

*1983*

*BODEGA*

*&*

*BRISTOL*

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This manual has been prepared to acquaint you with the operation and maintenance of your Bayliner Yacht and to provide important safety information. We urge you to become familiar with the information contained in this manual. This will help assure that your boating experience be enjoyable and trouble free.

When your Bayliner needs service, remember your Bayliner Franchised Dealer knows your boat best and is interested in your complete satisfaction. Return to him for service and any other assistance you may require.

DATA SHEET

NAME OF BOAT \_\_\_\_\_

OWNER'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

HAILING PORT \_\_\_\_\_

HULL NUMBER \_\_\_\_\_

REGISTRATION NUMBER \_\_\_\_\_

HEIGHT ABOVE WATERLINE \_\_\_\_\_

BEAM \_\_\_\_\_ DRAFT \_\_\_\_\_ LENGTH \_\_\_\_\_

FUEL CAPACITY \_\_\_\_\_ WATER CAPACITY \_\_\_\_\_

DOOR KEY NUMBER \_\_\_\_\_

TECHNICAL DATA

ENGINES

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Type Fuel Filter

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Gear Manufacturer: \_\_\_\_\_

Gear Model: \_\_\_\_\_

Gear Ratio: \_\_\_\_\_

Type Oil Filter:

PORT ENGINE \_\_\_\_\_

STARBOARD ENGINE \_\_\_\_\_

Serial Number: \_\_\_\_\_

Gear Serial Number: \_\_\_\_\_

AUXILIARY GENERATOR

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

BATTERIES

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_

PROPELLER SHAFTS

Material: \_\_\_\_\_ Diameter: \_\_\_\_\_

Length: \_\_\_\_\_

TECHNICAL DATA, CONTINUED

PROPELLERS

Manufacturer: \_\_\_\_\_

Diameter: \_\_\_\_\_

Number of Blades: \_\_\_\_\_

Style: \_\_\_\_\_

Pitch: \_\_\_\_\_

Material: \_\_\_\_\_

## CONTROLS AND INSTRUMENTS

Your Bayliner Yacht is equipped with a complete dual control system, steering, throttle and shift, and instrumentation. Your understanding of the basic functions of the controls and various instruments which control and monitor these systems will contribute to the safety and enjoyment of all aboard.

### A. Steering

Bayliner Yachts utilize a rack and pinion type mechanical steering system. The boats are equipped with two rudders. A steering cable connects each helm station to each rudder tiller arm and the tillers in turn are connected by a tie-bar assembly.

IMPORTANT: A periodic inspection should be made of the steering cables, helm assemblies and associated linkage. These parts should be lubricated with a light water proof grease. Any parts that show signs of deterioration due to corrosion or excessive wear, should be replaced immediately. Failure to do so could result in loss of steering control.

The rudder shafts pass through shaft logs mounted in the bottom of the boat. These shaft logs are equipped with a packing gland that must also be inspected periodically for leakage. The packing nut should be tight enough to prevent leakage but not so tight that excessive drag is created in the steering system. Generally hand tight is all that's required. To

check for drag, disconnect the steering cables and move the rudder by hand. It should move freely. If leakage cannot be stopped without exerting excessive drag on the steering system, repacking of the gland may be necessary. When repacking, use only flax packing. Graphite packing may cause corrosion in salt water.

CAUTION: Always make sure the jam nuts are tightened to prevent the packing nuts from loosening.

#### B. Throttle and Shift Controls

The dual control systems in Bayliner Yachts are made up of two controllers, four throttle cables and four shift cables. These cables are a mechanical "PUSH-PULL" type. On the 3550 Bristol, the cables are run from each control station to the power units. On the 4050 Bodega, the bridge control is connected to the lower control by tie cables. Cables are then run from the lower station to the power units. The control systems on Bayliner Yachts are equipped with a neutral safety device. On those models powered with Marine Power Engines, the device is a switch located in the upper controller. On those models powered by Crusader Engines the neutral safety device is incorporated into each transmission. The neutral safety device prohibits the engines from being started in gear. It may be necessary to move the shift control slightly back and forth past the neutral detent to deactivate the safety switch.

CAUTION: Always return the throttle lever to idle



position before shifting. Never shift the unit at engine speeds over 1,000 R.P.M.

Periodic inspection of the controllers, cables and all connections should be made. Check for signs of corrosion, wear, and cracks in the cable jacket and to see that all fasteners are in place and tight. Periodically all moving parts and connections should be lubricated with a light water proof grease. Cables can be lubricated by positioning them to their fullest extension and applying light grease to the inner cable near the jacket. Working the cables back and forth will distribute the grease in the inner cable. Lubrication should be performed as often as necessary to keep the system working smoothly.

CAUTION: When operating dual steering and shift and throttle controls, keep in mind how much machinery has to move. These controls should be operated firmly and smoothly. They should not be jammed or forced.

#### C. Instruments

1. Tachometer - All tachometers are of the electric type, indicating engine revolutions per minute (RPM) in 100's. On twin engine installations or dual station models, the tachometers may have a slightly different reading. This is normal.

2. Temperature Gauge - The temperature gauge indicates engine coolant temperature by monitoring a signal from a sending unit installed in the engine water jacket. The sender changes resistance value as its temperature changes. This changing resistance value is then measured by the instrument. When the gauge reads in the danger area, shut the engine down and diagnose the problem. A common cause of overheating is picking up a foreign object in the water intake. On those twin engine powered boats equipped with a hot water system whereby the cooling system of one engine is plumbed through the hot water tank to heat fresh water, the temperature gauge(s) for that engine will read a different operating temperature than the other engine.
3. Oil Pressure Gauge - The oil pressure gauge indicates pressure by monitoring a signal from a sending unit. When the gauge reads in the danger area, shut the engine down and diagnose the problem.
4. Fuel Gauge - The fuel gauge indicates fuel level. Since boats are many times exposed to rough water conditions and varying trim, fuel gauges may provide inaccurate readings at times. It is always wise to keep track of your running time as a double check against an inaccurate gauge.
5. Hour Meter (Optional) - The hour meter measures engine running time. It is an aid to maintenance and warranty requirements. The meter has a range of 10,000 hours with automatic recycle.

## ELECTRICAL SYSTEMS AND ACCESSORIES

### A. Electrical Power - 12 Volt DC

On the 3550 Bristol and 4050 Bodega, 12 Volt DC storage batteries are furnished to start the main engines, generator and to supply power for the 12 volt accessories. The standard batteries consist of an 85 AMP battery to start gas powered models (225 AMP battery to start diesel powered models) and a 225 AMP battery to supply power for the 12 volt accessories. The batteries are located in the engine compartment.

1. The marine battery has a big job, it supplies you with lights, engine starting power and power to run many accessories. Don't neglect it! Check the water level regularly by removing the caps. If the zinc plates are exposed, add distilled water. Corroded battery terminals can also let you down. Clean them with baking soda and water, and coat them with preservative or a light film of grease. Be sure all battery connections are tight. When storing the boat, it is best to remove the battery, give it a full charge, and store it inside where there are not extreme temperatures. Do not store on a cement floor.

### B. Battery Switches

Vapor proof ON/OFF main battery switches are provided for the starting and accessory batteries. A third vapor proof ON/OFF "jumper" switch is normally lockwired in the "OFF" position. In the event the starting battery goes dead, the "jumper" switch can be turned to the ON

position and the engines started off the accessory battery. This works vice-versa if the accessory battery goes dead. The "jumper" switch should only be used in emergencies.

On the 4050 Bodega, the main battery switches are located in the engine room. Access to them is through the engine room door in the aft berth. On the 3550 Bristol, the main battery switches are located under the small floor hatch in the center of the main salon.

#### C. 12 Volt DC Circuit Breakers

The 12 volt accessory circuit is protected by a 120 AMP circuit breaker. This breaker is located adjacent to the main battery switch for the accessory battery. In addition, individual circuit breakers are provided for each of the 12 volt accessories. These are located on the DC side of the main power panel at the lower helm station. The 12 volt engine circuits are also protected by a circuit breaker. This is a 40 AMP breaker and one is located on each engine.

#### D. Accessory Battery Condition

A volt meter is provided on the panel so that the accessory battery condition can be monitored. With the engines running over 1,500 R.P.M., volt meter readings of 13 to 14 volts are normal. Readings of less than 13 volts indicate a severely discharged battery or a non-functioning charging system. With the engines shut off, readings of 11.5 to 12.5 volts are normal. Readings in the 10 to 11.5 volt range indicate a marginal charge condition and a reading below 10 volts indicates a serious discharge condition.

#### E. Battery Charging

The engine alternators will maintain proper charge levels in the main batteries when the engines are being operated above 1,500 R.P.M. The port engine and starboard engine start and run off the start battery. The start battery is charged by the port engine. The accessory battery is charged by the starboard engine. The isolating of the charging circuit on the starboard engine is accomplished by use of a special alternator exciter circuit. The power for this circuit is taken off the back side of the accessory battery switch. The circuit is fused at the switch using an AGC 10 AMP fuse. The exciter circuit is activated by an oil pressure controlled switch installed on the starboard engine. When the starboard engine is started, the oil pressure comes up, the pressure switch closes, the exciter circuit is energized and the alternator charges the accessory battery.

