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Bayliner *Owner's*
Marine *Manual*
Corporation

WELCOME ABOARD

The purpose of this manual is to inform and familiarize both the novice and seasoned skipper with his new equipment. It will not tell you everything there is to know about boating, but will assist with the operation of equipment built and supplied by Bayliner. (Equipment and specifications subject to change without notice.) When your Bayliner needs service, see your authorized Bayliner dealer.

Understanding your new boat and how it works is essential to boating enjoyment and your safety. We recommend a four-step program for full pleasure.

1. Make certain you get a full explanation of all systems from your dealer before taking delivery.

2. Read this manual thoroughly, with particular emphasis on these points:

Starting, Checking for fumes, Carbon monoxide, Safety suggestions, Limited warranty.

3. Practice. All members of the family should be familiar with boat operation and how all systems work.

4. Register for local power squadron safe boating course or equivalent.

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SECTION I

Recommended Procedures for Launching, Fueling, Operating, Safety Inspecting, Trailering and Docking Your Boat.

At the time of the first launching of your new Bayliner, it is very important the procedure noted below be followed. Bayliner power boats in the 1600 through 1950 series are water-tested at our factories on a random sample basis only. Therefore, your new Bayliner must be checked closely when first launched.

Launching

1. Each Bayliner power boat is equipped with a transom drain plug. Make sure this plug is in place and tight.
2. Inspect the bottom of your new Bayliner and make a mental note of all fittings below the waterline. Then proceed with the launching.
3. Once in the water, immediately board your boat and inspect the motor compartment for signs of leakage. Check the area of any other through-the-hull fittings for signs of leakage.
4. If any leaks are noted, the boat should be removed from the water. If the selling dealer is not present, he should be notified so the leaks may be repaired before relaunching the boat.

Fueling

1. Prior to fueling, extinguish all open lights, close all hatches, windows and other doorways, stop all engines, motors, stoves, fans, and other devices liable to produce sparks or flames.
2. Inboard models are fitted with a through-the-deck fitting marked "Fuel". Remove the cap and insert the fuel nozzle, allowing the nozzle to make contact with the through-the-deck fitting. This contact will protect against static electricity.
3. Leave engine cover closed until 10 or 15 gallons of fuel have been pumped in. Then open engine cover and inspect the area of the engine and fuel tank for signs of leakage or fumes. If nothing is detected, proceed with fueling. When tank is full, check the motor/fuel tank area.
4. Install the fuel cap.
5. Wash down the area around the fuel fill with fresh water.
6. In the case of portable fuel tanks on outboards, remove tanks

from the boat for filling. **IMPORTANT:** Outboard fuel should be a mix of oil and gas. The first 12 gallons of fuel should contain one quart of oil to every six gallons of gas. Later, use one pint of oil to six gallons of gas. Follow the instructions printed on the gas cans provided by Bayliner. (1 part oil to 50 parts gas.) Once filled, they should be hosed down and wiped off before being replaced in the boat.

NOTE: Some portable tanks have vent screws which must be open to operate the outboard engine.

7. On very hot days allow for expansion. Do not fill the fuel tank completely.

8. If, when filling the tank, you can't put fuel in at a reasonable rate, check the fuel vent line to see that it's not kinked or plugged.

9. A periodic check should be made of the engine/fuel tank area. Any sign of fuel seepage or fumes should be investigated and the cause repaired prior to operating the boat.

Starting

With the engine cover or floor hatch still open, proceed as follows to start the engine.

1. Check the engine oil level, test alternator/water pump belts for tension and check entire engine area to see that everything is in it's proper place. **IMPORTANT:** Check entire area visually as well as by sniffing to insure that no fuel vapors are present.

2. Turn on blower and run it for four minutes. Do not turn blower off until you are under way and at cruising speed.

3. Pump the throttle two or three times and turn the ignition key to the start position.

4. As soon as the engine starts, set the engine speed at 2000 r.p.m.'s and check your oil pressure. Oil pressure will vary from one engine to another, but it should come up immediately. If it doesn't, shut the engine off.

5. When the oil pressure checks "OK", check the engine again for fuel vapors or fuel leakage. Give particular attention to all fuel fittings. Also check for any sign of water. Water leaking from the engine might indicate the blockdrain plugs are open.

WARNING: Gasoline Vapors Are Highly Explosive. To prevent explosion and fire, check engine and fuel compartments before each use for fumes or accumulation of fuel. Always operate blower for at least four minutes before starting, during starting and when operating below cruising speeds.

6. If everything checks "OK", close the engine cover.

7. Return to the helm and check the volt meter. The volt meter should be in the green at 12-14 volts. The temperature gauge should start coming up.

8. Now bring the engine back to an idle. Idle r.p.m. should be 600-800 when the engine is warm.

WARNING: CARBON MONOXIDE IS A POISONOUS GAS.

Idling at the dock for long periods of time, or running your boat with the camper back cover or slant cover installed without adequate ventilation can result in dangerous accumulations of carbon monoxide gas inside the boat. Always remove the canvas or otherwise ventilate the boat when operating the engines.

Controls

With the boat tied securely to the dock, advance the shift control to forward. Bring back to neutral, hesitate and bring the shift lever back to reverse. Return lever to neutral. The boat thrust should correspond to the shift lever position. When shifting in or out of gear, move the shift lever firmly and quickly.

Have someone watch the lower unit while you turn the steering wheel to port and to starboard. When you turn to port, the outdrive should swing to port. The same is true for outboard powered boats.

If you have followed the procedures above, then the most important functions of your boat have been checked. Any discrepancies noted should be reported to your dealer immediately. **DO NOT ATTEMPT TO OPERATE YOUR BOAT UNTIL THE PROBLEM IS CORRECTED.** If everything checks out OK, you're ready to go boating. Have Fun!!!

NOTE: Always carry the appropriate Coast Guard equipment and life jackets.

For maximum safety and fun afloat, the procedures above should be followed each time you operate your boat. They are not just for beginners. Seasoned skippers, like airplane pilots, perform these checks each time they launch, fuel or operate their boats.

