Beneteau 343 Information

Welcome to this sailing course on board the Beneteau 343. The boat is a fractionally rigged Sloop with in-mast furling and a roller-furled Jib. Powered by a 29 HP Diesel engine she can cruise at a maximum hull speed of 7.44 Knots

Two cabins and a single Head (toilet) make it comfortable for 4 Adults, with extra single beds in the lounge for two more (slightly shorter) people.

The Galley has ample equipment to store and prepare meals. Keep in mind that water is in limited supply so plan on ½ gallon per day for personal use and 5 gallons per day for cleaning etc. There are two water tanks on board for a total capacity of 255 Liters or 67 Gallons. Hot water is provided when connected to Shore Power or when the engine is running.

The Head is electrically operated but no wastepaper products can be flushed. Trash bags will be used to dispose of paper waste. Please remember that it is illegal to throw any waste, especially plastic, overboard and no oil/fuel can be discharged at any time.

For students enrolled in the 104 class, Bareboat Chartering, we will be planning a three-day voyage with two overnight stays consisting of one mooring/anchoring and one marina docking other than at home base. The boat provisioning schedule is part of your course and should include the Captain in your meal planning. Evening cocktails and all alcoholic beverages will be an individual's responsibility. Please organize your meals so that there is equal task sharing with due consideration to the entire crew's dietary needs.

In this booklet there are excerpts from the Owner's Manual with diagrams that will help explain the various systems we will discuss. Part of every certification includes knot tying. Here is a link to the knots we will review. Please practice beforehand but don't get worried if they seem difficult, you will be taught onboard. More info can be found on the Links page.

A Marine VHF frequency list is also attached for your reference followed by an Alphabet chart that includes flags and the Phonetic alphabet.

United States VHF Marine Frequency List

Channel Number	Ship Transmit MHz	Ship Receive MHz	Description of Communications
1A	156.050	156.050	Port Operations and Commercial, VTS. (New Orleans/Lower Mississippi)
5A	156.250	156.250	Port Operations or VTS. (Houston, New Orleans and Seattle)
6	156.300	156.300	Intership Safety
7A	156.350	156.350	Commercial
8	156.400	156.400	Commercial (Intership only)
9	156.450	156.450	Boater Calling. Commercial and Non-Commercial.
10	156.500	156.500	Commercial
11	156.550	156.550	Commercial. VTS in selected areas.
12	156.600	156.600	Port Operations. VTS in selected areas.
13	156.650	156.650	Intership Navigation Safety (Bridge-to-bridge). Ships >20m length maintain a listening watch on this channel in US waters.
14	156.700	156.700	Port Operations. VTS in selected areas.
15	--	156.750	Environmental (Receive only). Used by Class C EPIRBs.
16	156.800	156.800	International Distress, Safety and Calling. Ships required to carry radio, USCG, and most coast stations maintain a listening watch on this channel.
17	156.850	156.850	State Control
18A	156.900	156.900	Commercial
19A	156.950	156.950	Commercial
20	157.000	161.600	Port Operations (duplex)
20A	157.000	157.000	Port Operations
21A	157.050	157.050	U.S. Coast Guard only
22A	157.100	157.100	USCG Liaison/Maritime Safety Information Broadcasts. Announced on channel 16.
23A	157.150	157.150	U.S. Coast Guard only
24	157.200	161.800	Public Correspondence (Marine Operator)
25	157.250	161.850	Public Correspondence (Marine Operator)
26	157.300	161.900	Public Correspondence (Marine Operator)
27	157.350	161.950	Public Correspondence (Marine Operator)
28	157.400	162.000	Public Correspondence (Marine Operator)
63A	156.175	156.175	Port Operations and Commercial, VTS. (New Orleans/Lower Mississippi area)
65A	156.275	156.275	Port Operations
66A	156.325	156.325	Port Operations
67	156.375	156.375	Commercial. Bridge-to-bridge communications in lower Mississippi River. Intership only.
68	156.425	156.425	Non-Commercial
69	156.475	156.475	Non-Commercial
70	156.525	156.525	Digital Selective Calling (voice communications not allowed)
71	156.575	156.575	Non-Commercial
72	156.625	156.625	Non-Commercial (Intership only)
73	156.675	156.675	Port Operations
74	156.725	156.725	Port Operations
77	156.875	156.875	Port Operations (Intership only)
78A	156.925	156.925	Non-Commercial
79A	156.975	156.975	Commercial. Non-Commercial in Great Lakes only
80A	157.025	157.025	Commercial. Non-Commercial in Great Lakes only
81A	157.075	157.075	U.S. Government only - Environmental protection operations.
82A	157.125	157.125	U.S. Government only
83A	157.175	157.175	U.S. Coast Guard only
84	157.225	161.825	Public Correspondence (Marine Operator)
85	157.275	161.875	Public Correspondence (Marine Operator)
86	157.325	161.925	Public Correspondence (Marine Operator)
87A	157.375	157.375	Public Correspondence (Marine Operator)
88A	157.425	157.425	Commercial, Intership only.
AIS 1	161.975	161.975	Automatic Identification System (AIS)
AIS 2	162.025	162.025	Automatic Identification System (AIS)

