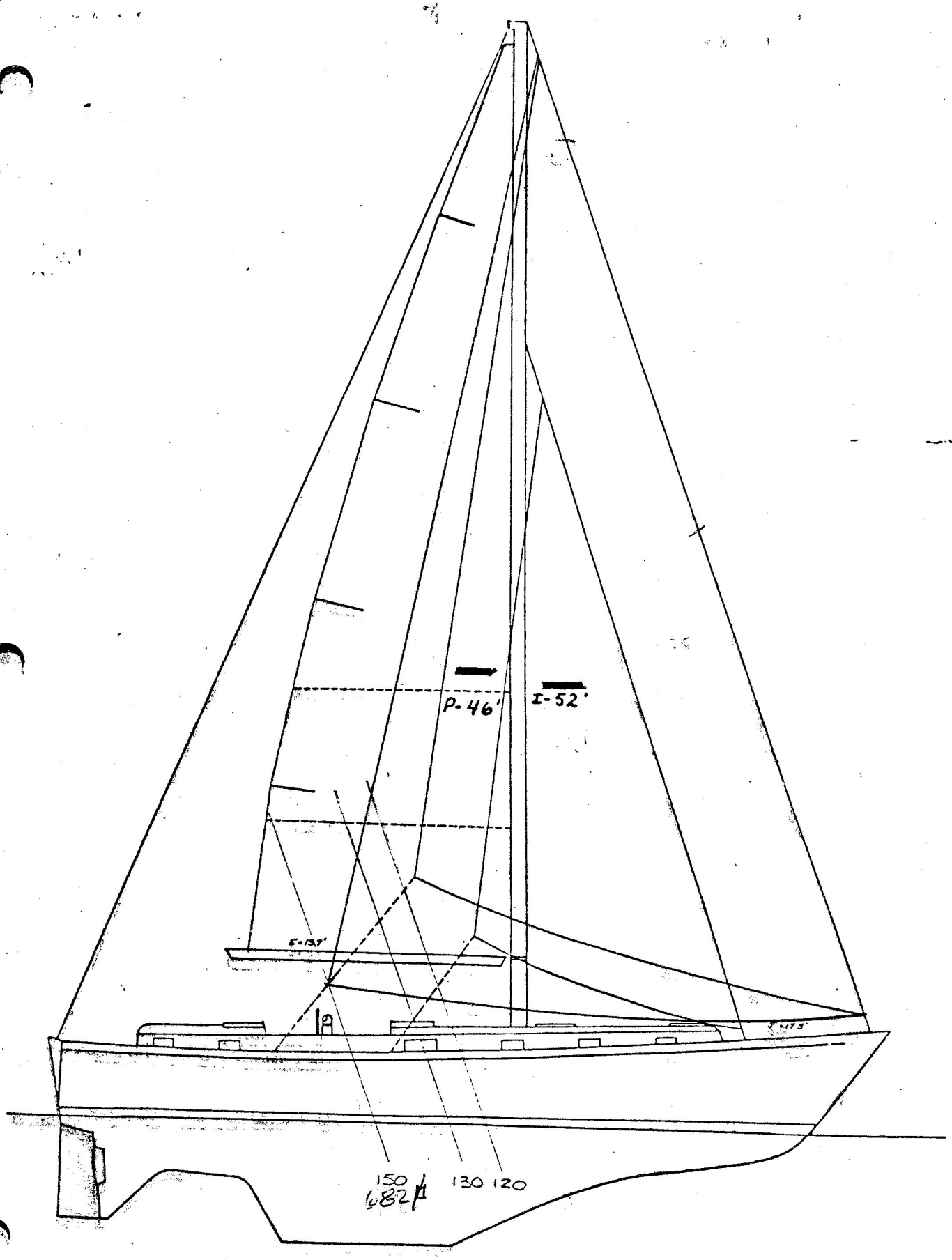
MANUAL

PETERSON 44

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248.5 - DISP'L
13.6 = SA/DISP

Peterson 44 Cruiser

This manual is intended to help to familiarize you with your Peterson 44. This guide is not written as a service manual, as the number of different manufacturers' items involved on a boat of this size prohibit such a work.

Each of the different manufacturers do, however, provide literature and warranties with their products and these are supplied to you with this manual.

By close study of the manufacturers' literature, this manual, the electrical diagrams, and the engine service manual, you should quickly become familiar with your vessel. We recommend that you do this before you set forth for the sake of your safety and to protect your investment in the Peterson 44.