Safety Inspection

1. You should check to make sure you have the following safety items, tools and spare parts on boats.

- () Fire extinguisher
- () Life preservers - one for each person aboard, one throwable flotation device, all with a Coast Guard approval tag.
- () Boat hook or paddle
- () Fenders

- () Lines
- () Chart for intended operation area
- () Flashlight
- () Flares, night and day types
- () Small tool box with:
 Philips head screw driver, slot head screw driver, pliers,
 vise-grip, regular open-end wrenches, electrical tape, Allen
 wrenches, jackknife, hacksaw, hammer, feeler gauges,
 lubricating oil, battery jumper cables, friction tape, water
 pump pliers, ratchet, sockets, extension, hose clamps, screws,
 Bolts, nuts, washers, waterproof matches.

NOTE: Metric tools are required on some engines.

Spare Parts

- () Alternator belt and/or water pump belt
- () Gear lubricant
- () Cabin lights, courtesy bulb number GE94 or GE90
- () WD-40 (rust inhibitor)
- () Navigation light bulb number GE-90 or GE1004
- () Dome lights number GE-1141
- () Propeller nut and washer
- () Drive pin, if required
- () Spare propeller
- () Fuse numbers - AGC10/12/15/30

2. Instruct passengers in the use and location of life jackets and fire extinguishers.

3. Bilge pumps work well if their intakes are kept clear of debris and the outlet hose is kept free. Occasional checking of operation is advised. Don't run your pump dry. Add a little water to the bilge and pump out to make certain it is operating properly.

Trailer

1. Purchase a trailer with the proper capacity rating. A trailer that is sprung to carry more weight will ride too roughly and can damage your boat. Too little trailer capacity will be unsafe on the freeway, and will not meet legal requirements.

2. Consult your state laws as to brake requirements, and check brakes for proper operation prior to departure on each trip.

3. Check tires for proper inflation. Under-inflated tires heat up rapidly and tire damage is likely to occur.

4. Wheel bearings should be checked at least every 90 days and before putting your boat away for the season.

5. Your boat should be fastened to the trailer by a line from the bow eye to the winch line PLUS a safety chain or cable to the winch stand or trailer tongue. The stern of your boat should be tied down to the trailer from the stern eyes.

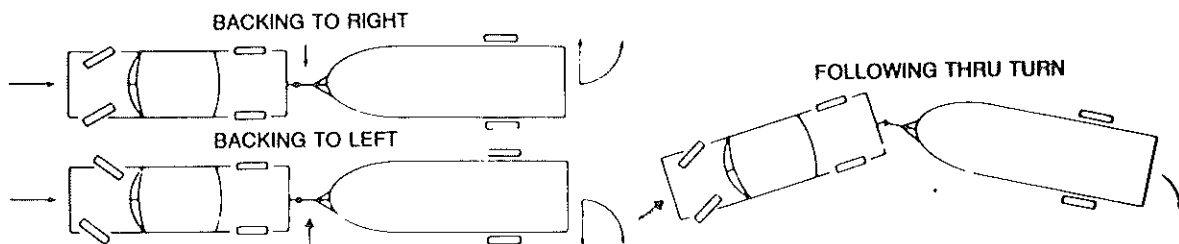
6. Check to be sure the tail lights and turn signals work when attached to the towing vehicle. Some automobiles require heavy duty flasher units to make turn signals work properly.
7. Your trailer should support your new boat in as many places as possible and be adjusted so the load is well divided among the supporting rollers or pads. Occasional lubrication of the rollers aids in launching and retrieving your boat.
8. Too much or too little tongue weight will cause difficult steering and tow vehicle sway. A rough rule of thumb is 5% to 10% of boat and trailer weight on the tongue.
9. Close and secure all cabin windows and doors. Store equipment so that it cannot slide or fall.
10. Before towing, take down the convertible top, side curtains and back cover. They can be damaged.
11. Check springs and under carriage for loose parts.
12. Carry a spare wheel with tire to fit the trailer with tools sufficient to change it.
13. On extended trips, carry spare wheel bearings, seals and races. Due to the immersion necessary to launch your boat the trailer bearings and packing will not last the mileage they will in your auto.
14. Before backing your trailer into water, disconnect the light plug from the car. This will greatly reduce the chances of blowing out your trailer lights when they become submerged.

How to Back Up Your Trailer

We will attempt to show you how it is done in pictures. However, practice makes perfect, so we suggest using an empty supermarket parking lot for practice.

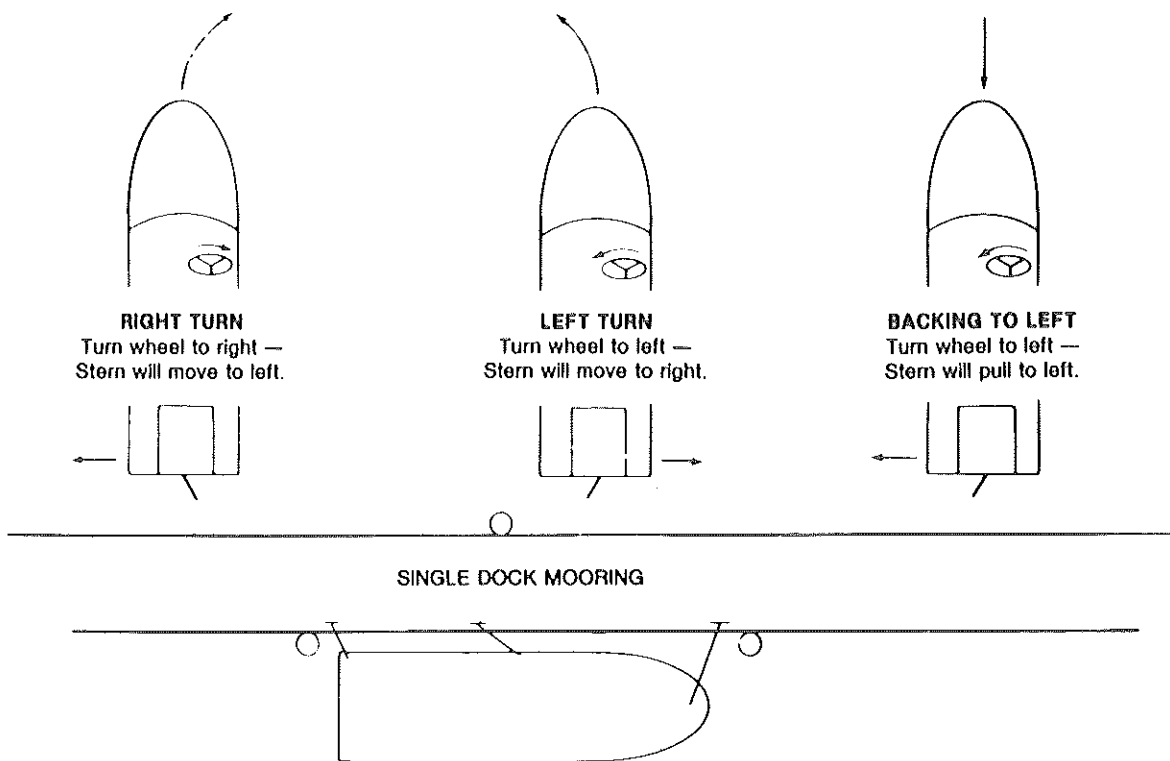
NOTE: When backing, be sure to have a lookout; your visibility may be severely impaired. Also, make certain the drive or outboard will clear obstacles.

