BAYLINER

# OWNER'S MANUAL

CIERA TROPHY



## Welcome Aboard

This manual has been prepared to assist you in the operation and care of your Bayliner boat. Although it is somewhat general in scope, familiarization with its contents can contribute to the more effective operation of your boat.

Understanding your new boat and how it works is essential to your boating enjoyment and safety. We recommend that you perform the following steps:

- 1. Make certain that you receive a full explanation of all systems from the dealer before taking delivery of your boat.
- Read this manual thoroughly, paying particular attention to the subjects of fueling, checking for fumes, starting, carbon monoxide, alcohol stoves, loading limits, trim tabs, recommendations for safety, and warranty.
- 3. Practice—all members of the family should be familiar with the operation and systems of your boat.
- 4. Participate in a safe boating course. Call the local office of the United States Power Squadrons or the United States Coast Guard Auxiliary for the date and location of their next class.

There is information in this manual related to the following **Bayliner** boats:

Ciera Models	Trophy Models
2150 Ciera Sunbridge 2450 Ciera Sunbridge 2560 Convertible 2650 Ciera Sunbridge 2850 Ciera Sunbridge 2850 Ciera Command Bridge	2160 Trophy Offshore 2460 Trophy Offshore

Due to our ongoing commitment to product improvement, we reserve the right to change, without notice or other obligation, the specifications or information contained in this publication.

WARNING! A qualified operator should be in control of the boat at all times. Do not operate the boat while under the influence of alcohol or drugs. Never operate the boat at speeds which exceed your ability to react if an emergency develops. At night, turn on the appropriate running lights and cruise at a reduced speed that allows you plenty of time to avoid dangerous situations.

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#### PREPARATION

Prior to leaving on your first outing (or, for that matter, any outing) there are certain items to check and activities to perform. Familiarize yourself with your boat while dockside, and consider the following:

## **Recommendations for Safety**

Personal Flotation Devices:
 One Coast Guard approved personal flotation device (PFD) of
 suitable size is required for each person aboard a recreational boat.
 New PFDs bearing Coast Guard approval are now identified as
 Types I, II, III, or IV.

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

- Always have children wear PFDs. Always check those devices intended for young children for fit and performance in the water. Never hesitate to have "all hands" wear lifesaving devices whenever circumstances cause the slightest doubt about safety.
- 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 personnel on board. Do not permit persons to ride on parts of the boat that were not designed for such use. Sitting up on seat backs, bow riding, gunwale riding, or lounging on forward sundeck cushions while underway can be especially hazardous.
- Falls are the greatest cause of injury both afloat and ashore. Eliminate tripping hazards where possible, make conspicuous those that must remain, and require that all persons on board wear proper footwear.
- 5. Understand the meaning of the buoys, and never moor to one. (It is a Federal offense.)
- Know the various distress signals. A recognized distress signal used on small boats is to slowly and repeatedly raise and lower the arms outstretched to each side.
- 7. Storm signals are for your information and safety. Learn them and be guided accordingly.

- 8. A special flag (red flag with white diagonal stripe) flown from a boat or buoy means skin diving operations. Approach with caution and stay clear by at least 25 yards.
- Be especially careful when operating in any area where there might be swimmers.
- 10. Watch your wake. It might capsize a small craft. You are responsible for damage caused by your wake. Pass through anchorages at a minimum speed.
- 11. Learn and abide by common boating "rules of the road".
- 12. Always have up-to-date charts of your cruising area on board.
- 13. Keep an alert lookout. Serious accidents have resulted from failure in this respect.
- 14. Always instruct at least one person on board in the rudiments of boat handling in case you are disabled or fall overboard.
- 15. Consider what action you would take under various emergency conditions such as a person overboard, fog, fire, a damaged hull or other bad leaks, motor breakdown, severe storm or collision.
- 16. 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.
- 17. Keep firefighting and lifesaving equipment in good condition and readily available at all times.
- 18. Do not test fire extinguishers by squirting small amounts of the agent. The extinguisher might not work when needed. Always follow approved instructions when checking fire extinguishers.
- 19. Have an adequate anchor and sufficient line (at least six times depth of water) to assure a secure hold in all types of weather and sea conditions.
- 20. Boat hooks are valuable when docking or when needed to retrieve objects that have fallen overboard.

- Keep electrical equipment and wiring in good condition. No knife switches or other arcing devices should be installed in fuel compartments. Allow ample ventilation around batteries.
- 22. Good housekeeping in your boat is important. Cleanliness diminishes the probability of fire.
- 23. Know your fuel tank capacity and cruising range. If it is necessary to carry additional fuel, do so only in proper containers. Take special precautions to prevent the accumulation of fuel vapors in confined spaces.
- 24. Before departing on a boat trip, advise a responsible friend or relative about where you intend to cruise. Be sure to give that person a good description of your boat. Keep them advised of any changes in your cruise plans. These precautions will enable your friend or relative 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 complete your trip to prevent any false alarms about your safety.
- 25. Your local U.S. Coast Guard Auxiliary and the United States Power Squadrons offer safe boating classes several times a year. These are comprehensive and generally of minimal cost to you. Call your local U.S. Coast Guard Auxiliary or Power Squadron Flotilla for the time and place of the next class.

## Safety Equipment

The following safety related items should be considered as part of your standard equipment:

- 1. Fire extinguishers (located for easy access)
- 2. Personal flotation devices
- 3. Fenders, lines and boat hook
- 4. Flares (night and day type)
- 5. Flashlight
- 6. Charts of intended cruising area
- 7. First aid kit

## **Tool Chest**

- 1. Assorted screwdrivers (Phillips and flat blade)
- 2. Pliers (regular, vise-grip, and water pump)
- 3. Wrenches (box, open-end, allen, and adjustable)
- 4. Socket set (metric and U.S. standard)
- 5. Hacksaw with spare blades
- 6. Hammer
- 7. Battery jumper cables
- 8. Electrical tape
- 9. Assorted fasteners
- 10. Gear grease and penetrating oil
- 11. Feeler gauges

#### Miscellaneous Items

- 1. Engine and accessories manual
- 2. Propeller with fastening devices
- 3. V-belts
- 4. Engine lubricating oil
- 5. Fuel and oil filters
- 6. Cooling pump impellers
- 7. Fuel can
- 8. Light bulbs
- 9. Spare set of spark plugs and other ignition parts

## **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 list. After launching, the floating attitude of 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.