FRESH WATER

WATER TANKS:
The water tanks contain about 127 U.S. gallons in a total of four (4) standard water tanks. See page 4 for location.
Filler: Two (2) on each side of deck near shrouds.

NOTE: EACH TANK MUST BE FILLED SEPARATELY AND ALL FILLERS SHOULD BE OPEN.

SHUT OFF VALVES:
Each tank has its own shut off valve - see page 4. Have only one valve open at a time to ensure water pump is properly primed.

FRESH WATER PUMP OPERATION:

1. Turn on "FRESH WATER" switch at service panel.
2. Turn on tap, pump will start automatically.
3. Switch off at control panel when you will not be using water for some time, e.g., at night. This prevents the pump from running dry and burning out if there is a slight leak and the tank is nearly empty.
4. If the pump runs but no water flows, switch off pump at service panel and change tanks.

CHANGING WATER TANKS:

1. Turn off fresh water pump at service panel.
2. Shut off empty tank and open valve to next full one.
3. Turn fresh water pump on again and open galley sink tap.
4. If water does not flow, press water pump prime button on base of water pressure switch in engine room (forward, port corner).
5. If pump runs but water does not flow, check the tank you have just connected is a full one.

HOT WATER:
Water is heated by the engine and is available after the engine has been running for some time. Also, water heater is available when connected to 110V shore power switch on panel.

SINK AND BASINS:
These drain through seacocks in the hull. Drain lines are small and waste, food, matches, etc. will block them.

FORWARD HAND BASIN:
Sea water may spurt through the drain hole in rough weather on a hard starboard tack. Close seacock in the cabinet under the basin to prevent this.

SHOWER DRAIN PUMPS:
Shower sumps are emptied by an electric pump.

1. Check the sump pump is "ON" at the service panel.
2. Turn pump on with switch next to hand basin.
3. If water level drops only slowly, lift up shower grating and clear suction head of any debris (hair, etc.).
4. Drain frequently. Do not let water slop onto cabin sole.

MARINE HEAD (TOILET)

The marine head breaks up toilet contents and pumps it into the sea. It can only handle pre-digested matter and normal amounts of toilet paper.

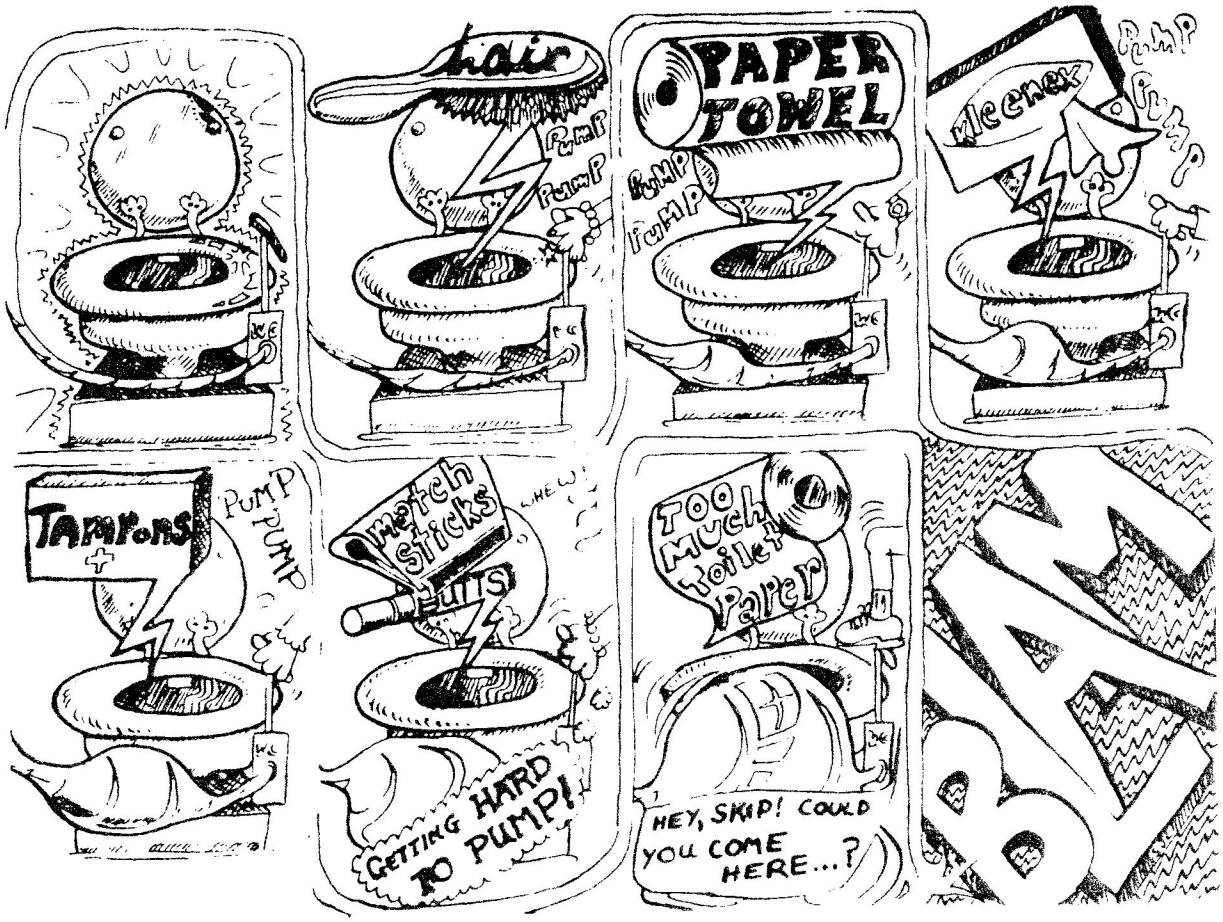
Kleenex tissues, paper towels, tampax, cotton waste or too much toilet paper will block the head.

