

# IBIS

## Dufour 46 Skipper manual

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## 1. LIABILITY OF THE SKIPPER

Before sailing, the sailing yacht skipper should read this manual and familiarize himself / herself with its contents, in particular with all the warnings relating to safe use and emergency procedures. It is the responsibility of the skipper to ensure that, when sailing, the sailing yacht is equipped with all the (safety) equipment required under the law. The skipper shall also inform all the other crew members about the proper use of the craft and equipment and the emergency procedures.

## 2. FIRE PROTECTION AND ESCAPE PLAN

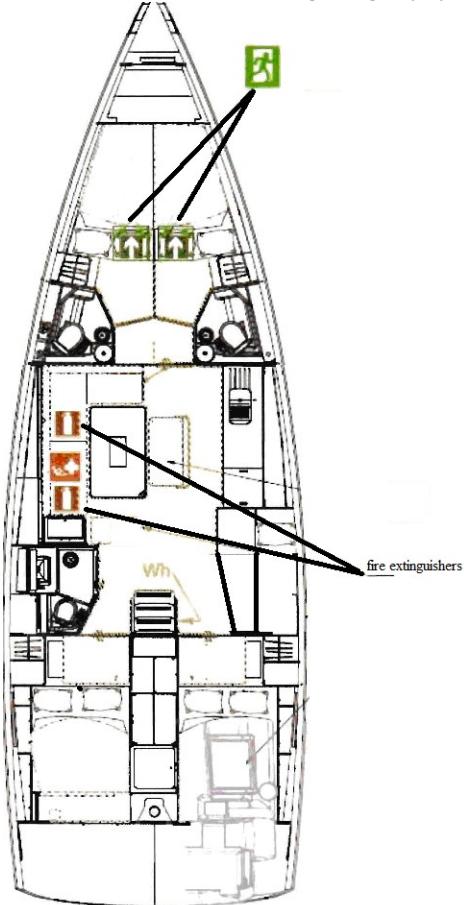
This sailing yacht is equipped with portable fire extinguishers of the following extinguishing capacities and at the following locations: (see Fig. 2)

No.	Location	Capacity
1	Under the skipper seats	2 kg
2	Under the skipper seats	2 kg

- Inform members of the crew about the location and operation of the fire-fighting equipment and the location of the escape routes.
- In case the fire in engine room use fire port hole located on the companionway.
- Ensure that the fire-fighting equipment is readily accessible when the craft is occupied.

### WARNING:

- NEVER obstruct passageways to exits and hatches.
- NEVER obstruct safety controls, e.g. fuel valves, gas valves, switches of electrical system.
- NEVER obstruct portable fire extinguishers stowed in lockers.
- NEVER leave the craft unattended when cooking appliances are in use.
- NEVER use gas light in the craft.
- NEVER fill the fuel tank or replace gas bottles when the engine is running or when cooking appliances are in use.
- NEVER smoke while handling fuel or gas.
- DO NOT fit free hanging curtains or other fabrics in the vicinity of or above the cookers or other open flame devices.
- DO NOT store combustible material in the engine room.



### 3. Fire Safety

Prevention is the best answer to fire safety.

Always switch off the valves when stove is not in use

Never leave the stove or oven burning unattended.

Never smoke inside the yacht.

Never smoke when changing propane tanks.

Safely store any flammable liquids (for example charcoal lighter fuel).

Keep matches away from children.

Engine compartment fire:

In the event of a fire in the engine compartment use the fire extinguisher positioned on right side of companionway.

Pull the yellow key out. Press down on the red button until all the contents of the extinguisher have been discharged.

Do not open the engine compartment even if you think the fire has been extinguished.



Open fire:

1. Pull out the yellow safety tab.

2. Point the extinguisher at the base of the fire and press down on the red button to discharge contents.

3. Generously cover the base of the fire and surrounding area to ensure the fire is under control and cannot spread.

Continue discharging extinguisher until the fire is out.

Galley fire:

- Take the fire blanket out of its container. Read the instructions for use carefully.

- Ensure hands and limbs are protected from the fire by the blanket.

- Carefully lay the blanket over the fire, laying the blanket away from you and keeping yourself protected at all times from the flames.

- Once in place leave the blanket until all heat has gone from the scene of the fire, this way you can be sure that the fire has definitely gone out and will not re-ignite.



Boiling batteries:

If you recognize the smell of a chemical reaction. Switch-off the main switchs of servise and starter battery. Opening a hatch to ventilate the inside the yacht and soonest contact with technical support.

#### **4. PRE-DEPARTURE SKIPPER CONTROL**

- Close the portlights and hatches.
- Check the position of all the inlet/outlet seacock in the hull.
- Open the engine cooling valve and close all the other valves; do not forget to close them if they are used during sailing.
- Switch on the main switches of the engine and other users.
- Check if cooling water runs through the engine exhaust; if not, check the water pump.
- Check if the bilges are clean and if the bilge pumps operate properly.
- Check the navigations lights.
- Check the required safety equipment.

#### **5. WATER INTAKE DURING SAILING**

##### **CALL NOVA EUROSPECTRA.**

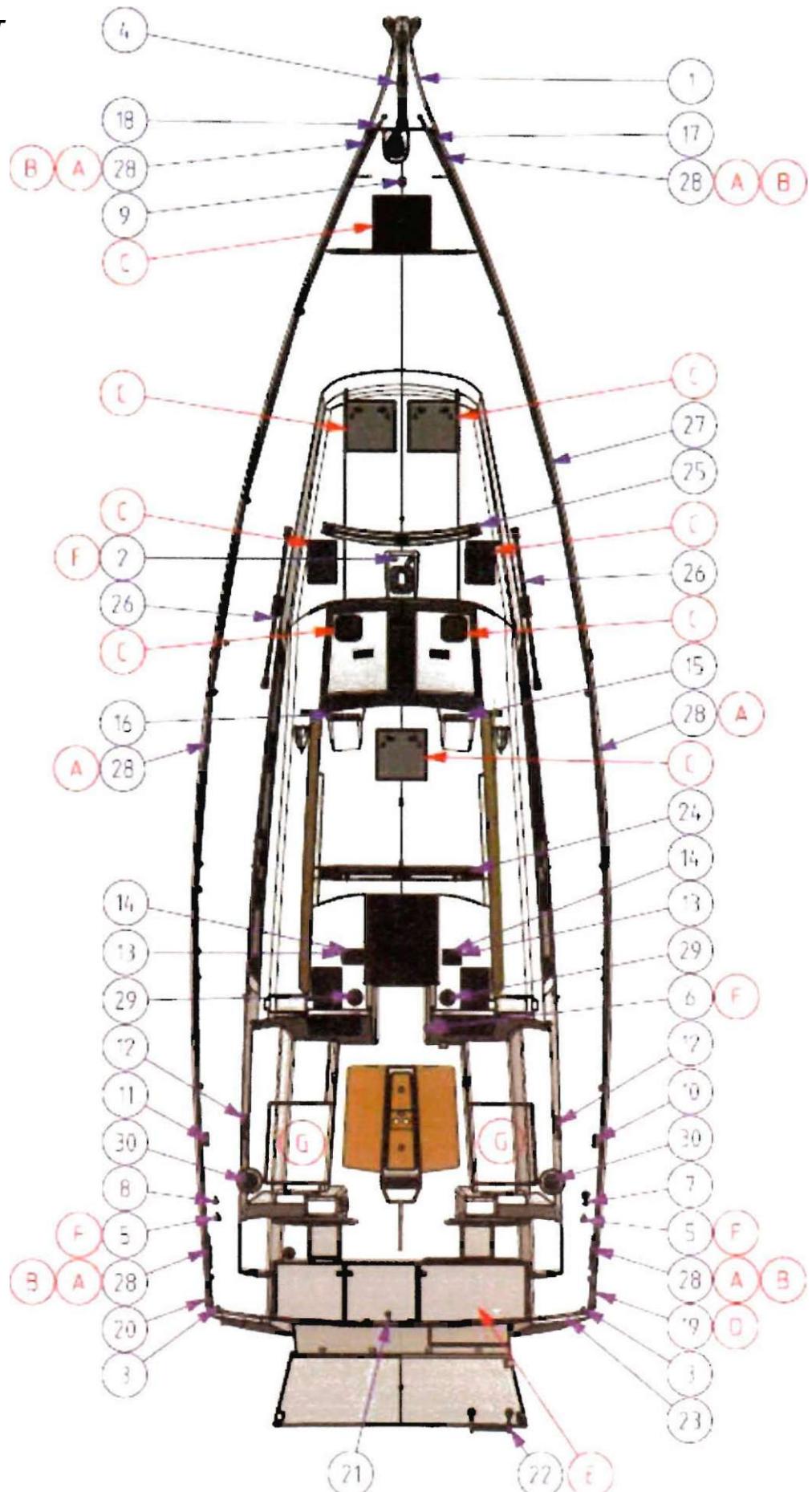
If during sailing you notice water in the craft, stay calm and immediately check if all the seacock are closed and turn on the bilge pumps. Use a manual bilge pump as well to pump the water out. Switch off the engine and close the engine cooling valve. Close the tank valves as well. Try to find out the cause of the leak as quickly as possible. If you fail to find out the cause and if the water level in the craft continues to rise, start evacuation procedures.

