Our quality

Your safety and boat pleasure

MAREX CONGRATULATES YOU WITH YOUR NEW 370 AFT CABIN CRUISER (373)

You are now the owner of quality product from MAREX. Your boat is build by the highest standards of safety and quality for your safety and pleasure.

The handbook is written so that you as a boat owner can have the best possibilities to get experienced with the boat and its functions. The handbook contains important information about handling, safety, systems, equipment mounted or delivered with the boat. You will also find useful information about use and maintenance.

It is recommended that you make yourself acquainted with the boats maneuvering ability and properties before you start to use it, regardless of previous boating experience. Your local dealer can assist you in finding an instructor or boating school.

Please study the handbook carefully before using the boat.

Producer:

MAREX BOATS UAB

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Article I. GENERAL

The handbook is written according to EN-ISO-10240 -

Type	:	***Marex 373 AFT CABIN CRUISER***
Construction category :		*B*
Approval	:	*Type approval by Det Norske Veritas,* *Type certificate nr. RCD-B-405* *See copy enclosed in divider nr 5*

The boats CIN number (Craft Identification Number) is engraved aft of the boat, under the fenderlist starboard side.

Remember to sign for the reception of the user handbook in divider nr. 6!

TAKE CARE OF THE USER HANDBOOK AND KEEP IT FOR THE NEXT OWNER OF THE BOAT!

Section 1.01 0.1 DIVIDER nr 7. contains a list of installed equipment in your boat.

Section 1.02 0.2 Symbols used in the book

(D) DANGER:

The ”D” warnings in the book or in the installed component own user manual MUST be followed to avoid personal injury or serious material damage.

(W) WARNING:

The warnings must be followed to avoid damage to boat or equipment.

(C) CAUTION:

This should be remembered to avoid damage to persons or equipment.

Description:

This is the description of location of the equipment or component.

Instruction Manual:

Read the separate instruction manual/ user handbook for this equipment. This is placed in the ”User bag” enclosed in the boat.

Section 1.03 0.3 Construction categories

EU-directive 94/25/EC' defines the following categories.

Construction categories:

A. OCEAN: Designed for extended voyages where conditions may exceed wind force 8 (Beaufort scale) and significant wave heights of 4 m and above, and vessels largely self-sufficient.

B. OFFSHORE: Designed for offshore voyages where conditions up to, and including, wind force 8 and significant wave heights up to, and including, 4 m may be experienced.

C. INSHORE: Designed for voyages in coastal waters, large bays, estuaries, lakes and rivers where conditions up to, and including, wind force 6 and significant wave heights up to, and including, 2 m may be experienced.

D. SHELTERED WATERS: Designed for voyages on small lakes, rivers, and canals where conditions up to, and including, wind force 4 and significant wave heights up to, and including, 0,5 m may be experienced.

Boats in each Category must be designed and constructed to withstand these parameters in respect of stability, buoyancy, and other relevant essential requirements, and to have good handling characteristics.

The actual use of the boat is on own risk. Read all the warnings in the user manuals.

Section 1.04 0.4 About this user handbook.

- ✓ This handbook is a part of the documentation that follows the boat. The handbook as one general part and one specific part intended for your boat only.
- ✓ Included in the boat is a "user bag" that contains the handbook and separate instructions..

- ✓ This "user bag" is considered a part of the boat and must be included in the boat for future owners.
- ✓ Marex is continuously developing the quality of its products. This book contains information updated at the time of the print of this book and may therefore deviate from your boat. Please contact Marex or your local dealer if questions regarding the user manual should appear..

- ✓ This handbook is adjusted to a standard equipped boat.
- ✓ Many Marex boats are custom made. Equipment that is not of significant importance to the safety or stability of the boat is not incorporated in this user handbook.

Article II. TECHNICAL DATA

Section 2.01 0.5 General Technical data

Boat type : Marex 373 AFT CABIN CRUISER
Construction category : B

Section 2.02 0.6 HULL

Type	Measurement	Metric	Line
Length over all incl/ bowsprit and platform (LOA)	11301	cm	
Length hull waterline (LW)	898	cm *)	
Transport height without lantern mast and mounted extra equipment (Transport height excluding the rudder)	341	cm *)	
Transport height without lantern mast and mounted extra equipment (Transport height including the rudder)	368	cm	
Total height from bottom to top lantern mast including flagpole.	424	cm *)	
Height from the waterline (Sailing height) with lantern mast including flag pole	370	cm *)	
Height from the waterline (Sailing height) without lantern mast, excluding flagpole	341	cm *)	
Height from the hulls keel to the top of the lantern mast including top lantern	424	cm	
Height of the mounted and removable lantern mast	83	cm	
Marex cradle height	10	cm	
Beam excluding fender list BOA	350	cm	
Beam including fender list BOA	355	cm	
Beam of the boat waterline BW	306	cm	

Displacement of empty boat single engine	6400	ca. kg*)	
cm* / kg*) standard boat and weight according to single Volvo D6 – 435			

Section 2.03 0.7 Engine and SHAFT

Engine type : Marine diesel, single shaft (Seatorque or Clements).

Max recommended effect
Single engine : 320kW (435 Hp)

Section 2.04 0.8 Electric system

Voltage : 12V DC/220V AC
Starter battery : 100 Ah
Service batteries : 4 x 100 Ah

Section 2.05 0.9 Capacities

Fuel tank : 660 liters
Water tank : 385 liters
Septic tank : 120 liters
Lens pump - Manual :
- Engine room : 0,5 liter per stroke
- Front cabin : 0,5 liters per stroke

Lens *pump - Electric:*
- Engine room : max 70 liter/min
- Front cabin : max 70 liter/min

Max ship weight incl. 8 Persons,
Full tanks and luggage : 7700kg
Max load incl. 8
Persons and luggage
(As shown on the producer plate) : 1000 kg
Max recommended number of persons: 8 persons

WARNING — Do not exceed the maximum recommended number of persons. Regardless of the number of persons on board, the total weight of persons and equipment must never exceed the maximum recommended load. Always use the seats/seating spaces provided**.**

When loading the craft, never exceed the maximum recommended load. Always load the craft carefully and distribute loads appropriately to maintain design trim (approximately level). Avoid placing heavy weights high up.

Article III. SAFETY

We summarize the important information for safety aboard. A great deal of the information will be repeated later in the user manual, but Marex signify the importance for you as a customer and user of the boat that this information is easy accessible in a stressed situation.

What's described should be studied by the customer:

Section 3.01 0.10 General

(W) WARNING

Never:

- ✓ let objects block the emergency exits –doors and hatches
- ✓ let objects hinder access to the fuel stop valve, lens pumps and electrical switches..
- ✓ let objects hinder access to fire extinguishers.
- ✓ use gas lights
- ✓ change any of the boats technical systems –specially the gas fuel and electrical systems.
- ✓ fill the fuel tank while the engine is running or while the cooker or heater is in use.
- ✓ smoke when handling fuel
- ✓ use the rails to pull anything after the boat. Never use the rails as mooring.
- ✓ place fenders at the exhaust outlets for heater and cooker.

Always:

- ✓ inspect the boat in particular the engine room for leakages before every turning on the engine.
- ✓ have cabin doors closed during sailing. The weight of the doors can make the doors slam. Also close all portlights and windows during rough weather conditions, or while planing.
- ✓ keep lensing pump free from impurities.
- ✓ check for leakage or incomplete combustion or smoke from the fuel system,
- ✓ check fuel level.

(i) Gas installation and leakage test instruction

READ THE INSTRUCTIONS CAREFULLY BEFORE THE LEAK DETECTOR IS INSTALLED OR USED!

Used symbols:

1.0 SAFETY

WARNING! I DANGER!

The leak detector is designed for indicating leaks in L.P.G.- systems with a maximum working pressure of **200** kPa **(2** bar).The system is supposed to be checked prior to the first time use, after a period of non-use and always when the gas bottle is changed. L.P.G. is an explosive gas, therefore smoking and open flames are absolutely prohibited when the detector is being installed or used.It is also recommended to make the function and use of the leak detector well known to all users of the L.P.G. installation. See section **3.1 O!**

2.0 INSTALLATION

2.1 We assume that the leak detector has been chosen to fit the connections and tubing of the L.P.G. installation.

2.2 Close the main valve on the gas bottle or dismount the regulator.

2.3 The leak detector has to be mounted in a vertical position after the regulator in the same space as the gas bottle or bottles are stored. Make sure that the sight glass is in full view. Stainless steel screws are included in the mounting kit (Fig. 2a).

2.4 Note the flow direction of the gas, marked with an arrow on the detector.

2.5 **IMPORTANT!** When connecting cupper tubing (8,O x 0,8 mm), the enclosed reinforcement sleeves have to be used (Fig. 2b). Hold the fitting with a spanner when tightening the nut with a second spanner. 2.6 When connecting hoses, hoses with prefabricated end fittings are recommended, and a must in boat installations according to IS0 10239 (EN 1763-1 and EN 1763-2). CE-marking from. July 1998. Other installations still allows hose clamps. If hose clamps are used, they should be the kind of hose clamps used for fuel hoses in stainless steel.

2.7 Unscrew the sight glass turning it counter-clockwise (Fig. 2c).

2.8 Fill up the sight glass till the marking on the glass (Fig. 2d).

2.9 Screw the sight glass back turning it clockwise by hand (Fig. 2e).

The leak detector is now ready for use.

3.0 TESTING

3.1 Fit the regulator and open the main bottle valve

3.2 Open the valves supplying the stove, the oven, the fridge and the heater, without activating the ignition safety devices.

3.3 Press and hold the red button for approx. 10 seconds (Fig. 3a).

3.4 If no bubbles appear in the sight glass, the system is leak tight up to the individual maneuver switch or valve of the installed device (Fig. 3b).

3.5 If bubbles appear in the glass the system is leaking (Fig. 3c)!

3.6 Release the red button and locate the leakage (Fig. 3d).

3.7 Close all the valves to the individual equipment (stove, oven, fridge and heater) and check according to 3.3. If there still are bubbles in the sight glass when pressing the red button, there is a leakage between the leak detector and the valves. Locate the leakage using a leak spray, soapy water (without ammonia) or an electronic leak tester and repair the leakage. Leaking tube fittings and hose

connections are fixed through tightening the nuts and hose clamps. If this doesn't cure the problem - change hoses and fittings.

3.8 If the leakage can't be traced to the tubes and hoses, open up the valves to the equipment one by one. Start by testing the hose connection between the valve and the equipment. If the leakage can't be found here, there is a leakage in the equipment (stove, oven etc.). If so contact a gas expert, to have the equipment repaired and tested at 15 kPa (150 mbar).

3.9 Check again in accordance with 3.1 - 3.4.

3.10 To demonstrate the function and to test the detector turn one of the burners on the stove on, and let it burn on low power. This simulates a leakage in the system. Press and hold the red button on the leak detector. The bubbles now appearing in the sight glass shows that the system is leaking (simulated by the burning flame).

It is absolutely prohibited to use a leaking L.P.G. system!
Close the main valve till the leakage has been repaired!
By uncertainty - contact a professional, testing the system at maximum 15 kPa (150 mbar).

GB - INSTRUCTIONS

4.0 EQUIPMENT WITH IGNITION SAFETY DEVICE

4.1 The leak detector can also be used for testing the ignition safety device of the equipment. Two persons are required.

4.2 Turn on for instance a burner and let it burn on low power.

4.3 Press and hold the red button on the leak detector. It is now bubbling in the sight glass constantly.

4.4 Blow out the burner and after 10 to 30 seconds the bubbling in the sight glass should stop. If more than 60 seconds are required an expert has to be contacted.