1. Turn the front wheels of the car in the opposite direction from which you want the trailer to go.
2. Once the turn is started, follow the trailer as you would normally backing the car.
3. When rounding turns on highways or streets, don't cut corners.
4. Equip your vehicle with a right hand mirror, a real benefit when passing and parking.



Getting Away From the Dock.

Piloting a boat is a lot like learning to drive a car. Extra caution and slow speeds cause fewer accidents. The diagram on page 7 will help you to understand how your new Bayliner steers. After leaving the dock, secure and store any fenders or mooring lines.



Practice Maneuvers Under Power

Once you are away from the dock, devote some time to learning how to maneuver.

1. Practice docking by using an imaginary dock.
2. Practice stopping. You have no brakes, but reverse works well at low speeds.
3. Remember your boat is heavy. When operating in close quarters or docking, all maneuvering should be done at idle speed. Proceed with caution in congested areas. Deep-V boats do not track straight at slow speeds. Proceed with caution in congested areas.
4. Gradually increase your speed. Get used to the boat before any full throttle operation.

Docking

Proper docking begins with proper preparation. Start by making sure you have adequate equipment, and that it is stowed correctly and ready for use. Your dealer is the best source for the amount and type of equipment you should carry.

1. Attach lines to deck cleats by making a loop in one end, large enough to pass through hole in the base of cleat and back over entire cleat. Pull line tight. Done this way, the line will not come off the cleat. The line now can be used to secure your boat. Lines may be kept this way while running as long as they are coiled and cannot become fouled in gear or props. In heavy sea conditions, all lines should be removed from decks.

TIP: Tie up by running line from boat, around dock cleat, and back to boat. This way you can untie without jumping from deck to dock and back aboard. Just cast off one end and then bring the whole line on board.

2. Be aware of wind, tide, current or other forces that effect your direction when leaving the dock and account for this in your maneuvering. Most maneuvering to and from a dock is best accomplished at 600 to 800 r.p.m.'s.

When approaching a mooring situation where there is a wind, tide or current, try to use these elements to your advantage. Allow them to carry the boat into dock. If there are high winds or strong currents, it is best to approach the moorage from the lee side. With a mild current or little or no wind it is best to approach from the windward side. When approaching check to see that all lines are attached to the cleats on the side that you will be mooring and that fenders are lowered on that side. Be sure to check that the fenders are hung at the proper height.

3. SINGLE SCREW BOATS: When leaving a mooring on your starboard side and your bow cannot be pushed away from the dock first, start forward with wheel to starboard in idle for 2' or 3'. Then shift to reverse with steering full to port. Repeat if necessary to get the stern far enough away from the dock so you can back clear of any other boats that may be moored ahead of you. (Reverse wheel directions when leaving port docking.)

CAUTION: Most anchoring and mooring areas have restricted speeds; as a matter of common boating courtesy, watch your wake.

TIP: Practice docking using a balloon or fender to simulate dock.

4. SINGLE SCREW BOAT: When approaching a mooring area, lower your speed within a reasonable distance to allow your wake to subside before it reaches other boats or docks. As you get close to your moorage check the wind and any tide current action that may effect your maneuver and make a conservative approach with these factors in mind.

When possible, as you approach your mooring it is desirable to have a person on the bow and the stern of the boat with a boat hook and a mooring line attached to a cleat. When approaching on the starboard side, approach at idle r.p.m. in forward at approximately 45 degrees to the dock. When your craft is 1/2 to 1/4 of a boat length away, turn hard to port, and stern will swing into the mooring. Now turn to starboard and at idle r.p.m. put the boat into reverse. This will stop the boat and bring the stern even closer to the dock. At this time, the boat can be put into neutral.

SECTION II

Parts and Systems-Operation and Maintenance

Electrical Systems

Although Bayliner manufactures many different model power boats the electrical systems on all models operate on the same basic theory. The key to a good marine electrical system is the battery. The batteries on Bayliner's 1600 through 1950 are a dealer installed item. Bayliner makes the following recommendations on battery rating:

Models 1600 - through 1950 - Minimum 70 amp/hour rating (outboard).

The 1600 through 1950 - minimum 70 amp/hour rating (4 Cylinder I/O).

Model 1950 - minimum 85 amp/hour rating (6 Cylinder I/O).

On those models 1650 through 1950 the condition of the battery can be read on the volt meter when the ignition is in the "ON" position.

With the engine not running, volt meter readings in the 11.5 to 12.5 volt ranges are considered normal. Readings in the 10 to 11.5 volt range indicate a marginal charge condition. Readings below 10 volts indicate a serious discharge condition.

With the engine running (over 1,500 r.p.m.) volt meter readings of 13 to 14 volts are considered normal. Readings below this indicate a severly discharged battery or a non-functioning charging system.