If you run aground while sailing, open the inspection covers in the saloon floor and immediately check for any leaks at the keel screws. Through the stowage compartment check the installation of the steering wheel as well. In case of a leak, follow the directions in the previous paragraph and have the sailing yacht lifted from water as soon as possible.

#### **6. TECHNICAL SPECIFICATIONS**

YACHT DESIGN CATEGORY:	A		
LOA (with overhang stemhead)	14.15 m	Holding tank	2x50 L
Hull length*	13.50 m	Engine battery	100 Ah
Maximum beam*	4.50 m	Auxiliary battery (3 X 140 Ah)	420 AH
Hull beam*	4.50 m	Light displacement (deep keel)	11,704 kg
Maximum air draft*	20.20 m	Minimum condition displacement (deep keel)	12,001 kg
Draught (deep keel)*	2.30 m	Maximum loading	3210 kg
Deep keel weight	2850 kg	Holding tank	2x50 L
Standard mainsail area (approximate)	49,8 m <sup>2</sup>	Engine battery	100 Ah
Self-tacking Jib area (approximate)	34,7 m <sup>2</sup>	Auxiliary battery (3 X 140 Ah)	420 AH
Maximum permissible on-board engine power	75 HP/55 kW		
Water capacity excl. 20L (approx.) water heater	530 L		
Diesel capacity (approximate)	250 L		

## 7. DECK LAYOUT



Nº	description	remarks
A	JACK LINE ANCHOR POINTS	Port and starboard cleats
B	TOWING POINTS	PT/STBD
C	<i>IT IS OBLIGATORY TO KEEP THE HATCHES CLOSED WHEN SAILING</i>	
D	"MAN OVERBOARD" REBOARDING LADDER	
E	LIFERAFT STOWAGE	
F	ANCHOR POINT FOR SAFETY HARNESS	
G	LOCKER MUST BE CLOSED WHEN UNDERWAY	
1	BOW ROLLER + OVERHANG STEMHEAD	
2	WATERPROOF PADEYE D8	Mast foot
3	WATERPROOF PADEYE D12	BACKSTAY
4	FORESTAY PLATE	
5	FOLDING PADEYE D8	Spinnaker
6	FOLDING PADEYE D8	
7	FOLDING PADEYE D6	Furling line
8	FOLDING PADEYE D8	Spinnaker option
9	FOLDING PADEYE D8	Releasable forestay option
10	SINGLE CLUTCH	furling line
11	SINGLE CLUTCH	spinnaker option
12	SINGLE CLUTCH	X2 German system option
13	SINGLE CLUTCH	X3
14	DOUBLE CLUTCH	X4
15	4-SHEAVE DECK ORGANIZER	
16	5-SHEAVE DECK ORGANIZER	
17	STARBOARD PULPIT	
18	PORT PULPIT	
19	STARBOARD PUSHPIIT	
20	PORT PUSHPIIT	
21	CENTRAL AFT PUSHPIIT	
22	FOLDING BATHING LADDER	
23	FUEL DECK PLATE	
24	MAINSAIL TRACK AND TRAVELER	
25	SELF-TACKING JIB TRACK	
26	GENOA TRACK	option
27	TOE RAIL	
28	ALUMINUM MOORING CLEAT	
29	WINCH T45	
30	WINCH T50	

**WARNING:** Keep portlights, windows, washboards, doors, hatches and ventilation openings closed when appropriate, e.g. in rough weather or at higher sailing speeds. Secure unfixed equipment safety when underway.  
**Folding platform should be loaded only at 100% open position.**  
**Maximum load is 100 kg or 1 persons.**

## 8.VISIBILITY FROM STEERING POSITION

**WARNING:** When navigate under the sails make sure that the additional person on board provides sufficient outlook of sailing route.

### WORKING DECK AND MEANS OF REBOARDING

The working deck shell provides safe access to following areas such as boat steering, strong points, anchoring, sail handling and trimming etc. It is well secured with foot stopper and guard rails and occupies practically the whole area.

The sailboat is equipped with swimming ladder and with emergency swimming ladder.

The swimming ladder is stored in the locker show below and can be placed on swimming platform when it is opened. The sailboat is extra equipped with emergency swimming ladder storred in saloon under the skipper seat.

**It is recommended that the swimming ladder is placed on the aft when crew onboard during mooring and anchoring as well.**

Swimming ladder is a life saver and if in case somebody falls overboard, use the swimming ladder fitted on the platform or the emergency swimming ladder to climb back.