5.0 REPAIRS I MAINTENANCE

5.1 The leak detector is virtually maintenance free. If the fluid level should drop below the level mark propylene glycol must be refilled (Fig. 2c.).

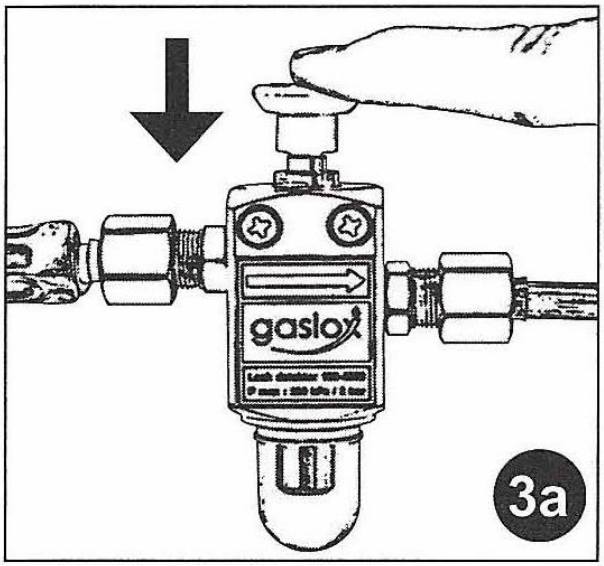
6.0 WARRANTY

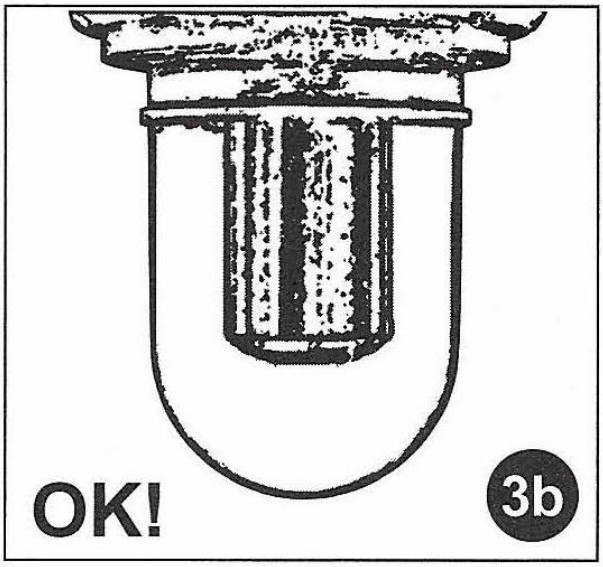
6.1 As per our current warranty regulations.

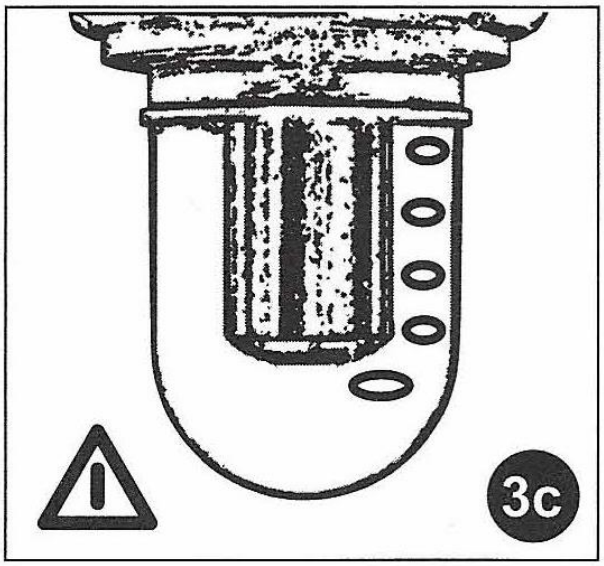
7.0 DISPOSAL AND RECYCLING

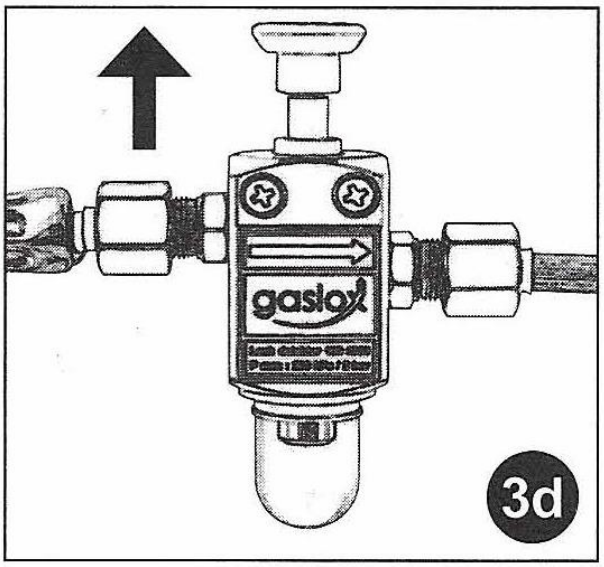
7.1 When the leak detector is not supposed to be used anymore, it has to be disposed following the local environmental regulations. The leak detector 100 4000 is approved by the Danish Governmental Gas Institute DGP (Notified Body for CE approvals) Approval number DG-3795.

TESTING









0.11 Fire

(D) 🕮 1 manual fire extinguisher 2 kg type ABC class II (powder apparatus) located:

- **Cockpit, next to entrance to front cabin**
- **The engine room has an automatic fire extinguisher system with auto discharge and auto stop of the engine. This extinguisher has an indicator in the dashboard.**

🕮 **All fire extinguishers must be checked yearly by qualified personnel. Read the instructions at the apparatus and be prepared for an emergency**

(W) Do not mount curtains or other fabrics over or close to any cooker or open flame sources.

(W) Flammable material must not be stored in the engine room. If non-flammable material is kept in the engine room it must not block access or risk contact with the engine

0.1.1 Automatic fire extinguisher

🕮 **Read the manual for Sea-Fire, enclosed in the "user bag".**

Vessels with engines larger than 120 kW (163 Hp) is equipped with a permanent fire extinguisher in the engine room. The fire extinguisher has automatic discharge by temperatures over 74° C. Indicator by the pilots position informs if the extinguisher has been discharged. The engine (s) will be stopped automatically. When the ignition is on the lamp indicator will light as long as the system is ready to be discharged. After a discharge the lamp will no longer light.

*) Sea-Fire display may deviate from what is mounted in the boat.

Indicator lamp

(C) Your boat has automatic fire extinguishing system in the engine room that uses FM200 as an active component.

☎☞◑ The engine room has a fixed installed system. **The contents can cause serious respiration problems and be fatal.**

Automatic fire extinguishing system in the engine room shown with a temperature sensor.

By automatic discharge of the contents,

- ✓ The engine stops automatically!
- ✓ Turn of the main switches.
- ✓ Evacuate the cabins.
- ✓ Grab the manual fire extinguisher and release the safety pin.
- ✓ Control the engine room for fire.
- ✓ Let the automatic extinguisher work for several minutes.
- ✓ By opening of the engine hatches, have the manual extinguisher ready and be alert.

After discharge always ventilate before entering the engine room

By fire out of control:

- ✓ Take on the emergency vests.
- ✓ Send emergency signals by radio or chart plotter, signal lights or telephone.
- ✓ Evacuate the boat.

(W) 🕮 See the separate manual in the"User bag". Do not lift or transport the extinguisher in the sensor valve. Do not drop the extinguisher. Keep the extinguisher out of reach for children.

After a discharge- REPLACE the cylinder.

0.1.2 The user/owner is responsible for:

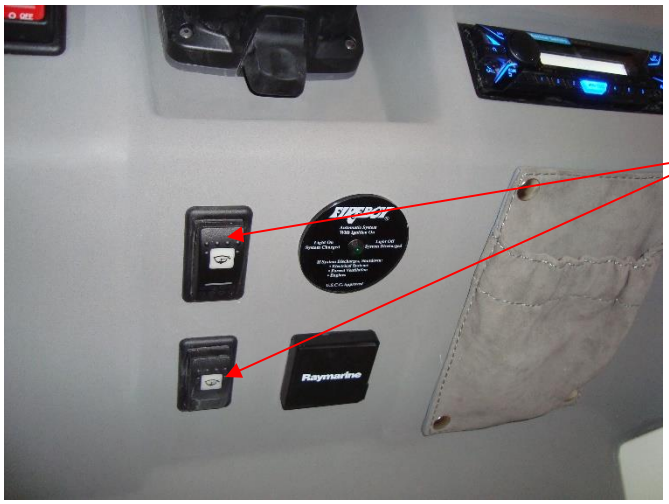
- That the extinguisher is controlled by qualified personnel at recommended times.
- That the extinguisher is replaced with working equipment.
- Inform the passengers about:
  - ✓ location and use of the fire extinguishers
  - ✓ location the emergency exits
- Assure that fire extinguishers are easy accessible.

Section 3.02 0.12 Manual lensing system

- The manual lensing system pumps out the water by hand. This system is used when the automatic system cannot be used or when you need to lens the tank room or cabin.
- Two lens pumps are placed on the aft deck, in the portside wall.
- The lens pump pumps the water out of the room the arrow is pointed at..
- One lens pump lenses the “engine room” and the aft cabin
- The second position of the valve lenses the front cabin
- **Stick the “pin” (a steel rod with a black handgrip) and pump up and down.**

Section 3.03 0.13 Automatic lensing system –Engine room

- In addition to the manual lensing there is the automatic system. This system works for the engine room, the aft cabin and for the front cabin. This is important to know. The auto-lensing is connected to a switch on the dashboard.
- Switches are located in dashboard under the steering wheel
- Then switches are operated manually symbol lights up. .
- If pump starts working automatically symbol, lights up too.



Switches for the electric lensing pump

- To test the pump: open floor hatch and check
  - if the red diode is turned on and
  - The summing tone is coming from the opened engine room

  If both points are ok, the switch appears to be in order.

Front automatic bilge pump and front intake for manual bilge pump

SAFETY PRECAUTION — Check the function of all bilge pumps at regular intervals. Clear pump inlets from debris and garbage.

WARNING

Automatic lens-pump does not replace a visual control.
Automatic lensing does not work if the batteries have a lower voltage than 11 Volt.

Section 3.04 0.14 Hull lead- through under the waterline

0.1.3 Closing-valve for seawater for the toilet.

(see enclosed drawing.. B.02.01)

The closing valves placed under the floor in the engine room.

Valve for discharging the septic

Valve for engine cooling water intake

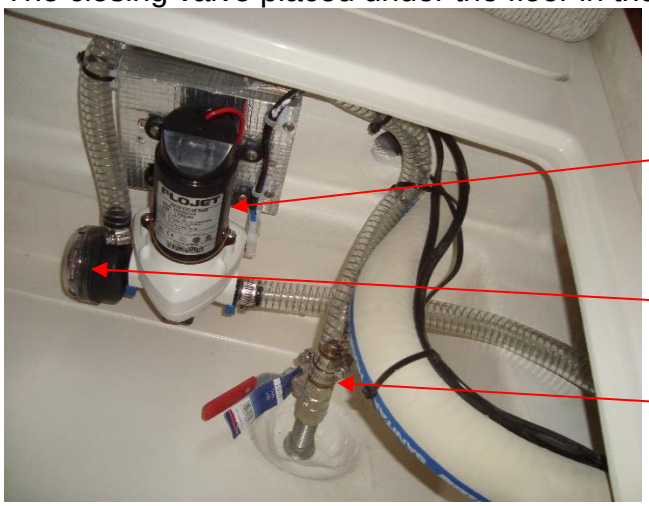
Close Septic discharge valve then emptying the septic tank through deck fitting.

