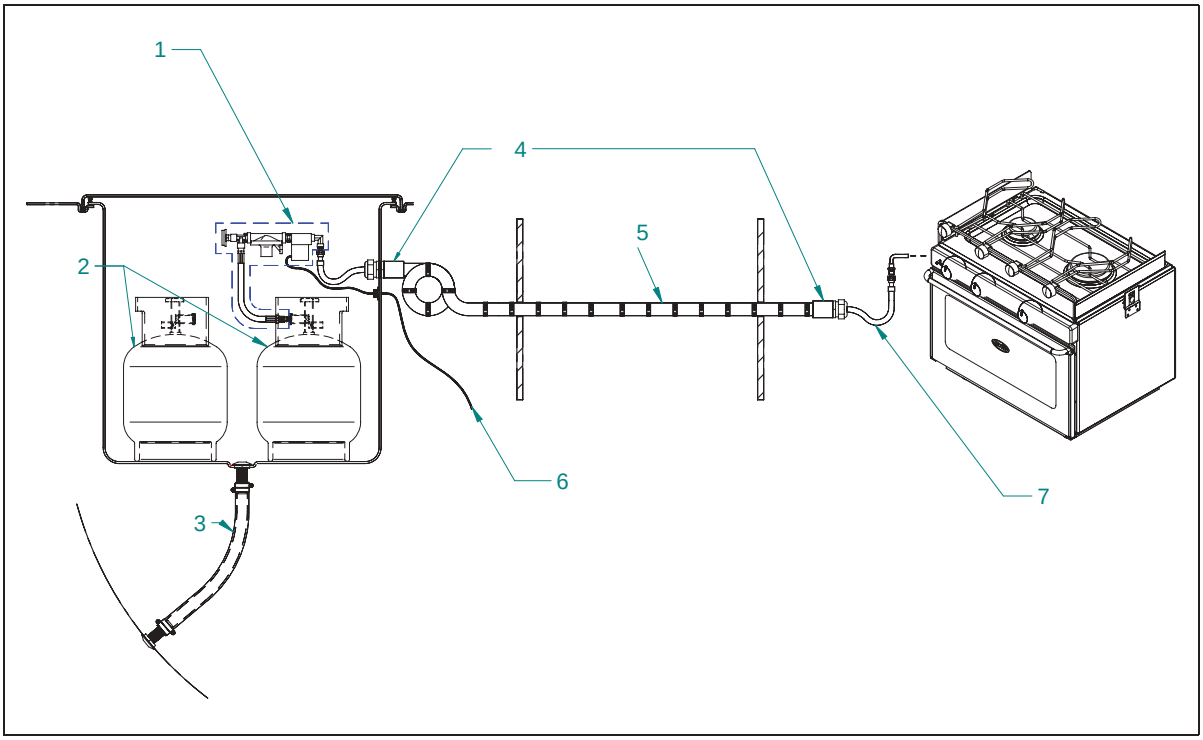
- Do not use solutions containing ammonia (ammonia, which is present in certain soaps and detergents, attacks brass connections. Although the damage may at first be impossible to detect, the cracks and leaks may appear several months after the contact with the ammonia)).

8.2 LAYOUT DIAGRAM

Version: Europe



Reference	Designation
1	Regulator valve
2	Gas cylinder
3	Drain
4	Connection kit - gas bottle
5	Rubber washers
6	Pictogram
7	Connection kit - gas copper
8	PVC girdled sleeve
9	Gas appliance connection kit



Reference	Designation
1	Regulator valve - 12 V
2	Gas cylinder
3	Drain
4	Stuffing box
5	PVC girdled sleeve
6	Electromagnetic valve - 12 V
7	Plastic propane pipe

9 DOMESTIC APPLIANCES

9.1 FRIDGE

General points

- The fridge is composed of 3 components: the compressor, the evaporator and the condenser. These components are connected by a closed circuit refrigerant gas circuit. The fridge is air-cooled.

- The fridge is DC powered. It is designed to chill food and drink. Any other use is dangerous and forbidden.

- A breaker protects the electrical circuit.

- The thermostat is in the inside compartment of the fridge. It enables the selection of the desired temperature setting for the inside of the fridge.

- The refrigration power can be affected by:
    - The ambient temperature,
    - The quantity of food to chill,
    - The frequency of opening the door.

Maintenance

- Clean the evaporator with a damp cloth at least once a year. Never use cleaners which are abrasive, acid or which contain solvents for cleaning the evaporator.