## Other Tips

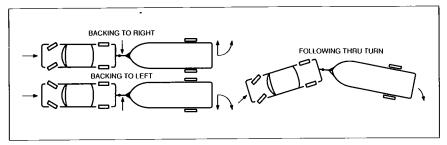
- When commissioning a new boat, do not plan an extensive trip or party until you have a shakedown cruise to make sure all equipment on your boat is functioning properly and you are familiar with its operation.
- 2. Use big fenders or fender boards to protect your boat's hull whenever mooring next to floats, piers, or other boats.
- 3. Carry adequate line properly sized to your boat. We suggest at least three 30' lengths of 5/8" nylon line.

#### **TRAILERING**

If you intend to transport your boat using a trailer, consider the following:

- 1. Before using your trailer, read the trailer owner's manual thoroughly.
- Purchase a trailer with the proper capacity rating. A trailer that is designed to carry more weight will ride too roughly and can damage your boat. Too little trailer capacity will be unsafe.
- 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.
- Check brakes for proper operation prior to departure on each trip. (Consult your state laws for trailer brake requirements and equip your trailer accordingly.)
- 5. Check tires for proper inflation. Underinflated tires heat up rapidly and tire damage is likely to occur.
- 6. Wheel bearings should be checked at least every 90 days and before putting your boat away for the season.
- Make it a habit to check the wheel hubs every time you stop for gas
  or refreshments. If the hub feels abnormally hot, the bearings should
  be inspected before continuing. Frequently check wheel lug nuts for
  security.

- 8. On extended trips, carry spare wheel bearings, seals and races.
- Check to be sure the taillights and turn signals work when attached to the towing vehicle. Some automobiles require heavy duty flasher units to make turn signals work properly.
- 10. Check springs and undercarriage for loose parts.
- 11. Your boat should be fastened to the trailer by a line from the bow eye to the winch, PLUS a safety chain or cable from the bow eye to the winch stand or trailer tongue. The stern of your boat should be tied down to the trailer from the stern eyes.
- 12. 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.
- 13. Close and secure all cabin windows and doors. Store equipment so that it cannot slide or fall.
- 14. Before towing, take down the convertible top, side curtains and back cover. Convertible tops are not designed to stay on boats at highway speeds.
- 15. Carry a spare wheel and tire, including tools needed to change them.
- 16. Before backing your trailer into water, disconnect the light plug from the car. This will greatly reduce the chance of blowing out your trailer lights when they become submerged.



## PRACTICE—PRACTICE—PRACTICE

Before attempting that first launch, tow your boat to a nearby empty parking lot and practice backing. When backing, be sure to have a lookout to help direct you.

Make sure your outdrive unit is raised to clear obstacles.

If not already so equipped, consider installing a right side mirror on your tow vehicle.

When rounding sharp turns, remember to swing wide to avoid cutting the corner with the trailer.

#### **OPERATING**

## **Fueling Procedures**

WARNING! Fuel vapors are explosive and can become trapped in the lower portions of a boat. While fueling, all doors, hatches, and portlights must be closed.

WARNING! Do not use fuels that incorporate any form of alcohol or alcohol derivatives. Alcohol destroys marine fuel system hoses and components, which could lead to hazardous leaks, fire or explosion.

- 1. If on the water, be sure that your boat is securely moored to the dock.
- 2. Turn off all equipment, including engines, appliances, bilge blower, lights, etc.
- 3. Extinguish all cigarettes, cigars or other items that may produce a spark or flame.
- 4. Close all openings including hatches, windows, doors, and portlights.
- 5. Through-deck fittings are provided for fuel tank filling. Remove the cap and insert fuel supply nozzle, allowing the nozzle to maintain contact with the fitting—thereby preventing possible static sparking.
- 6. After about 10 gallons have been pumped into the tank, inspect the engine and tank area for signs of fuel leakage. Proceed with fueling if no problem is detected.
- 7. Allow for thermal expansion on very hot days. 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. Replace the fill cap and wash off any fuel spillage.

- 10. Open engine compartment and windows, doors, etc., and inspect, visually and by smell, for fuel fumes or leakage. Any sign of fuel leakage, or any indication of fumes must be investigated and corrected prior to starting engine.
- Operate the bilge blower for at least four minutes prior to starting the engine. Leave the blower on until underway and up to cruising speed.

Fuel Capacity Table			
Ciera Models	Fuel Capacity (Gallons		
2150 Ciera Sunbridge	55		
2450 Ciera Sunbridge	55		
2550 Ciera Convertible	105		
2650 Ciera Sunbridge	105		
2850 Ciera Sunbridge	120		
2850 Ciera Command Bridge	120		
Trophy Models	Fuel Capacity (Gallons		
2160 Trophy Offshore	65		
2460 Trophy Offshore	92		

## Launching

Your Bayliner powerboat is equipped with a transom drain plug.
 Make sure this plug is tightly in place.

WARNING! Failure to install the drain plug securely will result in the boat filling with water when it is launched.

- 2. Inspect the bottom of your new Bayliner and mentally note the locations of all fittings below the waterline.
- After the boat has been lowered into the water, immediately board it and inspect the lower compartments and around the through-hull fittings for signs of leakage.
- 4. If any leaks are noted, the boat should be removed from the water. The selling dealer should be notified so the leaks may be repaired before relaunching the boat.

## **Starting**

The engine operating and maintenance manual furnished with your boat describes prestart and starting procedures. The following notes are basic reminders, and not intended to cover every detail of starting. We urge you to thoroughly read and understand your engine manual.

- 1. Check lubricating and cooling fluid levels.
- 2. Visually check for fuel, oil, coolant, and exhaust leaks.
- 3. Make sure the emergency engine shutdown switch cap is in place and the lanyard is attached to the operator.

WARNING! A serious accident may occur if the emergency engine shutoff switch lanyard is not fastened to the boat operator. In order for the emergency engine shutdown system to operate correctly, the lanyard must be physically attached to the operator (around the wrist or <u>securely</u> fastened to a stout piece of clothing, such as a belt, etc.).

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.