HOLDING TANK:
The aft head is fitted to a holding tank under the aft bunk. A "Y valve" is situated below the sink in the aft head to direct the flow from the toilet either to the holding tank or thru the sea cock. To pump out the holding tank, open the gate valve at the base of the tank, then either suck out matter thru the deck fitting or dischage using the hand pump located just in front of the holding tank. To use the hand pump, a Y valve must be turned on the aft starboard scupper drain. Ensure this is returned to normal position upon completion. Also, close the gate valve at the base of the tank.

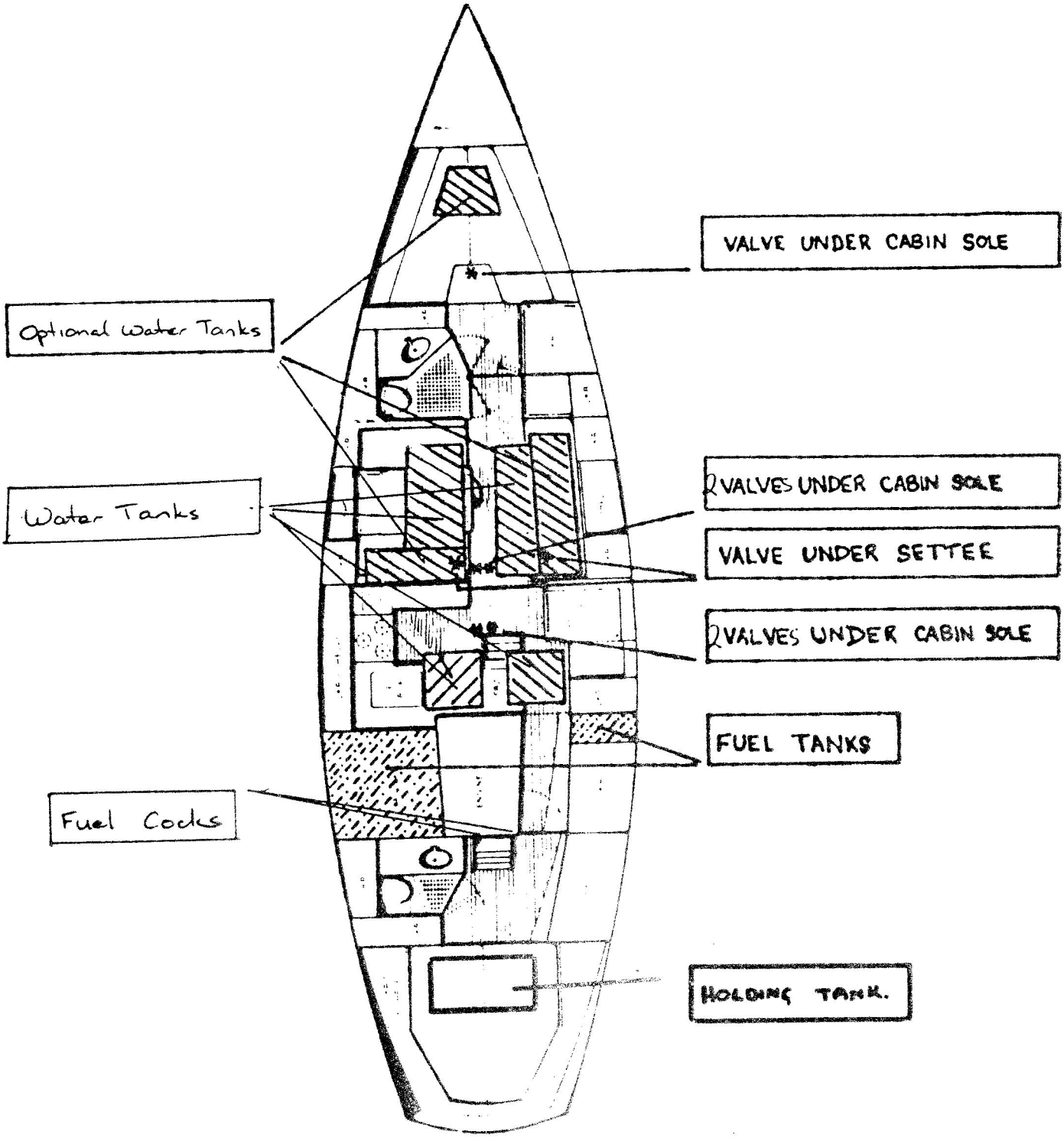
TO OPERATE HEAD:

1. Depress inlet valve lever with your foot, pump a little water into the bowl.
2. Use the toilet.
3. With the inlet valve depressed, pump until head is flushed clear. Give another 20 strokes to clear the hoses. Insufficient pumping results in bad odors and blockage.

4. Pumping without depressing lever will empty the toilet bowl.



TANKS


VALVE UNDER CABIN SOLE
Optional Water Tanks
2 VALVES UNDER CABIN SOLE
Water Tanks
VALVE UNDER SETTEE
2 VALVES UNDER CABIN SOLE
FUEL TANKS
Fuel Cocks
HOLDING TANK.

SEACOCKS

Normally, all seacocks should be left open. On starboard tack it may be necessary to close the seacock to the forward hand basin. Other seacocks should be closed only in an emergency, or to make a repair.

If rapid flooding of the bilges occurs, it is almost certain to be a broken or loose hose to a through-hull fitting. That seacock must be closed immediately. IT IS IMPORTANT TO KNOW THE LOCATION OF ALL SEACOCKS.

TO OPERATE SEACOCKS:

1. Loosen wing nut. Some leakage will occur.
2. Turn handle horizontally to close, vertically to open (1/4 turn).
3. Retighten wing nut HAND TIGHT ONLY.

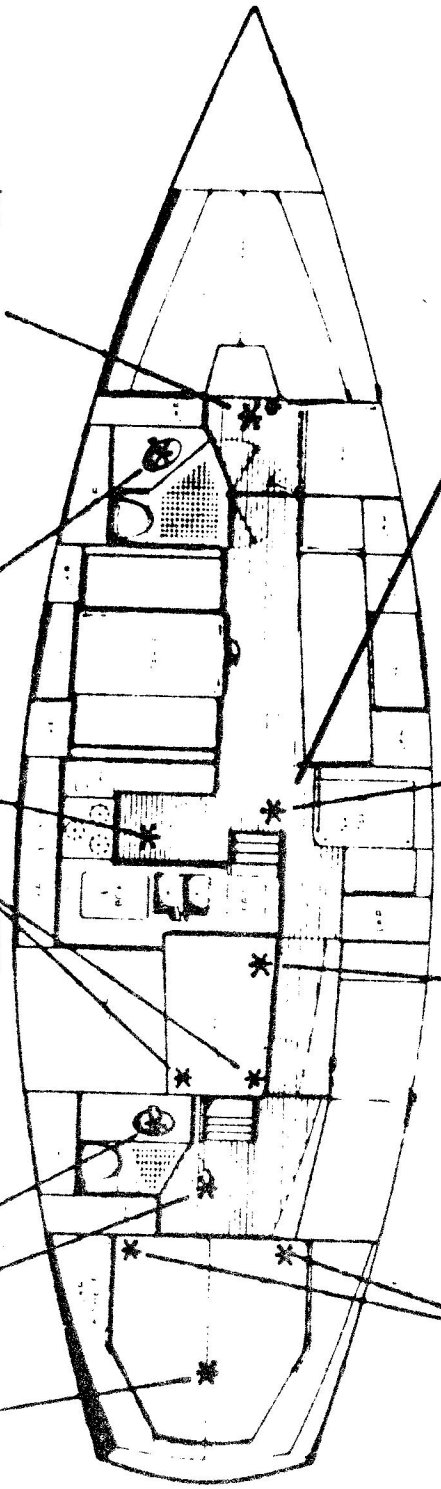
After working on a seacock, always double-check that it is in the "OPEN" or "CLOSED" position, as required. For example, leaving the engine inlet water seacock off, then running the engine, will result in expensive engine damage.