In addition to the engine alternators, the 3550 Bristol and 4050 Bodega are equipped with a battery charger. On the 3550 Bristol the battery charger is located in the aft end of the starboard lounge seat base. To gain access, remove the lounge seat cushions. On the 4050 Bodega, the battery charger is located ahead of the port engine under the salon floor. Access is gained through the floor hatch at the lower helm station. The battery charger will charge both the start battery and the accessory battery whenever the boat is plugged into 110 volt shore power or whenever the generator is operated. The circuit breaker for the battery charger on the main power panel must be in the "ON" position.

IMPORTANT: Please refer to the manufacturer's brochure in the last section of the manual for additional information on the battery charger and its Limited Warranty.

WARNING: Explosive hydrogen gas is generated when the batteries are being charged. If the charger is set at a high charging rate, the engine room should be ventilated.

F. Electrical Power - 110 Volt AC

The 3550 Bristol and 4050 Bodega are equipped with a 110 volt 30 AMP shore power hookup and also a 7.5 KW AC generator. On the AC side of the main power panel there is a rotary power selector switch, two master circuit breakers (line 1 and line 2), a volt meter and a polarity indicator light. In addition there are individual circuit breakers to protect each of the 110 volt accessories. When using shore power, the rotary selector switch should be in the "SHORE" position. The polarity indicator light should be checked. If lighted, the boat should be disconnected from shore power.

WARNING: Failure to disconnect the shore power when reversed polarity is indicated can result in a severe shock.

The master circuit breakers should be on and the individual circuit breakers should be on. The 110 volt accessories can then be used.

When using the generator, first check the engine oil level and check to see that the sea water inlet sea cock and fuel valve are open. On the main power panel switch the rotary selector switch to "SHIP" and the generator "OFF"/"START" switch to "START". The generator will start and run and the 110 volt accessories can be used.

IMPORTANT: Please refer to the manufacturer's brochure in the last section of this manual for additional information on the generator and its Limited Warranty.

The voltage on master circuit "LINE 1" and "LINE 2" can be read on the AC volt meter on the panel. The switch marked "LINE 1", "LINE 2" is used.

NOTE: Whether using shore power or the generator the amount of power available is limited. Accessories like the stove, hotwater tank, electric heat (optional), and air conditioning (optional) are a heavy draw on the AC system. The simultaneous use of two or more of these heavy draw accessories may be restricted. If the draw exceeds the power available, the master breaker will trip.

#### G. Bilge Pumps

The power for the bilge pumps (3) is supplied direct to the main panel circuit breaker from the hot side of the accessory battery switch. This circuit is fused in line on the back side of the battery switch

(AGC 20 AMP). This allows the bilge pumps to work with the main battery switches "ON" or "OFF". The bilge pumps are fitted with automatic switches. The control switches (2) on the instrument panel are 3 position; ON (manual) - OFF - (automatic).

When the boat is left unattended, it is recommended the main battery switches be turned OFF, the bilge pump circuit breaker on the main panel be turned ON, and the switches on the instrument panel be switches to "AUTO", this will allow any accumulated bilge water to be pumped overboard.

#### H. Refrigerator

The refrigerator used by Bayliner operates on 110 volt AC and 12 volt DC power. There are circuit breakers on the AC side and the DC side of the main power panel. With the accessory battery switch ON, the circuit breakers ON and the switch inside the refrigerator turned ON the refrigerator will operate on 12 volts. When an AC source of power is supplied, shore power or generator, the refrigerator will automatically switch to 110 volts AC. When operating on 12 volts, the refrigerator draws 8 AMPS. By itself, the refrigerator will discharge the accessory battery in less than 48 hours. For this reason the accessory battery should be charged every day either by running the main engines, the generator or by hooking to shore power.

IMPORTANT: Please refer to the manufacturer's brochure in the last section of this manual for additional information on the refrigerator and its Limited Warranty.



## I. Hot Water Heater (Fresh Water System)

The hot water tank used by Bayliner operates on 110 volt AC and also has an internal heating coil which is plumbed into the enclosed cooling system on one of the main engines. To operate on 110 volts the "hot water" circuit breaker on the master panel must be ON.

WARNING: Any time the water supply is run dry, the "hot water" circuit breaker must be shut OFF. The 110 volt heating element will burn out if the power is ON and there's no water in the tank.

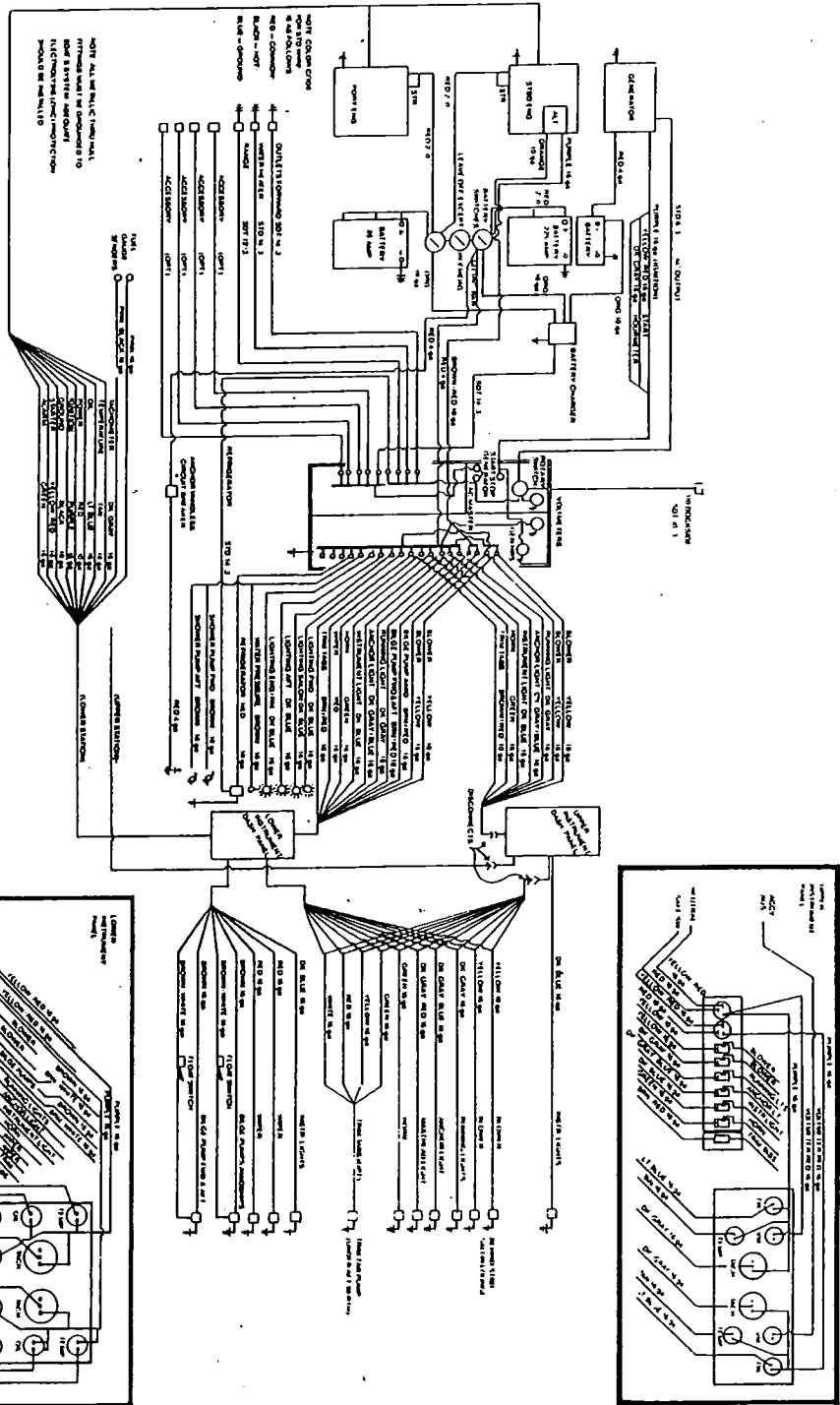
IMPORTANT: Please refer to the manufacturer's brochure in the last section of this manual for additional information on the hot water heater and its Limited Warranty.