Battery

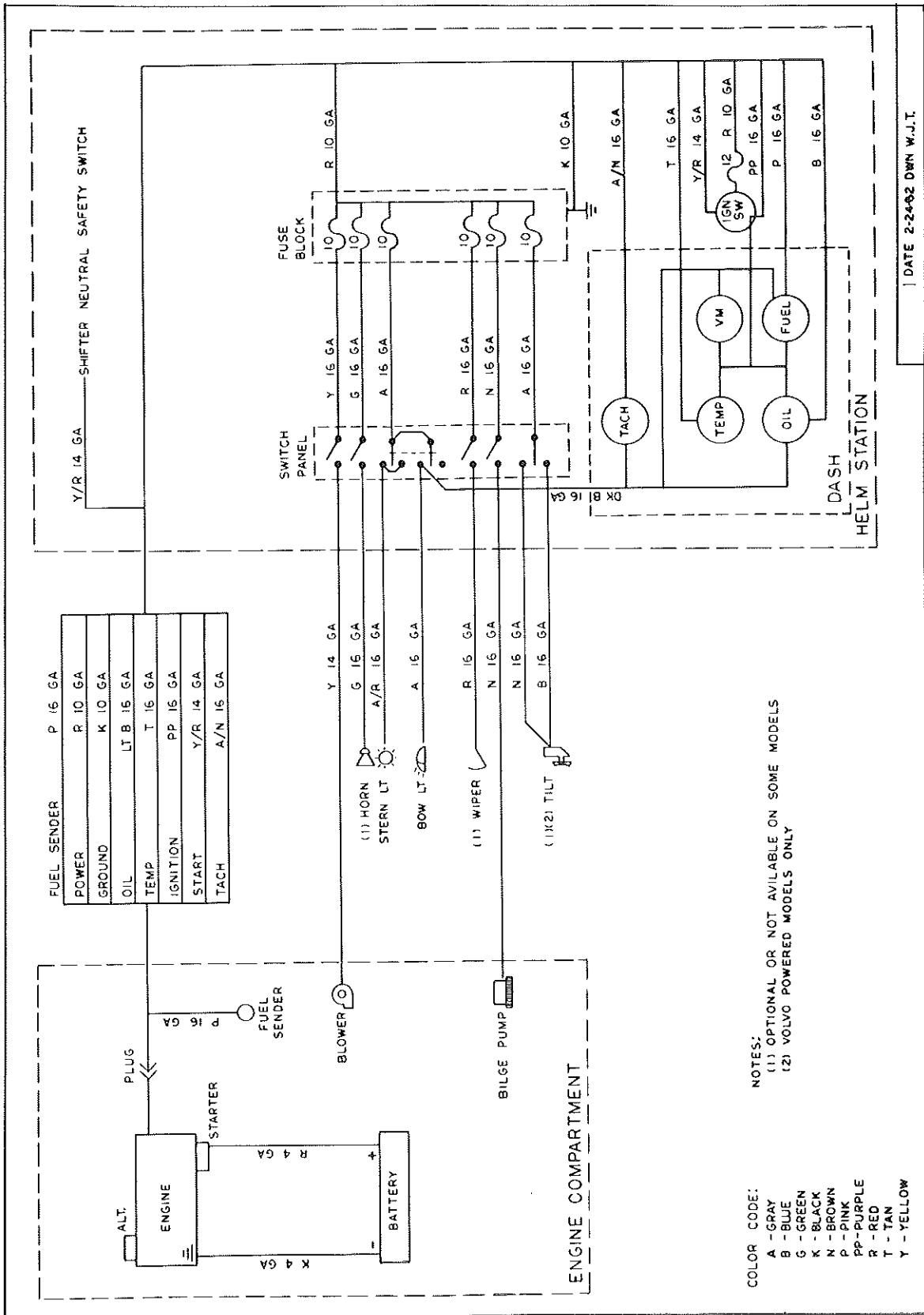
The marine battery has a big job; it supplies you with lights, engine starting power and power to run many accessories. Don't neglect it! Check the water level regularly by removing the caps. If the zinc plates are exposed, add distilled water. Corroded battery terminals can also let you down. Clean them with baking soda and water, and coat them with a 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.

Fuses and Circuit Breakers - 12V

On all inboard/outboard powered models 1650 through 1950 the engine and accessory circuits are protected by a large circuit breaker located on the engine(s): 40 amp (Volvo) - 50 amp (Mercury). In addition, the power trim pump on all Mercruisers are protected by a 40 amp circuit breaker, and the power tilt motors on all Volvo's are protected by a 20 amp fuse (AGU 20).

1600 - 1950 STANDARD EQUIPMENT - Fuse blocks on these models are located behind the instrument panel. The fuses are marked as to which accessory they protect. AGC 10 amp fuses are used on all standard equipment accessories.

SCHEMATIC WIRING DIAGRAM
All Stern Drive Models, 1650 - 1950



Fuel Systems

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. We recommend for your safety and the safety of your passengers that the "Fueling" instruction in Section II of this manual must be followed.

1. 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" or "Gas". Fills are located so that 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.

2. Anti-Siphon Valves:

As required by the U.S. Coast Guard, the fuel systems on all gas powered boats manufactured by Bayliner are equipped with an anti-siphon 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 siphoning 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-siphon valve should be checked. In the event the valve is stuck or clogged it should be cleaned or replaced with engine off. Under no circumstances should it be removed except in an emergency.

3. 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.

Starter Motor

The engine starter motor is different from most 12V electric motors. It is designed to deliver high horsepower for very short intervals only. Avoid operation for more than 30 seconds at one time. Due to its high horsepower this motor builds up considerable heat and can be permanently damaged with prolonged use. If it does not operate, check battery for charge and all direct connections for shorts or loose connections. The starter motor is located very near the bilge of your Bayliner. If bilge water is allowed to accumulate to a depth of more than 6", the starter can be damaged. Automatic bilge pumps are recommended for boats left in open moorage.

Bilge Blower

The bilge blower is designed to draw fumes out of the engine compartment and causes fresh air to circulate into the compartment through the deck vents.

The bilge blower is designed to be used before starting the engine(s), during starting and while boat is operating below cruising speed to insure fresh air circulation. Operate blower for 4 minutes before starting engine.

NOTE: The blower will not prevent explosion. If you smell any fuel, shut off all electrical accessories and engine and investigate immediately.

