

BAYLINER

AMERICA'S FIRST CHOICE IN BOATS

C I E R A / T R O P H Y

1 9 9 0 O W N E R ' S M A N U A L

Welcome Aboard

This manual has been prepared to assist you in the operation and care of your Bayliner boat. Please read through it completely, as familiarization with its contents can contribute to the safe and effective operation of your boat.

Your Bayliner boat is part of a carefully engineered total value package. It has been paired with a motor designed to provide optimum performance and utility. Please be aware that any changes you might make to this boat and motor combination may result in handling and performance qualities that differ from those experienced with the original package.

Your boat's mechanical and electrical systems were designed to meet safety standards in effect at the time the boat was constructed. Some of these standards were mandated by Federal law, others are considered industry norms. All of them were designed to insure your safety, and the safety of other people, vessels and property around you. To maintain the integrity and safety of your boat, only qualified people should perform maintenance on, or in any way modify, the steering system, engine control system, fuel system or electrical system. Failure to maintain these systems as designed could violate Federal law, and could expose you and other people to the danger of bodily injury or accidental death. We recommend that you follow the instructions provided in this handbook, in the engine owner's manual, and in the accessory instruction sheets included with your boat and motor package. We also 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.
2. 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.

The hazard warning symbols shown below are used throughout this manual to call attention to potentially dangerous situations which could lead to either personal injury or product damage. We urge you to read these warnings carefully and follow all safety recommendations.

 **DANGER**

The symbol shown above alerts you to immediate hazards which **WILL** cause *severe personal injury or death* if the warning is ignored.

 **WARNING**

The symbol shown above alerts you to hazards or unsafe practices which **COULD** result in *severe personal injury or death* if the warning is ignored.

 **CAUTION**

The symbol shown above alerts you to hazards or unsafe practices which **COULD** result in *minor personal injury, or cause product or property damage* if the warning is ignored.

NOTICE

The symbol shown above calls attention to installation, operation or maintenance information which is important to proper operation, but is not hazard-related.

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

- | | |
|---------------------------|----------------------|
| 2155 Ciera Sunbridge | 2159 Trophy Cuddy |
| 2255 Ciera Sunbridge | 2302 Trophy Cuddy |
| 2455 Ciera Sunbridge | 2459 Trophy Offshore |
| 2556 Ciera Command Bridge | |
| 2651 Ciera Sunbridge | |
| 2655 Ciera Sunbridge | |
| 2755 Ciera Sunbridge | |
| 2855 Ciera Sunbridge | |
| 3055 Ciera Sunbridge | |
| 3058 Ciera Command Bridge | |
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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 must be in control of the boat at all times. Do not operate your boat while under the influence of alcohol or drugs. Never operate your 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 will allow 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 suggestions:

Recommendations for Safety

1. 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.

2. 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 allow anyone 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.
4. 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 everybody on board wear proper footwear.
5. Understand the meanings of navigation buoys, and never moor to one. (It is a Federal offense.)
6. 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 a white diagonal stripe) flown from a boat or buoy means skin diving operations are underway nearby. Approach with caution and stay clear by at least 25 yards.
9. 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 your boat ever capsizes, remember that if it 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 the depth of the 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.

21. 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 United States Coast Guard Auxiliary and the United States Power Squadrons offer safe boating classes several times a year. These are comprehensive courses, and are generally of minimal cost to you. Call your local U.S. Coast Guard Auxiliary or Power Squadron Flotilla for the time and place of their next class.

Safety Equipment

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

1. Fire extinguishers (correct number and type, located for easy access)
2. Personal flotation devices
3. Fenders, lines and boat hook
4. Flares (night and day type)
5. Flashlight(s) with extra batteries
6. Charts of your 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. Spare propeller with fastening hardware
3. Extra V-belts
4. Engine lubricating oil
5. Spare fuel and oil filters
6. An extra cooling pump impeller
7. Portable fuel can
8. Replacement light bulbs
9. Spare set of spark plugs and other ignition parts

Static Float Attitude

The static floating 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, load heavy items on the opposite side until the boat floats more level. Load the remainder of your gear evenly after that.