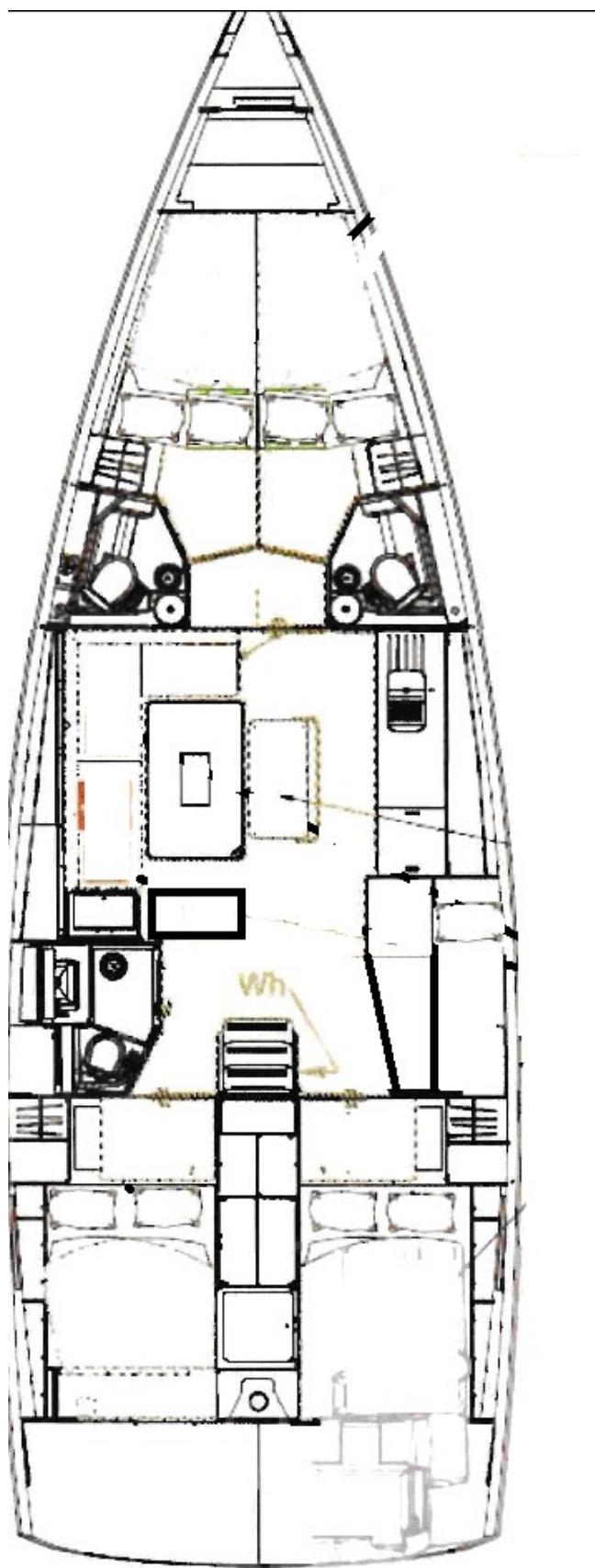
emergency swimming ladder



swimming ladder

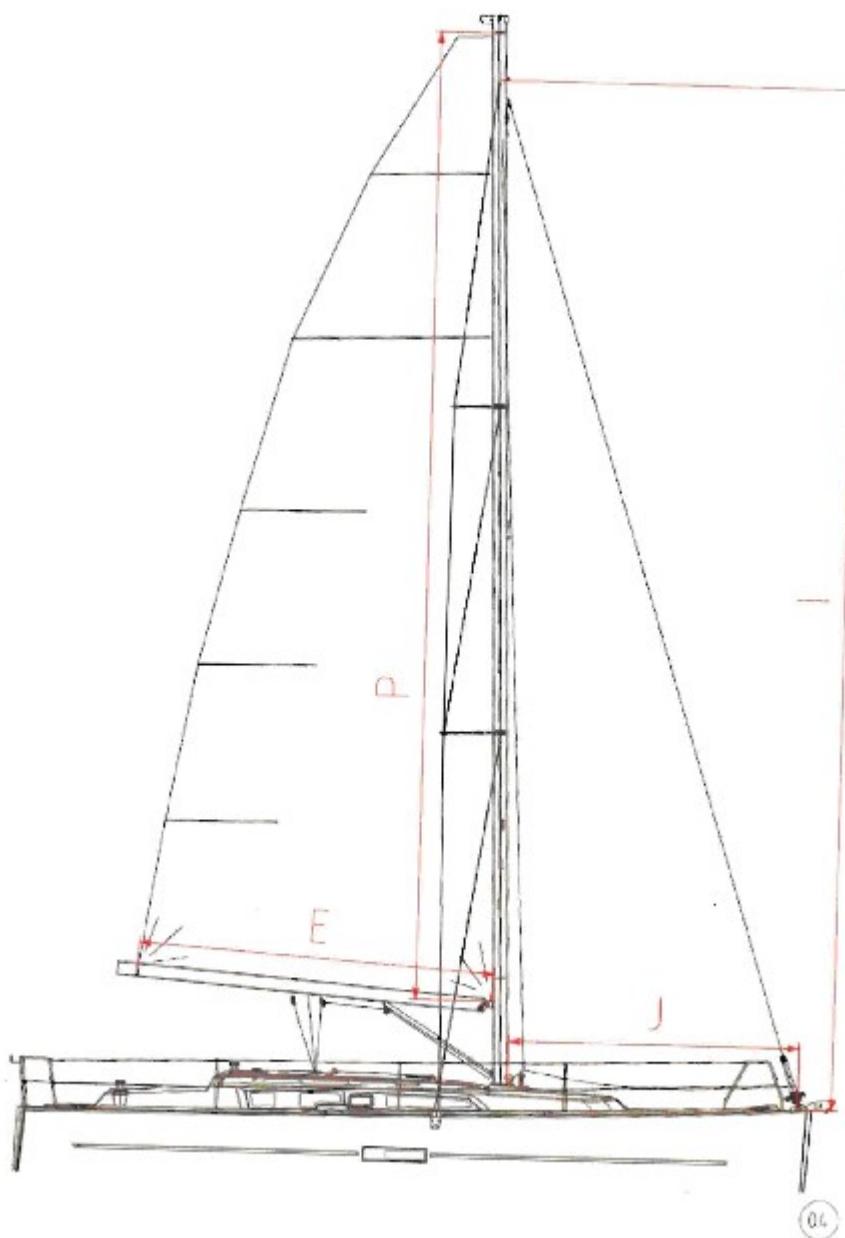


## 9. INTERIOR LAYOUT



## 10. SAILS AND MAST

I	16.25 m
J	5.15 m
p	15.58 m
E	5.30 m
Self-tacking jib LP	4.40 m
Mainsail area	49.80 m <sup>2</sup>
Self-tacking jib area	34.70 m <sup>2</sup>



## 11.ENGINE SYSTEM

**CAUTION: Max RPM during sailing is 2200!!**

When shifting from one gear to another via the idle position, keep the handle in the idle position long enough for the engine to rotate at the minimum RPM. Check the engine oil level. When putting in the reverse, hold the steering wheel firmly to avoid breaking the steering system. Shut down the engine before opening the engine compartment. The engine has rotating and moving parts that can be dangerous. Never turn off the main engine switch when the engine is running.

**Do not operate the starter for more than 10 seconds at a time. If the engine does not start, wait for at least 30 seconds before next try.**

## 12.ENGINE OPERATION (Daily Engine Checks)

-Check the oil level using the yellow dip stick located to the left rear of the engine. The level should be at least halfway between the empty and full marks. To add oil open the oil filler cap on the top of the engine.

-To the rear left of the engine is the seawater filter. Please do not touch this unless instructed to do so.

-To the rear right of the engine is the engine coolant reservoir. The coolant level should be between the maximum and minimum lines.

-Check for any engine leaks or bilge water below engine.

-Check the belt for any damage and correct tension.

**KEEP HANDS CLEAR OF ALL MOVING PARTS. ANY PROBLEMS CALL Technical support.**

**Before starting the engine:**

-Check the handle in the idle (neutral) position

-Switch on the main engine switch.

-Check and open the engine coolant water intake valve.



**Starting and stopping the engine:**

**On/Off button** Depress the button to start or stop the system. The panel cannot be switched off when engine is running.

**Start button**

When the button is depressed the pre-heat function is activated and the start motor engaged.

**Multi-function button (2)**

• Confirm the alarm. If an alarm occurs, a flashing warning symbol will be displayed in the tachometer window and an audible alarm will sound. The alarm is confirmed by depressing the multi-function button. The audible alarm is silenced and the warning symbol is lit continuously until the fault is remedied.

- Backlighting. To switch tachometer window backlighting on or off, depress the button for 1-5 seconds. The backlighting can be adjusted in five steps by depressing the button for less than 1 second.
- Adjust the tachometer window contrast by holding down the button for more than 5 seconds.

**Stop button**

The engine stops running when the button is depressed.

**CAUTION:** When sailing with inclination over 20 degrees, stop the engine. All fuel capacity cannot be used. Make sure that the tank will be filled over 20% of its capacity.