The crane is placed in the engine room

(W) Parallel with the hose: open:

When the valve handle is a cross the hose it is closed:

The closing valve placed under the floor in the middle cabin.



(D) Close the toilet water inlet valve BEFORE cleaning the seawater filter for the toilet water pump.

NOTICE: It is advisable to keep the unused valves closed at all times, for prevention of eventual flooding.

(D) Then cleaning macerator pump, valve for the septic tank hose MUST be closed

(W) Control regularly for leakages. Don't let valves be open if the boat is left for a longer period.

(D) Close the valve when driving in protected waters or drinking sources.

(D) By sailing near the coast the valve MUST be closed.

(D) Close the valve when driving in heavy weather and in big waves.

0.1.4 Valve for fresh water

Section 3.05 0.15 Shore power

When the boat is connected to shore power, the ZINC anodes must be controlled often. (Seen on top of the flounder on the stern drive- over the propeller) Zink anodes are for saltwater and are standard from the engine supplier.

WARNING: Aluminium or magnesium anodes should be used for other waters than salt water depending on the salt content.

If the anodes are tired or filled with ”holes” there can be something wrong with the shore power system or the marina electric system or any near boat or a close electrical system. Disconnect immediately and do not connect until the source is found.

WARNING: A short stay of a day or two in freshwater can cause the zinc anodes to be passive due to oxidation. A mild sanding of the zinc surface will activate it again and prevent corrosion on the stern drive. Do not drive in freshwater without activating the zinc anodes.

WARNING: Galvanic corrosion can be caused by other boats or external errors in the boat environment. Damages from external sources are not a warranty claim. Please check you insurance if this is covered.

Section 3.06 0.16 Safety equipment

(D) **In most countries, safety vests or similar must be available for ALL passengers aboard.**
See to that all personnel aboard, knows the instructions for use of such equipment. Rehearse on "Man Over Board" and practice the easiest boarding of the boat from the water. This can save you and your family's life.
The hatch over the bathing ladder opens into vertical position so that the bathing ladder is accessible. Flip the ladder into the water and close the hatch. (See picture below)
A Life raft canister can be placed by the aft bench, at the bathing platform.

Section 3.07 0.17 Batteries

(D) By charging the batteries an explosive gas develops. Do not use open flame close to the batteries when charging them. The smell of rotten eggs is a clear indicator of a leakage.

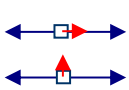
Section 3.08 0.18 Engine room

(W) Do not enter the engine room when the engine is running.

Section 3.09 0.19 Fuel tank

The fuel tanks are placed under the cockpit floor, on the sides of the engine. The closing valve for the fuel from the tank to the engine is placed near the cockpit.

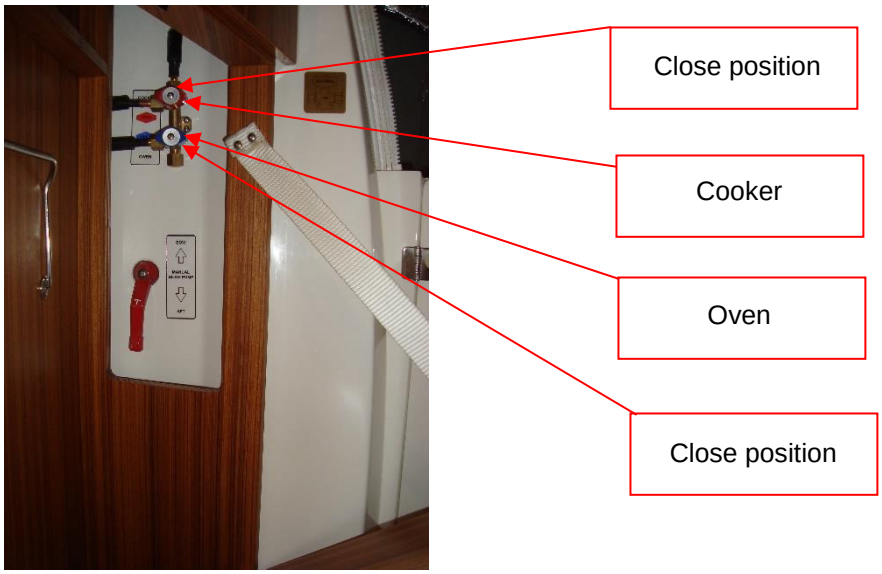
(W) Parallel with the hose: open:
When the valve handle is a cross the hose it is closed:



Section 3.10 0.20 Cooker and oven

📖 Standard equipment includes a gas cooker. The boat can also be delivered with diesel installation.

(C) Never start the cooker without checking the system.



(D) Follow the instructions in the user manual for the cooker. Remember that the cooker use oxygen to burn. The cooker must not be used as a heating oven.

📖 If LPG gas cooker is installed:

- ✓ Close the closing valves to the cooker and the valve in the compartment on the bathing platform when the cooker is not in use.
- ✓ Close the valves: before changing the gas bottles and close the valves immediately in an emergency.
- ✓ Make sure that the valves are closed before opening the safety on the bottle.

🕮 Test the gas system for leakages at a regular basis. Check all connections for leakage by:

- ✓ Testing and observing the bubble-leakage-tester in the compartment on the bathing platform.
- ✓ Manually test the system by adding soap and water to cranes and valves. Make sure the cooker is closed and the bottle opening –the pressure reduction valve on the bottle- is open. Look for bubbles.

(D) If you discover any leakage, close the system and immediately release the gas bottle valve- the pressure reduction valve- and make sure an authorized person repairs the system before you use it further.

The compartment where the gas bottle is kept is drained and the gas which is heavier than air will be rained out under the bathing platform.

(D) The pressure reduction valve must never be in contact with saltwater. If it gets in contact with saltwater it will start to corrode. If any corrosion is seen it must be changed before you use the gas system.

The pressure reduction valve must be controlled often and should be replaced every year.

(D) Must be changed if it gets in contact with salt water because it will corrode.

Test button for leakage. Open the gas tank valve and push the red button. If you can see bubbles the system has a leakage between the bottle and the cooker. Close the valves, remove the bottle and call for assistance.

Disconnect the pressure reduction valve when not in use.

(C) Do not use detergents containing ammoniac.

(D) Never use open flame to check for leakage!

(W) Fuel burning devices with open flame consumes oxygen and produces exhaust.

Ventilation is important when the device is in use. Keep the door or a window open. Don't use the cooker as a heater.

Do not block the access to any of the gas system components.

Keep the valves for empty gas bottles closed and disconnected. Keep hatches covers and plugs in place. Store the spare gas bottle in ventilated rooms or in a gas tight container with certified ventilation.

Never use gas bottles or boxes for storing of other equipment..

(W) Never leave the boat with LPG gas devices in operation/ in use.

(D) Do not smoke or use open flame when changing the LPG bottles.

LPG GAS hoses must be controlled at a regular basis minimum one time per year. Change immediately if any hose are damaged or old.

Do not use the LPG gas if the boat is not in balance.


Read the LPG gas user manuals and installation instructions. Read the manual for LPG gas leakage tester.

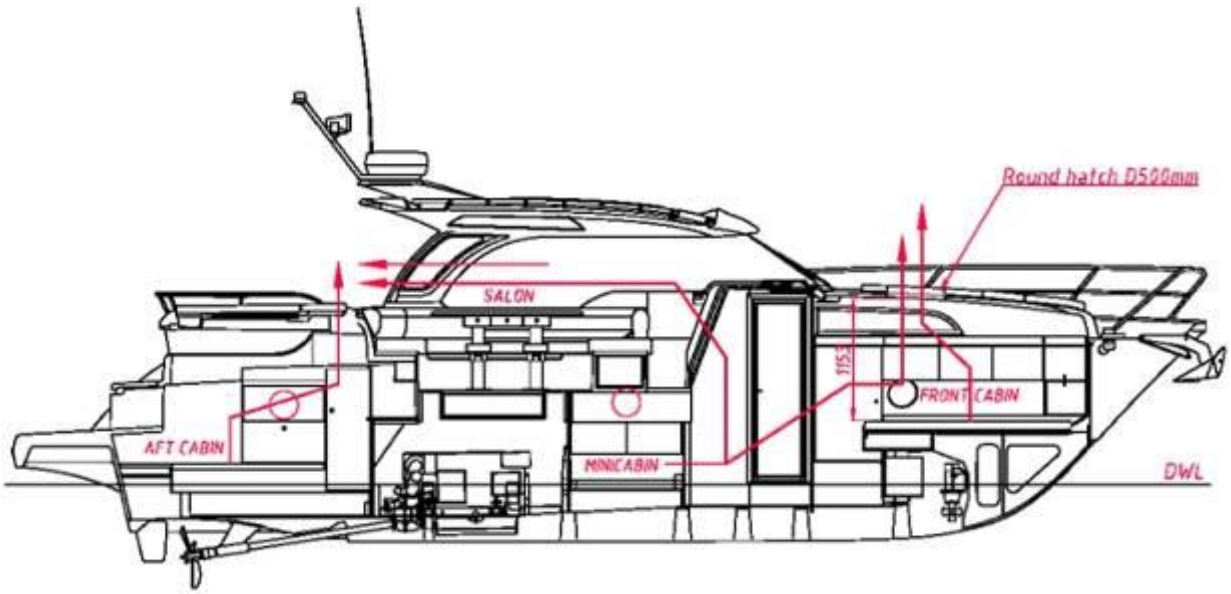
Section 3.11 0.21 Emergency exits

(F) Emergency exits front cabin:

- ✓ Door from front cabin to the cockpit opening size 50 cm
- ✓ Hatch in front cabin roof opening diameter Ø 48 cm

(F) Emergency exit aft -cabin:

- ✓ Door from aft-cabin to the cockpit Opening size: 55 cm



Section 3.12 Corrosion protection

Boat has Zink anodes installed from factory. Anodes are manufactured for different environments and will react to those. There are some general recommendations when choosing anodes:

Zinc – Salt water
Aluminum – Brackish
Magnesium – Fresh water

Caution! Zink and aluminum anodes then used in fresh water become covered with write crust of oxide which will stop the anode from working when returned to salt water. Zinc anodes react same way in brackish water while the aluminum anodes will work effectively in rivers estuaries and other conditions.

Magnesium anodes are not designed for use in salt water so if you are taking your boat into salt water for more than 7 days you should consider changing the anodes. The same can also be applied for Zink and aluminum anodes if moving between different waters.

It is important to inspect the anodes after shifting water and if necessary also clean them. The anodes can also be pacified just by being away from water.

If an anode for example looks yellow or is covered in white crust it has been pacified and need to be brushed or changed to provide protection. This can be done by brushing the anodes using sandpaper. Anodes provide **no protection** while they are **in pacified form.**

NOTICE! Never use a wire brush with steel bristles. Use sand paper without iron or iron oxide otherwise the anode might be pacified

Make sure to inspect anodes on regular basis and change them if more then 1/3 has been used up by corrosion. Very heavy anode used up during short time or no noticeable use after long time (like a year) might indicate a problem with boat corrosion protection and should be inspected.

Neglecting to this can cause severe damage to your boat

Article IV. DRAWINGS AND TECHNICAL DESCRIPTIONS OF THE BOAT

Section 4.01 0.22 General

These drawings show a standard boat.