 **Alfa** Diver down	 **Bravo** Dangerous cargo	 **Charlie** Yes
 **Delta** Keep clear	 **Echo** Altering to starboard	 **Foxtrot** Disabled
 **Golf** Want a pilot	 **Hotel** Pilot on board	 **India** Altering to port
 **Juliette** Keep clear	 **Kilo** Desire to communicate	 **Lima** Stop immediately
 **Mike** I am stopped	 **November** No	 **Oscar** Man overboard
 **Papa** About to sail	 **Quebec** Request clearance into port (int'l)	 **Romeo** Preparing to replenish (at sea)
 **Sierra** Engines going astern	 **Tango** Keep clear of me	 **Uniform** You are running into danger
 **Victor** I require assistance	 **Whiskey** Need medical assistance	 **X-Ray** Watch for my signals
 **Yankee** Dragging anchor	 **Zulu** Require tug	

BENETEAU 343

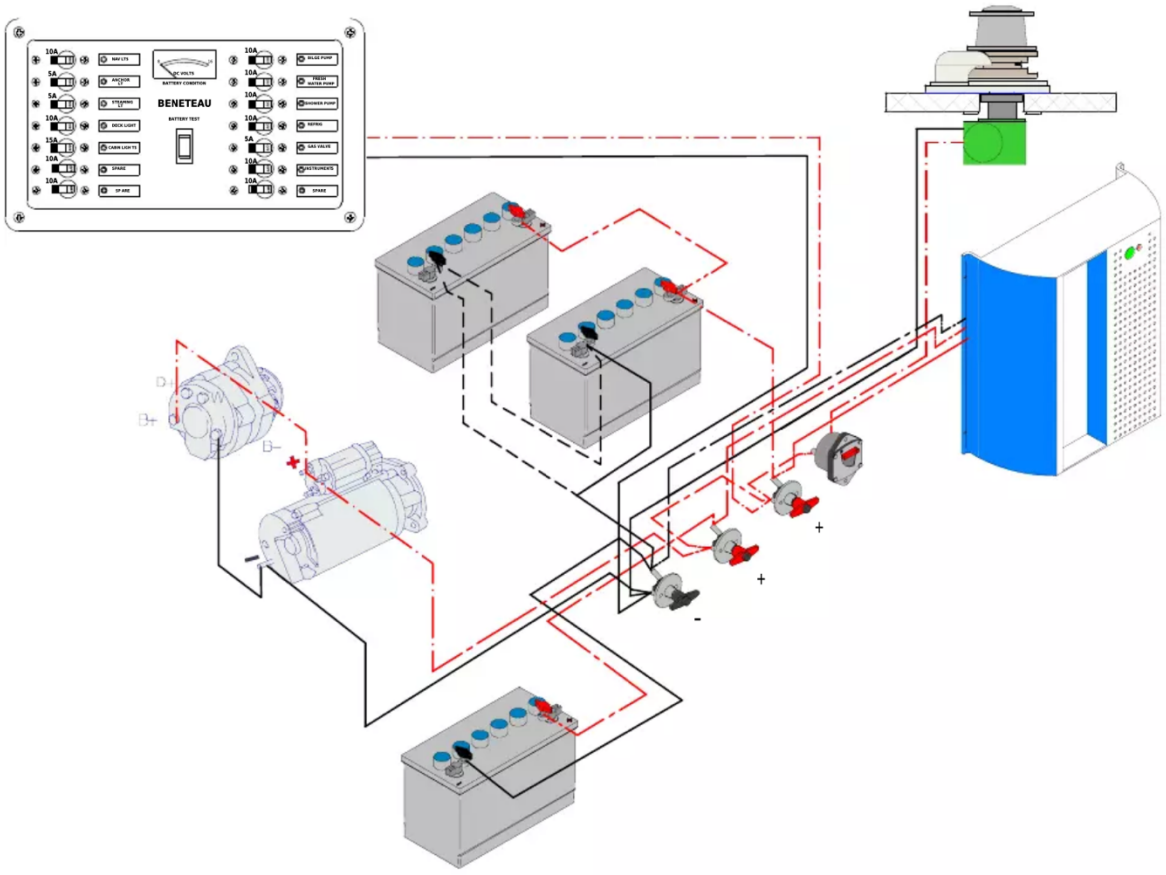
Sailboat Specifications

Hull Type:	Fin w/bulb & spade rudder
Rigging Type:	Fractional (9/10) Sloop
LOA:	35.50 ft / 10.82 m
LOD:	34.05 ft / 10.38 m
LWL:	30.83 ft / 9.40 m
S.A. (reported):	649.00 ft² / 60.29 m²
Beam:	11.42 ft / 3.48 m
Displacement:	13,448.00 lb / 6,100 kg
Ballast:	3,402.00 lb / 1,543 kg
Max Draft:	6.23 ft / 1.90 m
Construction:	GRP
Ballast Type:	Cast iron
First Built:	2005
Last Built:	2008
Builder:	Beneteau
Designer:	Berret-Racoupeau

Auxiliary Power/Tanks (orig. equip.)

Make:	Yanmar
Type:	Diesel