## J. Air Conditioning (Optional)

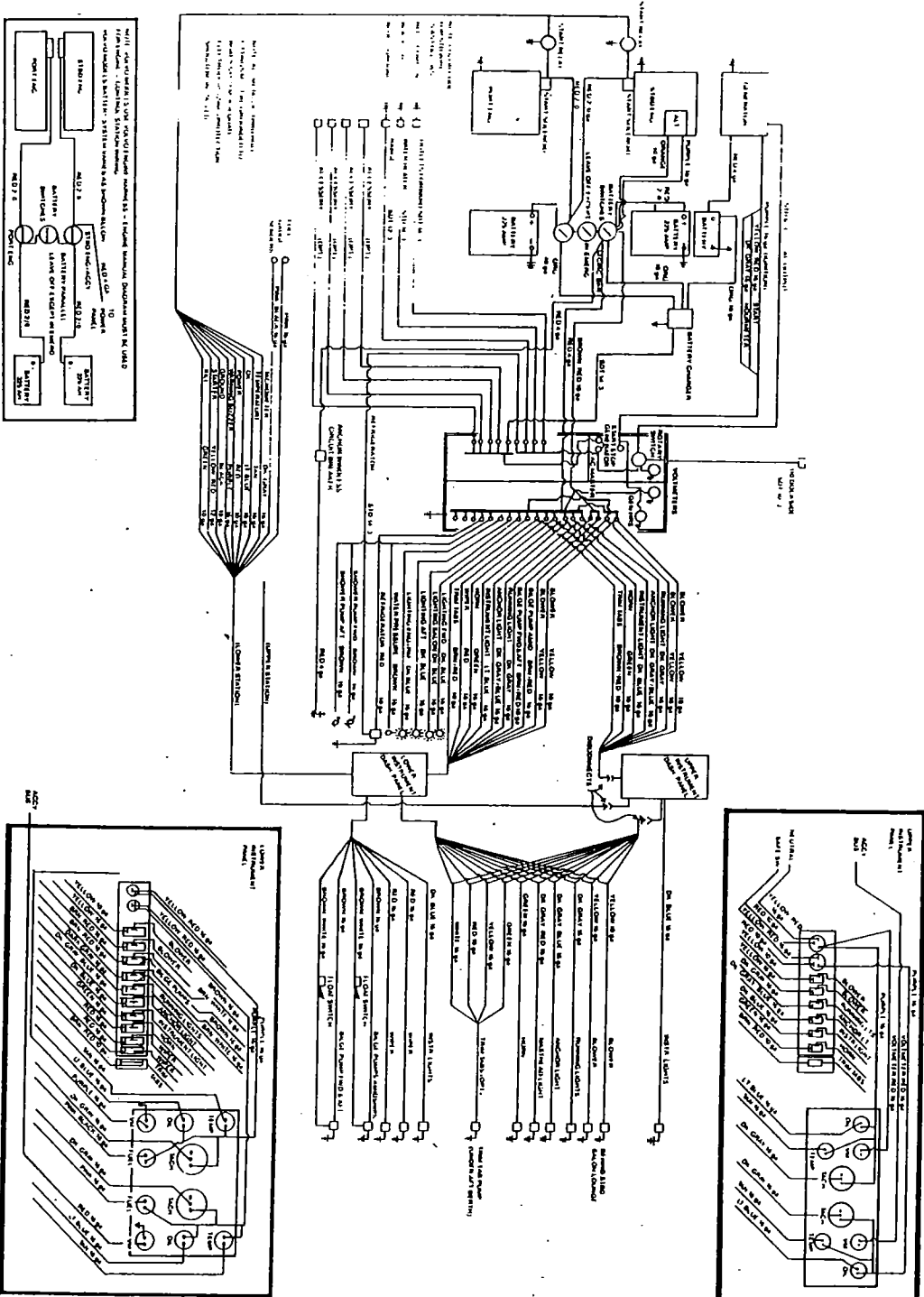
Those boats equipped with optional air conditioning have an additional 30 AMP shore power connection. This additional service is provided through the lower shore power receptacle on the cabin side and is connected to "LINE 2" on the AC side of the main power panel. Circuit breakers are provided for each air conditioning unit on the boat. Two on the Bristol and three on the Bodega. An additional circuit breaker is provided for the sea water circulating pump and the air circulating fans. To operate the air conditioning there must be an AC source, generator or shore power, the circuit breakers must be ON

and the sea water intake valve must be OPEN. The valve is located in the engine room ahead of the engines.

IMPORTANT: Please refer to the manufacturer's brochure in the last section of this manual for additional information on the air conditioning system, its operation and Limited Warranty.



DATE: 5-1-80 LW  
 4070 MODECA (CAS)



DATE: 5-1-80 [LV]  
 4030 BODEGA (DIESEL)

## FUEL SYSTEMS

### A. Testing

The gasoline fuel systems used in Bayliner yachts are designed to meet or exceed the requirements of the U. S. Coast Guard. All fuel systems have been factory tested in accordance with test regulations in effect at the time of manufacture. In addition, each fuel tank has passed rigid tests and inspections performed by the tank manufacturer.

CAUTION: It is very important that the fuel system be inspected thoroughly at the time it is first filled and then at each subsequent filling.

### B. Fuel Fills and Vents

Fuel fills are located either on the aft deck or on the side decks adjacent to the aft cockpit and are marked "FUEL", "GAS" or "DIESEL". Fills are located so that any fuel spilled from the fill will flow overboard. Fuel vents are normally located in the hull or transom below and in the same general area as the fill. If you experience difficulty filling the fuel tank, you should check to see that the fuel fill and vent lines are free from obstructions and kinks.

### C. Anti-Syphon Valves

As required by the U. S. Coast Guard, all gas powered boats manufactured by Bayliner are equipped with an anti-syphon valve. This valve is an integral part of the barb fitting on the fuel tank to which the neoprene

fuel line attaches. The valve is spring loaded and is opened by fuel pump pressure. These valves will prevent gasoline from syphoning from the fuel tank in the event of a fuel line rupture.

NOTE: If an engine running problem is diagnosed as fuel starvation, the anti-syphone valve should be checked. In the event the valve is stuck or clogged it should be cleaned or replaced. Under no circumstances should it be removed.

#### D. Fuel Filters

All fuel tanks installed by Bayliner are equipped with a fine mesh screen filter on the fuel pick up tube in the tank. In addition, when supplied by the motor manufacturer, an additional filter is installed on the engine. Fuel filters should be checked periodically to see that they're clean and free of debris.

#### E. Valves

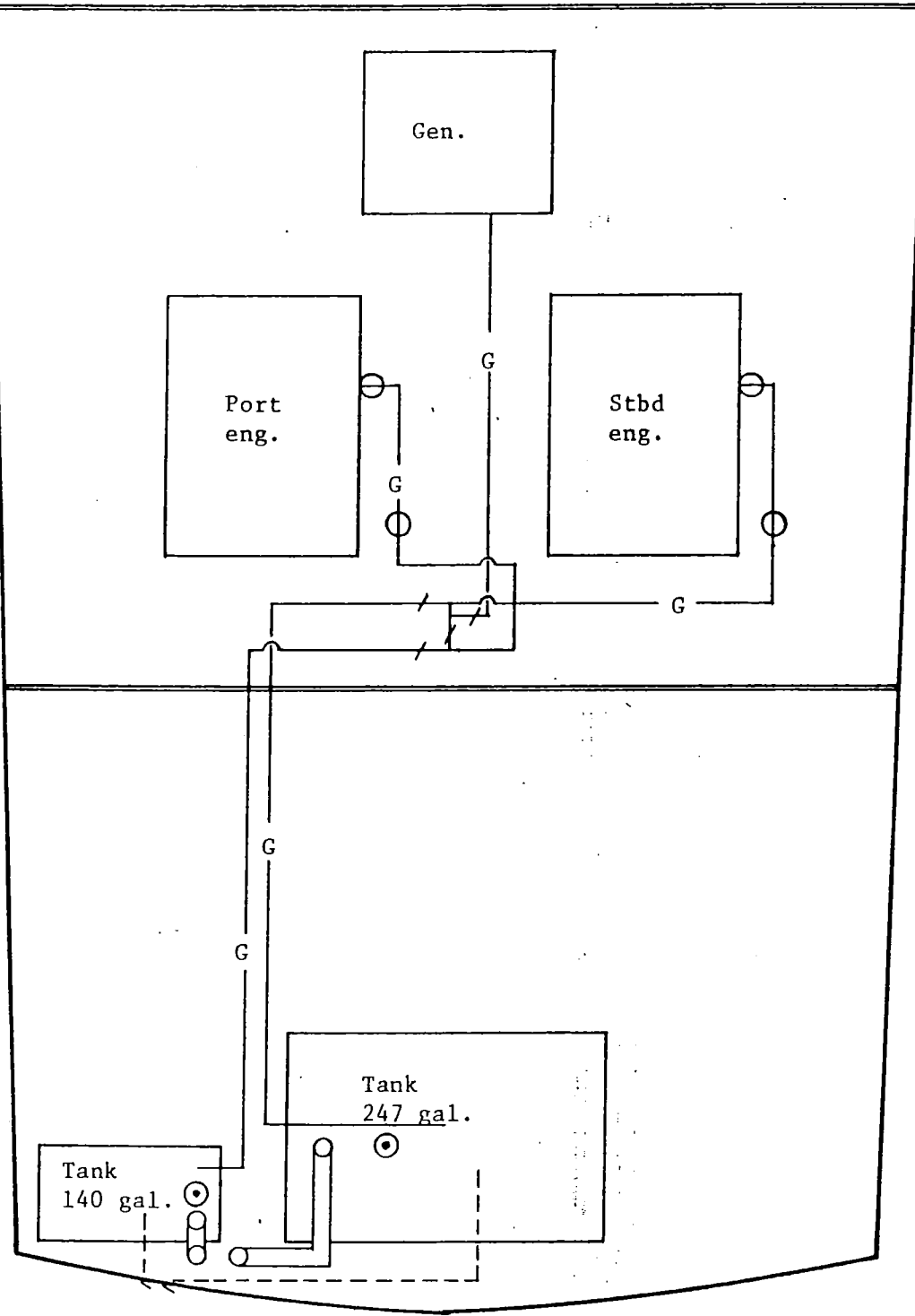
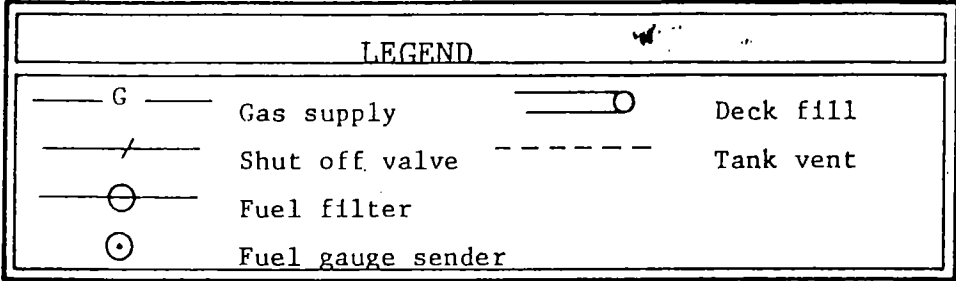
On Bayliner yacht models 3550 - 4050, two fuel tanks are used. The fuel lines from these tanks are run to a manifold made up of two OFF/ON valves and a crossover valve. There is also a valve on the manifold for the generator fuel line. Under normal conditions, the boat should be run with the shut-off valves open and the crossover valve closed. If for some reason one of the tanks runs dry, the valve to that tank can be shut, the crossover opened and both engines run off one tank. You should not run the engines in excess of 3,000 RPM when operating both engines on one tank. The fuel valve manifold is