- 4. Advance lever to maximum throttle position two to three times (with shift mechanism disengaged on single lever control) and return it to 1/4 throttle position.
- 5. Turn key to start position. Note: engine will not turn over unless gear selector is in neutral.
- Do not continuously operate the starter for more than 15 seconds at a time. Allow at least three minutes for cooling between start attempts.
- If engine fails to start, wait one minute and try again with the one difference being to advance the throttle handle only once to maximum position.
- 8. As soon as the engine starts, set the engine speed at 1200 rpm (2000 rpm for 4-cylinder engines) and check the oil pressure. Oil

pressure will vary from one engine to another, but it should come up immediately. If it doesn't, shut off the engine.

- With the engine running, the voltmeter should indicate a reading between 12-14 volts.
- 10. Check steering operation by turning the steering wheel full port and starboard while observing the outboard or outdrive movement.
- 11. While the boat is still securely moored to the dock and engine is idling at 600-800 rpm, advance the shift control to forward, to reverse, and into neutral to check shifting operation.

WARNING! Carbon monoxide is a poisonous gas that is colorless, odorless, and heavier than air. 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.

#### **Before You Leave**

Provided you haven't encountered any problems, you are almost ready to go. (If you did encounter problems, **do not** attempt to operate your boat until they are corrected.) Before you leave, perform the following steps:

- 1. Instruct passengers in the use and location of flotation devices and fire extinguishers.
- 2. Obtain a reliable weather forecast and plan accordingly for comfort and safety.
- Notify a responsible friend, relative, marine operator, or the Coast Guard of your cruise plans. Upon your return or a change in your cruise schedule, notify that person in order to avoid unnecessary concern.
- 4. Check the operation of equipment such as bilge pumps, running lights, wipers, etc.
- 5. Fill potable water tanks.
- 6. Make sure your self-contained head has fresh chemical solution.

## Maneuvering

With all your predeparture checks now completed, you are ready to leave the dock.

## Basic Maneuvering

Remember that all boats steer by the stern (the feeling is much like steering your automobile in reverse). For example, when you turn the steering wheel to the left, the stern of the boat will swing to the right as the boat goes into a left turn. This is especially important to keep in mind when docking and operating in close quarters with other boats.

There are no brakes on a boat. Stopping is accomplished by allowing the boat to slow down (under 5 mph) and then putting the engine in reverse. Gently increasing reverse power will allow you to stop the boat in a very short distance. A boat does not respond to steering in reverse nearly as well as it does when going forward, so do not expect to accomplish tight turning maneuvers when backing up.

If your boat has twin propellers, you can engage one engine in forward gear and the other in reverse gear to turn the boat completely around in its own length if the rudder is left in the center position. You can make such a turn in either direction. Port engine forward and starboard engine in reverse spins you clockwise. Starboard engine forward and port engine in reverse spins you counterclockwise. You can accentuate the spin with full rudder in the spin's direction.

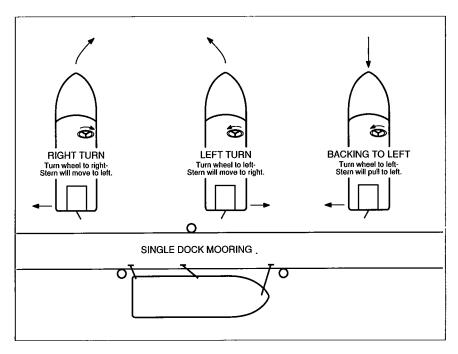
Once you are away from the dock, devote some time to learning how to maneuver.

- · Practice docking by using an imaginary dock.
- · Practice stopping.
- When operating in close quarters or docking, all maneuvering should be done at idle speed. Proceed with caution in congested areas.
- Gradually increase your speed. Get used to the boat before any full throttle operation.

## **Docking**

## Preparation:

Proper docking requires 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.



#### Approaching the Dock:

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 for any wind or current action that may affect your maneuver; then make a conservative approach with these factors in mind. Try to use the elements to your advantage. Allow them to carry the boat into the 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.

As you approach your moorage, it is desirable to have one person at the bow and one at the stern of the boat, each with a boat hook and a mooring line attached to a cleat. Approach at idle RPM at an angle approximately 45 degrees to the dock. When the bow is within a few feet of the dock (starboard side) the stern can be brought alongside the moorage by turning hard to port. Next, turn to starboard and at idle RPM put the boat into reverse. This will stop the boat and bring the stern even closer to the dock. These steps are reversed for docking to port.

#### Mooring:

Attach lines to deck cleats by making a loop in one end that is large enough to pass through the hole in the base of cleat; then pass the loop back over the entire cleat. The line can now 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 deck gear or props. In heavy sea conditions, all lines should be removed from decks.

TIP: Tie up by running the line from the boat around the dock cleat and back to the 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.

WARNING! Whenever you are towing another boat, or having your boat towed, make sure the towline is fastened securely to the bow or transom towing eyes only. Never attach a towline to deck cleats or the anchor windlass (if so equipped), as serious injury may result if the cleats or windlass pull free from the deck. Also, to reduce the danger created by a potential failure of the towline, all persons should stay well clear of the towline attachment points on both the towing and the towed boats.

#### Leaving the Dock:

Take into account wind, tide, current and other forces that affect your maneuvering as you leave the dock. Most maneuvering to and from a dock is best accomplished at idle speeds.

Do not forget to release mooring lines and stow fenders.

When leaving a moorage on your starboard side and your bow cannot be pushed away from the dock first, start forward with the steering wheel turned to starboard for two or three feet. 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 steering wheel directions when leaving a dock located to port.)

## **Boat Performance**

Boat speeds are affected by a great many factors. Some, such as temperature and altitude, you cannot change but some factors you can:

- Loading: Take only necessary equipment with you. Keep weight low in the boat and balanced.
- 2. Propeller(s): Keep them in good repair and at the correct pitch for your particular situation. The factory standard equipment

propeller(s) may not be the best for your particular boat and load conditions. If the engine RPM at full throttle is less than its maximum rating, try a prop of less pitch. If the engine RPM exceeds the maximum rating, 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.

## **Boat Running Attitude**

- 1. If your boat runs with its bow too high at cruising speeds, the following suggestions will help you lower the bow:
  - · Move weight forward in the boat.
  - · Adjust trim tabs. (See Trim Tab section below.)
  - Adjust thrust angle of engine (reduce distance between bottom of transom and drive unit). See your engine owner's manual for instructions.
- If your boat runs with its bow too low at cruising speeds (usually indicated by water coming off the hull far forward and steering difficulty or veering off course), you can raise the bow by performing the opposite of above.