HP:	29
Fuel:	20 gals / 75 L

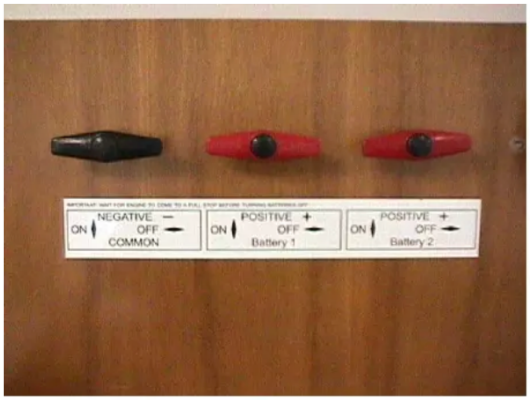
Electricity Layout



BATTERY SWITCH OPERATION

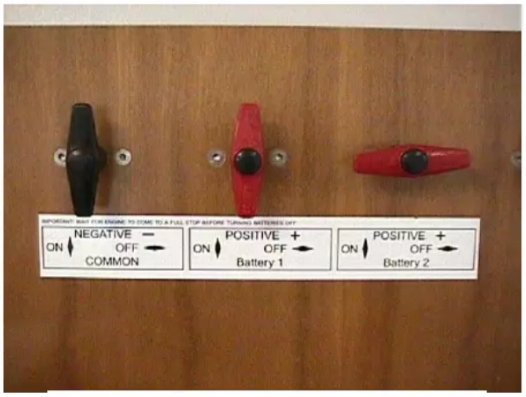
Never turn the negative battery switch off while engine is running.
Never turn all positive switches off while engine is running.
Battery 1 is the engine / start battery
Battery 2 is the service / house battery
Negative battery switch controls ground {DC12V negative} for all batteries.
To charge a battery with the engine the positive switch must be in the on position.

WARNING: Do not turn both positive battery switches off while engine is running



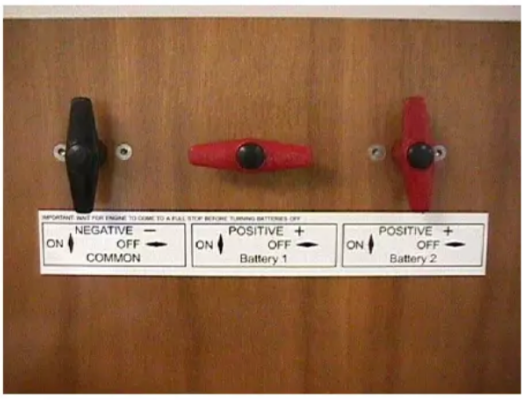
Everything is OFF, no 12V DC power
(when leaving the boat unattended)

Everything is ON, 12VDC power available
to start engine and/or run equipment



Configuration to start engine, while
house/service is off or down

You can turn house switch ON, while
engine is running to charge house.



Engine is off , Run equipment from house only
(like at anchorage)

12V Charging System

The batteries must be recharged by one of the following systems:

Alternator

A belt drive alternator is mounted to the engine which produces 12V as needed by the batteries when the engine is running. The output of the alternator is wired to the battery switches.