**Should flooding occur "WHEN ENGINE IS RUNNING". Consider the chance that the water is coming from the engine salt water cooling system. Quickly inspect the engine area and the exhaust system while the engine is running as this may save a long search for a hull leak.

**Remember that the ENGINE RAW WATER INLET HOSE can be disconnected from the strainer and dipped into the bilge water to assist the pumping. (DO NOT LET IT RUN DRY AS IT WILL DAMAGE THE ENGINE.)

REMEMBER TO CLOSE THE INLET SEACOCK BEFORE DISCONNECTING HOSE.

SEACOCKS



TOILET INLET SEACOCK UNDER CABIN SOLE

THREE SEACOCKS UNDER HANDBASIN:
1. SINK OUTLET (RED)
2. TOILET OUTLET
3. SHOWER PUMP OUTLET

GALLEY SALT WATER PUMP INLET UNDER GALLEY SOLE

COCKPIT DRAIN SEACOCKS

FOUR SEACOCKS UNDER HANDBASIN:
1. BASIN OUTLET
2. TOILET INLET
3. TOILET OUTLET
4. SHOWER PUMP OUTLET

PROP SHAFT GLAND

RUDDER POST GLAND

LOG PADDLE WHEEL UNIT, UNDER CABIN SOLE

GALLEY SINK OUTLET SEACOCK UNDER GALLEY SOLE

ENGINE INLET SEACOCK WITH STRAINER MOUNTED ON TOP

DECK DRAIN SEACOCKS BEHIND BLIDING DOORS UNDER AFT BUNKS

ELECTRICS

BATTERIES:
There are two standard 90 AMP HOUR batteries charged by a 42 AMP Alternator on the main engine. These are located under the sail locker opposite the engine room. One battery is for the house supply and the other for engine starting. There are provisions to increase the size of the house bank by one or two more batteries.

The system is wired so that domestic uses of power are all drawn from the house bank and the engine battery only accomodates starting and engine controls.

LINK-UP:
A special feature of this system is that both banks are automatically linked together by a solenoid when the ignition key is in the start position and then separated as soon as the engine starts. This ensures that the batteries are kept separate at all other times as there are no manual switches involved.

CHARGING:
A system is installed in the Peterson 44 to ensure controlled charging of each battery bank. A battery isolator has been installed so that the alternator will charge whichever bank is low and will not sense the full bank and cut back on output. Also, a manual control has been installed so that you can select which bank receives a charge if you so wish. However, this is not normally necessary. This switching is located on the panel above the freezer and is marked:

CHARGER - HOUSE
- ENGINE

IT IS IMPORTANT THAT AT LEAST ONE OF THESE SWITCHES IS ALWAYS ON WHILE THE ENGINE IS RUNNING. If the engine is run without a charge switch on, the alternator has no place for output and will likely be damaged.

The charging system is set so that the alternator is excited by an oil pressure switch which closes when the engine oil pressure reaches 25 psi. The tachometer is powered by the alternator so that when the alternator is not functioning, the tachometer will not work.

When the engine is first started, check that the tachometer is working, if not, increase the engine rev's (normal in excess of 1500) until it begins to function and then drop back to normal idle.

SWITCH PANELS

MAIN PANEL:
Located under the ladder over the freezer box.

1.	MAIN SWITCH:	On-off switch for engine battery. "ON" to start and run.
2.	AC-SHORE POWER:	Main circuit breaker for AC shore power. When boat is connected to 110V power - this switch must be on to have power on control panel to Range, Plugs, charger and hot water.
3.	AUX. GENERATOR:	Provision is made for switching if a generator is installed.
4.	REEFER:	Main switch for refrigeration.
5.	DC LOAD WINCH:	110 AMP circuit breaker for DC power if Windlass is installed.
6.	DC LOAD HSE:	110 AMP circuit breaker protecting all DC circuits on control panel. Main switch for all DC circuits.
7.	DC LOAD ENG:	110 AMP circuit breaker protecting all DC circuits associated with engine - must be "ON" to run engine.
8.	CHARGER HSE:	Circuit breaker allowing for control of charge to house battery bank.
9.	CHARGE ENG:	Circuit breaker allowing for control of charge to engine battery bank.
10.	CHARGER AUX.	Spare circuit breaker.
11.	ENGINE CONTROL:	Circuit breaker protecting engine control circuits. Must be "ON" to start and run.