## **Trim Tabs**

Trim tabs are intended for corrections to boat trim on the port and starboard axis; however, they may also create very minor changes in pitch (fore-and-aft) attitude. For major corrections, redistribute loads.

- 1. If tab position is unknown, put both tabs in the full bow-up position.
- After power is applied and boat is cruising, push appropriate tab button to level the boat from side-to-side. 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 trim tab switch operates the starboard trim tab and vice versa.
- 3. Both tabs can be lowered slightly to lower the bow. However, forcing the bow down too far 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! Improper use of trim tabs can 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 persons unfamiliar with trim tabs to operate them.

## **Steering Wheel Pressure**

Sterndrive models can be adjusted so that there is very little pull on the wheel at one given speed or trim angle. This is done by setting the trim tab on the sterndrive's 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. (We suggest using your normal cruising speed). When running faster or slower than this speed, a minimal amount of torque will be present.

#### Instruments

While under way, instruments should be checked frequently for possible indications of trouble.

- Tachometer—A tachometer is an electrical instrument that indicates engine revolutions per minute (RPM). The tachometer is useful for monitoring engine speed to avoid exceeding the maximum RPM rating. In addition, it can be used to detect performance changes by comparing speedometer readings at various RPMs.
- 2. Temperature Gauge—The temperature gauge indicates engine coolant temperature by monitoring a signal from a sending unit installed in the engine water jacket. When the gauge reads in the danger area, shut off the engine 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. Backing up in reverse gear, then pulling ahead in forward gear for 10-15 feet is helpful, too. 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 provide heating for the fresh water supply, the temperature gauge for that engine will indicate a different operating temperature than the other engine.
- 3. Oil Pressure Gauge—The oil pressure gauge indicates engine lubricating oil pressure. Low oil pressure readings are generally caused by low oil quantity. In any case, immediately shut down the engine and diagnose the problem.

- 4. Fuel Gauge—The fuel gauge indicates fuel level. Since boats are 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.
- 5. Compass—Your boat may come equipped with a compass for use in marine navigation. Many factors affect the operation of your compass, such as local magnetic variation and deviation (induced needle deflection caused by metal components and the operation of electrical equipment aboard your boat). Each compass must be "swung" (compensated) to adjust for individual boat characteristics, and for the particular compass installation. It is vitally important, therefore, that you have your compass professionally swung before using it for marine navigation. Your Bayliner dealer can refer you to local shops that perform this work.

## **Dual Station Operation**

Always start the engine at the station from which you will be operating the boat. Remind anyone near the unattended control station to KEEP HANDS OFF. When leaving one station to operate at the other, bring the boat to a complete stop. Never leave the helm while the boat is underway and never assume that someone else has the boat under control. If you are operating your boat from the bridge and you encounter heavy sea conditions, you should bring your boat down to an idle, point it into the sea and have all bridge passengers move down to the cabin. If sea conditions become very heavy, you should also leave the bridge and operate your boat from the lower station. Children should be required to wear life jackets.

## **COMPONENTS/SYSTEMS**

## **Electrical Systems**

WARNING! To reduce the risk of electrical shock, only qualified personnel should install batteries and perform electrical system maintenance. You can minimize the danger of fire and explosion by not exposing the batteries to open flame or sparks. It is also important that no one smoke anywhere near the batteries. Because fuel fumes are heavier than air, they will collect in the bilge areas where they can be accidently ignited. Running the bilge blowers for at least four minutes prior to engine starting, electrical system maintenance, or activation of electrical devices will decrease the danger of fire and explosion.

Although Bayliner manufactures many different models of powerboats, the electrical systems on all models operate on the same basic theory:

#### 1. Battery:

The key to a good marine electrical system is the battery (the batteries are a dealer-installed item). Bayliner makes the following recommendations on battery rating:

Sterndrive Models (4 cylinder)—minimum 70 amp/hour rating Sterndrive Models (8 cylinder)—minimum 85 amp/hour rating

The condition of the battery can be read on the voltmeter when the ignition is in the ON position.

With the engine not running, voltmeter 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 1500 rpm) voltmeter readings of 13 to 14 volts are considered normal. Readings below this indicate a severely discharged battery or a nonfunctioning charging system.

Check the battery water level regularly by removing the caps. If the zinc plates are exposed, add distilled water. Corroded terminals can impair battery performance and charging ability. 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 away from extreme temperatures.

#### 2. Fuses and Circuit Breakers:

On all sterndrive models the engine and accessory circuits are protected by a large circuit breaker located on the engine. In addition, US Marine Power tilt motors are protected by an external (manual reset) fuse as well as an internal breaker (which resets automatically about 3-5 minutes after overload). Ignition circuits are protected by a fuse located on the back of the instrument panel (found in an in-line fuse holder either at the ignition switch or in the main fuse block.)

Standard equipment fuse blocks are located behind the instrument panel (at both stations on dual station models). Generally, AGC 10-amp fuses are used for most standard equipment accessories. For more detailed information, refer to the wiring schematics included in the back of this manual.

#### Optional Accessory Fuses—

- Electric refrigerator—The 12-volt power for this accessory is taken off the fuse block (AGC 10-amp).
- Spotlight—The power for this accessory is taken off the instrument panel where the remote control is located. There are two inline fuses at the remote control. The motor drive for the light is protected by an AGC 1.5-amp fuse and the light by an AGC 10-amp fuse.
- Hot water cabin heater—The power for the hot water cabin heater is taken off the main fuse block behind the instrument panel (AGC 10-amp).
- Electronics—The stereo, CB radio and depth sounder are fused at the main fuse panel with an AGC 10-amp fuse. These items are also individually fused. See each individual component manual for details.
- Macerator Pump—Macerator holding tank discharge pumps are fused at the main fuse panel with AGC 20-amp fuses.

#### Dockside Power:

Listed below are those models equipped with 110-volt dockside power as standard or optional equipment. This system comes complete with a 50' cord for 30-amp service. It is recommended that 15-amp and 20-amp adapters be purchased for the 30-amp cord because not all shore installations have 30-amp service available.

Model	Dockside	Breaker Box Location
2450 Ciera Sunbridge	Optional	Cabinet above galley
2550 Ciera Convertible	Standard	Forward end of galley
2650 Ciera Sunbridge	Standard	Cabinet above galley
2850 Ciera Sunbridge	Standard	Aft end of galley
2850 Ciera Command Bridge	Standard	Starboard aft salon

The 110-volt circuit breakers are marked as to which accessory they protect. In addition to the individual breakers, all models are equipped with a main breaker.