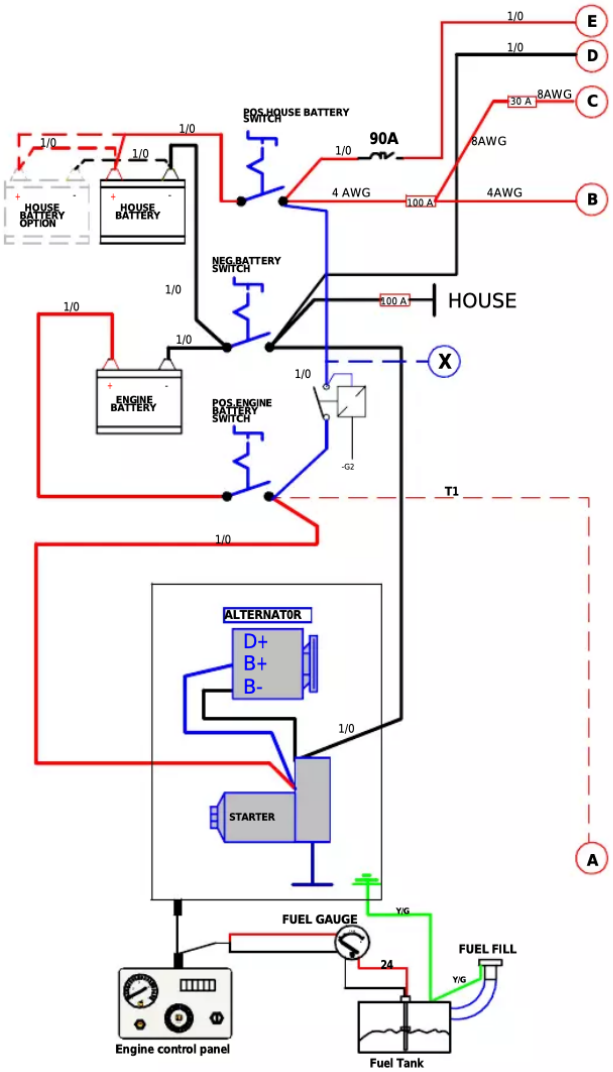
Battery Charger

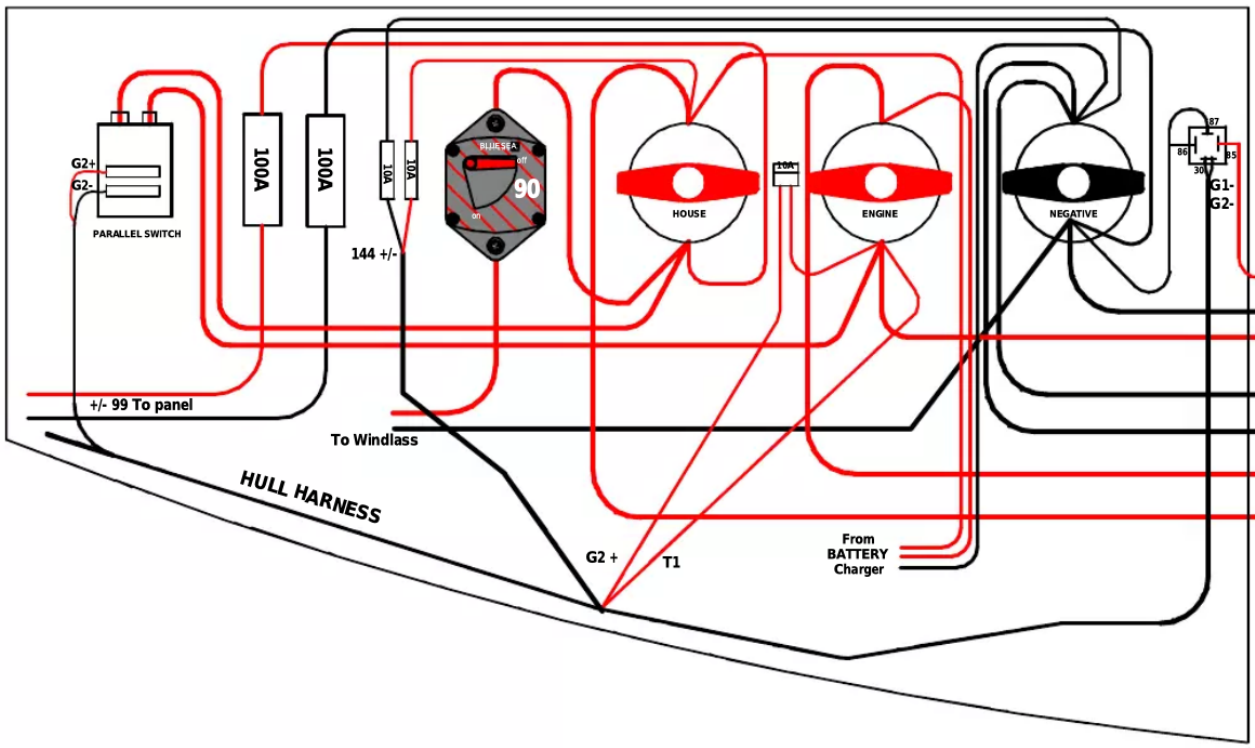
A marine battery charger is wired into the 110V shore power system. This charger converts the AC dock power to 12V DC and feeds it to the batteries.