Section 4.02 0.23 Arrangement and exterior drawings

In divider number 2, are the following drawings enclosed

MAREX 370-dwg.001	Main particulars
MAREX 370-dwg.002	General arrangement - Interior - Port
MAREX 370-dwg.003	General arrangement – Interior - Starboard
MAREX 370-dwg.004	General arrangement – Interior - Top view
MAREX 370-dwg.005	General arrangement – Exterior - Top view
MAREX 370-dwg.006	Fuel system – 1 diesel engine

Section 4.03 0.24 Technical systems

0.1.5 Drawings of the technical systems

Marex presents the following drawings in divider number 4 for 370 Aft Cabin Cruiser.

MAREX 370-dwg.007	Trough hull fittings
MAREX 370-dwg.007-2	Trough hull fittings-starboard
MAREX 370-dwg.007-3	Trough hull fittings-portside
MAREX 370-dwg.008	Access hatches
MAREX 370-dwg.009	Draining and lensing systems
MAREX 370-dwg.010	Engine ventilation
MAREX 370-dwg.011	Principal drawing 12V system
MAREX 370-dwg.012	Illumination
MAREX 370-dwg.013	Water system
MAREX 370-dwg.014	Septic system
MAREX 370-dwg.015	Fire extinguisher
MAREX 370-dwg.016	Emergency exits
MAREX 370-dwg.017	Mooring and towing
MAREX 370-dwg.018	Anchor winches and side thrusters
MAREX 370-dwg.019	Heating and defroster system
MAREX 370-dwg.020	Principal drawing 230V system
MAREX 370-dwg.021	230V Electric system
MAREX 370-dwg.022	Switch panel
MAREX 370-dwg.023	Main switch
MAREX 370-dwg.024	WC/Pump system
MAREX 370-dwg.025	Steering wheel scheme

0.1.6 Pictures and description of installed components

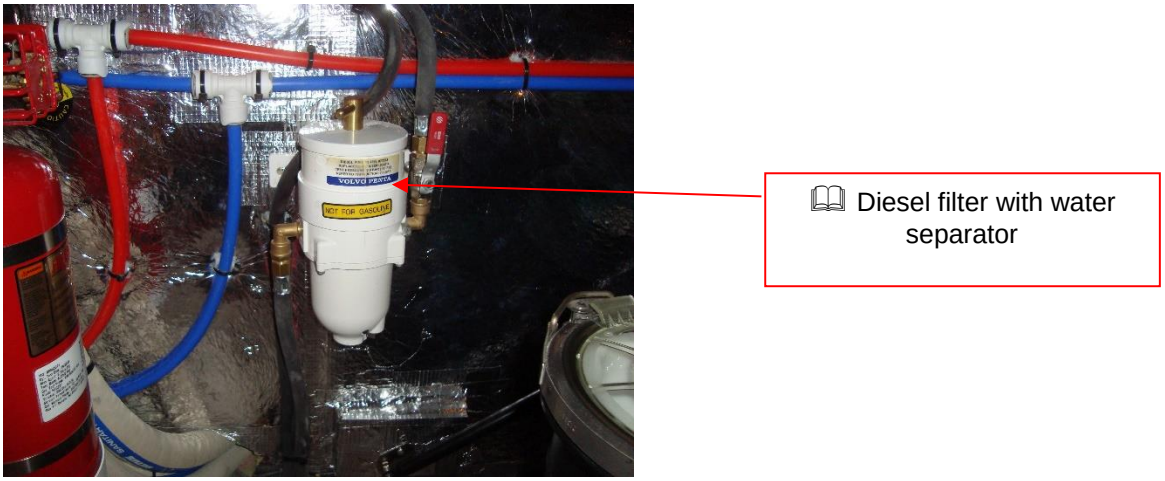
In divider 7 in this handbook you will find pictures with descriptions of installed components in a standard Marex 370 Aft Cabin Cruiser.

Section 4.04 0.25 The fuel system

The fuel system consists of the fuel tank in its own compartment, hoses connected to the tank shown on the drawings. The tank is made of aluminum Sheet Metal. For maintenance and control of this system, please contact a marine service work shop. Filter/water separator in the engine room must be checked on a regular basis. If any impurities or water is discovered in the separator contact the service workshop.

There are 2 tanks placed under the cockpit floor, on each side of the engine.

Closing valve for fuel to the engine is mounted near the fuel filter, and there is also an emergency valve on the sitting group wall in the cockpit.



0.1.7 Common errors

- ✓ Blocked tank ventilation
- ✓ Closed position of closing valve
- ✓ The diesel filter before the engine is full of water
- ✓ The diesel filter ”fine filter” is full, 🕮 read the user manual for the engine.
- ✓ Defect fuel pump on the engine
- ✓ Object in the tank that can block the flow inside the tank.

Section 4.05 0.26 Draining system

Draining of the cockpit floor:

The floor frame around the engine room drains the water down and out trough hull on port side.

Draining frame leads water down under the floor

There is also another draining collector under the floor, just near the starboard door, and leads the water down and out trough hull on starboard side.

Starboard cocpit draining

Draining of the floor of the aft deck:

- ✓ Self draining floor that drains the water into a floor frame.
- ✓ The floor frame drains the water through:
  - Outlet aft: the water drains out to the bathing ladder box.
  - Outlet starboard side aft.
- ✓ The aft deck floor has draining through the two collectors in the aft deck floor. The water is led through the hull..
- ✓ Please control at a regular basis, .that the draining has free flow of water.

Section 4.06 0.27 Lens pump

Manual lensing pump:

- ✓ Is placed on the starboard stairs.
- ✓ One lens pump lenses both, the engine room and the front cabins area. To choose which area to lens, use the 3 way valve located inside the pantry.

Automatic lensing pumps:

- ✓ The automatic lensing system works for the engine room, front and aft cabin.

(W) Warning

An automatic lens pump does not replace the visual checking of the engine room.
Automatic lensing does not work if the batteries have lower voltage than 11 Volt or less.

0.1.8 Common errors

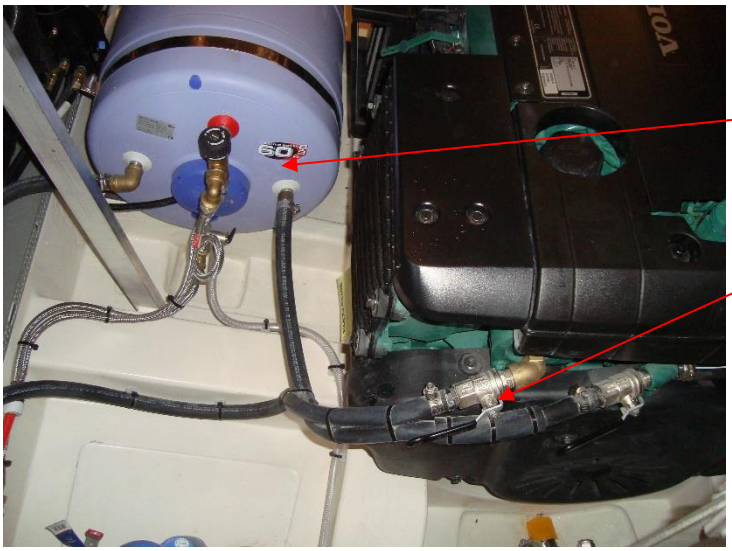
- ✓ The automatic fuse placed in main switch panel must be reset.(20 amp) and the red light has stopped illuminating .
- ✓ The automatic switch physically blocked.
- ✓ The pump inlet is blocked. This may also happen to a manual pump.

Section 4.07 0.28 Fresh water system

The freshwater system consists of hot and cold water from the water tank via the hot water tank heated by the engine or shore connection.

- ✓ Sink in the toilet room (starboard)
- ✓ Shower and sink in the shower room (port)
- ✓ External shower on the bathing platform
- ✓ External fresh water outlet in the bow
- ✓ Sink in the pantry
- ✓ Sink in the aft cabin

When the engine is running it heats via a hot water heat exchanger. By use of the shore power system the water is heated by electricity. The water is never heated by help of the batteries.



The system has an own pressure water pump that starts automatically. It starts when the pressure falls i.e. by opening a tap.

The shower has a separate lensing pump to drain the water.

- Read the user manual for the hot water tank and the pressure water pump.
- Read the user manual for the shower draining pump.

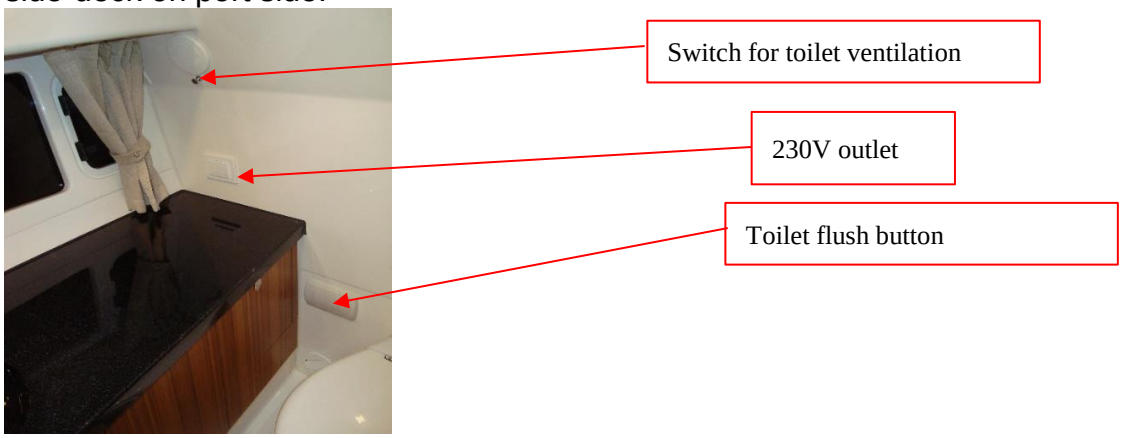
0.1.9 Common errors

Errors that may prevent free flow of water.

- ✓ Blocked air ventilation of the water tank.
- ✓ Blocked / full freshwater filter.
- ✓ Automatic fuse for the freshwater pump has been released. For resetting the fuse see the fuse panel placed starboard at the pilot position. (25 amp) Marked "Water pump" The red light is not lighting if the fuse is working correctly.
- ✓ Micro-switch at the bottom of the pump is not working correctly.
- ✓ Leakage in the system. Check all hoses and fittings.
- ✓ The shower on aft bathing platform is not closed.

Section 4.08 0.29 Septic system/ Black water system

The system consists of the toilet (the head) and the septic tank. The system works by discharging the black water through a bottom valve or by suction hose emptying the tank by a stationary vacuum machine through a filler-fitting at the side-deck on port side.



0.1.10 Common errors

Errors, which may stop or block the discharge:

- ✓ No water into the toilet-
  - Blocked inlet for the water into the toilet (plastic pieces, seaweed etc.)
  - Filled filter for the toilet pump
  - No power on septic flushing pump
  - Automatic fuse for the septic pump must be reset. Placed in the fuse panel starboard side. (25 amp) Marked "TOILET" The red light in the panel will be lit if the circuit is broken.
  - No power to the toilet. The fuse has to be reset

- ✓ Blocked macerator in the toilet bowl
  - Due to a block in the hoses
  - Through use of too much or bad toilet paper.