WARNING! Monitor the electrical control panel's polarity indicators when connecting shore power to your boat. A green light illuminating after the power cord is plugged into the boat's external power receptacle indicates acceptable electrical power. Therefore, you may energize the main breaker switches. However, a red light indicates reversed polarity, which could cause electrical system damage and possible electrical shock injuries. In this case, <u>DO NOT</u> energize the main breaker switches. Instead, immediately disconnect the shore power cord (always from the <u>dockside</u> outlet first) and notify marina management.

The simultaneous operation of several 110-volt accessories (e.g. electric stove, electric heat, refrigerator, etc.) can result in an overloaded 110-volt circuit on the boat or on the shore. It might be necessary to shut one accessory off while operating another.

All models with 110-volt receptacles in the head or galley are equipped with a ground fault interrupter to protect users from electric shock. This device will also protect other labeled outlets.

## 4. 110-volt/12-volt Refrigerator:

The refrigerator operates on 110-volt AC and 12-volt DC power. When the 110-volt system is not hooked to an AC source, the refrigerator operates on 12 volts. When an AC source is supplied by dockside power, the refrigerator automatically switches to 110 volts.

The refrigerator is the heaviest continuous draw on the 12-volt system. If no other 12-volt accessories are used, the refrigerator can draw a 100-amp battery dead in less than 24 hours. For this reason it is recommended that when operating on 12 volts, the cold setting on the refrigerator should not be set higher than position two. It is also advisable to turn the refrigerator off at night. If you are going to be out more than one day and cannot connect to dockside power, you should plan to run the engine each day to maintain a charged battery.

NOTE: It is recommended that the owner's manual supplied by the manufacturer be read before operating the refrigerator.

5. Hot Water Heater (Freshwater System):

On models equipped with standard or optional hot water heater, the heater is connected only to the 110-volt dockside power system. If the engine is equipped with freshwater cooling, either optional or standard, the hot water system heater may also be plumbed to the engine cooling system.

WARNING! You must shut down the hot water heater if the tank runs dry while being operated on 110 volts. This will prevent burning out the tank's heating element.

NOTE: It is recommended that the owner's manual supplied by the manufacturer be read before operating the hot water heating system.

#### 6. Battery Charger:

On models equipped with dockside power, an automatic battery charger is usually provided. Refer to the manufacturer's instruction manual for details concerning battery charger operation.

## **Fuel Systems**

CAUTION: It is very important that the fuel system be inspected thoroughly the first time it is filled and then at each subsequent filling. For your safety and the safety of your passengers, the fueling instructions in 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". 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, check to see that the fuel fill and vent lines are free of obstructions and kinks.

## 2. Antisiphon Valves:

As required by the U.S. Coast Guard, the fuel systems on sterndrive boats are equipped with an antisiphon 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 antisiphon valve should be checked. In the event the valve is stuck or clogged, it should be cleaned or replaced while the engine is shut down. 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 are clean and free of debris.

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

#### Starter Motor

The engine starter motor is designed to deliver high horsepower for only very short periods of time. Avoid operation for more than 15 seconds at a 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 the battery charge and all direct wiring for shorts or loose connections. If excess bilge water is allowed to accumulate, the starter can be damaged. Automatic bilge pumps are recommended for boats left in open moorage.

## **Bilge Blower**

The bilge blower removes fumes from the engine compartment and draws fresh air into the compartment through the deck vents.

To ensure fresh air circulation, the bilge blower is to be used before starting the engine, during starting, and while the boat is operating below cruising speed. Operate the blower for at least four minutes before starting the engine.

WARNING! Operation of the blower is NOT A GUARANTEE that explosive fumes have been removed. If you smell any fuel, shut off the engine and all electrical accessories and investigate immediately.

## **Bilge Pump**

The electric bilge pump supplied with your Bayliner is an impellertype pump. If bilge water is present and the pump motor is running but not pumping, check to see if it is clogged by debris. If it is clear but 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**

Although the night lights or navigation lights supplied with your Bayliner are of top quality, failure may occur for a variety of reasons:

- 1. There may be a blown 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 and coat with nonconductive grease.)
- 4. A wire may have come loose or may be damaged. (Repair as required.)

NOTE: Prolonged operation of cabin interior lights (overnight) will result in a dead battery. Be conservative in the use of battery power.

## **Portable Heads**

Be sure to read and follow the manufacturer's instructions. Some points to remember:

- Do not overfill the freshwater tank.
- 2. Add water to bowl before using.
- 3. Use only white toilet tissue (colored dyes may impair the effectiveness of the chemical). Use regular ply tissue; disintegrating tissue may clog the entire pump system.
- 4. After flushing, stroke pump to rinse bowl and slowly push valve handle in to seal holding tank.
- 5. Do not add holding tank chemical to freshwater tank.

- 6. Do not add odor control chemical into bowl with clapper seal closed.
- 7. Use only mild cleansers, detergents or soaps for cleaning. Do not use abrasive cleaners.
- 8. For cold weather usage, add a nontoxic winter protector antifreeze to the freshwater supply tank.
- 9. For storage, empty water and holding tanks and rinse them out.

## Marine Head with Holding Tank (optional on 2150 Ciera)

The marine head with holding tank system is designed so that sea water is used to flush waste from the toilet to the holding tank. The holding tank is plumbed to a waste fitting on the deck for use at a dock-side pump-out station, and to a macerator pump so that waste may be pumped overboard where regulations permit. The push-button switch for the macerator is located at the helm station (lower helm station on command bridge models).

To operate the marine head, open the seacock on the seawater intake. Before using, pump some water in to wet the bowl. After using, pump until thoroughly cleaned. Pump a few more times to clean lines. If excess waste should cause water to rise in bowl, stop pumping until the water recedes.

If at any time you are unable to pump water into the bowl, the probable cause is debris sucked into the pump diaphragm. To remedy, shut inlet seacock and dismantle pump. Pump is generally held together with six screws. The design is simple and the problem will be obvious when pump body is split open.

To winterize toilet, shut off intake valve and pump until dry. Remove drain plug in base and pump again to remove all water. Do not use antifreeze. The inlet seacock should be closed while the boat is underway or when the boat is left moored in the water.