N.B. The engine hour meter is connected to engine control switch. Therefore, when engine is not in use, this switch should be "OFF".

SWITCH PANELS

CONTROL OR SERVICE PANEL:

Located beside the navigation station. This controls all ship functions except engine. INDICATOR LIGHTS show important circuits are "ON".

The VOLTAGE METER has a selector switch. Use it to check each battery bank.

All circuits are protected by CIRCUIT BREAKERS: These will "trip" if there is a fault. Should this happen, look for the problem; burnt-out motor, water in the circuit, etc. NEVER HOLD THE SWITCH ON OR SHORT CIRCUIT THE BREAKER.

The A.C. FREQUENCY METER will work showing shore power frequency.

Do not expect the 110V AC outlets to work unless

(a) Shower power is connected, and

(b) The AC Volt meter is showing a 110V reading.

SHORE POWER:

A connecting cable is provided (if applicable) and this is connected to a 110V/60HZ shore outlet. The cable fits in a socket in the starboard side of cockpit.

HINTS ON THE USE OF THE YACHT ELECTRICAL SUPPLY

** Remember that without a reserve of battery power, you cannot start the engine and may put yourself in a dangerous situation.

** If in doubt, start the engine and charge the batteries before you have a problem. (Notice dim lights, weak pumps, etc.)

** Avoid the use of heavy drain electrical equipment: such as, deck lights, pumps, refrigeration on without engine, even excessive lights.

** Look at the instruments, learn the normal note of the engine related to the tachometer. The tachometer is driven by the alternator so any variations may be an indication of loose belts or even failure.

** Check for reasons for non-starting BEFORE the batteries are flat; (Stop Control are often either electrically or manually

engaged when trying to start. Check at the fuel injection pump).

** Alternators get hot when they work hard; feel them when starting from cold.

** If you have a HYDROMETER, test the batteries.

** One dead cell can drain a complete battery bank if left connected to the battery system.

IDENTIFY THE POLARITY OF THE CONNECTIONS BEFORE ATTACHING CABLES AS MISTAKES CAN CAUSE DAMAGE AND EVEN EXPLOSIONS.

ENGINE SECTION

The engine is a Perkins 4.154 or Westerbeke 4.154 diesel. There is a light on the forward engine room bulkhead. Opening the cockpit seat hatch on the starboard side provides both light and ventilation when working on the engine.

PRE-START CHECKS:

1. Water: The header tank runs along the top of the engine with a filler cap, check level and fill to within 1" (25cm) of filler cap. Do not spill any water on the alternator directly below. Always do this with the engine cold. If you have to check level with the engine hot, take extreme care in removing the cap. Let the pressure off slowly and fill with hot water with the engine idling.

2. Oil: The dipstick is on the side of the engine about half-way along its length. The oil filler cap is on top of the engine (rocker cover). Check oil level and topoff if necessary. Oil should be black. If grey and sludgy, there is water in the oil.

3. Hydraulic Fluid: The gear box is at the aft end of the engine. The dipstick/filler hole is on the port side of the gear box. Unscrew the handle of the dipstick a few turns, remove and check level. Top off (make sure you are using hydraulic fluid, not engine oil), gently screw up handle to lock. Hydraulic fluid should be clear red. If it is milky, you have water in the gear box.

TO START ENGINE:

1. Turn MAIN SWITCH to "ON"
2. DC LOAD engine breaker "ON".
3. ENGINE CONTROL CIRCUIT BREAKER to "ON" (Red light will show on control panel).
4. CHARGER CIRCUIT BREAKER HSE & ENG "ON".
5. Advance throttle to half speed.
6. Check Manual STOP CONTROL (if fitted) is down.
7. Check GEAR SHIFT is in NEUTRAL position. (Some yachts are

fitted with a device to prevent start in gear).

8. Turn key to start.
9. Advance revs to 1800 momentarily to activate alternator. Return to idle before engaging gear.
10. On Westerbeke's, there is a preheat system controlled from the cockpit panel. This can be held on for approximately 30 seconds before turning key, and will aid easy starting.