WARNING! DO NOT OPERATE THE CHARGER WHEN THE ENGINE IS RUNNING.

The battery charger is completely automatic; refer to the charger's manual for complete details. To charge the batteries using the charger: plug in the shore power cord and turn the charger breaker on at the 110V shore power panel.

GENERAL 12V SCHEMATIC




G2+
G2-
PARALLEL SWITCH
100A
100A
10A
10A
144 +/-
BLUESEA
90
HOUSE
10A
ENGINE
NEGATIVE
87
86
85
30
G1-
G2-
To alternator red
To engine block
To engine starte
From engine bat
From house batt
From engine batt
From house batt
+/- 99 To panel
To Windlass
HULL HARNESS
G2 +
T1
From
BATTERY
Charger

110V-220V ELECTRICAL SYSTEM

The shore power system consists of a marine power cord adapter plug mounted on the transom of the boat which is connected to an 110V panel that distributes the 110V AC current to the outlets and appliances on your boat. The shore power system is rated for a maximum of 30 AMPS; care must be taken to not overload the system.

WARNING! DO NOT WIRE OPTIONAL AIR CONDITIONERS TO THE SHORE POWER SYSTEM; INSTALL A SEPARATE SERVICE AND PANEL.

The 110V panel consists of breaker switches which protect and turn the individual circuits on and off. The charger, hot water heater and the 110V outlet circuit are on separate breakers.

Boats are fitted with a 110V/60Hz or a 220V/50Hz system. We advise you to follow these steps in order to avoid the risk of electric shock and fire.

Do not work on a live fitting.

Connect the boat / shore supply cable to the boat before you plug it into the shore supply socket with the breaker off. Turn the breaker on last.

Do not immerse the boat / shore cable socket.

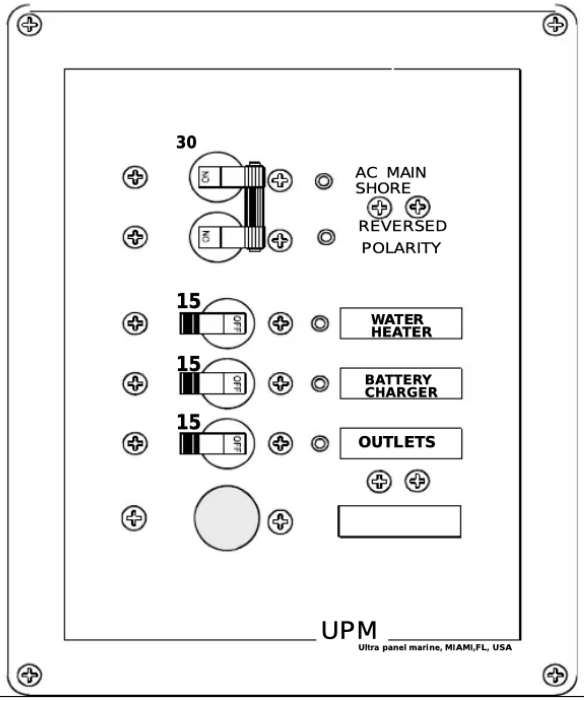
Turn off the shore supply switch on board before you plug in or unplug the boat / shore supply cable.

Do not tamper with the connections of the Boat / shore supply cable. Use only compatible connections.

Never swim in a marina around boats connected to shore power. If necessary for maintenance unplug the boat being worked on and surrounding boats.

WARNING! DO NOT OPERATE THE 110V WATER HEATER DRY.

110V Panel



XVII) LP GAS SYSTEM

GAS STOVE

Your Beneteau is equipped with a propane stove and oven combination. This unit is located in the galley and is gimbaled for your safety and comfort in a seaway. The stove is supplied by a storage bottle located in a self draining locker in the cockpit. The pressurized gas is fed thru a regulator at the bottle which reduces the pressure and feeds the propane gas to a 12V solenoid valve. The solenoid is a remotely controlled valve which turns the flow of gas on and off from a switch located at the 12V distribution panel. A pressure gauge is located before the regulator to check the gas system for leaks.