## HOLDING TANK AND VALVE LOCATION TABLE

Model	Cap. (gal.)	Location of Hold. Tank	Location of Inlet Seacock
2150 Ciera Sunbridge (optional)	13	stb side engine well	fwd side engine well
2450 Ciera Sunbridge	13	stb side engine well	fwd side engine well
2550 Ciera Convertible	13	stb side engine well	aft side engine well
2650 Ciera Sunbridge	13	stb side engine well	fwd side engine well
2850 Ciera Sunbridge	13	stb side engine well	midship near water tank
2850 Ciera Command Bridge	13	aft of head under berth floor	aft head bulkhead

## **Alcohol Stoves**

Carefully read and follow manufacturer's operating instructions supplied with your stove, and observe the following:

- 1. Use only denatured alcohol labeled specifically for marine use.
- 2. Do not operate the stove while underway.
- 3. Do not fill stoves near an open flame or hot object.
- 4. All alcohol spilled should be wiped up prior to lighting the stove.

5. Do not put cooking utensils on stove until burners are lit and functioning properly.

#### 6. Pressurized Type

To fill:

Unscrew cap and fill tank using a funnel, replace cap (the filler cap is equipped with a safety valve and must not be replaced with any other type of cap).

To start:

Pump approximately 20 times to pressurize tank and slowly open one burner at a time to allow alcohol to flow into priming cup below the burner body (fill cup about 3/4 full). With burner off, ignite priming alcohol. When priming alcohol is fully consumed, turn control knob toward open position and light burner.

CAUTION: Flare-up may occur during preheating, particularly if burner valve is opened before preheating is completed. If flare-up occurs, shut off burner and restart.

#### 7 Nonpressurized Type

To fill:

Close both burners and completely slacken the retaining screw in the middle of the front. Pull the top forward (towards you), disengaging the pegs at the rear, and lift the top (lift at the middle of the grid to help keep the top horizontal). The stove top must only be lifted when the burner openings are completely covered by the regulating plates (burners closed). Providing all flame has been extinguished and there is no heat glow on top of the tank, the tank unit can be lifted out.

The tank openings are recessed to facilitate filling; pour the fuel directly into the opening covered by the wire mesh. Check quantity by raising tank to vertical. When fuel is visible in recess, discontinue filling.

After filling, make certain no excess fuel remains in stove. Always wipe tanks dry. Place tanks in stove. Check to see that they fit properly in mountings.

Make certain that both burners are closed and follow above steps in reverse to replace stove.

## To Light:

Turn regulator counterclockwise (towards + sign) to open burner. Place a lighted match at tank opening. (Match can be dropped in and removed at next filling). If the stove is warm (from previous use), burner may ignite suddenly and instantly snuff itself out. If this happens, blow down into burner opening to dissipate alcohol vapor, and relight.

## To Extinguish:

Turn regulator clockwise (towards - sign). Winterize your stove by burning remaining fuel.

## **Freshwater Systems**

Pressure type (demand) systems are operational any time the electrical switch for the pump is in the ON position. Make sure the switch is OFF when the boat is not in use or the water tank is empty. (Switches are located in the galley.)

Water System Specifications					
Model	Tank Location	System	Water Fill Location	Capacity (gallons)	
2150 Ciera Sunbridge	port side engine well	hand pump	on the tank	13	
2450 Ciera	port engine	hand	port deck	13	
Sunbridge	box	pump	aft		
2550 Ciera	under salon	demand	stb side	35	
Convertible	floor	pump	aft		
2650 Ciera	under salon	demand	stb deck	19	
Sunbridge	floor	pump	aft		
2850 Ciera	port engine	demand	port deck	30	
Sunbridge	shelf	pump	aft		
2850 Ciera	port engine	demand	port deck	30	
Command Br.	shelf	pump	aft		
2160 Trophy	under cabin	hand	stb mid	13	
Offshore	floor	pump	deck		
2460 Trophy	under cabin	hand	stb mid	13	
Offshore	floor	pump	deck		

## **Loading Limits**

- 1. Command bridges: 500 pounds maximum.
- 2. Hardtops: 100 pounds maximum.
- 3. Transom platforms: 250 pounds maximum.
- 4. Auxiliary outboard motor (transom platforms with molded outboard brackets): 10 horsepower maximum.

#### **GENERAL MAINTENANCE AND REPAIRS**

In addition to instructions found elsewhere in this manual and in the literature specific to certain components, the following information is provided for general maintenance and repair.

Because conditions vary widely in different areas, and the frequency and type of use can differ greatly between owners, intervals for maintenance are not listed here. Common sense should determine the frequency of maintenance.

## **Bilges/Engine Compartment**

- Pump bilges dry and remove all loose dirt. Be sure all limber holes are open. If there is oil in the bilge and the source is not known, look for leaks in engine oil lines or engine gaskets. Oil stains are best removed by use of a bilge cleaner available from your dealer or a marina. Do not use flammable solvents.
- Check all wiring to be sure it is properly supported, that insulation is intact, and that there are no loose or corroded terminals. If there are corroded terminals, they should be thoroughly cleaned with sandpaper or replaced. Tighten securely using a lock washer and spray with WD-40 or similar preservative.
- Inspect the entire fuel system (including fill lines and vents) for any evidence of leakage. Any stains around joints could indicate a leak. Try a wrench on all fittings to be sure they are not loosening, but do not overtighten them. Clean fuel filters and vent screens.
- 4. Inspect the entire bottom for evidence of seepage, damage or deterioration, paying particular attention to hull fittings, hoses, and clamps. Straighten kinked hoses and replace any that do not seem pliable. Tighten loose hose clamps and replace those that are corroded. Tighten any loose nuts, bolts, or screws.

5. Refer to your engine operating manual for details of maintenance. Wipe off engines to remove accumulated dust and grease. If a solvent is used, make sure it is nonflammable. Go over the entire engine and tighten nuts, bolts, and screws, including the mounts. Inspect the wiring on the engine and clean and tighten terminals. Inspect belts and tighten if needed. Replace any belt that is cracked or frayed. Clean and lubricate battery terminals; fill battery cells with distilled water as needed.