ENGINE ALARMS:

A system of alarms is built in to sound a buzzer and light a red warning light on the cockpit control panel if the oil pressure should fall below 25 psi or temperature rise above 195°F. This alarm can be turned off on the cockpit control panel and there is an orange light to warn if the alarm is switched off.

AFTER-START CHECKS:

1. Buzzer stops and oil pressure indicates about 35 psi. (STOP IF THIS DOES NOT HAPPEN)
2. Make visual check that water is emitted from exhaust.
3. AMMETER should show min. of 15 amps.
4. Squealing noise indicates a loose belt. (Observe Tach.)

CONTINUOUS CHECKS AS ENGINE RUNS:

1. Oil pressure remains greater than 35 psi.
2. Water temperature less than 190 degrees fahrenheit.
3. Check bilge level every hour.

If oil pressure drops, temperature rises, buzzer sounds, tachometer reads low, or any unusual noise or vibration starts, stop the engine.

NOTES ON RUNNING THE ENGINE:

1. Always reduce revs to idle before changing gears.
2. Cruise at 1900 rpm or less. Higher revs double fuel consumption and increase engine wear without great speed increase.
3. For charging batteries and running refrigerator, run at 1000 to 1200 rpm in neutral.

ENGINE STOP

1. Reduce revs to idle
2. Press stop button or pull manual stop
3. Turn off key - do not turn off key before engine has completely stopped.
4. Turn off circuit breakers on main panel.

ENGINE STOP UNDER SAIL:

1. Reduce engine revs to idle.
2. Put gear shift in reverse.
3. Wait 15 seconds.
4. Press stop button (or pull manual stop where fitted).
5. SWITCH OFF. (Buzzer should stop and red light on service panel go out.)

NOTE:

Do not continue to use starter if the engine does not start immediately; check whether the manual stop is engaged (if fitted), or, that the electric stop is operating as soon as control is turned on (listen for an audible "click" in engine room).

FUEL

The two fuel tanks hold a total of 115 U.S. gallons (450 litres). Port tank has enough fuel for 60 hours of motoring, starboard for 40 hours. P.TANK = 69 gal S.TANK = 46 gal.

CHANGING TANKS:
Change tanks by turning BOTH the valve on the supply line and the valve on the return line through 90 degrees. Both valves are on the engine room aft bulkhead. The supply valve is attached to the large orange and black filters; the return valve is below and to the left of it. If you run out of fuel from one tank, changing tanks and cranking the motor WILL NOT START THE ENGINE. The motor will have to be bled.

FILLERS:
The fuel fillers are located on each side deck opposite the cockpit. NEVER ALLOW ANY WATER INTO THE FUEL TANKS. If water does get in a tank, do not use that tank until all water has been drawn from it. Replace filler caps tightly.

BILGE PUMPS

Keep a check on the level of water in the well behind the engine. Check morning and night, more often while under way for any appreciable time. If there is a sudden increase in bilge water, seek out the cause.

BILGE PUMPS (continued)...

TO PUMP BILGE:

1. Switch on bilge pump circuit breaker at the service panel.

2. Turn on MANUAL BILGE switch on control panel.

3. Turn off bilge pump when it sucks dry.

If the electric pump fails, use the hand pump. This is in the cockpit, port side aft end. Lift the cover, insert handle and pump. The handle is normally stowed in the cockpit coaming locker.

** The "Bilge Pump" switch is linked to an automatic switch in the bilge and can be left "ON"; however, never rely on this as a substitute for visual inspection. Furthermore, failure of this 'auto' switch can result in flat batteries and burnt-out motors.

STOVE

The stove is gimballed, but may be immobilized with a bolt. When gimballed, take care opening the oven door. The weight of the door will roll the oven forward, allowing the contents to cascade out on your feet.

TO OPERATE STOVE:

1. Turn on the BUTANE switch at the service panel.

2. Turn on and light top burners as needed. The oven is lit by a pilot located in the bottom of the oven. Turn the switch to pilot and then light. Once this is done, the switch can then be advanced to light the oven.