- Regularly clean the fridge/icebox door seal with a damp cloth.

- Regularly defrost the fridge.

- When winterising the boat, leave the fridge door/icebox cover open to prevent mould and smells from developing.

ADVICE-RECOMMENDATION

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

- Never heat or use tools to defrost the inside of the fridge more quickly (risk of damaging the interior surface).

- Never obstruct the heat exchanger of the fridge.

Fridge
Location: Galley

9.2 MICROWAVE

General points

- The microwave is AC powered.
- A breaker protects the electrical circuit.
- The microwave is designed to reheat food and drink or to cook food. Any other use is dangerous and forbidden.
- The microwave must never be started when empty.
- Remove all foil or metallic elements of the packaging before putting food in the microwave.
- Remove hermetic coverings from the packaging before putting food in the microwave.

Starting up

- Use the switch on the chart table to select the power source (shore power or generator).
- Put the microwave circuit-breaker in the ON position.

Maintenance

- Regularly check the door seals.
- Regularly clean the inside of the fridge with a damp sponge.

Location: Galley

9.3 HOT PLATE

General points

- The hob runs on an AC power supply.
- A breaker protects the electrical circuit.

Starting up

- Use the switch on the chart table to select the power source (shore power or generator).
- Turn the hob circuit breaker to ON.

Location: Galley

Never allow children to use the domestic electrical equipment unsupervised.

ADVICE-RECOMMENDATION

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

10 AUDIO-VISUAL EQUIPMENT

10.1 TELEVISION

General points

- The television is powered by AC provided by the DC/AC invertor which is powered by the service batteries. The inverter has an ON / OFF button.
- A circuit-breaker protects the circuit.
- Pre-cabling for the aerial is already installed on the boat.

Starting up

- Start the AC/DC inverter.
- Switch on the television.

Layout of components: Saloon

10.2 HIFI

- The sound system is DC powered.

- The sound from the TV or from the DVD player is amplified by the boom box and the speakers.

- The sound from the TV comes out of the integral speakers.

- The sound from the TV can come from the speakers if AUX is selected on the DVD player.

- The sound from the DVD player comes from the speakers.

- The sound from the radio comes from the inside and outside speakers. It is possible to select either outside or inside speakers by adjusting the balance control.

ADVICE-RECOMMENDATION

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

Radio

Base box (Bass speaker)
Access: Pilot seat

USB socket
Location: Steering station

Interior speaker

Outside loudspeaker

11 ONBOARD COMFORT

11.1 AIR CONDITIONING

General points

- The air-conditioning is powered by alternating current.
- The air-conditioning cools the air temperature inside the boat (only when the boat is floating in water).
- The cooling circuit consists of one or more compressors that operate independently. A compressor is called "reversible" because it can heat the boat if the sea water temperature exceeds 13°C.
- In winter, you can programme the dehumidifier function on the airconditioning controls.
- The refrigeration compressors are made by one or two seawater pumps. These pumps are run on AC voltage and are master controlled by one or two can relays.
- Sea water is evacuated through a through-hull fitting equipped with a valve, located above the waterline. Each compressor has its own through-hull evacuation fitting. It is advisable to check the flow of water visually once the air conditioning starts running.

Operation

Before starting the engine::

- Open the raw water intake valves and evacuation valves;
- Make sure that the control panel is in the STOP position;
- Use the switch on the chart table to select the power source (shore power or generator).
    - If using shore power: plug into the shore power socket;
    - If using the generator: before turning on the air conditioning, leave the generator running for about 3 minutes.

The air conditioning is running:

- Switch the air-conditioning circuit-breakers ON.
- Select the temperature of each compressor using the control units.

- Refer to the manufacturer's instructions for use and maintenance.
- When the air-conditioning is running, check visually that the sea water has been fully drained.
- Never start the generator when the climate function is already on.
- Always turn off the air conditioning before turning off the generator.
- Regularly check and clean the sea water filter placed on the sea water intake through-hull fitting.
    - Close the sea water intake valve;
    - Unscrew the top of the filter;
    - Clean the strainer;
    - Put everything back in place.
- Clean the air filter (located in the compressor) regularly for maximum performance of the installation.
- Clean the cooling coil at least once a year.
- To prevent the air-conditioning circuit from freezing: never run the system when the seawater temperature drops below 5 degrees C.
- Winter Storage: drain the whole sea water system.
- The cooling gas circuit needs no maintenance.