Bilge Pump

The electric bilge pump supplied with your Bayliner is of an impeller type. If you see water and the pump motor is running but not pumping, check to see that it is not clogged by debris. If it still does not pump, check the discharge hose for kinks or a collapsed area.

NOTE: The federal water pollution control act prohibits the discharge of oil or oil waste into or upon the navigable waters and contiguous zone of the United States if such discharge causes a film or sheen upon, or discoloration of, the surface of the water, or causes a sludge or emulsion beneath the surface of the water. Violators are subject to penalty of \$5000.

Running Lights

The night lights or navigation lights supplied with your Bayliner are of top quality. However, failure may occur for several reasons:

1. You may have blown a fuse. (Replace fuse in switch panel.)
2. The bulb may be burned out. (Carry spare bulbs for replacement.)

3. The bulb base may be corroded. (Clean periodically as required and coat with non-conductive grease or vaseline.)

4. A wire may be loose due to vibration or mis-stowed gear. (Repair where break occurred.) **NOTE: Prolonged operation of cabin interior lights (overnight) will result in a dead battery. Be conservative in the use of battery power.**

Transom Platforms: Loading Limits

Weight not to exceed 250 pounds.
Auxiliary engine not to exceed 7 1/2 horsepower.
Periodically check for looseness and corrosion.

SECTION III

Underway Operating Instructions

While under power, check instruments frequently. They are the advance warning system that will enable you to avoid troublesome malfunctions.

Instruments

Tachometer - All tachometers are of the electric type, indicating engine revolutions per minute (r.p.m.) in 100's. Refer to engine manual for cruising and maximum limits.

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 off and diagnose the problem. A common cause of overheating is picking up a foreign object in the seawater intake. Usually, raising and lowering your outdrive will free it.

Oil Pressure Gauge - The oil pressure gauge indicates pressure by monitoring a signal from a sending unit. When gauge reads in the danger area, shut the engine off and diagnose the problem.

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 good to keep track of your running time as a double check against an inaccurate gauge.

Boat Performance

Boat speeds are affected by a great many factors. Some such as temperature and altitude, you can't do anything about. You can affect other factors. They are:

1. **Loading:** Take with you only the necessary equipment. As you add weight to your boat it slows down. Keep weight low in the boat and evenly distributed.

2. **Propeller:** Keep it in good repair and the correct pitch for your particular situation. The factory standard equipment propeller may not be the best one for your particular boat and load conditions. The engine should be able to come up to it's rated r.p.m. on a normally loaded boat. If the engine r.p.m. at full throttle is less than the maximum rated, try a prop of less pitch. If the engine r.p.m. exceeds the maximum rated, try a prop of greater pitch.

A slightly bent or nicked propeller will adversely affect the performance of your boat.

3. Weeds, barnacles and other growth: Keep your boat bottom clean. When your boat starts "growing grass" it will slow down greatly, even to the point it will not plane. Anti-fouling paint that does not contain mercury or copper is recommended. Base materials, such as copper, will accelerate electrolysis and possibly damage under water gear.

Marine growth varies from one area to another so it's best to consult your dealer for the best bottom paint for your particular area.

Boat Running Attitude

1. If your boat runs with it's bow too high at cruising speeds, the following suggestions will help you lower the bow:
 - a. Move weight forward in the boat.
 - b. Install trim tabs (optional equipment).
 - c. Adjust thrust angle of engine.
 1. Volvo I/O or outboard motors: move tilt pin in transom plate to the closest hole to the boat.
 2. Mercruiser: run trim "down" or "in" position.
- If your boat runs with it's bow too low at cruising speeds (usually indicated by water coming off the hull way forward and the boat being difficult to steer-veering off), you can raise the bow by:
- Moving weight aft.
 - Not using tabs.
 - Adjusting engine thrust angle.
 1. Volvo I/O or outboard motors: move tilt pin out away from the transom, one hole at a time.
 2. Mercruiser: run power trim "out" with small adjustments.

Trim Tabs (optional)

Trim tabs are intended for corrections to boat trim on the port and starboard axis with very minor changes in pitch or fore-and-aft attitude. For major corrections, redistribute loads.

1. If tab position is unknown, when idling away from the dock, put your tabs in the full bow-up position.
2. After power is applied and boat is at cruising r.p.m., push appropriate tab button to level the boat on lateral axis. Several short touches of the tab button are recommended. Allow the boat to react to the new position of the trim tab after each touch.

When installed under manufacturer's recommendation, the port button on the trim tab switch operates the starboard trim tab and vice versa.

3. Both tabs can be lowered slightly to lower bow. Forcing the bow down with tabs will cause steering difficulty and a loss of efficiency.

4. When running in a following sea, run tabs in full bow-up position.

WARNING: EXCESSIVE USE OF TRIM TABS WILL CAUSE A LOSS OF CONTROL. DO NOT USE TRIM TABS IN A FOLLOWING SEA AS THEY MAY CAUSE BROACHING OR OTHER UNSAFE HANDLING CHARACTERISTICS. DO NOT ALLOW THOSE UNFAMILIAR WITH TRIM TABS TO OPERATE THEM.

Steering Wheel Pressure

All stern drives can be adjusted so there is little or minimal pull on the wheel at one given speed or trim angle. We suggest your normal cruising speed. This is done by turning the trim tab on the lower unit in the direction the wheel is pulling. Small adjustments should be made until the steering has neutral torque at the speed you desire. When running faster or slower than this speed, a minimal amount of torque will be present.

Static Float Attitude

The static attitude of your boat can be affected by many variables. Optional equipment and loading of gear are the biggest contributors to a boat's listing. After launching, any new boat can be adjusted. If your boat lists to one side, store heavy items on the light side and light items on the heavy side.

Batteries have a big effect on static float attitude of a boat. Move batteries to the light side if required.

Boats should have a slight list on the side the propeller is turning towards. This is to compensate for propeller torque when cruising.

Tips for Boat Owners

1. When commissioning a new boat, do not plan an extensive trip or party until you have a shakedown cruise to make sure all equipment on your boat is functioning properly and you are familiar with it's operation.