**Fuel level instrument shows the diesel level of the tank with a large deviation and helps you to be informed when tank will be empty, and not to indicate the exact diesel level of full tank. Average fuel consumption 7 liters per hour.** MAXIMUM WORKING SPEED OF ENGINE ARE 2200 RPM

### 13.ENGINE AND PROPELLER INSTALLATION

Dufour 460 are equipped with a VOLVO engine - sail drive version. The engine runs on normal diesel fuel. It is cooled with seawater in a closed cooling circuit. Access to the engine is possible from the front by lifting the companionway and via the engine compartment cover in the aft cabins or head compartment.

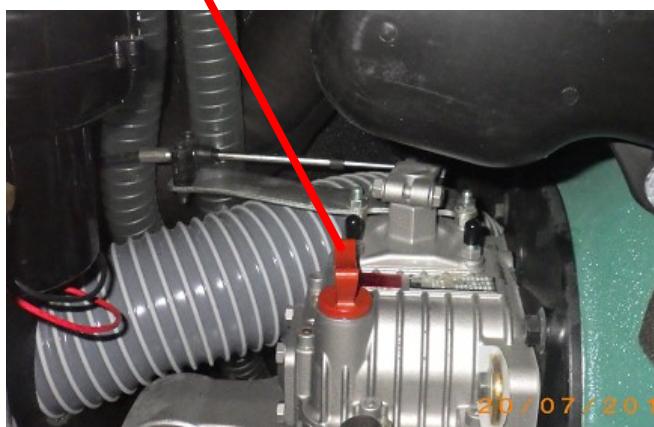
**Engine cooling water inlet**



**Oil refill**



**Gear oil level**



**Engine Oil level**



**Fuel filter**



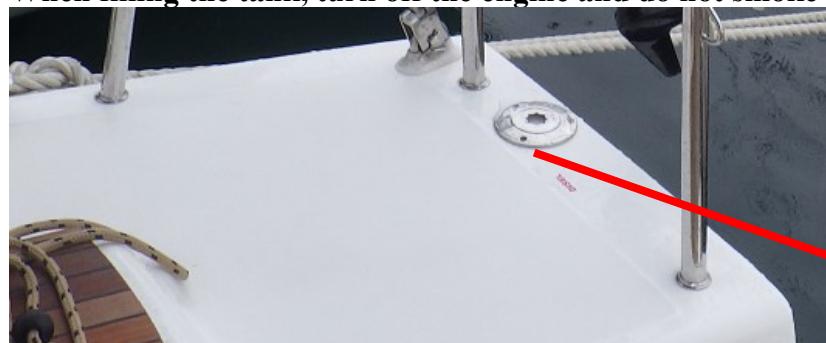
### 14.FUEL SYSTEM

The fuel tank has a capacity of 250 liters. The fuel tank is stowed under the bed of starboard aft cabin.

#### Filling the fuel tank:

- Fill the fuel tank with diesel via the deck filler.
- The fuel filler is marked "DIESEL". Unscrew the plug using a winch handle.
- Before filling the tank, close the portlights in vicinity of the fuel filler.
- Fill the fuel tank slowly in order to avoid spilling fuel on the deck.
- In case of spilling fuel on the deck, clean it immediately using a detergent and a large amount of fresh water.
- Keep the fuel tank full because a low fuel level can cause air penetration and improper engine operation and stoppage.
- Close the carefully and screw it tight.

**When filling the tank, turn off the engine and do not smoke**



**Fuel filler**

## 15. FRESH WATER SYSTEM

The sailing yacht is equipped with 2 fresh water tanks. They are filled via fresh water fillers marked "WATER".



Unscrew the plug using a winch handle. A fresh water level indicator is located on the electrical control panel. The tanks are connected, so that the water level is equal in all tanks when both valves are open.



Shower drain pump

Water pump

Water tank valves

**CAUTION:** After filling the tanks, close the fillers carefully and screw them tight to avoid the risk of seawater entering the fresh water tanks. To avoid the risk of contaminating one liquid with the other one, never fill fresh water and fuel at the same time.

An electrical fresh water pump located under the seats in saloon is used to pump fresh water to the consumers. The fresh water pump is automatically shut off by a pressure valve when pressure reaches 1.5 bar.



**Please ensure that the correct fillers are used, NOT the holding tanks, NOT the diesel tank.**

To use the fresh water system, turn on the water systems breaker on the 12v panel and open a faucet.

**When a tank runs out of water and almost empty, the pump will run at high speed and the faucet will start to cough air. As soon as you hear the pump running continuously, check to see if anyone is using water. If not, switch off the pump immediately to prevent the pump from drawing more air into the system or the pump overheating.**

Use the touch screen key on the 12v panel to confirm if your tank is empty.

**CAUTION:** Take care not to operate the electric pump when the fresh water tanks are empty.

Always open the sink and waste water seacocks when using fresh water from the tanks.

When sailing close the water tank connection valve.

## **16. HOT WATER SYSTEM**

A separate hot water system leads hot water from the water heater to the users. The hot water system is filled with fresh water from the fresh water system. When the empty hot water system is being filled, open the hot water seacocks at the taps to let air out of the system.

With Fresh water is heated in two ways:

-the coolant water from the engine when the engine is in operation. The coolant water runs through the water heater where it is used to heat the fresh water filled from the fresh water system.

-With an electrical spiral that can be turned on when the boat is connected to a 230V supply.

**CAUTION:**      **Do not operate the water heater if the fresh water system is empty.**  
**Do not turn the water heater on if the fresh water system is empty.**



**Water boiler/heater is located under the wall between aft cabins.**

## 17. HEAD AND WASTE SYSTEM

Sea water is used for flushing the toilets. The toilets are flushed with a manual pump that is built into the toilet. The waste water from the toilets is emptied via outlet seacock.

**CAUTION:** Nothing is to be put down the head included all kind of paper to be kept in plastic bags.

**Prior to use, move the lever to wet bowl to add water - 4/6 pumps.**

**Pump out waste in the wet bowl position ; this must be done when you are more than 300 m off shore!**

**After the bowl has been cleared of it's contents, an additional 20 - 25 pulls on 'wet' bowl will flush the bowl and pipes and will keep your heads smelling fresh.**

**Move lever back to dry bowl and pump the bowl and pipes dry, the lever must be left in dry bowl as leaving it in wet bowl will ingress water.**

**Wherever possible please use the marina's WC as this keeps our waters nice and clean.**

**When you stay on anchor or buoy close the WC valve outlet located behinde the door under the sink . 50 l waste tank will concume all from wc.**

Blocked heads will be cleared at a cost to you of eur200.00.

### Each heads equipped with waste tanks

Valve handle to switch between waste tank and sea located behinde this door for aft head



**Valve handle to switch waste tank located under the floor plate between bow heads.**



## 18. BILGE WATER SYSTEM

The bilge strainer is located under the saloon central seats. Lifting the floor plate under the seats will allow you access to the bilge pump.

To check the bilge pump operation press the bilge switch on the electrical panel. You will hear the pump performance in the case of the present of water in the bilge check the outflow.

**CAUTION:** **Check the bilge pump for bilge water before leaving the dock, during sailing and when leaving the boat for a longer period.**  
**Switch on the bilge water pump switches on the control panel and check the operation of the bilge pump.**



Manual bilge pump on starboard skipper helm seats.



## 19. GAS SYSTEM

The boat is equipped with a gas cooker. A copper tube leads from the gas bottle to the cooker. A certified rubber hose is used to connect the cooker and the gas bottle to the copper tube. The screw valve on the gas bottle is connected to a safety non-return valve. There is an extra gas valve installed in the galley, marked with a label. The gas bottle is stowed in the stowage compartment under the helmsman's seat in the cockpit.