    - ➢ **Tip:**
      - Fill a 1 ½ liters bottle with a strong mix dish wash detergent and water, place the bottle upside down into the toilet and squeeze hard to flush the toilet open.
      - Empty a strong mix dish wash detergent and water, into the toilet bowl and let the mix work for some time. Pump in water into the bowl and try to flush
      - Demount the engine in the Macerator. Remove the plastic cover, unscrew the four screws and clean. Caution: Make sure to place the rubber SIMRING in correct place. The toilet will leak if otherwise.

      .

- ✓ Blocked air ventilators can prevent emptying the toilet and tank and can cause bad smell.
  - ➢ **Tip:**
    - Flush with water into the ventilators from the outside of the boat and into the ventilators. The septic can have dried and become "composted"
  - ➢ **Tip:**
    - Fill the septic tank with freshwater and sanitary liquid through the septic tank outlet in the deck (the fitting)

- ✓ Discharge through hull fitting /valve is not working correctly (macerator pump in engine room)
  - No power on the macerator pump 25 amp) Marked "12 V CABIN" The red light will then turned on.
  - Macerator pump blocked by not dissolved paper or not dissolved septic.

- **Tip:**
  - Close the bottom valve.
  - 🕮 Demount the front of the macerator. Clean the plastic ”lips” mounted before the pump.

✓ Don’t go to bed with a full tank. If the daylight heats a full tank, stinking gas will appear as a result of expanding material.

Section 4.09 0.30 Use of the septic tank

Always use approved sanitary liquids in the toilet.
Always use toilet paper that dissolves in water.
Normal kitchen paper must NOT be used in the toilet.
Never place tampons, pads or cotton into the toilet.
Inform your passengers and guests

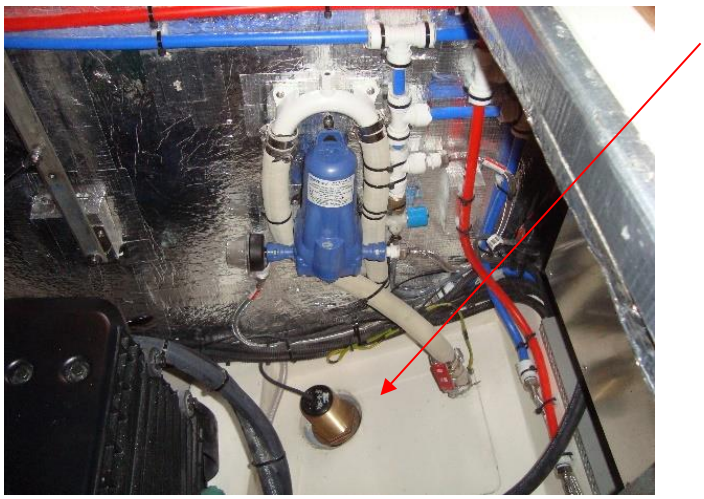
Crane and filter are placed under the floor in the entrance to the cabins.

🕮 Read the user manual for the pressure water pump for the toilet.

After use, the toilet is emptied into the septic tank.
Caution! At full tank further use will lead to over pressure and leakage in the system.

Discharging the septic tank into the seat through the bottom valve:

- ✓ Electric pump in the engine room port side
- ✓ The pump is controlled with a switch in the WC room marked ” Waste”



Sptic tank bottom discharge valve in engine room.

*Discharge of the septic tank by the **deck** fitting:*

The bottom valve MUST be closed before the septic is sucked up with a hose- **Caution! Water can be sucked up into the tank if the valve is not closed.**

Section 4.10 0.31 The electric system

The system consists of two main parts:

- 12 Volt Direct Current from the batteries
- 220 Volt Alternating Current by the use of shore power. Be aware that you do not have unlimited power capacity. Use the power carefully and turn off the light in unused rooms..

Voltage	:	12V DC/220V AC	
Starter battery	:	100 Ah	(Main switch marked ”**START**”)
Service batteries	:	4 x 100 Ah	(Main switch marked ”**SERVICE**”)
Battery charger	:	220V AC	

Service battery bank located in aft cabin under bed

Start battery and charger located in engine room

12 Volt system:

- ✓ Batteries:
  - *The Start battery serves:*
    - Starting the engine
    - The electronic to the engine(s)
  - *The Service batteries serves:*
    - Pumps
    - Electronic equipment

- Cabin lights and courtesy lights
- Anchor winches
- Radio and TV
- Various service devices
- Bow propeller
- Aft thruster

📖 See enclosed drawings of the switch panel and main switches.

230 Volt system consists of:

- ✓ Maintenance/charging the start and service batteries.
- ✓ Hot water boiler
- ✓ Circuit protection breaker located under seat in cockpit

Voltage sensitive charge relay (VSR):
Relay is normally open, so banks are separate and service equipment can't discharge start battery (and other way around). Then batteries are charged from shore power VSR connect start battery only after service batteries are fully charged. Then boat is underway and start battery is charged from engine alternator VSR connects service batteries only after start battery is fully charged. Diode on VSR indicated then two battery banks are connected together

- ✓ Power **must not** be connected to the hot water tank when the tank is empty. If this happens read manual for the hot-water tank.
- ✓ Service outlets 220 Volt in the boat.
  - Standard outlets are:
    - 1 sockets on starboard side in engine room (water heater)
    - 1 by the pantry
    - 1 in the WC room
    - 1 socket in the aft cabin near the wash basin
    - 1 socket in the front cabin near the side windows

(D) Danger

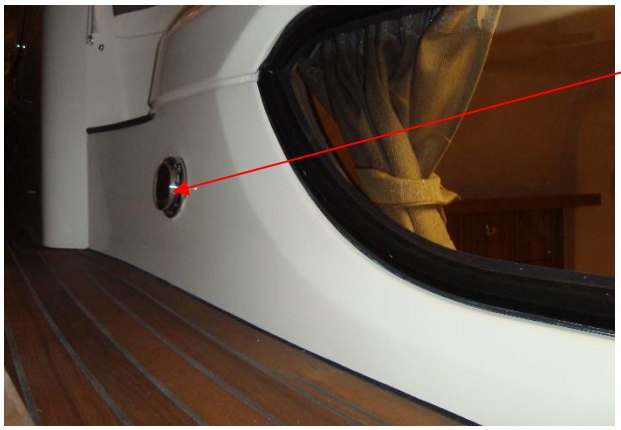
Never:

- ✓ Work on the electrical system when the system is activated.
- ✓ Change the electric installation or relevant drawings. Use an authorized marine electric technician.
- ✓ Change or divert the power circuits or fuses.
- ✓ Install or replace electrical components with higher voltage than the system permits.
- ✓ Leave the boat unattended with the electrical system activated except for the systems for the automatic lens pump, the fire protection and the alarm

- ✓ Use start-cables without spark protection/ignition protection. This can damage the electronic system for the engines!

📖 Read the instruction manual for the battery charger

Some models have a red diode light ignited when the shore connection is in use.



When 220V is plugged in, the red LED light is on.
Always plug the connection to the boat first and disconnect it after disconnecting on land.

(D) **DANGER**

Do not let the shore-connection-cable fall into the water. This can cause **DAMAGE AND DEATH!** An electric field can be created and is a danger to life. Read this again!

(D) To minimize the danger of shock and fire:

- ✓ Turn off the switch to the shore connection in the boat before any connection or disconnection of the cable power
- ✓ **Always** Plug/connect the boat first and then the electric circuit on land.
- ✓ **Always disconnect** /unplug on land and then on the boat.
- ✓ Make sure the cover of the plug is in use.
- ✓ Do not change the connections in the systems
- ✓ Use only certified cable.
- ✓ Use grounding cables (green or green with yellow stripe) on metal covers on the 220V electric equipment.

0.1.11 Maintenance and controlling

(D) **When the boat is connected to shore power, the ZINC anodes must be controlled often**. (Seen on top of the flounder on the z-drive- over the propeller)

If the anodes are tired or filled with ”holes” there can be something wrong with the shore power system or the marina electric system or any near boat or a close electrical system. Disconnect immediately and do not connect until the source is found.

(D) Clean the battery surfaces to **prevent short-circuits on a regular basis**

See to that the ventilation holes are open so that gas can exit *).

The battery poles and the cable shoes must also be kept clean and always are greased with acid free fat/vaseline to prevent corrosion.

Fluid level/nouveau in the cells*)

- ✓ Control the levels by opening the plugs on the batteries and control the level. It should be 5 mm over the plates. If the level is too low fill it up with distilled water. Do not use water from the tab. It contains minerals or pollution and can destroy the batteries.

(D) By controlling the liquid level do not use open fire. The gas that develops by charging is explosive. That case can be described as bad smelling – like rotten eggs. Do not use open fire if you smell something strange similar to this until the cause is known or found.

*) does not apply to GEL batteries

0.1.12 Common errors

See enclosed manual from the battery supplier.

Section 4.11 0.32 Exhaust system

Consist of standard gas/water hose system, with waterlock and sound damper, and leaded trough hull at stern.

Exhaust hose going to waterlock located in engine room

Section 4.12 0.33 Ventilation system for the engine

The engine room is ventilated through the side openings on the hull, on port and starboard side. The air travels into the engine room down the sides and above the diesel tanks.
Do not block the ventilation path, when the engine is running.

Section 4.13 0.34 Fire extinguishing system

Consists of :

- 1 Cockpit, next to entrance to front cabin
- 1 automatic extinguisher in the engine room with an indicator by the drivers position/ helms position.
- 1 fire resistant blanket behind the helms seat.

Cockpit extinguisher

Automatic engine room extinguisher

Fire resistant blanket

Article V. OPERATION

This chapter contains information advices and hints about practical use of the boat and equipment.

The following activities and equipment will be commented:

- ✓ Starting the engine
- ✓ Batteries
- ✓ Operating the equipment in the boat
- ✓ The electrical layout
- ✓ Maneuvering
- ✓ Sanitary system
- ✓ Hints advices and tips

The descriptions have two intentions, to promote maximal safety and to guide for correct use. Correct use facilitates long unproblematic use and good second hand value of the boat. Proper operating equipment provides safety and comfort aboard.

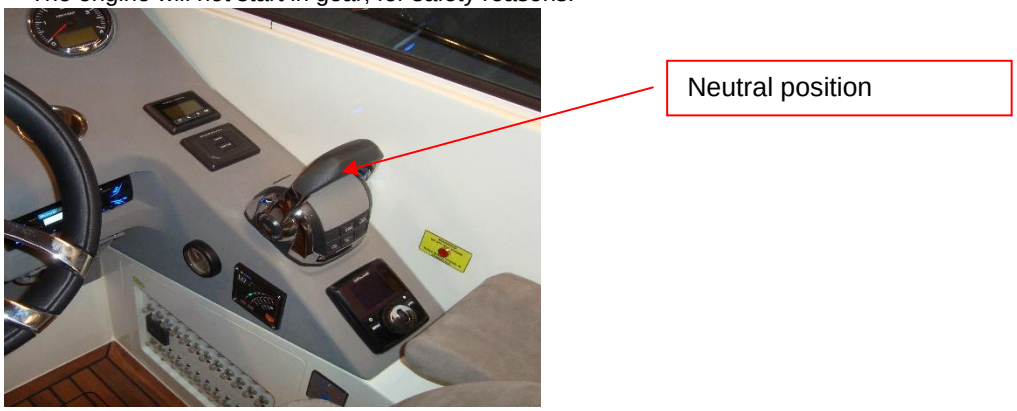
(D) Before starting it is important to assure yourself that the safety equipment is present and functional. (Safety vests, fire extinguisher, anchor, ropes etc)
Always use a safety vest aboard.