Other Tips

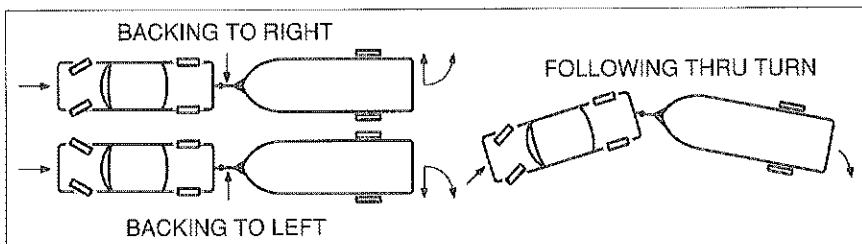
1. When commissioning a new boat, do not plan an extensive trip or party until you have had a shakedown cruise to make sure all equipment on your boat is functioning properly and you are familiar with its operation.
2. Use big fenders or fender boards to protect your boat's hull whenever mooring next to floats, piers, or other boats.
3. Carry plenty of line that is 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.
2. Purchase a trailer with the proper weight capacity rating. A trailer that is designed to carry more weight will ride too roughly and can damage your boat. A trailer with too little weight capacity will be structurally unsafe.
3. 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 helps when launching and retrieving your boat.
4. Check your trailer's brakes for proper operation prior to departure on each trip. (Consult your state laws for trailer brake requirements and equip your trailer accordingly.)
5. Frequently check your trailer's wheel lug nuts for security.
6. Check the tires for proper inflation. Underinflated tires heat up rapidly and tire damage is likely to occur.
7. Wheel bearings should be checked at least every 90 days and before putting your boat away for the season.
8. 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.

9. On extended trips, carry spare wheel bearings, seals and races.
10. 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.
11. Check your trailer's springs and undercarriage for loose parts.
12. 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. Note that the boat transom-to-trailer tie-down straps and winch lines are designed for *normal* towing conditions on paved roadways and moderately rough secondary roads (at slow speeds only). They **should not** be relied upon for *any* lifting application. Also, we recommend the use of additional straps or rope tie-downs for securing the boat to the trailer, particularly for longer trips or whenever you expect to encounter rough roads.
13. Too much or too little tongue weight will cause difficult steering and tow vehicle sway. A rough rule of thumb is that 5% to 10% of the boat and trailer weight should rest on the tongue.
14. Close and secure all cabin windows and doors. Store all loose equipment so that it cannot slide or fall.
15. Before towing your boat, take down the convertible top, side curtains and back cover. Canvas tops are not designed to withstand the loads created by highway speeds.
16. Carry a spare wheel and tire, along with the tools needed to change them.
17. Before backing your trailer into the 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 your trailer. Whenever you are backing up, make sure you have a lookout to help direct you.

Make sure your outboard or outdrive unit is raised to clear obstacles.

If it is 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 where they might be ignited accidentally. 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 you're going to fuel your boat while it's in the water, be sure that it's securely moored to the dock.
2. Turn off all electrical 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 the fuel supply nozzle, allowing the nozzle to maintain contact with the fitting; this will prevent 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 of the fuel 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. When you have finished fueling, replace the fill cap and wash off any fuel spillage.
10. Open the engine compartment and all windows, doors and hatches; inspect, both 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 the engine.
11. Operate the bilge blower for at least four minutes prior to starting the engine. Leave the blower on until the boat is underway and up to cruising speed.