2. Use big bumpers as they will best protect your boat from floats, piers and other boats.
3. Carry adequate line properly sized to your boat. A minimum of two 30' lengths of 3/8" nylon line should be on board models 1600 through 1950.
4. Stow an adequate anchor or anchors.
5. Install all US Coast Guard Safety Equipment.
6. Be courteous to other boats. Slow down in congested areas and watch that your wake does not damage other boats.

Boating Safety Courses

Your local Coast Guard Auxiliary or Power Squadron generally puts on a Safe Boating Class several times a year. They are very comprehensive and generally of minimal cost to you. Call your local US Coast Guard Auxiliary or Power Squadron Flotilla for the time and place of the next class.

SECTION IV

General Maintenance and Repairs

Fiberglass Staining and Discoloration

These problems can generally be removed by many of the fine fiberglass cleansers available. However, they take elbow grease. For best results follow the manufacturer's recommendations. If the marine products are not available in your area, try the new liquid household cleaners such as 409, Ajax Liquid, Fantastik or others. **CAUTION: Household cleaners with abrasives will dull the finish on your boat. If this occurs, wax and buff area to restore the luster.**

Hardware Cleaning

Use nearly any of the metal 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 will discolor.

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.

Vinyl Flooring

Use one of the liquid cleaners mentioned previously and a scrub brush. Rinse thoroughly to avoid slickness when wet.

Structafoam Transom Platforms and Steps

These clean well with a spot remover made for rugs and carpets.

Teak

To keep teak looking fresh, it should be treated with teak oil at least twice a year (more often if exposure is severe). If the teak is in particularly bad condition, the teak oil should be rubbed in using 220 grit wet and dry sand paper.

Repairing Fiberglass, Gelcoat Chips, Gouges and Scratches

Almost unavoidable during the life of your boat is damage to the gelcoat or colored surface. This is not as serious as you might think. Repair is not costly and can be done by the novice.

1. Scratches: If the scratch does not penetrate the gelcoat surface, use automotive rubbing compounds. Dampen a soft rag or use a power buffer. Apply rubbing compound with plenty of elbow grease. The scratch may not disappear completely, however, its noticeability will decrease.

2. Gouges and Chips: To repair, simply obtain "Patch Paste" from your Bayliner dealer and follow this recommended procedure:

- a) Clean area to be repaired of wax and oil. Acetone is a good solvent.
- b) Use as small portion of patch paste on a piece of cardboard, mix thoroughly with the catalyst (two or three drops of catalyst to a tablespoon of paste).
- c) Apply to pit, chip or gouge with a single edge razor blade to match the surface and the contour of the area being repaired. It's better to have an excess than not enough of the paste.
- d) Allow to harden thoroughly. In most climates, one to two hours should be sufficient.

e) Shape the patch to desired thickness, using fine wet sandpaper on a sanding block.

f) Finish using automotive rubbing compound in the same manner as for scratches.

CAUTION: Teak oil, acetone and catalyst are hazardous materials and should be used only in well ventilated areas. Follow manufacturer's instructions only.

Saltwater Special Care

If permanently moored in saltwater your boat will collect barnacles and grass on its bottom. This will detract from the boat's beauty and greatly affect its performance. There are two methods of preventing this:

1. Periodic haulout and cleaning (about every 30 to 45 days). Use soap and water and a lot of elbow grease.

2. **IMPORTANT: Bayliner advises that any boat moored in fresh or salt water be painted with a good grade of antifouling bottom paint below the water line. Bayliner recommends International Paint Company's "Tri-Lux" bottom paint. Bottom paint is a dealer installed option. It is best and least expensive to have antifouling paint added prior to first launching.**

Underwater Corrosion

Stray current corrosion or electrolysis can best be compared to electroplating of chromium or brass, with the salt water acting as the electrolyte and the battery acting as the source of direct current.

Electrolysis can be prevented in several ways. The following are the most common causes and the simplest cures for the problem:

1. Keep a clean dry bilge. Wiring may leak a certain amount of electricity.

2. A poorly grounded zinc anode: Check ground wire, clean contact surfaces.

3. The zinc anode may be deteriorated beyond effectiveness: Replace at usually 50% loss.

4. Don't use a copper based bottom paint as it can cause electrolysis on some metal parts. If your boat is permanently moored we recommend you contact someone in your area specializing in corrosion control and have them check your boat in its moorage to see that its properly protected.

Cabin Windows

Salt and brackish water are capable of etching and damaging glass. Keeping windows clean is the best preventive measure you may take. When cleaning, flush with plenty of fresh water.

Window Leakage

Cabin window leakage is uncommon, but should it occur it is simple to remedy.

1. Mark the leak using a crayon or other nonpermanent marking.
2. Dry thoroughly. Sealer will not bond if moisture is present so you may have to wait for a dry day.
3. Coat area with silicone type rubber sealant.
4. Allow sealant to dry well, then check by sprinkling with a hose. (Cabin window or windshield leakage is not covered under the Bayliner warranty.)

Convertible Tops and Back Covers

Convertible tops can be cleaned using a regular vinyl cleaner. Vinyl cleaners may be obtained in grocery stores or auto parts houses. To prevent rainwater seepage at the canvas seams, a coating of Scotch Guard can be applied to the seams on the inside of the vinyl. Mildew can occur if your boat does not have adequate ventilation. Heat alone won't prevent mildew. If mildew does occur, it can be removed using a solution of hot water and Clorox (one cup of Clorox to one gallon of hot water). Brush into affected area, let set for 10 to 15 minutes and rinse with fresh water. If at all possible, the vinyl top parts of your boat should be stored indoors in a fairly warm, dry place. This will greatly extend the life of the material.

Instruments - Care and Service

Your marine instruments have been designed and constructed of the best possible materials and with proper care will give you years of trouble free operation.

When using your instruments in a salt water environment, salt crystals may form on the bezel and the plastic dial. These salt crystals should be removed with a soft damp cloth; never use abrasives or rough dirty cloths to wipe plastic parts. Mild household detergents or plastic cleaners can be used to keep the instruments bright and clean.

SECTION V

Winterizing

If your boating season has ended or cold weather is setting in follow these suggestions.