Section 5.01 0.35 Starting the engine

Before starting check the following:

- ✓ Control the boat for leakages over and under the waterline.
- ✓ Check that all hoses and couplings are intact
- ✓ Turn on the main switch
- ✓ Follow the engine instruction handbook.

(D) See to that the bathing ladder is felt in and not in the water. An open bathing ladder can damage the propellers.
The throttle (gas/gear regulator) must be in neutral position. *)
*) The engine will not start in gear, for safety reasons.



Section 5.02 0.36 Batteries (Lead accumulators)

Generally
The batteries must be fully charged at least once per month.
Batteries are your source of energy to start the engine and to supply you with services like lanterns, lights, 12 volt system etc.

Your boat is equipped with 5 batteries. One for starting the engine and 4 are for service. They are located under the bed in the aft cabin.

To make sure that you have enough power to start the boat, there is a separate starting battery, separated from the service batteries. If the service batteries are empty you will still have power to start the engine(s) from the start battery.

(C) **NEVER turn off the main switch during the engine operation.**

When the engine is running, the batteries are charged by the generator/dynamo on the engine. It is important to maintain this system.

Charging voltage

The voltage by maximal charging is normally around 14,2 to 14,4 Volt.

Battery voltage

The voltage on a normal battery is -if unused- around 12,3 to 12,8 Volt.

During charging, the voltage will rise on the batteries. It is the battery charger that automatically decides when the charging is stopped.
Please note that LEAD ACCUMULATOR batteries will create gas at 14,4 volt. This gas is very explosive.

- **Hint:**
  - The gas smells like ”rotten eggs”.
  - Be aware of bad smell and act if gas is created.

The battery charger automatically stops charging before gas is created if the regulator is operational and well maintained.

Note : To get correct voltage when measuring the voltage, you must measure directly on the batteries and not on the generator.

Section 5.03 0.37 Switch panel & connection schemes

Drawings are enclosed in divider nr. 4

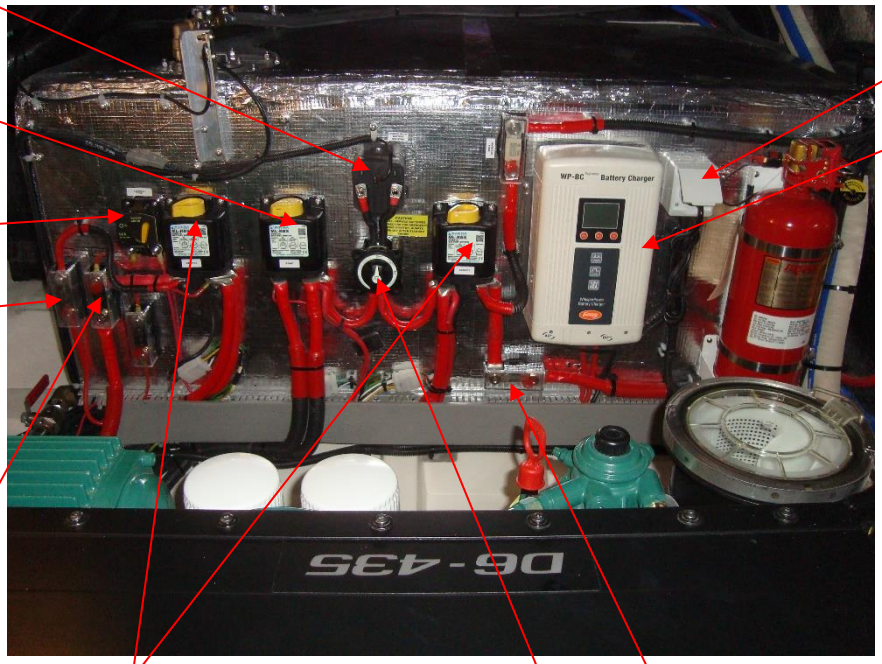
Section 5.04 0.38 Fuse panel

Placed at starboard side by the helms position/drivers seat.

Section 5.05 0.39 Main switch panel

Always switch off all main switches before leave the boat

Automatic main switch box is located in engine room – controlled with two switches on dashboard



Section 5.06 0.40 Windscreen wipers

Control switches are placed on the dashboard/ helms positioned under the navstation.

Section 5.07 0.41 Dashboard instrumentation installation access

For the access to all installation cables and connections, the plotter needs to be removed and then the access to the backside of the instruments is possible.

Section 5.08 0.42 Maneuvering the boat

0.1.13 Maneuvering a boat in category B

Important factors to understand and study are:

The boat, the cargo weight and placement, position of the rudder, the position of the trim flaps. The use of trim flaps and the rudder takes time to master. Spend time on practicing this.

Start immediately to practice how to maneuver the boat with and without the bow propeller. We recommend to practice towards a buoy or another fixed point. Don't underestimate the impact of side winds.

Observe the aft wave and pay attention to the wave you create. The waves can be a danger to others and a large wave is a sign of very high fuel consumption. Large waves are very unpopular.

Maneuvering in rough sea:

Never enter rough sea unless you are absolutely positive that the boat and crew/passengers can handle it.

- ✓ Be well prepared.
- ✓ Fasten loose equipment and luggage.
- ✓ Have the emergency equipment ready.
- ✓ Avoid high waves close to land.

Against the waves:

- ✓ Adjust the speed according to the height of the waves.
- ✓ Adjust the angle towards the waves.
- ✓ Avoid waves hitting the boat sideways.

Maneuvering with the waves:

- ✓ Trim the bow high up with the tilt and trim flaps.
- ✓ Avoid sailing faster than the waves.
- ✓ Throw an emergency anchor/drifting anchor if the speed is too high.

(W) Do not let children stay in the cabins under rough sea.
The anti skid coating can be slippery when wet.

- ✓ Adjust the speed according to all passengers comfort. The comfort is normally perceived better for the pilot than the passengers. Be aware of this and take care of the passengers comfort.
- ✓ Always keep the engine room closed when starting the engine.
- ✓ Do not stay at the fore deck, bathing platform or side decks during sailing.
- ✓ Close all hatches as well as the hardtop or canopy
- ✓ Only access the fore deck through the front deck hatch.
- ✓ Never use the bathing ladder as long as the engine is running.
- ✓ Stop the engine for inspection of propeller and z-drive.
- ✓ Exit the boat for filling fuel.
- ✓ Close the aft sliding door before sailing
- ✓ Check that the navigation lamps are working, before sailing in the dark and always keep spare bulbs in the boat.

Do not sail the boat at maximum speed in trafficked areas or in weather-conditions that can reduce the visibility. Reduce speed according to other boaters and as a safety precaution for you and others. Observe the speed limit and non-wave zones like outside marinas etc.

The visibility can be reduced by a high trim angle as well as:

- ✓ The cargo and the cargo placement
- ✓ Speed
- ✓ Quick acceleration
- ✓ Entering and exiting planning
- ✓ Sea conditions
- ✓ Rain and sea spray
- ✓ The boats own light
- ✓ Position of the boat helms equipment and curtains

Always keep enough distance to avoid collisions and to maneuver away in case of unexpected happenings.

(W) Maneuvering possibilities are limited at high speed!
Sudden turns can cause loss of control.
Reduce speed before sharp turns.

Knowledge about weather conditions:

- ✓ Show respect for the weather and the wind conditions.
- ✓ Observe the conditions and listen to local advices.
- ✓ Always listen to the weather forecasts.
- ✓ Always check the fuel level before any trip. By low fuel level in high seas the engine can suck air and this can cause the engine to stop.

Section 5.09 0.43 The electric system

📖 Follow the advices of the engine supplier by starting, driving and stopping the engine.

Do not use power unnecessarily and be careful when maintaining the system. See to that the connections and joints are properly fastened.

Section 5.10 0.44 Sanitary system

Empty the black water tank/septic tank in deep waters far away from land. Avoid polluting!

The bottom valve water inlet must be open for the toilet to work.
(Located in the engine room) **mid cabin**

Always use sanitary liquid in the toilet and follow the producer's advice.

(C) Observe the discharging process until the tank is empty
The black water/septic instrument shows the level of the tank

- ✓ Hints for emptying the black water tank:
  - Stop the engine
  - Open the engine room hatch
  - Open the bottom valve
  - Discharge the tank
  - Tip : The sound of the macerator pump is "higher" when the tank is empty"
  - Stop discharging
  - Close the bottom valve

Section 5.11 0.45 Operating other equipment

0.1.14 Cooker and oven

Cooker and oven

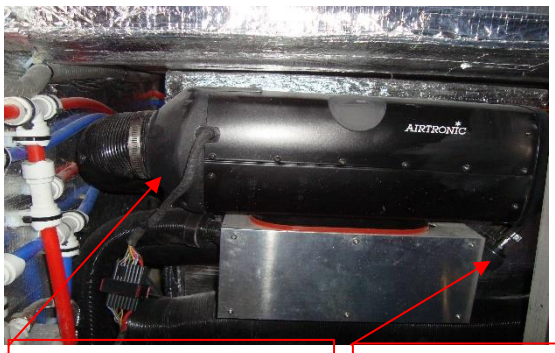
(W) The cooker uses oxygen! Provide for good ventilation when the device is in use. Avoid suffocation. Do not use for heating! Do not let a fender block the exhaust outlet (in the hull) as this can cause fire.

0.1.15 The Defroster

The defroster is driven by the engines heat.
Defroster is operated by the switch on the helms position/dashboard.
The defroster has two speeds and the outlets are under the windscreen.

0.1.16 The diesel heater

The diesel heater



Diesel heater with blower

Heater fuel pump

Heater controller

The diesel heater is placed in the engine room.
The outlets:

- ✓ 3 in the cockpit
- ✓ 1 in the mini-cabin
- ✓ 1 in the toilet
- ✓ 1 in the shower
- ✓ 1 in the front cabin
- ✓ 1 in the aft cabin

(C) Never close the outlet in the cockpit on port side by the co-pilot seat. This can cause overheating and fire!

Section 5.12 0.46 Hints and advices

0.1.17 Lifting and storage in a "cradle"

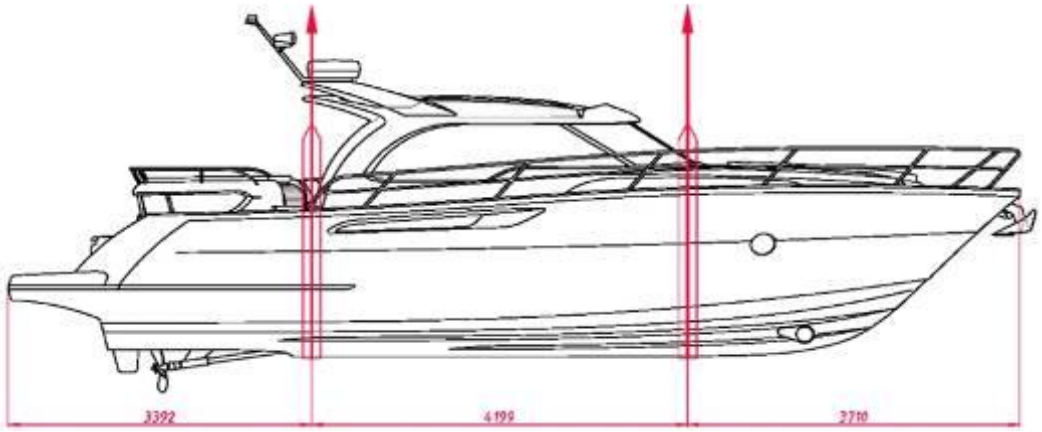
Adjust the lifting straps so that the boat is lifted in a horizontal position. Use protection between the straps and the boat.