Fuel Capacity Table

Ciera Models	Fuel Capacity (Gallons)
2155 Ciera Sunbridge	55
2255 Ciera Sunbridge	55
2455 Ciera Sunbridge	55
2556 Ciera Command Bridge	105
2651 Ciera Sunbridge	55
2655 Ciera Sunbridge	105
2755 Ciera Sunbridge	80
2855 Ciera Sunbridge	105
3055 Ciera Sunbridge	100
3058 Ciera Command Bridge	116
Trophy Models	Fuel Capacity (Gallons)
2159 Trophy Cuddy	65
2302 Trophy Cuddy	140
2459 Trophy Offshore	86

Launching

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

CAUTION

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.
3. 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, immediately remove the boat 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 are not intended to cover every detail of starting. We urge you to thoroughly read and understand your engine manual.

1. Check the lubricating and cooling fluid levels.
2. Visually check for fuel, oil, coolant, and exhaust leaks.
3. On boats with a single, side-mounted shift/throttle lever, advance the lever to the maximum throttle position several times (while holding the handle button IN to disengage the shift mechanism). Then return the lever to the 1/4 throttle position.
4. On boats with dual control installations, the throttle lever should be in the SLOW/START position and the shift lever in the NEUTRAL position before starting the engine(s).
5. Make sure the emergency engine shutdown switch cap is in place and the lanyard is attached to the operator.

⚠ WARNING

A serious accident can 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 securely fastened to a stout piece of clothing, such as a belt, etc.).

⚠ WARNING

Gasoline vapors are highly explosive. To prevent a possible explosion and fire, check the engine and fuel compartments before each engine start for fumes or accumulation of fuel. Always operate the bilge blower for at least four minutes before engine starting, during the starting process, and anytime you are operating your boat below cruising speeds.

6. Turn the ignition key to the START position. Note: the engine will not turn over unless the shift lever is in the NEUTRAL position.
7. **Do not** continuously operate the starter for more than 15 seconds at a time. Allow at least three minutes for cooling between start attempts.
8. If the engine fails to start, wait one minute and try again with the one difference being to advance the throttle only once to the maximum position.
9. As soon as the engine starts, use the throttle to set the engine speed at 1200 RPM for V-8 engines, or 2000 RPM for 4- or 6-cylinder engines. Check the oil pressure; it will vary from one engine to another, but should come up immediately. If it does not, turn the engine off right away and diagnose the problem.
10. With the engine running, the voltmeter should indicate a reading of 12-14 volts.
11. Check the steering operation by turning the steering wheel full port and starboard while observing the outboard or outdrive movement.

⚠ WARNING

On boats with dual control levers, always pull the throttle lever back to SLOW before moving the shift lever to FORWARD or REVERSE. Failure to do so can cause transmission damage and possible injury or death.

12. While the boat is still securely moored to the dock and the engine is idling at 600-800 RPM, advance the shift control to forward, to reverse, and into neutral to check the shifting operation.

⚠ WARNING

Carbon monoxide is a poisonous gas that is colorless, odorless and heavier than air. It can accumulate in the lower regions of the boat in dangerous concentrations if proper ventilation is not provided. A person breathing these fumes could become seriously ill or even suffocate. Always run the bilge blower and open windows or hatches whenever the engine is idling. Also, never operate the engine when either the slant cover or the camper cover is installed.

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

Maneuvering

With all of 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, or when 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.

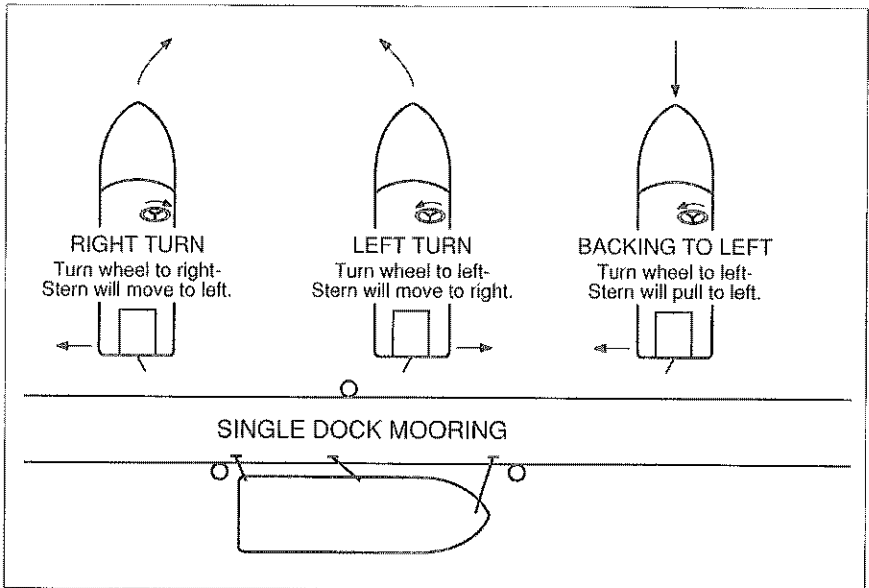
Once you are away from the dock, devote some time to learning how to maneuver.