located inside the engine room on the 4050 Bodega and under a hatch in the center of the salon floor on the 3550 Bristol.

CAUTION: Avoid the storage or handling of gear near the fuel lines, fittings and tanks.

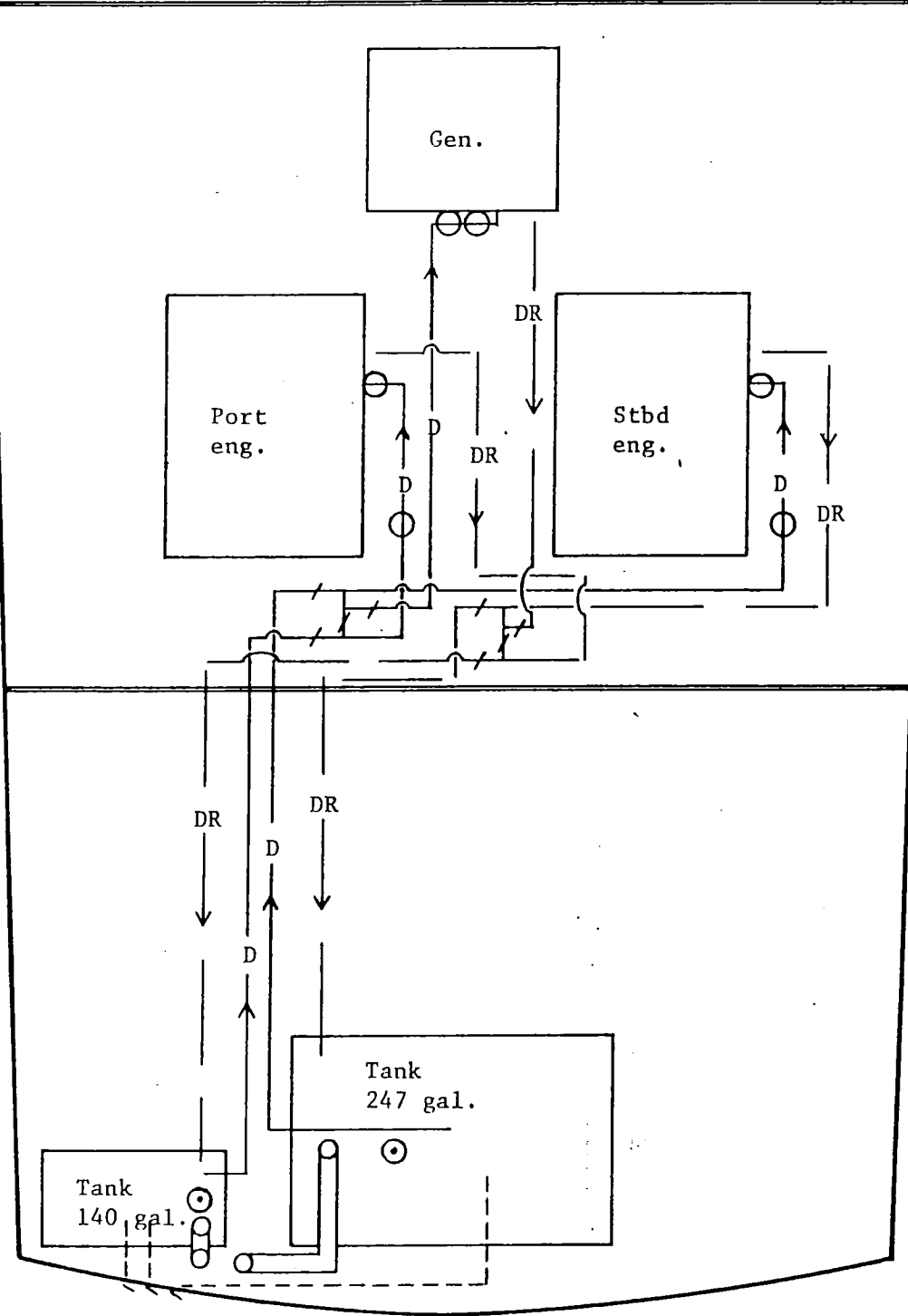
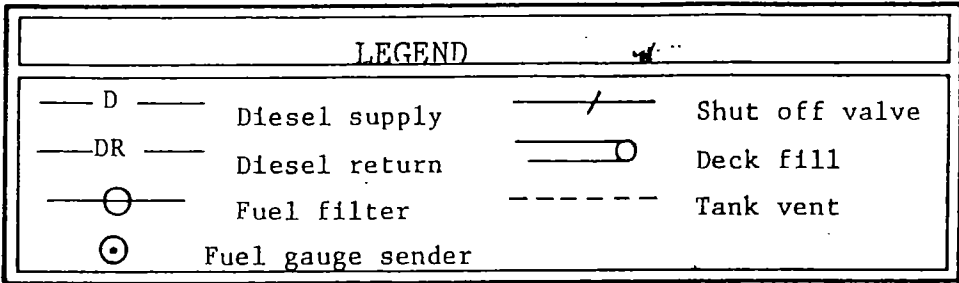
#### F. Diesel Fuel

The diesel fuel systems utilized in Bayliner boats are similar in many ways to the gasoline system. Diesel engine operation requires a return fuel line from the engine to the tank. Thus, the fuel system has two lines between the engine and the tank instead of one. The diesel fuel tanks are not fitted with anti-syphone valves. Fuel valves are included in diesel system between the tank and engine and in some applications a crossover valve is used. Fuel filteres are utilized in every diesel installation. It is very important that the filters be checked and cleaned regularly.

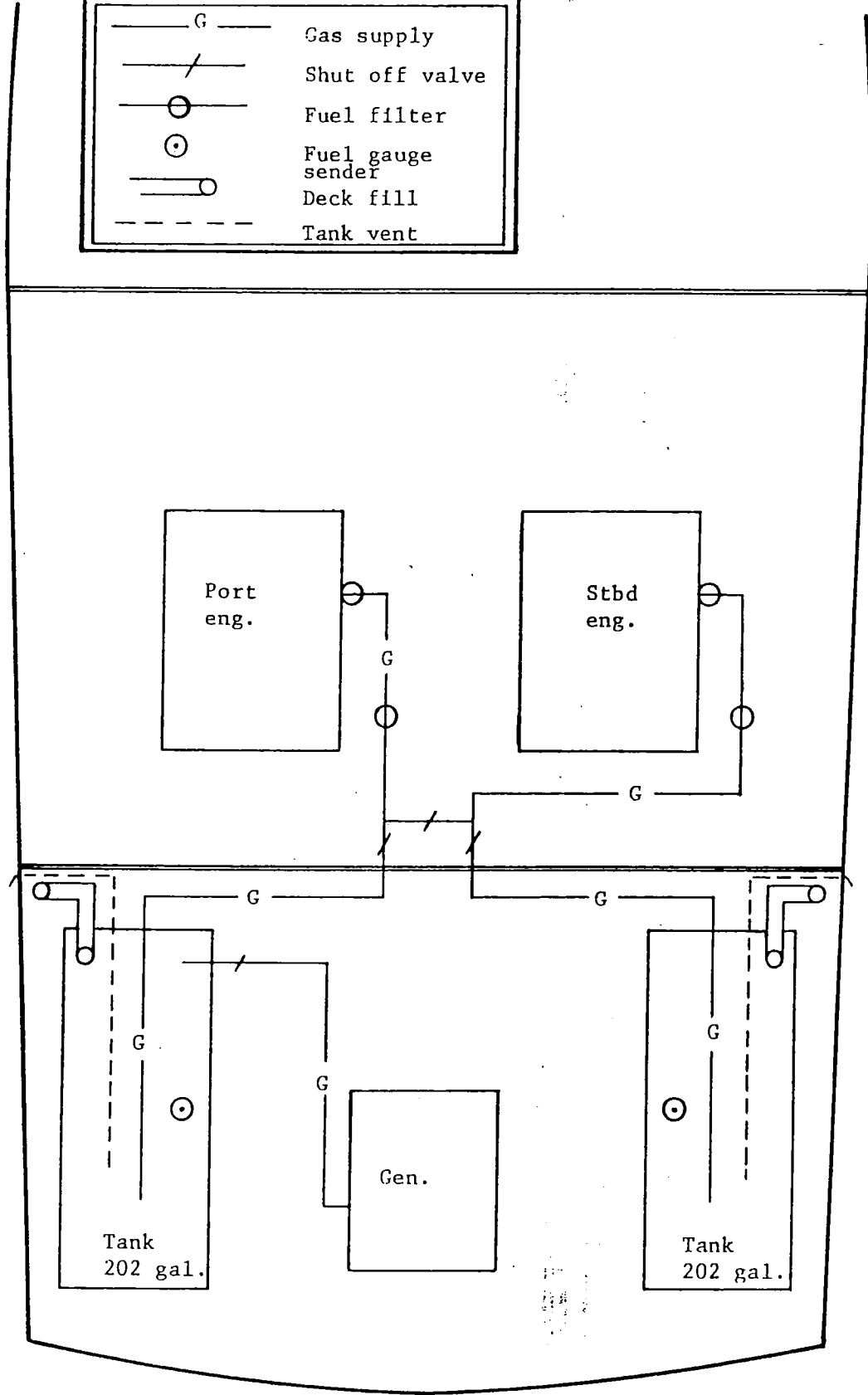
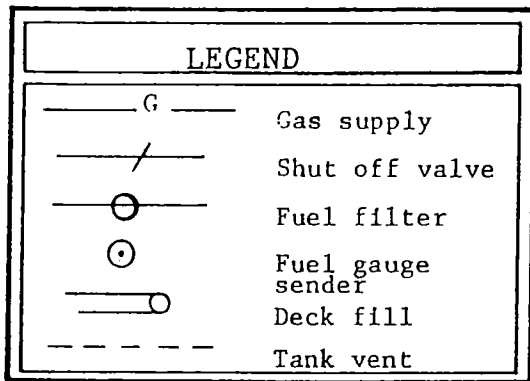