## **Cabin and Topside Areas**

- Test all electrical equipment and appliances to make sure they
  operate properly. Inspect all wiring for proper support, sound
  insulation and tight terminals. Pay particular attention to portable
  appliance cords and plugs.
- Inspect and operate heads, basins, showers, sinks, and freshwater system, including tank. Check and operate water pumps, including shower pump and sink drain pumps. Check all water lines and connections for leaks and make sure all connections are secure.
- 3. Check bow rails, ladders, and grab rails for loose screws, breaks, sharp edges, etc., that might be hazardous in rough weather. Inventory and inspect life jackets for tears and deterioration. Check your first aid kit to make sure it is complete. Check signalling equipment. Inspect anchor lines, mooring and towing lines and repair or replace as required. DO NOT stow wet lines or they may mildew and rot.
- Salt and brackish water are capable of etching and damaging window glass. Keeping windows clean is the best preventive measure you can take. When cleaning, flush with plenty of fresh water.

Exercise caution when cleaning windows and doors made of plexiglass because it tends to scratch easily.

First, use generous amounts of water to wash off as much dust as possible. Use your bare hands with plenty of water to dislodge any caked dirt. Then use a soft grit-free cloth or clean soft sponge with a detergent or nonabrasive soap. Dry with a clean damp chamois, using a blotting action. Never use a glass cleaning solution or a duster as these will scratch the surface. Remove any grease or oil with kerosene or hexane. DO NOT use solvents such as acetone, benzine, carbon tetrachloride, fire extinguisher fluid, dry cleaning fluid, or lacquer thinner since they will attack the surface.

- 5. 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-or-dry sandpaper.
- 6. 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 and hardware should be sprayed with a rust inhibitor similar to WD-40. If not maintained on a regular basis, stainless steel railings and fittings will discolor.
- A variety of high quality fabrics have been used in the construction of your boat. Proper care and cleaning of all fabrics will contribute to their long life.

Prior to cleaning any fabric we suggest that you **test your cleaning solution and method** on a hidden or inconspicuous area.

Convertible tops and vinyl upholstery can be cleaned using a mild soap and water solution. Vinyl cleaners and conditioners are **NOT** recommended for use on Bayliner upholstery. To prevent rainwater seepage at the seams, a coating of "Scotch Guard" can be applied on the inside of the vinyl. Mildew can occur if your boat does not have adequate ventilation. Heat alone will not prevent mildew. If mildew does occur, it can be removed using a solution of hot water and laundry bleach (one cup of bleach to one gallon of hot water). Brush into affected area, let sit for 10 to 15 minutes and rinse with plenty of 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.

Dry cleaning should be considered for interior fabrics other than vinyl.

8. When instruments are exposed to a saltwater environment, salt crystals may form on the bezel and the plastic covers. 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.

#### Hull

- 1. The finish on a fiberglass boat is similar to that of an automobile and will respond to the same system of care and cleaning. Car waxes and cleaners are often used to maintain a sparkling finish. Also, a variety of polishes and cleaners for fiberglass are now on the market. We suggest you experiment with different brands to determine what you like best.
- 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.

Scratches: If the scratch does not penetrate the gelcoat surface, it can be repaired with automotive rubbing compound. Dampen a soft rag and apply the compound by rubbing in a circular motion. The scratch may not disappear completely; however, its noticeability will decrease.

Gouges and Chips: To repair, simply obtain "patch paste" from your Bayliner dealer and follow this recommended procedure:

- Clean area to be repaired of wax and oil. Acetone is a good solvent.
- Mix a small portion of patch paste and catalyst on a piece of cardboard (two or three drops of catalyst to a tablespoon of paste).
- Apply to pit, chip, or gouge with a putty knife or flat-edged stick; try to match the surface contour of the area being repaired. It is better to have an excess of paste, rather than not enough.
- Allow the paste to harden thoroughly. In most climates, one to two hours should be sufficient.
- Shape the patch as desired, using fine wet sandpaper.
- Finish by using automotive rubbing compound in the same manner as you did for small scratches.

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

3. The bottom paint on boats is designed to dissolve slowly to prevent marine growth. Therefore, it is unusual to find a boat bottom that does not need repainting after a season's use.

Periodically haul the boat out of the water and scrub the bottom with a bristle brush and a solution of soap and water. It is not always necessary to repaint the bottom each time it is scrubbed, but no bare spots should be permitted.

Our recommended procedure for repainting the bottom is as follows:

- · Prepare the bottom by sanding, cleaning and fairing as required.
- It is imperative that the new paint be applied over a perfectly dry surface. Fiberglass hulls should never be hauled, painted and relaunched in the same day, since this does not allow sufficient time for the moisture which has been absorbed into the old paint film to completely dry out. Generally, 24 -36 hours of drying time will be required.
- Bayliner recomends the application of an epoxy barrier coating, such as International Paint Company's "Interlux Interprotect 2000 System", to help seal the hull bottom and reduce the possibility of gelcoat blistering. The barrier coat should be covered with several coats of antifouling paint.

WARNING! Many states regulate the chemical content of bottom paints in order to meet environmental standards. Check with your local Bayliner dealer about recommended bottom paints, and about laws that are in effect in your area.

- 4. Whenever your boat is out of the water you should check all metal parts for stray current corrosion. Stray current corrosion, or electrolysis, can be prevented several ways. The following are the most common causes and the simplest cures:
  - Wiring may leak a certain amount of electricity: Keep a clean dry bilge.
  - A poorly grounded zinc anode: Check ground wire, clean contact surfaces.
  - The zinc anode may be deteriorated beyond effectiveness.
     Replace at 50% loss.
  - Do not 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 it is properly protected.

- 5. Propellers should be inspected often for damage. Every attempt has been made to equip your boat with a propeller that will optimize performance. However, your boating needs may dictate a propeller change. Your Bayliner dealer can help you in the selection of propellers better suited to your needs.
- Flapper valves on cockpit scuppers (on models equipped with selfbailing cockpits) should be checked often to see that they are pliable and operating properly to provide sealing action.

#### **STORAGE**

The following suggestions are offered for storage at the end of your boating season.

- 1. If your boat is to be stored out of the water, it is extremely important that its hull is properly supported to avoid permanent hull distortion. If stored inside, it should be in a well-ventilated building.
- 2. A temporary winter cover is recommended if covered storage isn't available. A proper winter cover should keep the weather off the boat, but still provide adequate ventilation. Wrapping a boat 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.
- 3 If storing on a trailer:
  - Now is a good time to repack wheel bearings. Your local auto service center can help you.
  - · Block the trailer wheels off the ground to avoid tire deterioration.
  - Loosen stern tie downs to avoid stress on hull.
- 4. If storing on blocks:
  - Blocks with at least two square feet of bearing surface may be placed at each corner of the transom; one block may be placed forward under the keel. Preferably, the forward block should be V-shaped and located under a bulkhead.
- 5. Refer to your engine manual for storage instructions.
- Drain the freshwater tanks and system by first opening all faucets and operating the water pump (on boats so equipped, be sure that the hot water tank power switch is turned off). Operate the pump until empty, draining accumulated water in the pump to avoid damage due to freezing.