- Practice docking by using an imaginary dock.
- Practice stopping and reversing.
- 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 mooring gear, and that it is stowed correctly and ready for use. Your dealer is the best source for information concerning 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 and little or no wind, it is best to approach from the windward side. While approaching, check to see that all lines are attached to the cleats on the side facing the moorage. Also insure 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:

To attach lines to deck cleats, make a loop in one end of the line and pass it through the hole in the base of the 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 underway 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 the decks.

TIP: To tie up, run the line from your boat around the dock cleat and then back to your boat. This way you can untie the line without jumping from your deck to the dock and back again. Instead, just cast off one end of the line and bring the whole length back 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, everyone 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 the mooring lines and stow the 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:

1. **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's 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 achieve a more correct cruising attitude:
 - Move some weight forward in the boat.
 - Adjust the trim tabs. (See the Trim Tab section below.)
 - Adjust the thrust angle of the engine (reduce the distance between the bottom of the transom and the drive unit). See your engine owner's manual for trimming instructions.
2. 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 steps opposite of those 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 the tab position is unknown, put both tabs in the full bow-up position.
2. After power has been applied and the boat is up to cruising speed, push the appropriate tab button to level the boat from side-to-side. Several short touches of the tab button are recommended, rather than one long one. Allow the boat to react to the new position of the trim tab after each touch. When installed in accordance with the manufacturer's recommendation, the port trim tab switch will operate the starboard trim tab and vice versa.

- Both tabs can be lowered slightly to lower the bow. However, forcing the bow down too far with trim tabs will cause steering difficulty and a loss of efficiency.
- When running in a following sea, run trim tabs to the 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 people who are unfamiliar with trim tabs to operate them.

Steering Wheel Pressure

Stern drive 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 stern drive'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.
- 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 degrees of 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 System

⚠ 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 accidentally ignited. Running the bilge blower 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 dealer-installed items). Bayliner makes the following recommendations on battery rating:

Outboard Models —	400 cold cranking amps minimum
Stern Drive Models —	500 cold cranking amps minimum
L-Drive Models —	500 cold cranking amps minimum

On models with dual outboard engines, the portside battery provides starting power for the port engine only. The starboard battery provides starting power for the starboard engine, and also provides power for the accessories. Note that both batteries in dual outboard-powered boats must be bonded together to a common ground.

On some models the condition of the battery can be read on the voltmeter when the ignition switch is in the ON position.

With the engine not running, voltmeter readings in the 11.5 to 12.5-volt range are considered normal. Readings in the 10 to 11.5-volt range indicate a marginal charge condition. Readings below 10 volts indicate a seriously discharged 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 electrolyte level regularly. Remove the caps on top of the battery and observe the level of the fluid inside. If the zinc plates are exposed, add distilled water until they are covered again. Corroded terminals can impair battery performance and charging ability. Clean them with baking soda and water; then 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 stern drive models the engine and accessory circuits are protected by a large circuit breaker or fuse located on the engine. In addition, each US Marine power-tilt motor is 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 an ATC 15-amp fuse located on the back of the instrument panel (found in the accessory fuse block).