1. Drain the engine block and manifolds. Frozen water expands and can crack your engine. Consult your engine owner's manual for location of drains. There can be drains on the block and the manifold.

2. Consult operating instructions provided with your head (toilet) for winterizing. Drain self-contained heads.

Drain water tanks to avoid freezing and insure fresh taste in the spring. Be sure to drain accumulated water in the pump to avoid damage due to freezing. This is best accomplished by running the pump until empty.

On those boats equipped with hot water tanks, remove the drain plug on the tank after all the water has been pumped out of the regular water tank.

3. Fuel tanks should be kept completely full so there is little air space to allow condensation, a major cause of sludge and gum that eventually creates problems.

4. Remove the marine battery from the boat. Fill the cells to proper level and store in a warm place. **DO NOT STORE ON A CEMENT FLOOR.** A fully charged battery will survive storage better.

5. Lubricate control and steering push-pull cables.

6. Clean the boat thoroughly. Coat deck hardware and other surfaces with a metallic rust inhibitor.

7. Your boat should be stored under cover if possible. If covered storage isn't available then a temporary winter cover is recommended. A proper winter cover should keep the weather off the boat, but still provide adequate ventilation. Wrapping a boat up in a tight plastic cover can do more damage than good. Dampness and lack of air circulation provide ideal conditions for the fungi that cause mildew and dry rot.

8. Bunk and dinette cushions may be left on board, however, they should be stored on edge with plenty of ventilation.

9. If storing on a trailer:

- a. Now is a good time to repack wheel bearings. Your local auto service center can help you.
- b. Block the trailer wheels off the ground to avoid tire deterioration.
- c. Loosen stern tiedowns to avoid stress on hull.
- d. Touch up trailer paint.

We hope the preventive measures will help make a spring get-ready less work. However, don't forget to consult your dealer as well as the engine owner's manual for engine winterizing requirements

NOTE: Bayliner cannot sell accessories or other items directly to the public due to production commitments and dealer franchising. Our dealers normally stock many of our accessories or can supply them to you in a short time.

Your dealer will be happy to help you in any way possible.

SECTION VI

Propeller Recommendations

Variances in operating altitudes (highland vs. sea level) and loads can affect performance. Changing to a propeller of a different size and pitch can often compensate for the effects of increased load or altitude, and insure peak performance.

The following propeller chart lists a recommended propeller for some model and engine combinations. These recommendations are based on operation at sea level with two persons and a light load in all models 1650 through 1950.

Generally, for every 2500 feet above sea level it is advisable to decrease propeller pitch two inches from the recommendations listed.

PERFORMANCE SPECIFICATIONS

Model/ Engine	Prop/ Rotation	Max RPM	Max Cruise RPM	Volvo Pinhole
1650 Capri Bowrider 125V	14x19-R	4400-4800	4300-4500	2
1950 Capri 1950 Capri Bowrider 1950 Capri Cuddy				
125V	14x19-R	4400-4800	4300-4500	2
120M	14x19-R	4400-4800	4300-4500	2
170M	21 A4-R	3800-4200	3400-3600	P/T
175V	14X17-R(CUP)	4600-4800	3600-3800	2

SECTION VII

Recommendations for Safety

1. Fuel vapors are explosive and, being heavier than air, will settle in the lower parts of a boat. While fueling, all doors, hatches and ports should be closed, smoking strictly prohibited and the filling nozzle kept in contact with the fill pipe to prevent static spark. Avoid spilling. Do not fill gasoline stoves, heaters, or lights on board. Whenever possible, portable tanks should be filled out of the boat.

2. After fueling, thoroughly ventilate all compartments and check the machinery and fuel tank areas for fumes before attempting to start the engine. Remember that the electrical ignition and starting system could supply the ignition to any accumulation of explosive vapors. Take time to be safe. Keep all lines tight and bilges clean.

3. Do not overload or improperly load your boat. Maintain adequate freeboard at all times: Consider the sea conditions, the duration of the trip, the weather and the experience of the operator. Do not permit persons to ride on parts of the boat that were not designed for such use. Bow riding and seat back or gunwale riding can be especially hazardous.

4. Keep an alert lookout. Serious accidents have resulted from failure in this respect.

5. Be especially careful when operating in any area where swimmers might be. They are often difficult to see.

6. Watch your wake. It might capsize a small craft. You are responsible and it can damage boats and property along the shore. Pass through anchorages only at a minimum speed.

7. Keep firefighting and lifesaving equipment in good condition and readily available at all times.

8. Obey the rules of the road. Neglect of this is the greatest cause of collision.

9. Always have children wear lifesaving devices. Always check those intended for young children for fit and performance in the water on each individual. Never hesitate to have "all hands" wear lifesaving devices whenever circumstances cause the slightest doubt about safety.

PERSONAL FLOTATION DEVICES: Requirements - One Coast Guard approved personal flotation device (PFD) of suitable size for each person aboard recreational boats, including sailboats, rowboats,

kayaks and canoes. New PFD's bearing Coast Guard approval are now identified by "Types I,II, III, or IV."

MANDATORY EQUIPMENT

1. Boats sixteen feet (16') or over in length: One Type I,II, or III (wearable) for each person on board and one (1) type IV (throwable) in each boat.

2. Boats less than sixteen feet (16') in length and all canoes and kayaks: One (1) Type I,II,III or IV PFD for each person on board.

Type I is an approved device designed to turn an unconscious person in the water from a face downward position to a vertical or slightly backward position, and to have more than 20 pounds of buoyancy. Recommended for offshore cruising. Acceptable for all size boats.

Type II PFD is an approved device designed to turn an unconscious person in the water from a face downward position to a vertical or slightly backward position and to have at least 15.5 pounds of buoyancy. Recommended for closer, inshore cruising. Acceptable for all size boats.

Type III PFD is an approved device designed to keep a conscious person in a vertical or slightly backward position and to have at least 15.5 pounds of buoyancy. While having the same buoyancy as Type II, the Type III has a lesser turning ability to allow for a comfortable design for water activities such as water skiing. Recommended for in water sports, or on lakes, impoundments, and close inshore operation. Acceptable for all size boats.