OPERATION

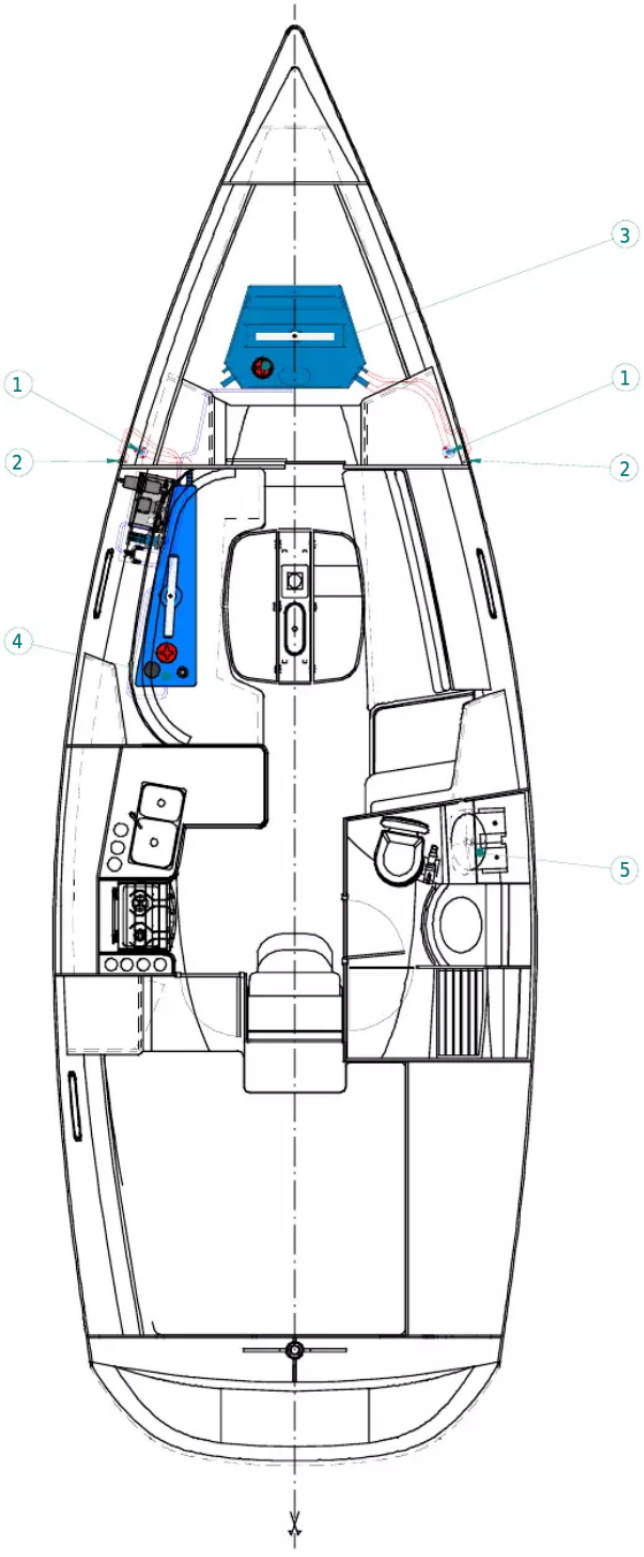
WARNING! ALWAYS LEAVE BOTH THE SOLENOID VALVE AND THE VALVE ON THE GAS BOTTLE CLOSED WHEN THE STOVE IS NOT BEING USED.

1. Read and follow the instructions printed on the propane warning labels located at the appliance and under the lid of the gas storage locker.
2. Be sure all burner and oven knobs are in the off position before attempting to operate the galley stove.
3. Activate the main 12V system and be sure the solenoid switch is in the off position.
4. Open the supply valves and test the system for leaks following the instructions on the locker warning label.
5. Switch on the solenoid using the breaker on the 12V panel.
6. Light the appliance in accordance with the stove manufactures procedures. Generally each burner is lit by turning the burner control knob to the lighting position and then pushing the knob in. A safety thermocouple will keep the valve open as long as the burner remains lit. If the flame goes out it will stop the gas flow to the burner.

Note: If the odor of gas is detected at any time, turn off all electrical and mechanical systems, extinguish any open flames and immediately check for a propane leak. Propane is a heavy gas and may settle in the bilge which represents an explosion and fire hazard.