Standard equipment fuse blocks are located behind the instrument panel (at both stations on dual station models). Generally, ATC 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 (ATC 10-amp).
- Spotlight—The power for this accessory is taken off the instrument panel where the remote control is located. There are two in-line fuses at the remote control. The motor drive for the light is protected by an ATC 1.5-amp fuse and the light by an ATC 10-amp fuse.
- Electronics—The stereo, CB radio and depth sounder are fused at the main fuse panel with an ATC 10-amp fuse. These items are also individually fused. See each individual component's instruction manual for details.
- Macerator pump—Macerator holding tank discharge pumps are fused at the main fuse panel with ATC 20-amp fuses.

3. *Dockside Power:*

Listed below are those models equipped with 110-volt dockside power as standard or optional equipment. The dockside power 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.

Dockside Power Table		
Model	Dockside	Breaker Box Location
2455 Ciera Sunbridge	Optional	Aft end of galley
2556 Ciera Command Bridge	Standard	Cabinet above galley
2651 Ciera Sunbridge	Optional	Aft end of galley
2655 Ciera Sunbridge	Standard	Cabinet above galley
2755 Ciera Sunbridge	Optional	Aft end of galley
2855 Ciera Sunbridge	Standard	Cabinet above galley
3055 Ciera Sunbridge	Standard	Cabinet above galley
3058 Ciera Command Bridge	Standard	Cabinet above galley

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, **DO NOT** energize the main breaker switches. Instead, immediately disconnect the shore power cord (always from the *dockside* outlet first) and notify marina management.

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.

The simultaneous operation of several 110-volt accessories (e.g. electric stove, electric heat, refrigerator, etc.) can result in an over-

loaded 110-volt circuit on the boat or on the shore. It might be necessary to shut off one accessory 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 and the 110-volt refrigerator breaker is ON, 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.

N O T I C E

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 heating, 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.

N O T I C E

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

▲ 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. Fuel receptacle caps 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 stern drive 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.

N O T I C E

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 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 in stern drive models. 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 impeller-type 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.

N O T I C E

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 a 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 the fuse in the switch panel.)
2. The bulb may be burned out. (Carry spare bulbs for replacement.)
3. The bulb base may be corroded. (Clean the base periodically and coat it with nonconductive grease.)
4. A wire may have come loose or may be damaged. (Repair as required.)

N O T I C E

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

Portable Head

Be sure to read and carefully follow the manufacturer's instructions.

1. *To Fill the Freshwater Tank:*
Remove the upper section from the lower section. Remove the fill cap and fill to the maximum waterline level on the side of the tank. **DO NOT OVERFILL. DO NOT POUR WASTE TANK DEODORIZER INTO THE FRESHWATER TANK.**
2. Before use, always check the pressure build-up by pulling out the flush handle slowly with the lid closed. It is necessary to pump liquid into the basin. Keep the basin dry when not in use.

N O T I C E

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

3. *To Flush:*

Pull the holding tank flush valve handle straight out. To rinse the bowl, stroke the pump several times. Next, slowly push the valve handle straight in. This will ensure a leakproof seal.

4. *To Add Chemical Deodorizer:*

Pull the flush valve handle straight out so that the bowl clapper seal is completely open. Add 2 oz. of Liquid Gold concentrate or Royal Gold powder directly into the tank. Pump sufficient water through the bowl opening to cover the bottom surface of the lower tank.

N O T I C E

Do not add holding tank chemical to the upper fresh-water tank. Also, do not add odor control chemical to the bowl while the bowl clapper seal is closed.

5. *Cleaning:*

Use only mild cleansers, detergents or soaps (avoid using abrasive cleaners). Clean the toilet periodically.

6. *To Empty:*

The unit is ready to be emptied when the contents of the holding tank approach a level of 1" (2 cm) below the surface of the bowl clapper seal.