|                                    |                                     |
|------------------------------------|-------------------------------------|
| <b>BAYLINER MARINE CORPORATION</b> |                                     |
| 1-14-80 WCT                        | 4050 Bodega<br>gasoline fuel supply |
| (not to scale)                     |                                     |

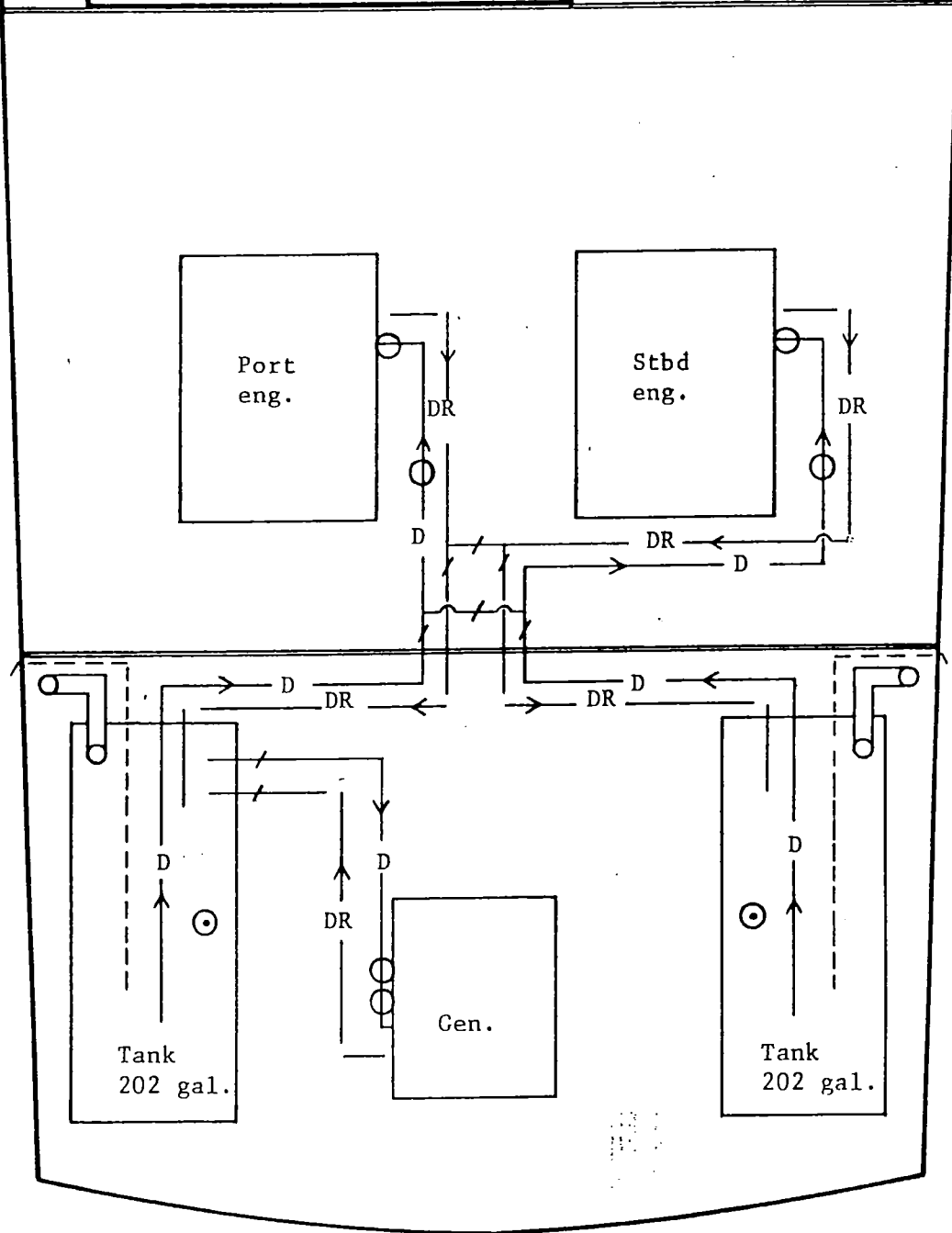
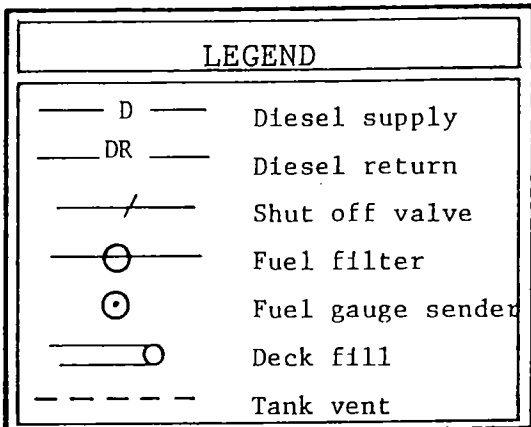




|                             |                    |
|-----------------------------|--------------------|
| BAYLINER MARINE CORPORATION |                    |
| 1-14-80 WCT                 | 4050 Bodega        |
|                             | diesel fuel supply |
|                             | (not to scale)     |



|                             |                                      |
|-----------------------------|--------------------------------------|
| BAYLINER MARINE CORPORATION |                                      |
| 1-14-80 WCT                 | 355C Bristol<br>gasoline fuel svstem |
|                             | (not to scale)                       |



|                             |     |                    |
|-----------------------------|-----|--------------------|
| BAYLINER MARINE CORPORATION |     |                    |
| 1-14-80                     | WCT | 3550 Bristol       |
|                             |     | Diesel fuel supply |
|                             |     | (not to scale)     |

## POWER PLANT AND PROPULSION SYSTEM

### A. Engines

All necessary data and information about the engines are contained in the Engine Manual, so they are not repeated here. Just a reminder, the life and performance of the engines are dependent on the way they are cared for, so follow the manufacturer's instructions and watch the instruments carefully to obtain many hours of pleasureable boating.

### B. Marine Gears

A gear unit, affixed to the after end of your engine, is a mechanically operated forward and reverse transmission and reduction gear. Information and maintenance procedures can be found in the Engine Manual.

### C. Propeller Shafts

Information as to size, length and material of shaft will be found on the Ship's Information page at the front of this book.

### D. Engine-Shaft Alignment

At the factory, your engines were aligned properly, but they should be checked after the boat has been in the water for 48 hours, again after 20 hours of operation, then every 50 hours. To insure proper alignment when the boat has been launched after a haul-out or dry storage, let the boat settle in the water for a day or two before making final alignment adjustments. We recommend the following procedure:

Remove all bolts in the coupling flanges at the end of the marine gear. Slide shaft aft until the flanges are about 1/4" apart.

The flexible hose on the shaft log does not give the shaft full support. Move the shaft up and down and from side to side to determine, as closely as possible, the central position where shaft should be normally located. At this point, the boss on shaft coupling should enter recess on engine coupling without moving shaft to either side, nor raising it more than 1/8".

If such is not the case, move engine as indicated.

When you are assured that the engine is roughly aligned with the shaft, bring the flanges of the couplings together until they touch lightly.

Check for an opening between the flanges with a feeler gauge. If the opening is greater than .003" at any point, engine should be realigned by adding or removing shims under those engine mounts that will correct the situation.