3. Switch off Solenoid when finished with the stove.

4. See manufacturer's instructions

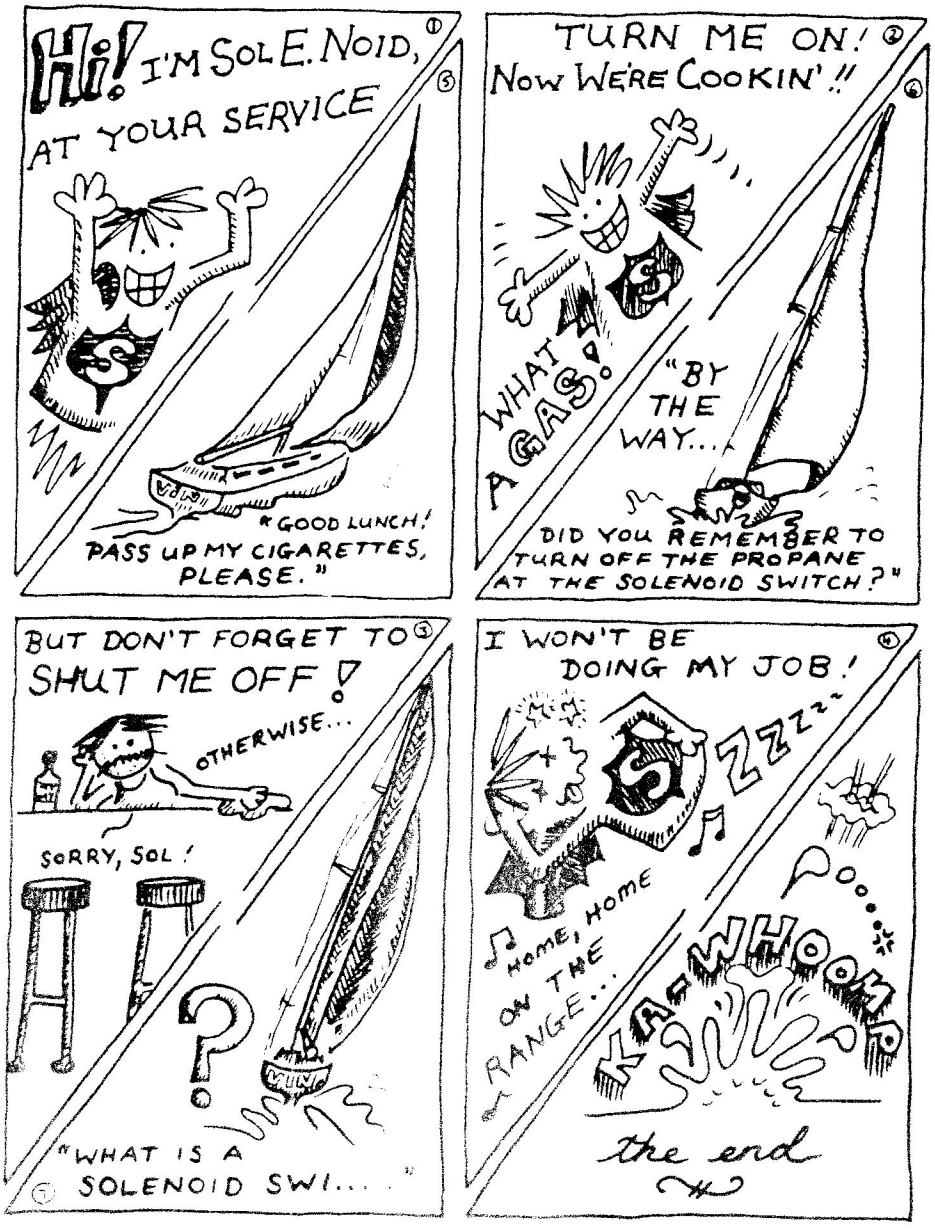
NEVER LEAVE THE SOLENOID ON AFTER YOU HAVE FINISHED COOKING IF YOU WISH TO LIVE TO AN OLD AGE.

GAS BOTTLE

The gas bottle is under the seat at the aft end of the cockpit. There is a manual shut off valve on the bottle in addition to the solenoid.

When changing the bottle, make sure the regulator is properly sealed. Check for leaks with liquid detergent - NEVER A MATCH.

NOTE: BOTTLE CONNECTION IS A LEFT HAND THREAD.



REEFING THE MAIN:

1. Lower the sail until the reefing eye can be secured to the gooseneck.

2. With the boat head to the wind, or nearly so, and the sheet free, winch the reef pennant until the reef clew reaches the boom.

3. Cleat pennant.

4. Retighten halyard.

5. Close hauled with sheet in hard, tie the reef points between sail and boom. This is only to stow excess sail. Do not pull too tight.

6. When shaking out a reef, reverse the previous steps. ALWAYS RELEASE THE REEF POINTS BEFORE TACK AND CLEW.