Close gas supply valves and cylinder valve when appliances are not in use. **Close valves immediately in an emergency.**

**WARNING: NEVER USE FLAME TO CHECK FOR LEAKS!**

**Changing the gas bottle:**

1. Close the gas valve under the cooker.
2. Close the screw valve on the gas bottle.
3. Put the gas bottle into the compartment under the helmsman's seat.
4. Open the screw valve on the gas bottle.
5. Open the gas valve to the left of the cooker and turn the cooker on.

Gas valve under the stove



The propane tank locker is located in the cockpit at the helm seat on the port side.



To use:

1. Open the manual shut offs on the propane drum.
2. Open the manual shut offs of the pipeline in the galley under the shelf above the stove.
3. To light the stove, push the knob in, turn the knob you want 90 degrees counter-clockwise, and light the burner (to light oven put the flame in the tube that is inside/center bottom).
4. Hold the knob in for 10-15 seconds, then release. Make sure that the flame goes all the way around. Reduce any wind that may hinder this.

**In the event that the propane smell goes off follow these steps:**

- 1. Close the both valve on the propane tank and pipeline.**
- 2. Switch –off all electricity on board, bilges, water, shower pump.**
- 3. open up the bilges and hatches. Point the boat downwind and use the manual bilge pump to pump out the bilges.**
- 4. Call Nova Eurospectra.**

## 20. ELECTRICAL SYSTEMS

### 12V SYSTEM

The boat is equipped with 3x12 V batteries totaling 420Ah. The batteries are charged via an alternator driven by the boat's engine. They can also be charged via a battery charger when the boat is connected to an external 230 V supply. Solar panel 320 w / 30a charged the service batteries also. All electrical consumers are connected via control panel. Each consumer is equipped with an automatic circuit breaker, a signal light and a switch to turn it ON/OFF. There are two main switches, one for the engine system, one for the other consumers.

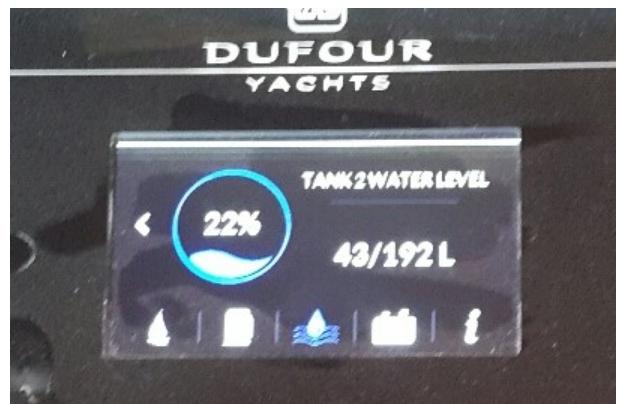
**The main switches are located on the left side of companionway.**



**Engine and service batteries located under the floor plate in saloon.**



On the electrical control panel there is a touchscreen that indicates the operating voltage of the batteries, the fresh water, waste and the fuel level.



Cockpit light is switched on by HIFI button on control panel.

## 230V SYSTEM

The boat is equipped with a 230 V electrical circuit. In addition to the battery charger, the circuit also comprises sockets for 230 V consumers.

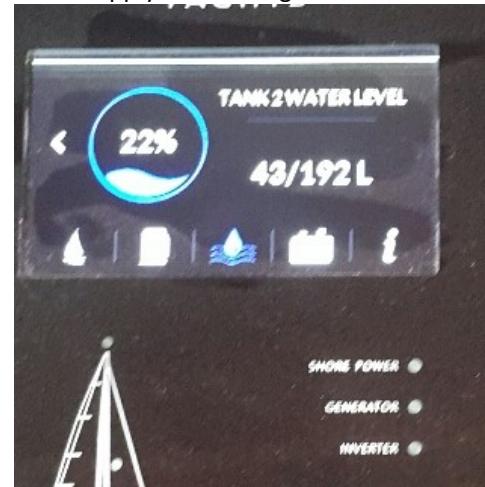
The shore socket is located in the cockpit and protected by electric switch located on rear wall over the ceiling in port aft cabin .



Main switch for water heating and socets are located behind the backrest of skipper seat.



When the boat is connected to an external 230 V supply then red light is on.



**WARNING: Before connecting the cable on the shore, connect it to the boat first.**

**Disconnect the cable after use. First switch off the main switch in the boat, then disconnect the cable on the shore and last, disconnect it on the boat.**

**Do not soak the catches of the cable in water.**

## 21. Showers

Your yacht has a hot & cold, fresh-water shower in head and on the transom.

If the engine has been running, the hot water can be very hot - be cautious!

In order to use the showers, the fresh-water pump must be activated on the 12V panel.

Water pump switch



**The shower-drain pump is operates automaticaly when the water run out.**

Transom Shower

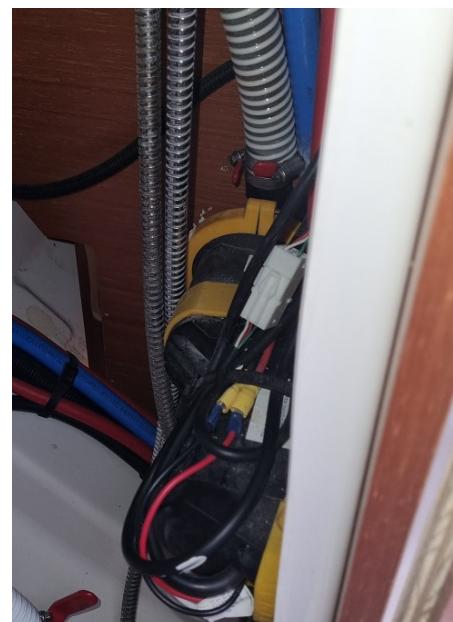
The valve and the shower head are located under the plate in cockpit has two functions:

- By rotary the head down you can regulate the water heating.
- Be careful. The water can be very hot. Test before showering.

To use the shower head simply pull it out and press the button on the back. If no water comes out make sure that the 12V water switch is on, that the shower hose is not kinked (access from aft cabin, same side as shower) and that the water pressure valve is in the correct position.



**Shower dry pump located under the sink in each heads.**



## 22. Instruments

Yacht is equipped with the following instruments on board:

VHF Ray52 Raymarine located above the skipper table (<http://www.raymarine.com/vhf-radio-communication/ray52/>)



Starboard helm contain :

Engine switch on/out, Volvo engine tachometer (max 2200 rpm), VHF speaker.

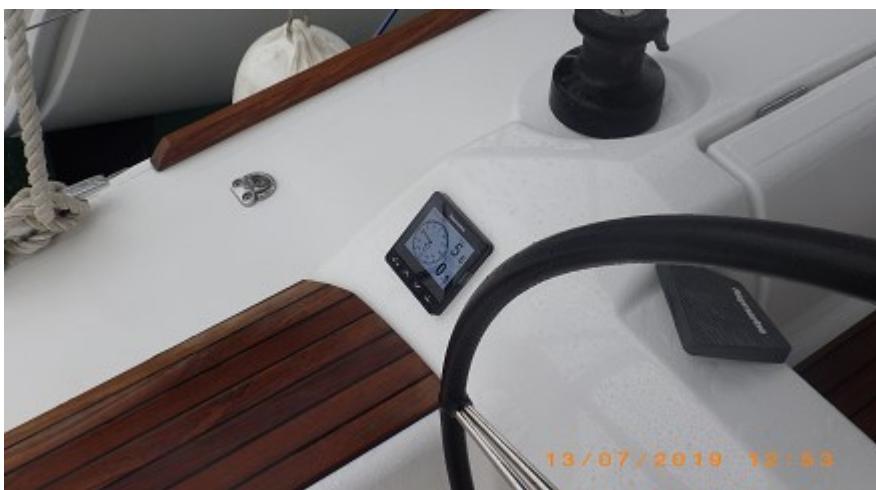
Raymarin p70s auto pilot controller (<http://www.raymarine.com/view/index.cfm?id=15032385934>)

Chart plotter Raymarin GPS Axiom 9 (<http://www.raymarine.com/multifunction-displays/axiom/axiom9/>)

Remote control of bowthruster Quick (maximum time of continuous operation 5 seconds)



Raymarin i70 multifunction instrument (<http://www.raymarine.com/display/?id=17721>), and compass located at the port side helm.