- 7. Flush each head several times. If stored in saltwater, close the intake seacock, add fresh water to the bowl and allow it to stand for a day or more to dissolve accumulated salt. With seacock closed, flush until pumped dry. Pump out holding tank.
- Fuel tanks should be filled so there is little air space, thereby minimizing condensation.
- 9. Refer to your engine manual for storage procedures related to the engine seawater cooling system and batteries.
- 10. Thoroughly clean your boat. If possible, remove cushions, mattresses, blankets, towels, and other items that can hold moisture and cause mildew. Such items left on board should be positioned for maximum air circulation—stand mattresses and cushions on edge.
- 11. Defrost and dry out refrigerator and freezer; prop doors open. Leave drawers and locker doors open.
- 12. Clean hardware and coat with rust inhibitor.
- 13. Lubricate steering mechanism and throttle control.
- Close seacocks.
- 15. Provide as much heat and ventilation for interior spaces as is safe and practical.

We hope these preventive measures will help make getting ready again in the spring easier. Should you have any questions, your Bayliner dealer is anxious to provide assistance.

#### **NAUTICAL TERMS**

ABEAM: On 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 side 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 six feet generally used to

measure water depth.

FREEBOARD: Vertical distance from deck to waterline.
GUNWALE: The point 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 radiotele-

phone.

PORT: To the left side of the boat.

PORTLIGHT: A hinged window in the boat's cabin or hull. SCUPPER: An opening in a deck or cockpit permitting water

to drain overboard.

STANCHION: A fixed, upright post used for support (of rails or

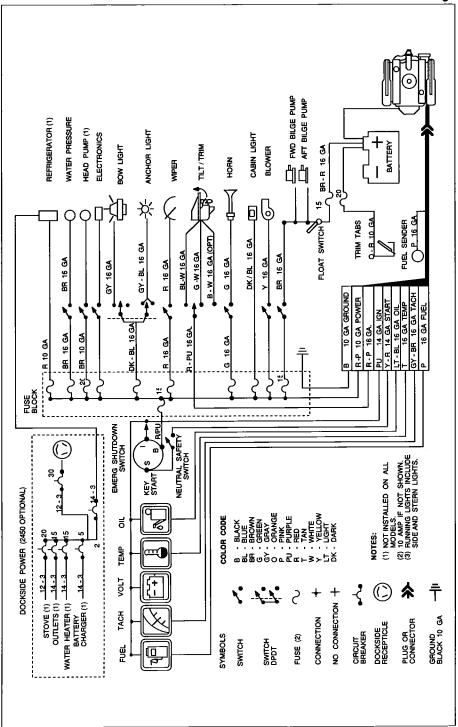
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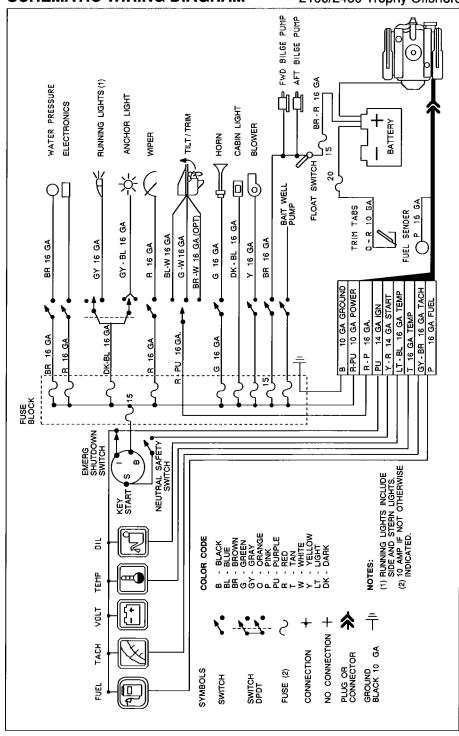
STARBOARD: To the right side of the boat.

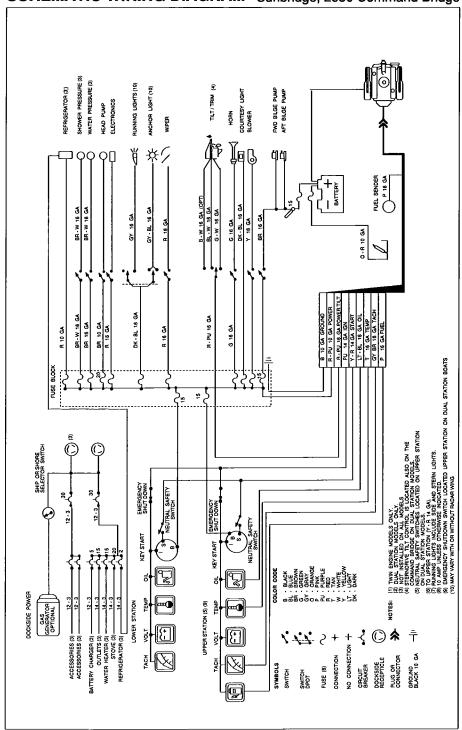
STERN: The rear of the boat.

STERNDRIVE: Inboard/outboard propulsion unit. TRANSOM: The vertical part of the stern.

WINDWARD: The direction from which the wind is blowing.







#### WARRANTY

#### **One Year Limited Warranty**

Bayliner warrants to the original purchasers of its boats operated under normal, noncommercial use in the U.S. or Canada that it will repair or replace any parts found to be defective in factory materials or workmanship within one year from the 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:

- Any implied warranty of merchantability is limited to the duration of this written warranty.
- 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.
- 3. 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.

#### Your Obligation

In order to comply with Federal regulations, it is essential that your warranty registration card be submitted within 30 days of delivery of your boat. Return of this card is a condition precedent to warranty coverage. Before any warranty work is performed, we require that you contact your selling dealer to request warranty assistance.

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.

Bayliner Marine Corporation PO Box 24467 Seattle, WA 98124