- **Never install flammable materials above cooker (curtains, papers, serviettes, etc…).**
- **Never leave the boat unattended when gas or spirit appliances are operating.**
- **In the case of gas smells or the accidental extinguishing of the flames (even though the gas supply is automatically shut-off in case of extinction), close the taps and create a draught of air to evacuate residual gas. Look for the cause of the problem.**
- **Do not smoke or use a naked flame when looking for a gas leak or when changing a gas tank or when working on the gas system.**
- **Appliances burning combustible fuels consume cabin oxygen and reject combustion gases into the boat. It is therefore necessary to ventilate the boat when cooking or gas appliances are being used. Do not obstruct ventilation holes in the boat (ventilator cowls) and at least leave the door open.**
- **Close the gas supply line valve and the gas tank valves when the appliances are not in use.**
- **For cookers with integral gas cylinders, change the cylinders outside the boat. Test before replacing the cooker in the galley. Make sure that you lock the cooker gimbals after replacing it.**
- Never use cooking appliances to heat the boat.
- Never obstruct openings intended for ventilation.
- Make sure that the burner knobs are closed before opening the supply line or tank valves.
- Close the valves before changing a tank and immediately in case of an emergency.
- Stow spare tanks in ventilated housings on deck or in lockers provided for this, which should be gas tight and ventilated towards the outside.
- Never obstruct access to components of the gas system notably to the valves (tank and cooker).
- The flexible hoses connecting the tank to the extremity of the system at one end and the cooker at the other should be changed in accordance with regulations in force in your country. Use only hoses complying with the standards of your country.
- Do not use gas tank lockers for stowing any other equipment.
- Be careful not to damage the thread of the tank onto which is fitted the regulator. Check the condition of the regulator every year and change if necessary. Use regulators identical to those installed.
- Make sure that empty tank valves are closed and disconnected. Keep protective devices in place; caps and bungs.
- Never use ammonia based solutions for cleaning or leak detection.

XVIII) FRESH WATER AND WASTE TANKS



Some of the equipment in the following table could be on option.

REF	Description
1	Water tank filler
2	Water tank breather
3	Fwd water tank (160L estimated)
4	Port water tank (95L estimated)
5	Waste rigid tank (80L estimated)

- **These capacities cannot be totally used depending on the trim, loading and the position of filling point(s) and / or eventual emptying point(s).**
- Do not discharge the toilets close to shore.
- Inform yourself about local environmental protection regulations, and the respect of codes of good practice.
- Respect international regulations against pollution of the marine environment (Marpol).

The operating principle for the system is described in the attached schematic diagram.

- After each use, rinse the system: fill the bowl with fresh or sea water then empty.
- Products to use for cleaning should be domestic cleaning products.
- The system should be empty during storage below freezing temperatures (32°F/0°C).

For the respect of the environment:

- Do not discharge the contents of the holding tanks close to the shore; use the pump-out stations at marinas or harboursfor emptying the holding tanks before leaving harbour.
- Make sure that the holding tank discharge cock is closed in order to avoid any inadvertent discharging.

XIX) FRESH WATER SYSTEM

The fresh water system supplies the sink in the galley, the wash basin and shower in all of the heads, and the transom shower. This system is pressurized by an electric pump. There is a filter between the water tank manifold and the pump. It is necessary to check and clean this filter regularly.

Never run an electric pump when the tank is empty. It may burn out the pump.

OPERATION.

1. Fill the water tanks. **(SEE DECK SECTION FOR WATER FILL LOCATIONS)**
2. Select the tank for use at the valves on the manifold.
3. Turn on the fresh water pump at the panel.
4. Open all taps and bleed off any trapped air in the lines until the water runs clear with no sputtering.
5. Close all taps and the pump will turn off when it reaches operating pressure. If the pump continues to cycle check all fittings for leaks.

- Never fill up with water and diesel at the same time if the filling points are close to each other, to avoid the risk of contaminating one liquid with the other.
- Similarly, avoid risk of contamination by never handling a product that might cause pollution close to the deck fill while taking on water.
- If unused for a long time, the tanks and pipes need to be flushed with a solution of acetic acid (solution of vinegar and water).
- The sink and washbasins are drained through their own thru-hull valves; these should be kept closed when the fresh water system is not in use.
- Do not force hosepipe nozzle down the fill pipe as a high back pressure could occur. Check the vent/overflow fitting to avoid over filling.

XX) MARINE TOILET & HOLDING TANK

GENERAL DESCRIPTION

The marine sanitary system consists of a marine toilet (head), a holding tank and a series of thru hull intakes, discharges and valves to control the intake of water into the head to flush the bowl either into the holding tank or overboard.