**IMPORTANT: Please never change the English language, do not reduce the brightness, do not change the settings and alarm on all kind of instruments and plotter.**

## 23. VHF Procedures

The VHF radio is located at the Skipper desk. Using the VHF radio:

Familiarize yourself with the method for switching channels, and with the squelch and volume controls on your radio. Most radios have a button to instantly select Channel 16 - ensure you understand how this operates or you could end up speaking on Ch. 16 when you think you are on some other channel.

1. Make sure the radio is switched on, volume quite high, power to high unless the station you are calling is very close.
2. Squelch up until loud hissing, and then back a little until the noise *just* stops.
3. Select the channel for calling (Channel 16, unless specified otherwise).
4. Press switch on microphone when speaking. Release immediately.

If no response then wait two minutes and repeat the call. If still no response, wait a further two minutes before trying again. If calling on Channel 16, it is very important to switch to a working channel after the contact is established. Do not use Channel 16 for your conversations - this channel is for hailing and distress only.

Channels to use:

16 - Hailing and Distress

17 - Marinas and Yacht Clubs - for reservations

06 - Ship to Ship - along with Channel 68 and 77 can be used for contact between boats In the event that your vessel is involved in a non-life threatening incident with an object or with another vessel, it is important that you contact the Nova Eurospectra immediately .Please remember to get as much information as possible about your location, the other vessel's description and what damage has been done to your vessel so that we can best assist you.

Failure to report any accidents or incidents in a timely manner may result in nullification of your deposit.

Types of emergency:

In the unlikely event that you are involved in an emergency stay calm and follow these steps. You will also have an Emergency Procedure card next to your VHF.

Distress: "MAYDAY, MAYDAY, MAYDAY." This is an International Distress signal and an imperative call for assistance. It is used only when a life or vessel is considered to be in grave and imminent danger.

Mayday Relay: used to summon help for a vessel which is either too far offshore to contact the coastguard directly, without radio capabilities or whose radio has been damaged or destroyed.

Urgency: "PAN-PAN, PAN-PAN, PAN-PAN" This is the International Urgency Signal and is used when a vessel or person is in some jeopardy but is not considered to be in grave and imminent danger.

Medical emergency: "PAN-PAN MEDICO, PAN-PAN MEDICO, PAN-PAN MEDICO" (Pronounced med-ick-oh). This is an International Urgency Signal that should be used when medical advice is needed.

Safety: "SECURITE, SECURITE, SECURITE" (Pronounced Say-cure-it-tay). This is an International Safety Signal and is a message about some aspect of navigational safety or a weather warning.

How to issue an emergency message

Select Channel 16 and press transmit button on handset

Say slowly and clearly 'MAYDAY, MAYDAY, MAYDAY, CALLING ALL STATIONS This is.... (vessel name)....' and repeat vessel name 3 times .Give position - vessel's position in degrees of latitude and longitude or nautical miles from, and bearing to, a navigational landmark. Describe emergency - list the problem, the type of assistance needed; number of passengers aboard (boat length, hull colour and type is also useful)

Wait 1 minute for a response, repeat message.

## 24. Batteries / Battery switches

The systems on your yacht are all 12volt. The batteries will need to be recharged as often as you deplete them.

Conserving power will result in less time needed for charging, so turn off systems that are not being used.

Your batteries will charge when the engine is running at 1400rpms or more, whether sitting at a mooring or motoring to a destination. Check the battery levels and make note of them before charging.

Run the engine at 1400rpms or more for a minimum of 2hrs **twice daily**.

Shut the motor off. Wait 15 minutes before checking the battery levels, (directly after turning off the motor they will remain in an excited state for about 10 minutes).

The servise batteries should come to rest at 12.8 v. and then slowly get lower. When the batteries gets to 12.2 you should start to re-charge the batteries soon.

Yacht has servise battery systems , starter , bowthruster battaries which are isolated from each other. The servise batteries have a capacity of 420 AHrs.



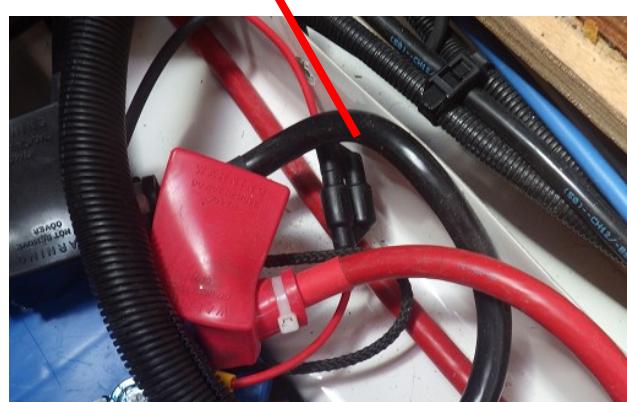
Isolator

Battary charger

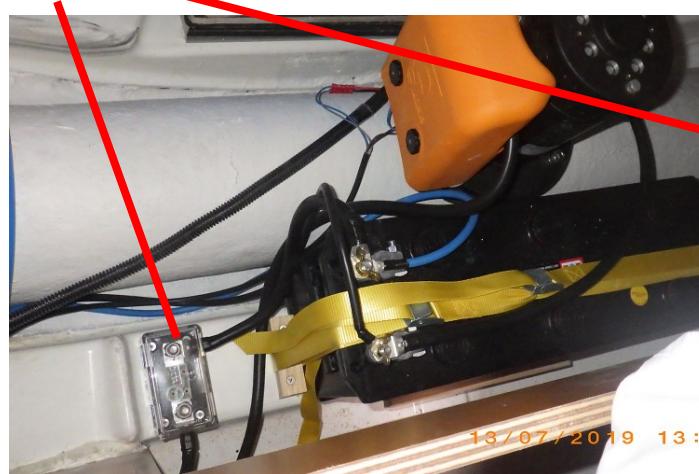
Solar panel chrger



Solar charger fuse



Fuse and switch of bowthruster located in space under the bed of bow cabin.



## 25. Anchoring & the windlass

Setting your anchor:

Preparation:

- Establish a non verbal communication system from bow to stern, as with the noise of the engine and wind, verbal communication proves difficult.
- Tie the dinghy painter close to the boat at the bow or amidships to avoid wrapping it around the prop.

Location:

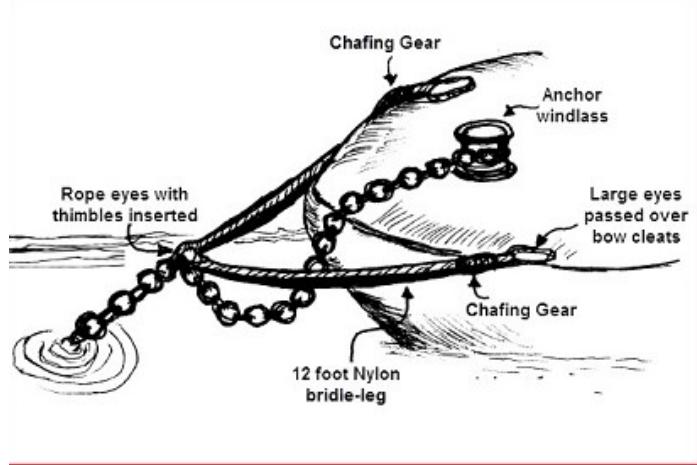
- Choose a clear area to anchor in, with depth in 5 to 10 m. A white color of bottom under the sea water is sand and perfect for anchoring. A brown or green bottom will be grass, rock or coral. **Only anchor in sand.**
- Make sure that the land relief is protecting you from the wind and that you are not being pushed onto the shore.