Place of the lifting straps:

- ✓ Like shown on the picture.

Placing the "cradle":

- ✓ Near the lifting straps



(D) DO NOT STAND UNDER THE BOAT WHEN LIFTED!

0.1.18 Transporting the boat

When the boat is transported on a trailer, the weight of the boat must rest on a surface on the bottom "keel". Adjust the side support to avoid dislocation and fasten the boat safely. Make sure there is no cargo in the boat.

0.1.19 Mooring the boat

Marex 370 Aft Cabin Cruiser has 2 pullers in the front and 2 at the back/aft of the boat, and 4 pullers at the middle of the ship length.

Recommended anchor weight is 21-32 kg, and the recommended anchor rope diameter is 14-16 mm, length approx. 30-50 meters.

0.1.20 Environmental issues

The boat owner is responsible for following local regulations regarding pollution and to reduce environmental damage caused by:

- ✓ Fuel and oil
- ✓ Garbage
- ✓ Noise
- ✓ Waves
- ✓ Exhaust
- ✓ Septic/black water
- ✓ Chemicals and antifouling

Article VI. PERIODIC MAINTENANCE

The maintenance of the boat and equipment should be performed by authorized personnel.

Section 6.01 0.47 Maintenance of the hull

0.1.21 Before placing the boat on water

Your plastic boat is exposed to sun, wind and water that over time will make the gelcoat mat. It is therefore important to wax the boat before it is placed on water. You may wax more than once per season.

If the boat has scratches or other damages in the gelcoat the damages should be repaired. It is important that the correct gelcoat is used for this repair. The user handbook has information on which serial/RAL number the gelcoat has.
This job is complicated and we recommend you use a specialist for the best result.

If the boat gets yellow spots this can be form-wax from the production of the boat and is very common and difficult to avoid. This wax can be removed in warm weather with a thinner and very hot water.

To protect the hull and to prevent osmosis, Marex recommends to prime the hull under the waterline before antifouling is added. This has already been made if antifouling has been ordered as extra equipment.

- ✓ Sand the underwater surface with sandpaper grade 400.

- ✓ Clean the surface and dry.
- ✓ Apply according to the producers specification 2 layers of 2-component epoxy primer or similar product.
- ✓ Apply antifouling.
- ✓ CAUTION! Use a different antifouling on the propulsion components, intended for this purpose.
- ✓ Do not paint on the Zinc anodes.

0.1.22 Before winter storage

Clean the boat thoroughly after lifting it out of the water. Remove all fouling and apply a thin layer of wax or Vaseline over the boat. This will ease the maintenance next year. Spray all electrical contacts with anti-corrosion spray, suitable for electrical equipment.

0.1.23 Normal maintenance

Remember that a well kept boat has a higher second hand value. Oil and grease can leave permanent stains. If you need to rub and polish the boat it is important to wax it.

Section 6.02 0.48 Maintenance of the teak deck

The deck supplier recommends that the boat owner tests and uses those products, which give the best result. The wood must first be well cleaned with soap and water. Do not use a hard brush. Do not use high pressured water. The wood must be totally dry before fat/grease/oil is applied. This will give the teak its color but many boaters prefer the teak to go grey. There are many products on the market and Marex recommends oiling the deck with oil without chemical additives. To get the best result the teak can be sanded with fine sandpaper and then oiled.

Section 6.03 0.49 Maintenance of the engine and the drive

- ✓ 🕮 **Read the engine suppliers manual!**
- ✓ Control the oil level on engine and gearbox often, see chapter 8.2. Control the trough hull shaft connection and its oil level.
- ✓ Control the seawater filter every 25 engine hours
- ✓ For periodic control and replacements, see the engine manual
- ✓ Control the fuel system for visual leakage

Section 6.04 0.50 Maintenance of the steering system

- ✓ 🕮
- ✓ Control the couplings, hoses, bearings and fastening points.
- ✓ Control the fluid level in the steering system frequently. Check the cylinders and hoses for leakages. Lubricate the joints and couplings with the prescribed grease/oil.
- ✓ In case of leakage, contact the supplier.

Section 6.05 0.51 Fire extinguishers

- 🕮
- Always check that the pressure is correct at the manometer. The indicator must be in the green zone. Contact a professional for maintenance.

Article VII. PREPARING FOR THE SEASON

Section 7.01 0.52 General preparation

- ✓ Take off the canopy in due time and ventilate the boat thoroughly before the boat is placed on water. Wash and polish the boat. Apply antifouling under the waterline.

- ✓ Replace the batteries and refill the water level. Check/measure the capacities, cables and cable shoes. Check the hoses and other joints. Control that the instruments and navigation lights are functioning.

- ✓ Check that all valves in the hull are working and that the hoses are properly fastened

- ✓ Connect and check that all filters are airtight:
  - Fresh water filter
  - Shower pump filter
  - Toilet water inlet

- ✓ Close all draining plugs. Check that bottom valves for seawater cooling is open. Check that pipes and water taps are closed.

- ✓ CAUTION! Check for potential frost damages.

*) Adjustments on the engine feet/fundaments must only be performed by authorized personnel. The bolts are glued to the fundaments. By any adjustments you will damage the glue. If the feet/bolts are loose, contact a serviceman immediately.

Section 7.02 0.53 Preparing the engine and the drive

- ✓ 🕮 Control the new oil level (the oil must be changed). See the engine producer's manual.
- ✓ 🕮 Control the new gear oil level (the oil must be changed). See the engine producer's manual.
- ✓ 🕮 Control the fuel filter and change it if necessary. Control the fuel system and fasten all couplings and fittings. Check the water separator. Look for any damages or leakages or potential hazard. See the engine producer's manual.
- ✓ Check the trough hull fitting at the shaft and its oil level. Control all couplings and fittings.
- ✓ Check the propeller, the propeller nut and the splint pin.

Section 7.03 0.54 Preparing the steering

- ✓ 🕮 Check the steering function, before the boat is placed on water.

Section 7.04 0.55 Other installations

- ✓ 🕮 Cleaning the canopy: See the suppliers manual in divider 4.
- ✓ Clean all textiles according to the manuals.

Section 7.05 0.56 Removing rust/corrosion

The only steel usable for boats is acid proof stainless steel AISI 316 L. Normal stainless steel is not suitable for use .Bolts and screws must be of A4 quality or better.

Stainless steel is not maintenance free and should be polished together with the boat. Use a soft tissue and a small brush like a toothbrush to remove dust. DO NOT USE RUBBING materials on stainless steel.

Rust on screw-heads or on the rail-foot is normally not rust/corrosion but discoloration. This comes from mounting tools, dust, iron particles and similar. This discoloration can easily be removed by polishing with “autosol” Wurth” or other similar polishing liquids.

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Article VIII. WINTER STORAGE PREPARATION

- ✓ The freshwater system must be completely drained if the boat is exposed to frost:
  - Open all valves including the aft shower.
  - Open all taps and run until empty.
  - Close the pantry pump when the system only delivers air.
  - Let all taps be open during the winter.
  - Take off the shower handgrips.
  - Empty the water tank.

- ✓ Empty the hot water tank trough the opening valve on the tank.

- ✓ Drain the windscreen water system.

- ✓ Empty the septic tank before lifting the boat out of the water.

- ✓ Demount all hoses from all filters and pumps
  - Drain all filters:
    - Fresh water filter
    - Filter for the shower pump
    - Filter for the toilet water inlet

- ✓ Use anti-freeze in the toilet and pump it trough (use anti-freeze mixed with water, pure anti-freeze can damage the seals)

- ✓ If the boat is covered with plastic, it is important to protect all surfaces against rubbing and tearing through the winter. It is a big risk that this will go mat, if it is unprotected. Use masking tape or similar to protect gel coat, glass and steel.

Section 8.01 0.57 Batteries

- ✓ The batteries can be kept in the boat during the winter, although it is not recommended. It is then important, that the batteries are fully charged and maintenance during the winter to compensate the self-discharge, that will happen. If the batteries are kept in the boat, it is important to disconnect the PLUS cable (red) and prevent contact with electrical cables and the battery cable shoe.

(D) **CAUTION!** If the batteries are connected to a maintenance charger that is connected to a grounded outlet, the boat is in big risk of galvanic corrosion due to grounding errors between the boat grounding (z-drive or shaft) and the land grounding.

(C) To prevent damage to the hot water tank, disconnect the 230 v system when the hot water tank is empty. Pull out the plug.

Section 8.02 0.58 The hull

- ✓ Clean the boat when the boat still is in the water. Scrub all spots on deck and at the waterline. Use a boat shampoo.
- ✓ Control all trough hull fittings.
- ✓ To save work, it is recommended to polish the boat before the winter.
- ✓ Clean all dust and dirt, to prevent a bad smell the next season.
- ✓ Remove all personal belongings to prevent mildew.
- ✓ Place 1-2 moist removers, that attract moist and condense. Drain these periodically trough the storage period.

Section 8.03 0.59 Engine and drive

- ✓ 🕮 See the engine and drives suppliers user manual enclosed.

Section 8.04 0.60 The steering system

🕮 See the steering system supplier's user manual enclosed.

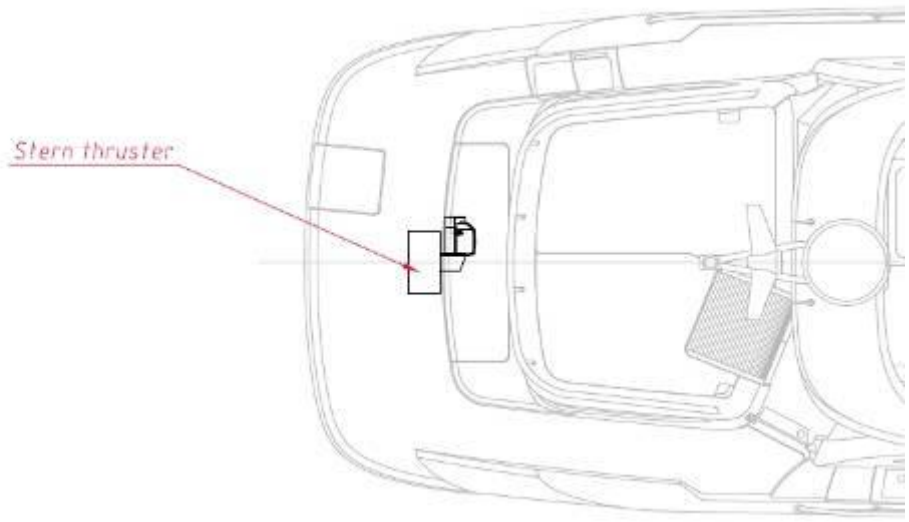
- ✓ Control all nuts and joints and trough hull leads. Look for damages and control the system.
- ✓ Control all fittings, hoses and bearings.
- ✓ Control the steering fluid in the steering hydraulics system. Refill if necessary.

Section 8.05 0.61 Waterlock

- ✓ The Vetus exhaust system components are especially suitable for use in water-injected exhaust systems.
- ✓ Check all hose connections for gas and water leaks regularly. Before the winter lay-up, drain the waterlock. The waterlock has a valve for this purpose

Section 8.06 0.62 Emergency steering

Is possible with the use of bow and stern thrusters.