Type IV PFD is an approved device designed to be thrown to a person in the water and not worn. It is designed to have at least 16.5 pounds of buoyancy. Acceptable for boats less than 16 feet and canoes and kayaks as a throwable device for boats 16 feet and over in length.

3. Know your fuel tank capacity and cruising range. If it is necessary to carry additional gasoline do so only in proper containers and take special precautions to prevent the accumulation of such vapor in confined spaces.

4. If you ever capsize, remember that if the boat continues to float it is usually best to remain with it. You are more easily located by a search plane or boat.

CAUTION: Some Bayliner trailerable boats contain flotation material, however, no boat is unsinkable. Therefore, personal flotation devices should be carried for each passenger in accordance with US Coast Guard requirements.

5. Good housekeeping is even more important afloat than ashore. Cleanliness diminishes the probability of fire.

6. Know the meaning of the buoys. Never moor to one, it is a Federal offense.

7. Consider what action you would take under various emergency conditions such as man overboard, fog, fire, a stove-in hull or other bad leaks, motor breakdown, bad storm or collision.

8. Have an adequate anchor and sufficient line to assure good holding in a blow (at least six times depth of water).

9. Boat hooks are not required equipment but they are valuable when mooring or when needed to retrieve pets, preservers (and people) over the side.

10. Know the various distress signals. A recognized distress signal used on small boats is to slowly and repeatedly raise and lower the arms out stretched to each side.

11. Storm signals are for your information and safety. Learn them and be guided accordingly.

12. Falls are the greatest cause of injury both afloat and ashore. Eliminate tripping hazards where possible, make conspicuous those that must remain, have adequate grab rails and require proper footwear to be used on board.

13. Always have an up-to-date chart, or charts of your area on board.

14. Always instruct at least one person on board in the rudiments of boat handling in case you are disabled or fall overboard.

15. Keep electrical equipment and wiring in good condition. No knife switches or other arcing devices should be in fuel compartments. Allow ample ventilation around batteries.

16. Before departing on a boat trip, you should advise a responsible friend or relative about where you intend to cruise. Be sure that the person has a good description of your boat. Keep him advised of any changes in your cruise plans. By doing these things, your friend or relative will be able to tell the Coast Guard where to search for you and what type of boat to look for if you fail to return. Be sure to advise the same person when you arrive so to prevent any false alarms about your safety.

17. Do not test fire extinguishers by squirting small amounts of the agent. The extinguisher might not work when needed. Always follow approved instructions in checking fire extinguishers.

18. A special flag hoist (red flag with white diagonal) flown from boat or buoy means skin diving operations. Approach with caution and stay clear at least 25 yards.

19. Your local US Coast Guard Auxiliary/Power Squadron generally puts on a Safe Boating Class several times a year. They are very comprehensive and generally of minimal cost to you. Call your local US Coast Guard Auxiliary or Power Squadron Flotilla for the time and place of the next class.

SECTION VIII

Nautical Terms

ABEAM: Either side of the boat.
AFT: To the rear or near the stern.
BEAM: The width of the hull.
BILGE: The lowest portion inside a boat (in a fiberglass boat, generally the underdeck and lower portion of the engine compartment).
BOW: The forward portion of the boat.
CHINE: The intersection of the sides and bottom of a V-bottom boat.
DRAFT: Vertical distance from the waterline of boat to the lowest point of the boat.
FATHOM: A measurement of 6 feet generally used to measure water depth.
FREEBOARD: Vertical distance from deck to waterline.
GUNWALE: Where hull and deck meet.
HATCH: A covered opening in the deck.
HEAD: Toilet or toilet room.
HELM: Steering wheel.
KEEL: The lowest external portion of the boat.
KNOT: Nautical mile per hour; nautical mile is 6,076 ft.; land mile is 5,280 ft.
LEE: Opposite from which the wind blows.
MAYDAY: International spoken distress signal for radiotelephone.
PORT: To the left side of the boat.
PORTLIGHT: A hinged window in the boat's cabin.
SCUPPER: An opening in a deck or cockpit permitting water to drain overboard.
STANCHION: A fixed, upright post used for support (of rails).
STARBOARD: To the right or right side of the boat.
STERN: To the rear of the boat.
STERNDRIVE: Inboard/outboard unit.
STRAKE: One line of planks from bow to stern.
TRANSOM: The vertical part of the stern.
WAKE: Track or path a boat leaves behind while in motion.
WINDWARD: The direction from which the wind is blowing.

LIMITED WARRANTY FOR BAYLINER BOATS

One Year Limited Warranty

Bayliner warrants to the original purchaser of its 1983 model boats operated under normal, non-commercial use in the U.S. or Canada that the Selling Dealer will repair or replace any parts found to be defective in factory materials or workmanship within one year from date of retail delivery.

WHAT IS NOT COVERED

This warranty does not apply to: (1) Engines, drive trains, controls, props, batteries or other equipment or accessories carrying their own individual warranties; (2) Engines, parts or accessories not installed by Bayliner; (3) Window breakage or leaks; gelcoat finish, blisters, cracks or crazing; (4) Hardware, vinyl tops, vinyl and fabric upholstery, plastic, metal, wood or tape trim; (5) Any Bayliner boat that has been altered, subjected to misuse, negligence or accident, or used for racing purposes; (6) Any Bayliner boat which has been overpowered according to the maximum horsepower specifications on the capacity plate provided on each Bayliner outboard boat; (7) Any Bayliner boat used for commercial purposes; (8) Any defect caused by Failure of the customer to provide reasonable care and maintenance.

OTHER LIMITATIONS:

THERE IS NO OTHER EXPRESS WARRANTY ON THIS BOAT. TO THE EXTENT ALLOWED BY LAW:

1. Any implied warranty or merchantability is limited to the duration of this written warranty.
2. Neither Bayliner nor the selling dealer shall have any responsibility for loss of use of the boat, loss of time, inconvenience, commercial loss or consequential damages.

YOUR OBLIGATION:

We require that you return your boat, at your expense, to your Selling Dealer or, if necessary, to the Bayliner factory. You will be responsible for all transportation, haul-outs and other expenses incurred in returning the boat for warranty service.

Some states do not allow limitations on how long any implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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