Action:

- Carefully lift the anchor over the bow roller and slowly put the chain till the anchor is just above the water surface.
- Use the external forces; approach from down wind or current, whichever prevails.
- Once the yacht is stationary use the electric windlass to drop the anchor. The external forces will push you back and away from the anchor.
- Minimum scope is 4:1. In heavy weather you may want to increase that, always ensuring your rotation area is clear of any obstacles. Chain has red painted indication for each 10 m. You can issue 40m chain max. The chain is connected to the hull by a 10mm rope which serves to drop out the chain in case of danger, and not for the preservation of the chain.
- Engage reverse, slowly up to 1500 rpm to really drive your anchor into the sand.
- Once set, put the engine in neutral and allow the yacht to settle, it is always advisable to snorkel the anchor and rotation area to be sure it is bedded in correctly and not underwater rock in area.

Attaching the snubbing line:

- Once you are happy that the anchor is set you must attach the snubbing line. The snubbing line protects the windlass and it is important that you attach the snubber every time you set the anchor.
- Attach the hook around the chain link (the hook is too big to go through the link) and cleat off the bitter end of the line to a bow cleat. Pay out enough chain so that the snubbing line becomes taut.



There is a high amperage fuse that will blow if the windlass gets overloaded.

The fuse is located under the skipper desk.

The anchor windlass fuse is 100 amps. You can switch-on the fuse to raise the bar.

If the windlass is not workable, but the windlass breaker on the 12v panel is switched on, this indicates that the yacht service battery power is too low to run the windlass. Please run the engine @1500 rpm for 15 min, and try again. If the windlass still refuses to operate, please call technical support.

Manual operation of the windlass

If you lose power to your windlass, start the engine and give it to 2000 rpm in neutral, to make sure you have not just got a low battery voltage. Then make sure the windlass breaker with the anchor icon is in the 'on' position on the 12 volt panel. If there is still no power, check the the windlass fuse in on position. If you still have no power, you can operate the windlass manually.

To drop the anchor, insert the windlass handle into the star fitting on the top of the windlass. Continue to pull back on the windlass handle, so that the brake cap loosens. Your anchor is now ready to drop.



Remove the safety line and push the anchor over the bow, keeping hands and feet clear. Control the rate the chain pays out by tightening or loosening the brake with the windlass handle.

When you have paid out sufficient chain - 3 to 5 times the water depth, push the handle forward to tighten the brake. Increase revs to 1500 rpm, to set the anchor. If you drag, pay out more chain, and re-try 1500 rpm in reverse. When the anchor is set, fit the snubbing line, and cleat it off, then release the chain on the gypsy as above, so that the load is taken up on the snubbing line.

#### *26. Picking up a mooring buoy*

Ensure the dinghy painter is tied off short on the bow or amidships and is clear of the prop.

1. Approach the mooring buoy, keeping the bow into the wind or current, whichever prevails.

2. Have a crew member on the bow to pick up the mooring pennant with the boat hook.

3. The bowman will direct the helmsman to the mooring, using the already established non verbal communication system. Once at the mooring, inspect the buoy and line for any signs of wear and tear; if you are unsure about a mooring buoy's integrity, choose another location to moor up.

4. Once set your mooring buoy will be attached either on the port or starboard cleat and the yacht will be head to wind. Remember to centralize the wheel and lock in place to avoid the yacht sailing around the buoy.

5. Next attach a second back up line directly to the mooring ball. There will be a metal ring at the top of the ball or a shackle just under the ball. Attach a line from the opposite bow cleat and if possible run the line through the ring or shackle and back to the cleat. It is always easier to do this from the dinghy. Do not try to make the lines of equal length, the first line should be taking all the weight of the boat.

6. To depart, release the back up line first. Slowly motor the boat forward to create slack, release the line from the cleat and allow the pennant to slip from the line into the water. Fall back with the wind or current, and be careful not to foul your prop on the pennant.

**7. Remember to tie your dinghy away from the stern whenever you are maneuvering in close quarters.**

## 27. Refrigeration

The system on this boat is an upgraded 12v refrigerator. This system is designed to run 4hrs continuous without charging of service batteries then the units off they keep the low temperature some hours more. There is a top loading fridge and a front loading unit with a small freezer compartment. To ensure that it does not fail there are two things you should do.

**1. Firstly, keep your batteries charged. If the level goes below 12v the system will malfunction. Refer to section 25 for charging instructions.**

**2. Secondly, do not chip at the ice or use any other sharp items in the fridge. If something is frozen to the fridge do not force it away. Warm water on it if you need to melt it away.**

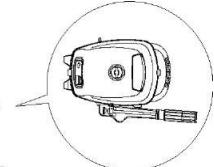
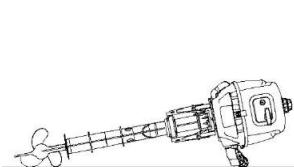
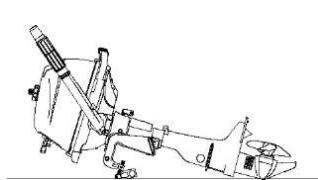
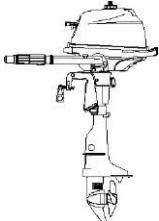
There is a thermostat in the fridge. It is a white dial with numbers on it going from 1-7. Putting 7 at the apex of the dial is the coldest setting. Keep it on this setting until it is too cold. Then you can turn the system down or off if you wish.



Switch on the cockpit fridge button on panel



## 28. Dinghy & Outboard



Note:

- Place a towel or something similar under the outboard motor to protect it from damage when as shown in the figure 2 or figure 3 above.
- Please make sure the tiller handle faces down to make the throttle handle point to the direction of propeller

Starting engine:

1. Loosen the air vent screw on the fuel tank cap. One turn for built-in tank.
2. Open the fuel cock.



3. Place the gear shift lever in neutral. The engine must be started in neutral otherwise damage to the starter can occur.
4. **Place the throttle grip in the "START" (start) position**

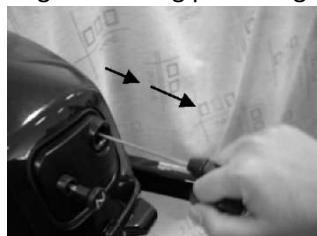


## 5. Pull out the choke knob fully



- It is not necessary to use the choke when starting a warm engine.
- If the choke is left in the "START" (start) position while the engine is running, the engine will run poorly or stall.

6. Pull the manual starter handle slowly until you feel resistance. Then give a strong pull straight to crank and start the engine. Repeat if necessary.



7. After the engine starts, slowly return the manual starter handle to its original position before releasing it.
8. Slowly return the throttle grip to the fully closed position.

**CAUTION:** When the engine is cold, it needs to be warmed up. If the engine does not start on the first try, repeat the procedure. If the engine fails to start after 4 or 5 tries, open the throttle a small amount (between 1/8 and 1/4), and try again.