Section 8.07 0.63 Sanitary system

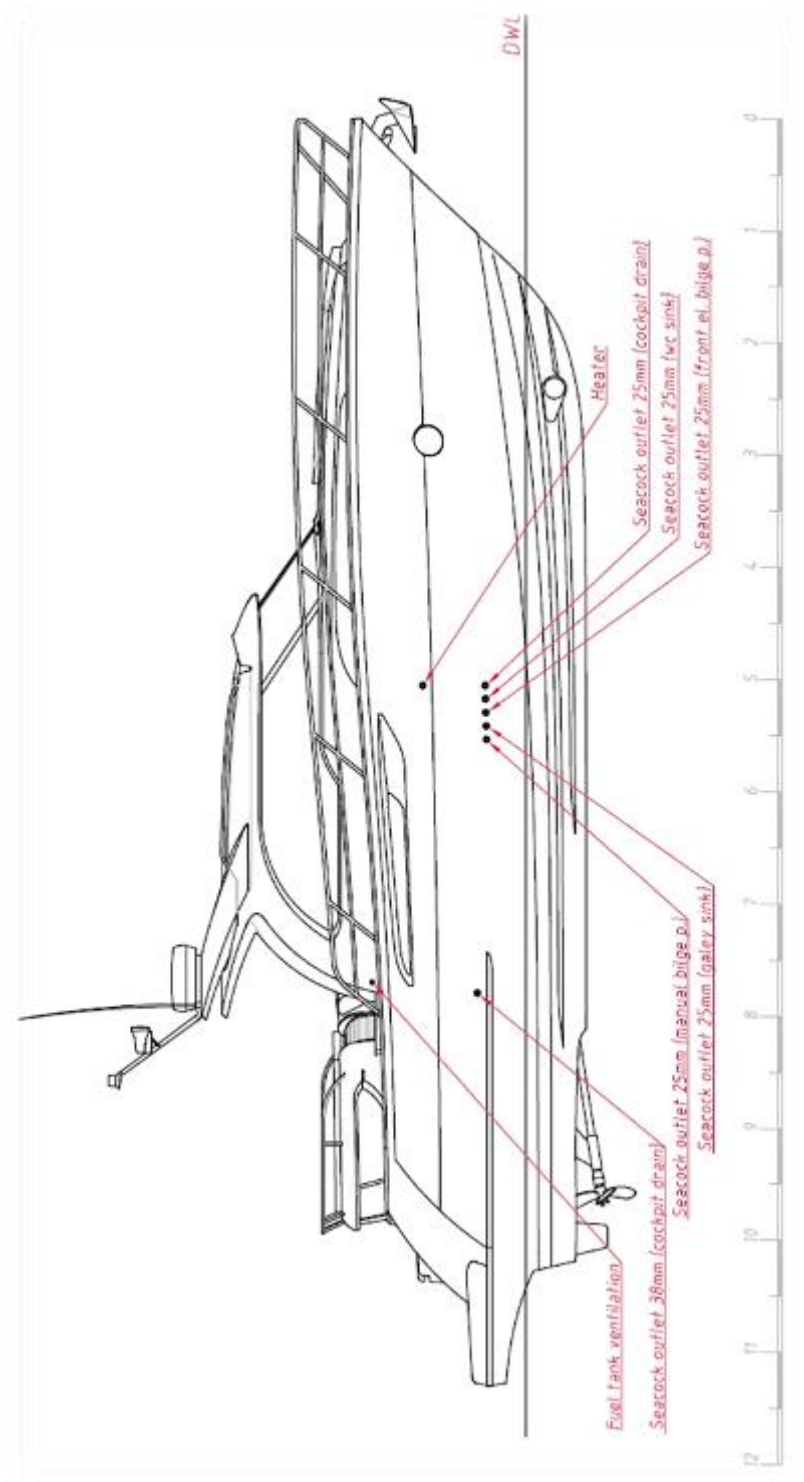
- Empty the toilet bowl and septic tank/black water tank for contents BEFORE the boat is taken off the water and refill one time with water before emptying again. Fill with mixed anti-freeze.
- Control all hoses and couplings. Retighten the hose clamps. Keep all cranes open.

(C) Always mix antifreeze with water. Pure antifreeze will damage the system.

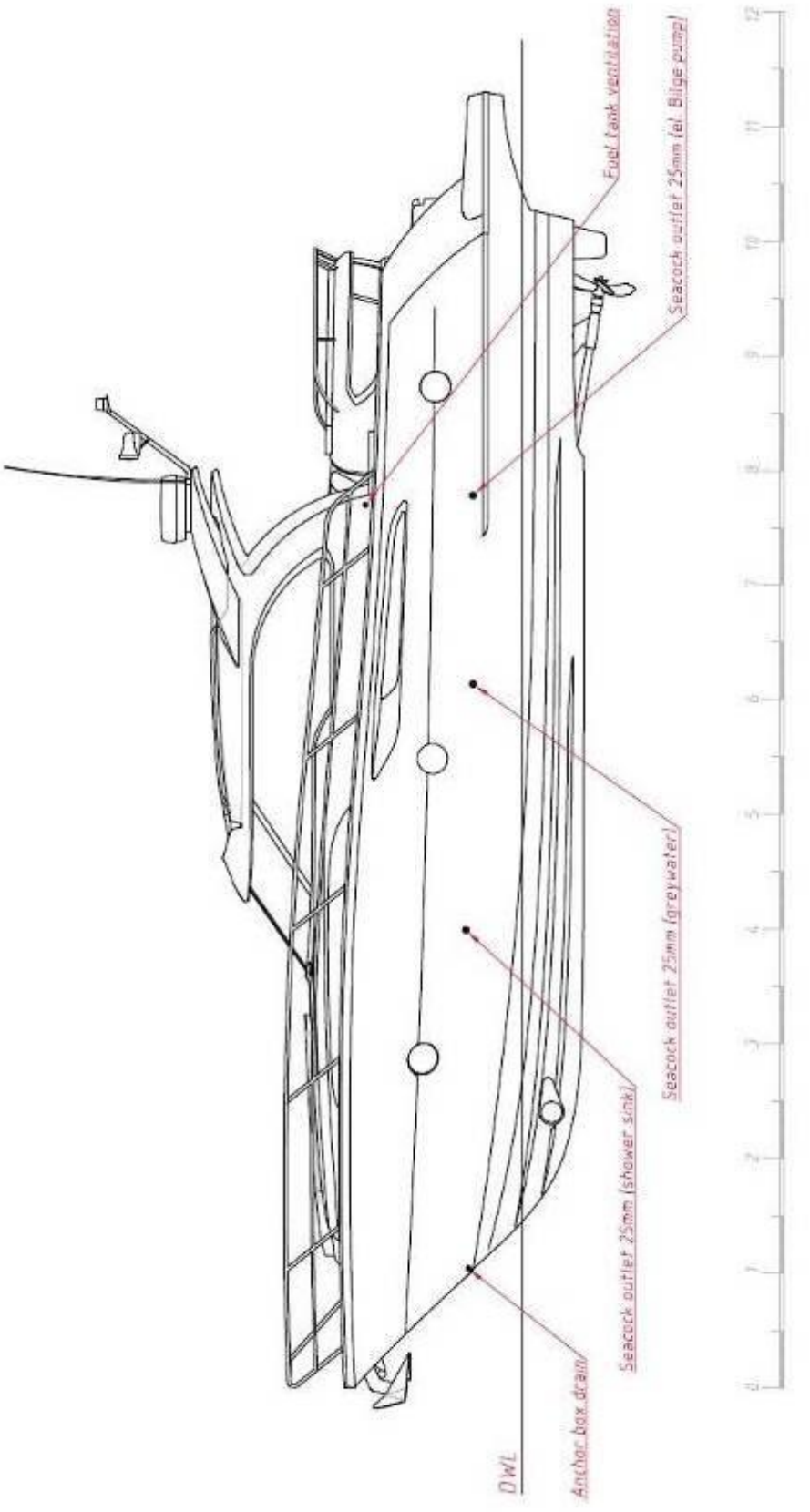
See divider 8, for a checklist on winter preservation.

Article IX. Positions of through hull fittings

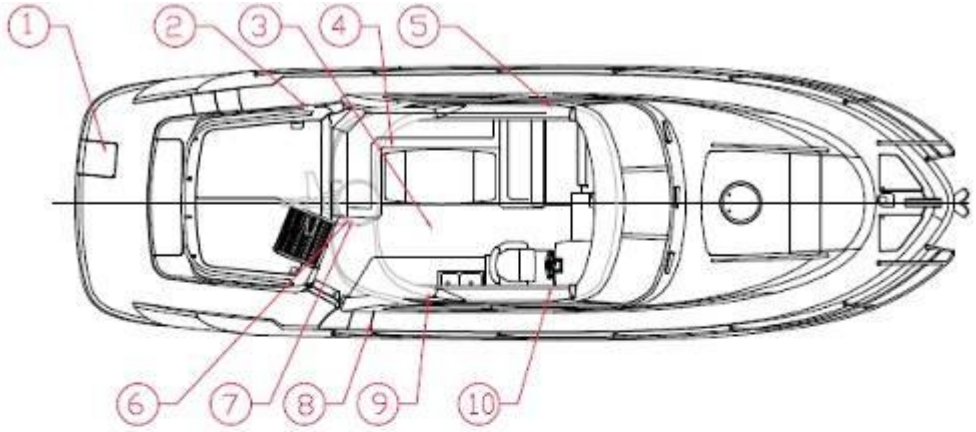
Section 9.01 0.64 Starboard side

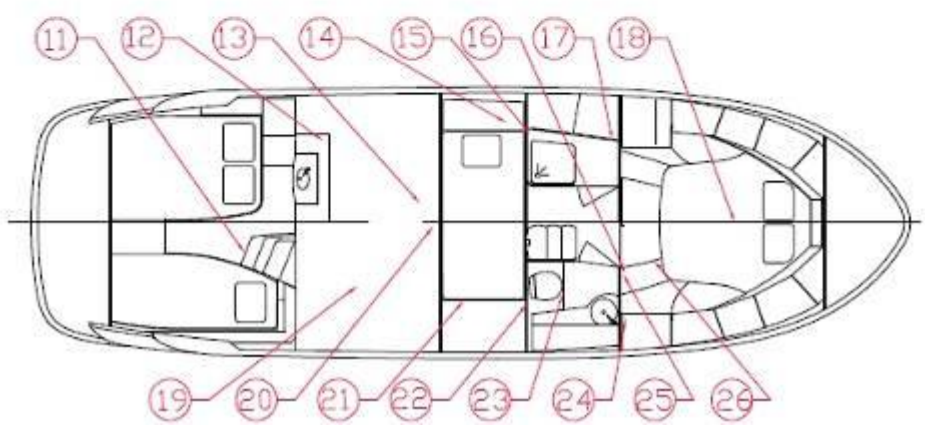


Section 9.02 0.65 Port side



Article X. Overview





1. Draining of water from the aft deck
2. Inlet 230V
3. Engine hatch (access to fuel and septic tank)
4. Heater outlet
5. Fire extinguisher
6. Main switch panel
7. 230V socket inside switch panel
8. Manual lensing pump (outside)
9. Switches for light
10. Heater outlet
11. Heater outlet
12. 230V socket
13. Toilet water inlet valve (engine room)
14. 230V socket
15. Switches for shower and bathroom fan
16. Switch panel for heater
17. Heater outlet
18. Bow propeller
19. 230V socket in engine room
20. 230V socket in engine room
21. Heater outlet
22. Toilet operation switch
23. Heater outlet
24. 230V socket
25. Front cabin light switch
26. Heater outlet