#### E. Shaft Log and Stuffing Box

The shaft log is the metal casting or fiberglass pipe that the propeller shaft turns in where it penetrates the hull of the boat. On the inside end of the shaft log, there is a stuffing box attached by a flexible rubber hose and held in place by hose clamps. This flexible hose allows for a misalignment of .010 inch without undue wear of the packing gland itself. The stuffing box is packed with braided flax packing. This is

kept tight to keep it from leaking by the packing gland. It is normal to have a slight drip of water from the stuffing box as this serves as a lubricant, but, if the leaking is excessive, the packing gland should be tightened. Be careful not to tighten too much as this will glaze the packing and score the shaft. If necessary to repack the gland, remove the boat from water, back off both lock nuts and slide the packing gland forward on the shaft. Be sure that the old packing is completely removed and install five 1/4" x 1/4" individual rings of new packing. Stagger the cut ends of the rings. Then slide the packing gland aft and tighten to a point where there is a slight drip of water. Tighten so shaft will not move. This will seat packing. Back off until shaft is free. Run shaft for a while and reset. Always use tallow flax packing. Do not spiral around shaft, each ring must be separate.

CAUTION: Always tighten packing gland evenly. One turn at a time on each nut will avoid any problems.

#### F. Propellers

Information on propellers will be found on the Ship's Information page of this book. The propellers recommended are those with which your boat was tested at sea level. If weight has been added or the operating characteristics have been changed due to addition of special equipment, it may be necessary to change the pitch and/or diameter to suit existing conditions.

#### G. Installation of Propellers

Propeller bore and the end taper of the shaft must be clean and free of any obstructions. In order that the propeller seats securely on

the shaft, the keyways must be free from burrs and corrosion. With shaft greased, insert the key with its round end forward on the shaft, then place the propeller on the shaft aligning the keyway. The key should fit snugly on each side of the keyway, but clearance at the top is essential so as not to pull the propeller off center and thereby cause vibration. After proper fitting, assemble the propeller nut, locking nut and cotter pin on the shaft. The key must go on the shaft first.

#### H. Exhaust System

Your exhaust system is designed to keep water out of the engines, in most conditions. However, care should be taken not to anchor stern to sea. The engines should not be shut off if the seas are too high. Always use good seamanship and consider the seas before anchoring or shutting off the engines.

#### I. Maintenance

Check all of the clamps the first ten hours. Check these clamps periodically.

## FRESH WATER SYSTEM

The fresh water system in your Bayliner is a pressure demand system and operates off the 12 volt accessory battery. To operate, the accessory battery switch must be ON, the DC circuit breaker on the main power panel must be ON, and the switch marked "WATER" in the galley must be ON. You may then draw water at any faucet on the boat including the shower.

When filling the water system for the first time or any time it has been run dry, the complete system must be bled of air. While filling the water tank, turn on the "WATER" switch. Then open every hot and cold valve on the boat. Within one or two minutes you'll get a steady stream of water from each faucet. When this occurs, the air has been removed and the valves can be shut.

The 4050 Bodega has two water tanks. One tank gravitates into the other. When filling you should fill until water overflows the fill fitting, allow some time for one tank to gravitate to the other and then continue filling.

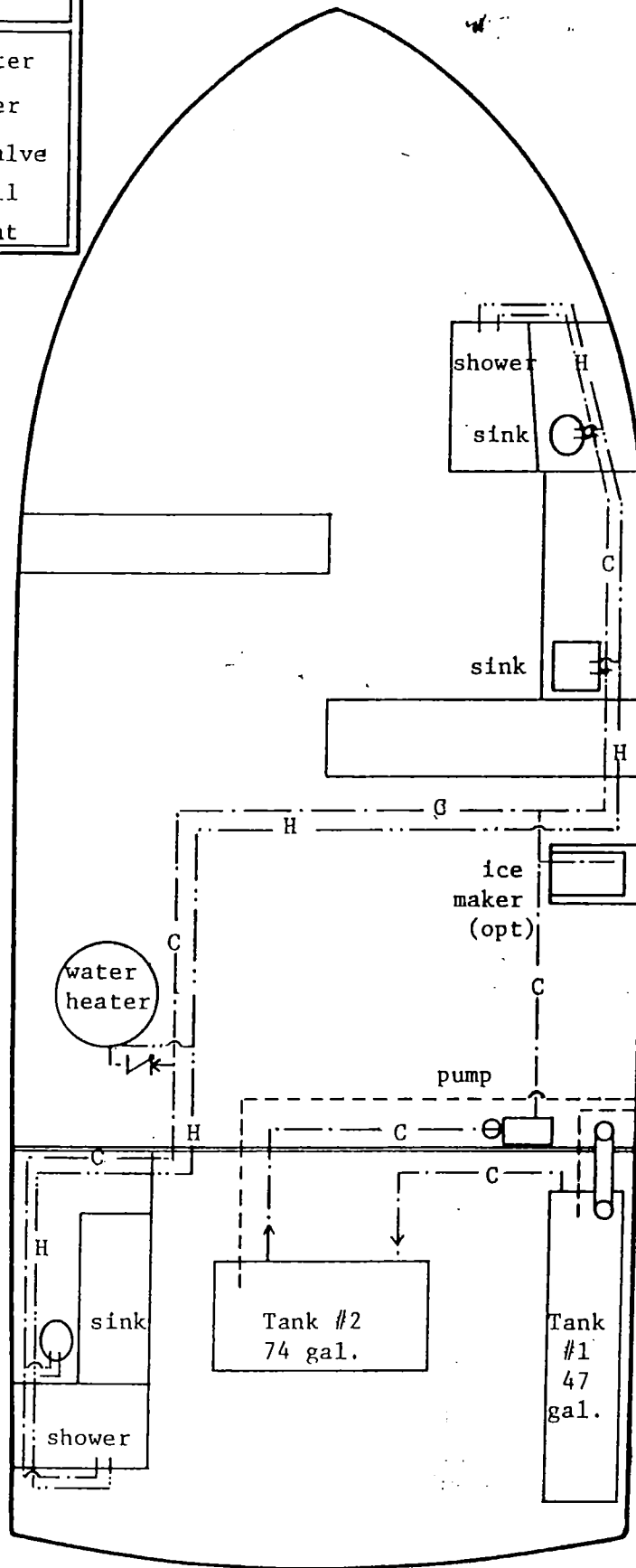
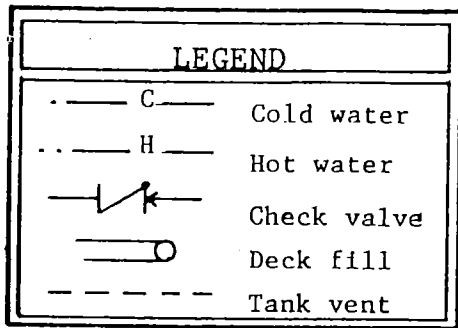
The 3550 Bristol and 4050 Bodega are equipped with a six gallon hot water tank. The hot water tank operates on 110 volts from either shore power or the generator. The circuit breaker on the AC side of the main power panel must be on. In addition, the hot water tank has a built in heat exchanger that is plumbed into the cooling system on one of the main engines. Engine cooling water circulating through the coils in the hot water tank, heats the fresh water in the tank.

CAUTION: Any time the fresh water tank(s) is run dry, the hot water tank circuit breaker must be shut off.