Head Operating Procedure

The marine heads on your Beneteau are installed below the water line, all valves must be closed after use and the selection lever on the head must be returned to the dry bowl position. Failure to do so could result on the bowl overflowing and flooding the boat with water.

1. Read the instructions for use supplied by the head manufacturer and the precautions marked on the pump.
2. Before use, make sure that the water supply thru-hull valve is open and the Y-valve is selected for discharge into the holding tank.

NOTE: BY LAW YOU MUST USE A HOLDING TANK IN ALL US, CANADIAN, AND AMERICAN WATERS.

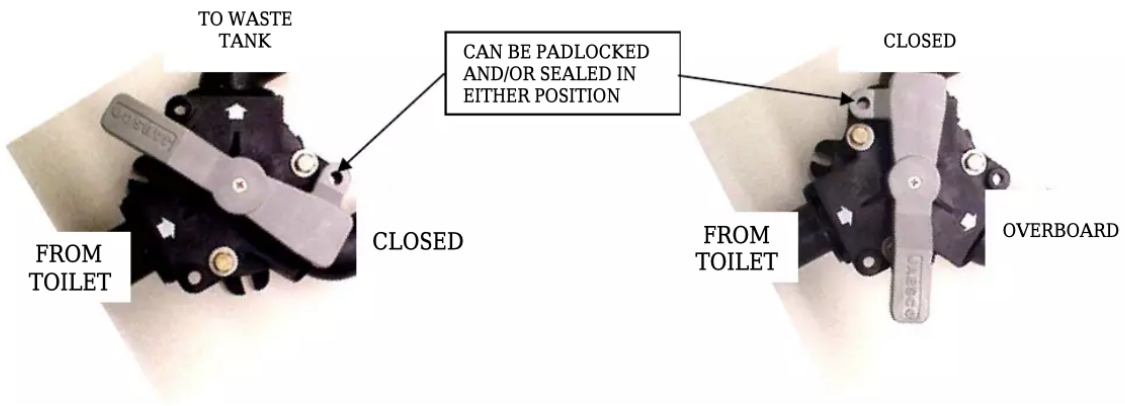
3. Check with local authorities for regional laws governing your area before selecting the overboard discharge option. If you choose overboard discharge option, be sure the discharge thru-hull valve is open before using the head. Select the overboard discharge position on the Y-valve.
4. Select "Flush Bowl" with the selection lever on top of the pump body and pump the handle until the bowl is flushed clean. Return the selection lever to "Dry Bowl" and pump the handle until the bowl is dry. Limiting pump strokes will maximize the use of the holding tank.
5. **CLOSE THE VALVES AFTER USE.**

Holding Tank Pump Out Procedure

The holding tanks are pumped out through deck plates located on the deck. (Unless an additional draining option has been installed; macerator pump, manual pump, gravity drain) Consult your dealer or your marina for the closest pump out facility in your area.
(SEE DECK SECTION FOR LOCATION OF PUMP OUT DECK FITTINGS)

1. Open the deck plate with a winch handle and insert the pump out hose into the deck fill,
2. Follow the pump out stations operating procedure to pump all of the effluent from the tank.
3. Flush the tank by pumping water thru the head into the tank or by inserting a hose into the deck fitting to add fresh water and then pump the tank again.
4. Close the deck fitting.

Operation of three-way valve for toilets



WINDLASS (OPTION)

OPERATION (if option is installed)

The windlass is used to raise and lower your ground tackle (anchors, chains and rodes), refer to the windlass owners manuals for proper operation. As a general guide please observe the following procedures. Control the speed of the chain running over the gypsy as the anchor is being released.

CAUTION! ALLOWING THE CHAIN TO RELEASE FREELY MAY CAUSE THE CHAIN TO JUMP FROM THE GYPSY DAMAGING THE WINDLASS, THE BOAT OR CAUSE PERSONAL INJURY.

Set the anchor by engaging the engine in reverse briefly. Do not set the anchor by pulling in with the windlass. Always make the anchor rode fast on a cleat when the anchor is set. Do not rely on the windlass brake to hold the boat.

WARNING! THE MOTION OF THE BOAT AT ANCHOR CAN CAUSE LOADS ON THE ANCHOR RODE THAT MAY DAMAGE THE WINDLASS.

Always motor the boat up to the anchor as you take in on the rode.

WARNING! NEVER PULL THE BOAT UP TO THE ANCHOR WITH THE WINDLASS.

WARNING! NEVER BREAK THE ANCHOR OUT USING THE WINDLASS, CLEAT THE RODE OFF AND USE THE ENGINE TO BREAK OUT THE ANCHOR.

LAYOUT