### Warming up engine

After starting the engine, return the choke knob to the half Way position. For approximately the first 5 minutes after starting, warm up the engine by operating at one fifth throttle or less. After the engine has warmed up, push the choke knob in fully.

- **If the choke knob is left pulled out after the engine starts, the engine will stall.**

Check for steady flow of water from the cooling water pilot hole.



#### CAUTION:

- If water is not flowing out of the hole at all times while the engine is running, stop the engine and check whether the cooling water inlet on the lower case or the cooling water pilot hole is blocked.
- If the problem cannot be located and corrected, contact technical support.

### Shifting

To shift from forward to reverse or vice versa, first close the throttle so that the engine idles (or runs at low speed).

#### Forward

1. Place the throttle grip in the fully closed position.



2. Move the gear shift lever quickly and firmly from neutral to forward

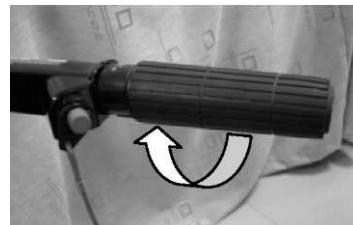


#### Reverse

#### WARNING:

When operating in reverse, go slowly. Do not open the throttle more than half. Otherwise the boat could become unstable, which could result in loss of control and an accident.

1. Place the throttle trip in the fully closed position.
2. turning the outboard motor around 180°.
3. Move the gear shift lever quickly and firmly from neutral to reverse.



### Stopping engine

**NOTE:** Before stopping the engine, first let it cool off for a few minutes at idle or low speed. Stopping the engine immediately after operating at high speed is not recommended.

#### PROCEDURE:

1. Push and hold the engine stop button until the engine comes to a complete stop.

#### NOTE:

If the outboard motor is equipped with an engine stop switch lanyard, the engine can also be stopped by pulling the lanyard and removing the lock plate from the engine stop switch.



2. Tighten the air vent screw on the fuel tank cap and set the fuel cock lever or knob to the closed position.



**IMPORTANT:**

**The driver of the dinghy must be over 18. Never operate the dinghy under the influence of alcohol or drugs. Always tow your dinghy on a short line while motoring and a long line while sailing, always mount the engine on the push-pit during the sailing.**

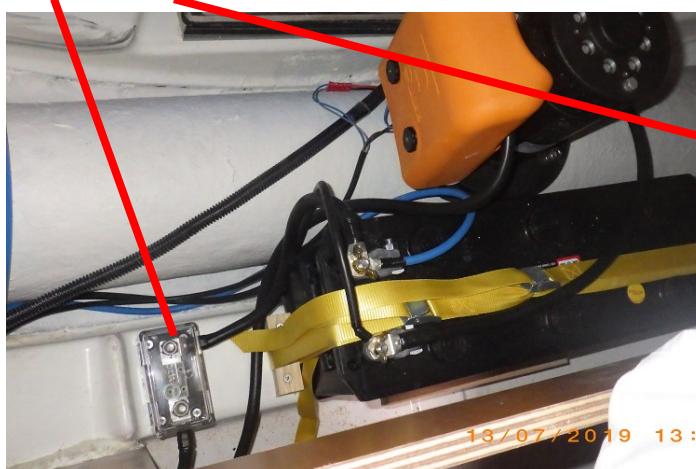
**If weather conditions are very rough, the outboard needs to be mounted on the push-pit.**

**Do not allow the tender and outboard propeller to touch with the sea bottom and grounding. Only sea urchins are the reason for blowing the dinghy.**



## 29.BOW THRUSTER

Fuse and switch of bowthruster located in space under the bed of bow cabin.



**Remote control of bowthruster Quick  
(maximum time of continuous operation 5 seconds).**



### 30. Swim Ladder and bathing platform

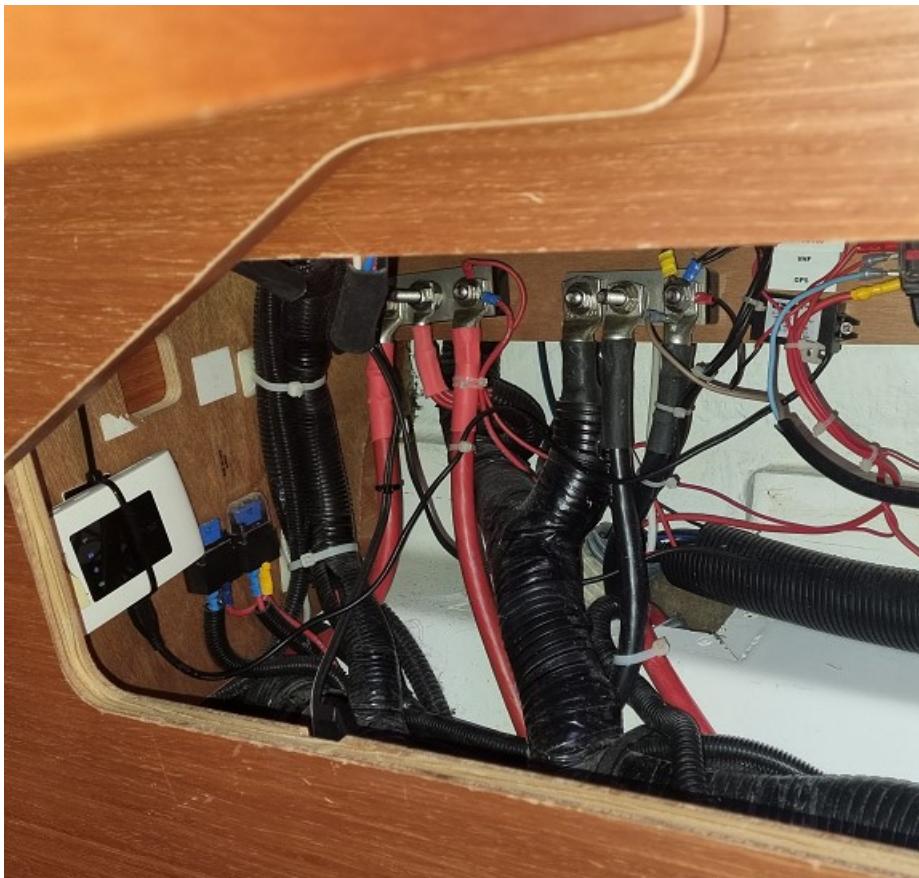


Yacht is equipped with retractable transom (bathing platform). There is a swim ladder. While under sail, the transom should remain closed and secure. After you have gotten to your anchorage feel free to deploy the transom for easy access to your dinghy, swimming or snorkeling.

**Attention: Keep the platform closed while sailing, as well as in the anchor, when a high wave hits the platform. Otherwise, the platform will be damaged.**

### 31. WiFi access

Mobile access point must always be included in electricity for internet access located behind the wall of skipper seats



Use the net name and passport specified in boat documents.

### **32. Risk of damage**

**! Always keep close the hatch windows shown below to avoid damage of hatches by rope of Genoa and boom.**



**! In reverse gear when the yacht is going astern, with the propeller "walking" the stern to starboard (right side).**

**! Due to the overload of coastal sea , please book in advance Marinas, Restaurants and buoys berthing for your restful sleep on the yachts:**

- a. <https://my-sea.com/en>
- b. <https://book.aci-club.hr/>

**! Check daily forecast on:**

- <http://meteo.hr>
- [https://www.windfinder.com/weatherforecast/poljica\\_trogir](https://www.windfinder.com/weatherforecast/poljica_trogir)

**(only 3 days superforecast page)**

- <https://www.windy.com/-Wind-gusts-gust>

**! Be very carefully with the sheet, mooring line in order to avoid winding on the engine and bowthruster propeller.**

**Spare engine propeller located under the saloon seat.**