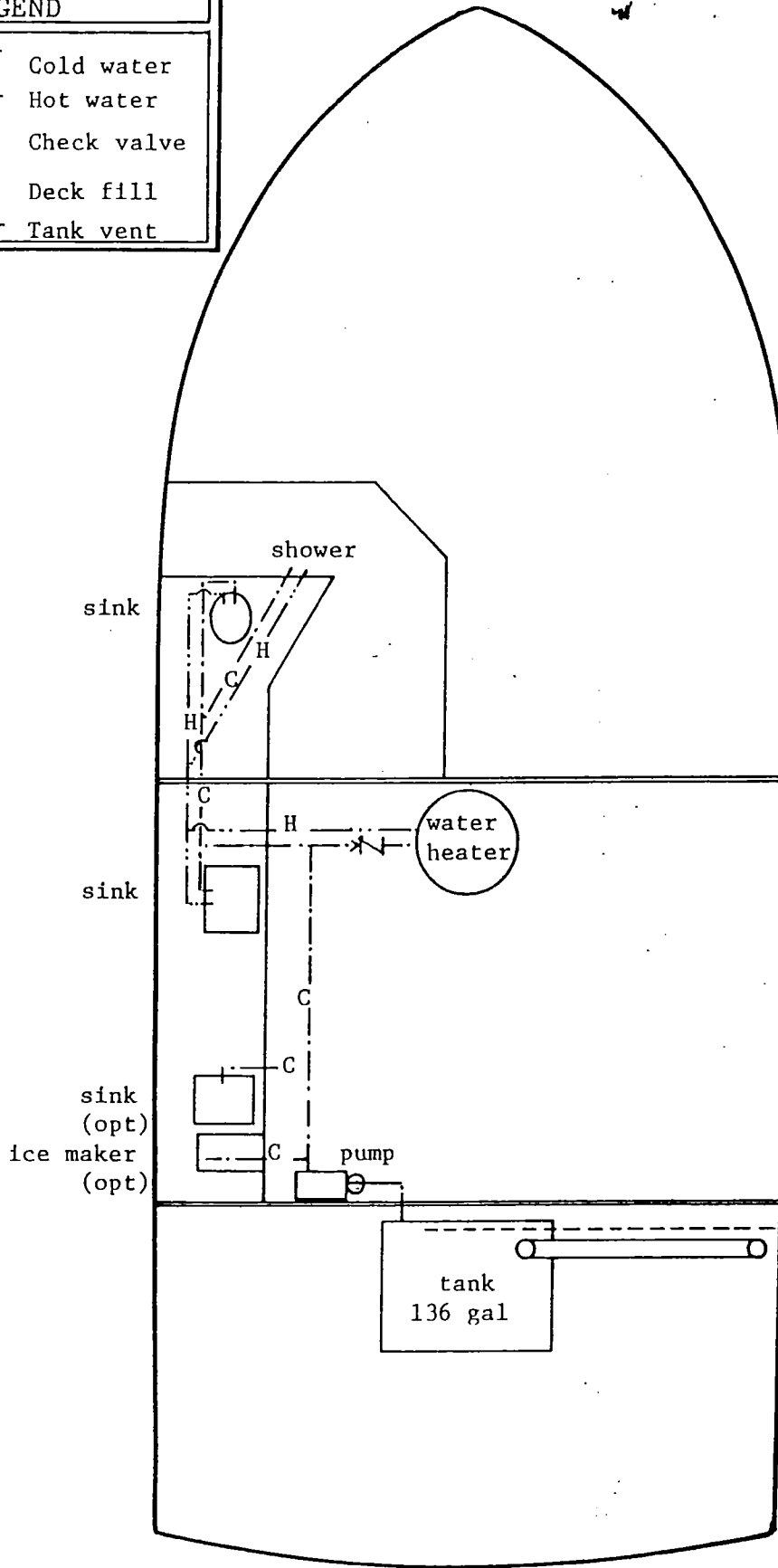
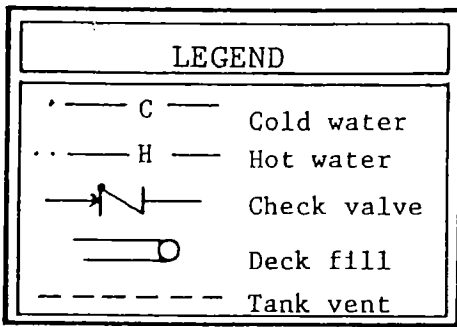
The 110 volt heating element in the tank will burn up if there is no water in the tank.

All the sinks on the Bristol and Bodega drain overboard. The water that is used in the shower(s) drains into a sump. Because the shower drain is below the water line the shower water must be pumped out. The shower sump pump is activated by a switch in the head compartments marked "SHOWER SUMP".



Note: water tank #2 is filled by water that gravitates from tank #1.

|                             |                             |
|-----------------------------|-----------------------------|
| BAYLINER MARINE CORPORATION |                             |
| 1-14-80 WCT                 | 4050 Bodega<br>water system |
| (not to scale)              |                             |



|                             |     |                              |
|-----------------------------|-----|------------------------------|
| BAYLINER MARINE CORPORATION |     |                              |
| 1-14-80                     | WCT | 3550 Bristol<br>water system |
| (not to scale)              |     |                              |

## STARTING PROCEDURE - GAS ENGINES

IMPORTANT: Read owner's manual supplied by motor manufacturer for specific information on the operation, maintenance and Limited Warranty on the engines in your boat.

### A. Starting the Engines in your Boat

Check engine compartment for gas fumes and any signs of fuel leakage from the tanks, fuel lines or fuel pumps.

CAUTION: If fumes are detected, Do Not turn on any electrical accessories. Ventilate boat by opening hatches and investigate. If the problem cannot be detected and easily corrected notify the marina where you're moored of your problem and then contact your Bayliner dealer.

1. If there are no fumes present, turn on the main battery switches.
2. Go to the main power panel at the lower helm and turn on the DC circuit breakers for the accessories you'll be using.
3. Turn on both blower switches at the instrument panel and run blowers at least four (4) minutes before starting engines.

NOTE: The blowers should not be turned OFF until your boat is at cruising speed.

4. Turn on fuel valves to each engine and the generator.
5. Check the oil in the main engines, transmissions and the generator.
6. Check the coolant in the main engines.
7. Check the belts on each main engine for proper tension.
8. Open seacocks to main engines and the generator.

IMPORTANT: If blowers have been operated for four (4) minutes you are now ready to start the engines. You should start the engines at the station you intend to run the boat from.

9. Move the shift controls to neutral position.

NOTE: The shifting system is fitted with a neutral safety device so the engines can't be started in gear. It may be necessary to move the shift lever slightly back and forth in the neutral detent to activate the safety switch.

10. Advance throttle levers fully to set automatic chokes. Then one at a time, turn ignition switches to the start position, and at the same time, pump the throttle two or three times. The engine should start.

NOTE: When starting from the bridge, keep an eye on the tachs. You won't be able to hear the engines the moment they start and you may over-rev them.

11. Set engine RPM's at 1,200 and check oil pressure. It should come up immediately.

CAUTION: If the oil pressure does not come up immediately, shut the engine down and investigate.

12. If the engines have not been run for a while, we recommend you again visually inspect the engine compartment for fuel or water leaks.

13. Return to the helm and check the volt meters. At 1,500 RPM's or a more normal reading is 13 - 14 volts.

14. When the engine temperature starts to come up, set the throttles at idle position. The engines should idle at 600 - 800 RPM.

CAUTION: Shifting the transmission when the engine speed exceeds 800 RPM can cause damage to the transmission.

## STARTING PROCEDURE - DIESEL ENGINES

IMPORTANT: Read owner's manual supplied by the motor manufacturer for specific information on the operation, maintenance of and Limited Warranty on the engines.

- A. If your Bayliner is equipped with diesel engines you should follow the procedure outlined for gas engines.
- B. In addition to opening the fuel valves to the engines, the diesel fuel system includes return lines to each fuel tank for excess fuel. There are valves in the return lines and these valves must also be opened.

NOTE: See diesel fuel system diagram.

- C. It is not necessary to pump the throttles. Simply set levers at half throttle. On those engines equipped with glow plugs, activate glow plug for 30 seconds when engine is cold.
- D. Turn ignition key to start.

IMPORTANT: If the engine does not start, do not engage starter motor for more than 30 seconds at a time.

- E. On Volvo and GM diesel powered boats a "STOP" button is used. To shut engines down, push "STOP" button and hold in until engine stops. Then turn ignition switch OFF.

CAUTION: Do Not turn ignition switch off prior to shutting engine down. This will damage the charging circuit.

F. If you have been running hard, you should allow the engines to idle and cool down for a few minutes before shutting down.



## MAINTAINING YOUR BAYLINER

### A. Fiberglass Care

The fiberglass construction which makes up the entire hull and superstructure, consists of several parts. The exterior layer gelcoat is a special polyester resin into which coloring pigments have been incorporated to give built-in color. Just beneath the gelcoat is a series of glass fabric laminations bonded together by a chemical action, and the part is a one-piece unit. The outside gelcoat -- approximately 0.015" depth -- gives the fiberglass part its glossy finish. The following recommendations will help you keep this unique material in the same condition it was when it left the factory.

### B. Seasonal Care

Clean surface with soap and water.

Wax and polish the surface with an automotive type wax.

### C. Loss of Gloss

To restore the glossy appearance of the gelcoat surfaces, a light buffing may be advisable. For hand buffing, use a slightly abrasive rubbing compound, as Dupont No. 7. If a power buffer is used, Mirror Glaze No. 1 or similar product is recommended. After buffing, the surface should be waxed and polished as described above for Seasonal Care.

The fiberglass gelcoat surface is non-porous and therefore highly resistant to stains. Most can be removed easily with household detergent. Crayon, lipstick or shoe polish can be removed with plain alcohol. Ink spots will come off with Ajax or a similar detergent. While penetrating stains are very uncommon, some products with unusual chemical contents may go too deeply for ordinary methods of removal. In such cases, weak solutions of acids or alkalies, such as hydrochloric acid or ammonia can be tried. These may, however, produce a slight discoloration in the gelcoat. If none of the above methods are successful, it may be necessary to sand down through the gelcoat to remove the stain. This will require refinishing.. (See below.)

#### D. Fiberglass Repair

Fiberglass is one of the most durable, strong, and forgiving construction materials available. Due to its resilient characteristics, damage from striking an object or dock is minimal. Occasionally crazing, scratches or damage to the fiberglass can occur. Crazing is the appearance of hair-line cracks in the gelcoat and is not a sign of fiberglass deterioration. The cracks penetrate only the gelcoat and do not affect the structural soundness of the laminate.

In case of cosmetic surface damage, repairs to the area can be made as follows:

1. Lightly sand the damaged area. Do not excessively scratch or gouge the surrounding area.

2. If the nick or gouge is deep and through the gelcoat, fill the area with fiberglass patching paste. Follow the directions on the jar when mixing the paste with the catalyst.
3. After the gouge is filled and has dried, sand the patched area. Begin by using medium-fine grade sandpaper. Progressively use finer grade sandpaper until the surface is very smooth. Add additional filler and sand again if necessary.
4. The patch paste used on Bayliner boats is available from your Bayliner dealer. Due to color variations and fading, matching the boat's gelcoat may be difficult. Occasionally, tinting the gelcoat may be necessary.

Remember, the patch paste must be catalyzed.

5. After ample drying time, sand the area using very fine wet/dry sandpaper.
6. Polish the area using a fiberglass rubbing compound and then wax.

More severe fiberglass damage requires the expertise of a fiberglass repair technician. Repairs of structural damage should only be attempted by someone experienced in fiberglass repairs. See your Bayliner dealer.

IMPORTANT: Improper repair techniques can lead to further severe fiberglass component damage.

E. Anti-fouling Hull Surface

After hull construction, the hull surface below the water line is thoroughly sanded and it is then painted with International Tri-Lux anti-fouling paint.

Anti-fouling paint reacts with the water to retard the growth of algae, barnacles and other marine growth on the hull surfaces. The paint also fills the microscopic pores of the gelcoat and helps protect the fiberglass. Bayliner does not recommend the use of a hull without anti-fouling hull paint applied. Continued immersion of unprotected gelcoat can lead to fiberglass cosmetic problems.

After a season's use or sooner under certain conditions, the anti-fouling paint may appear to be dissolving. This is due to the paint's chemical emissions retarding marine growth. Re-finishing is then in order. The paint begins reaction upon contact with water. Paint discoloration during shipment or storage may occur.

Bayliner recommends re-application of the anti-fouling paint seasonally. The paint's effectiveness will be drastically reduced if used longer. Though Bayliner has found the anti-fouling paints we use provides good marine growth protection in most water, other paints may be more effective in certain water conditions. See your Bayliner dealer for his recommendations on anti-fouling paint use in your area.

#### F. Hardware Cleaning

Use any of the modern chrome cleaners on the market today to spruce up hardware. After a good cleaning, a coat of paste wax will add greatly to its luster. All metal fittings, including dash panel, instruments, railings and hardware, should be sprayed with a rust inhibitor similar to WD-40 every three months when exposed to salt water and annually in fresh water. If not maintained on a regular basis, stainless steel railings and fittings, in particular, will discolor because of surface carbon steel granules picked up in processing and, in some areas, because of contaminants carried in the air.

#### G. Vinyl Upholstery

Use any good automotive vinyl cleaner; cleaner concentrates such as Fantastik work well also.

CAUTION: Avoid solvents and bleaches, as they may permanently damage the vinyl.

#### H. Teak

Your teak can be maintained dark and rich in appearance with the following care:

1. Exposure will cause the grain of the wood to rise. This will cause it to feel and appear rough. Should this occur, lightly sand the teak using a hand sanding block and medium grade sandpaper. Sand it only enough to smooth the teak.

2. Liberally apply a teakwood dressing of your choice. This will replenish the teak oil lost. Repeat the application in a few days.
3. Reapplication of the teakwood dressing as periodically required will keep the wood dark and rich appearing.

Once the teak becomes excessively gray (weathered), more complex cleaning or bleaching is necessary to restore it. Many teak restoration products are available from your Bayliner dealer. Do not varnish or paint the teak. The oil emitted by the teakwood will cause the varnish or paint to peel.

#### I. Winterizing

Pump out the head holding tank(s).

Fill the fuel tank(s) completely full and add gasoline winterizer which will reduce varnishing, condensation, etc. See your "Engine Owner's Manual" for their recommendations. Also, check with the marina operators for their recommendations.

Winterize the engine and drive systems as recommended in the "Engine Owner's Manual" and V-drive Manual. Portions of this winterization procedure may require the boat having been lifted.

Be sure all the water is completely drained from the entire fresh water system. Disconnect all hoses, check valves, etc. and blow all the water from the system. Use very low air pressure when doing this, otherwise system damage could result. Fresh water system anti-freeze is available and recommended as an alternative to dis-assembling the system as above.

Winterize the head as recommended by the head manufacturer.

Be sure the batteries have sufficient water and clean terminals and are fully charged.

Spray the 110 Volt receptacles with WD-40.

Clean the boat interior thoroughly.

Remove as many cushions and hatches and open as many locker doors as possible. Open the ice box or refrigerator door. Leave as many of the above areas open to improve ventilation. Provide heat in boat if possible. Excessive dampness can cause electrical problems, corrosion, and dry rot.

Spray the boat upholstery with Lysol Spray Disinfectant.

Enclosed areas such as the refrigerator, shower basin, storage locker areas, etc. should also be sprayed with Lysol.

## HEAD SYSTEMS

### A. Head Operation

#### 1. Self Contained Head - Potpourri 707 (Standard Equipment)

To use:

- a. Mix 1 1/2 to 2 gallons of water with four ounces of Liquid Gold concentrate and pour the mixture through the opening of the basin, while operating the flushing handle on the side.
- b. Pump the liquid into the basin, and push on the flush handle. Repeat the operation to assure perfect mixing.
- c. Before using, it is always necessary to pump liquid into the basin.
- d. Keep the basin dry when running.

NOTE: Use only white toilet tissue as colored dyes may impair the effectiveness of the chemical. Use regular ply tissue. Do not use disintegrating tissue as this may clog the entire pump system.

Cleaning:

- a. Use only mild cleansers, detergents or soaps. Avoid using abrasive cleansers. Clean the toilet bowl periodically as you would your household toilet.



This manual has been prepared to acquaint you with the operation and maintenance of your Bayliner Yacht and to provide important safety information. We urge you to become familiar with the information contained in this manual. This will help assure that your boating experience be enjoyable and trouble free.

When your Bayliner needs service, remember your Bayliner Franchised Dealer knows your boat best and is interested in your complete satisfaction. Return to him for service and any other assistance you may require.

DATA SHEET

NAME OF BOAT \_\_\_\_\_

OWNER'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

HAILING PORT \_\_\_\_\_

HULL NUMBER \_\_\_\_\_

REGISTRATION NUMBER \_\_\_\_\_

HEIGHT ABOVE WATERLINE \_\_\_\_\_

BEAM \_\_\_\_\_ DRAFT \_\_\_\_\_ LENGTH \_\_\_\_\_

FUEL CAPACITY \_\_\_\_\_ WATER CAPACITY \_\_\_\_\_

DOOR KEY NUMBER \_\_\_\_\_

TECHNICAL DATA

ENGINES

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Type Fuel Filter

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Gear Manufacturer: \_\_\_\_\_

Gear Model: \_\_\_\_\_

Gear Ratio: \_\_\_\_\_

Type Oil Filter:

PORT ENGINE \_\_\_\_\_

STARBOARD ENGINE \_\_\_\_\_

Serial Number: \_\_\_\_\_

Gear Serial Number: \_\_\_\_\_

AUXILIARY GENERATOR

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

BATTERIES

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_

PROPELLER SHAFTS

Material: \_\_\_\_\_ Diameter: \_\_\_\_\_

Length: \_\_\_\_\_

TECHNICAL DATA, CONTINUED

PROPELLERS

Manufacturer: \_\_\_\_\_

Diameter: \_\_\_\_\_

Number of Blades: \_\_\_\_\_

Style: \_\_\_\_\_

Pitch: \_\_\_\_\_

Material: \_\_\_\_\_

## CONTROLS AND INSTRUMENTS

Your Bayliner Yacht is equipped with a complete dual control system, steering, throttle and shift, and instrumentation. Your understanding of the basic functions of the controls and various instruments which control and monitor these systems will contribute to the safety and enjoyment of all aboard.

### A. Steering

Bayliner Yachts utilize a rack and pinion type mechanical steering system. The boats are equipped with two rudders. A steering cable connects each helm station to each rudder tiller arm and the tillers in turn are connected by a tie-bar assembly.

IMPORTANT: A periodic inspection should be made of the steering cables, helm assemblies and associated linkage. These parts should be lubricated with a light water proof grease. Any parts that show signs of deterioration due to corrosion or excessive wear, should be replaced immediately. Failure to do so could result in loss of steering control.

The rudder shafts pass through shaft logs mounted in the bottom of the boat. These shaft logs are equipped with a packing gland that must also be inspected periodically for leakage. The packing nut should be tight enough to prevent leakage but not so tight that excessive drag is created in the steering system. Generally hand tight is all that's required. To

check for drag, disconnect the steering cables and move the rudder by hand. It should move freely. If leakage cannot be stopped without exerting excessive drag on the steering system, repacking of the gland may be necessary. When repacking, use only flax packing. Graphite packing may cause corrosion in salt water.

CAUTION: Always make sure the jam nuts are tightened to prevent the packing nuts from loosening.

#### B. Throttle and Shift Controls

The dual control systems in Bayliner Yachts are made up of two controllers, four throttle cables and four shift cables. These cables are a mechanical "PUSH-PULL" type. On the 3550 Bristol, the cables are run from each control station to the power units. On the 4050 Bodega, the bridge control is connected to the lower control by tie cables. Cables are then run from the lower station to the power units. The control systems on Bayliner Yachts are equipped with a neutral safety device. On those models powered with Marine Power Engines, the device is a switch located in the upper controller. On those models powered by Crusader Engines the neutral safety device is incorporated into each transmission. The neutral safety device prohibits the engines from being started in gear. It may be necessary to move the shift control slightly back and forth past the neutral detent to deactivate the safety switch.

CAUTION: Always return the throttle lever to idle