Make sure the flush valve handle is closed. Disengage and remove the freshwater tank from the holding tank. Unscrew the holding tank cap while the tank is in a horizontal position. Pull up on the air vent valve (red cap located on the top, front, left-hand corner of the tank). Carefully empty the holding tank by grasping the tank in the front and back and slowly tilting.

After emptying the tank, rinse with fresh water, replace the cap, push the air vent valve closed, reassemble and recharge the unit.

N O T I C E

There are many brands of toilet chemicals, any of which will work very well in any of the portable toilets supplied by Bayliner.

7. *Winter Usage:*

For cold weather use, add a nontoxic winter protector antifreeze to the freshwater supply tank to prevent it from freezing.

8. *Storage:*

Empty both the water tank and the holding tank. Rinse out the holding tank with one cup of bleach (5% solution) per gallon (5 liters) of water.

Marine Head with Holding Tank

The marine head and holding tank system is designed so that sea water is used to flush waste from the toilet into 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 the head, pump some water in to wet the bowl. After use, pump until the bowl is thoroughly cleaned. Pump a few more times to clean the lines. If excess waste should cause the water to rise in the 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 in the pump diaphragm. To remedy this, shut the inlet seacock and dismantle the pump. The pump is generally held together with six screws. The design is simple and the problem will be obvious when the pump body is split open.

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

HOLDING TANK AND VALVE LOCATION TABLE

Model	Capacity (gallons)	Location of Holding Tank	Location of Inlet Seacock
2155 Ciera Sunbridge (optional)	13	stb side engine well	fwd side engine well
2255 Ciera Sunbridge (optional)	13	stb side engine well	fwd side engine well
2455 Ciera Sunbridge	13	stb side engine well	fwd side engine well
2556 Ciera Command Bridge	13	stb side engine well	stb side engine well
2651 Ciera Sunbridge	13	stb side engine well	fwd side engine well
2655 Ciera Sunbridge	13	stb side engine well	fwd side engine well
2755 Ciera Sunbridge	13	stb side engine well	fwd bilge under entry step
2855 Ciera Sunbridge	13	stb side engine well	fwd side engine well
3055 Ciera Sunbridge	13	stb side engine well	fwd bilge under entry step
3058 Ciera Command Bridge	13	stb side engine well	under aft berth floor
2302 Trophy Cuddy (optional)	13	amidships below floor	port quarter berth
2459 Trophy Offshore (optional)	13	amidships below floor	port quarter berth

AM/FM Cassette Stereo

The AM/FM cassette stereo that comes standard with your Bayliner has a separate brochure that explains its operating features. Note that AM/FM radio reception will be impaired anytime the engine is running, and therefore it is suggested that you turn the radio off while underway.

Depth Sounder

Your Bayliner may come equipped with an electronic depth sounder. It will provide you with measurements of water depth beneath the boat. In many cases it also will help you locate schools of fish. The depth sounder comes with its own owner's manual. We suggest that you read it carefully before turning on the unit.

⚠ WARNING

The depth sounder should not be used as a navigation aid to prevent collision, grounding, boat damage or personal injury. When the boat is moving, submerged objects will not be seen until they are already under the boat, or bottom depths may change too quickly to allow time for the boat operator to react. Always operate the boat at very slow speeds if you suspect shallow water or submerged objects.

Alcohol Stove

Carefully read and follow the 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 the stove near an open flame or hot object.
4. All spilled alcohol should be wiped up prior to lighting the stove.
5. Don't put any cooking utensils on the stove until the burners are lit and functioning properly.

6. Pressurized Type

- *To fill:*

Unscrew the cap and fill the tank using a funnel. Replace the 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 the tank and slowly open one burner at a time to allow alcohol to flow into the priming cup below the burner body (fill the cup about 3/4 full). With the burner off, ignite the priming alcohol. When the priming alcohol is fully consumed, turn the control knob toward the OPEN position and light the burner.

CAUTION

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

7. Nonpressurized Type

- *To fill:*

Close both burners and completely loosen the retaining screw in the middle of the stove's front. Pull the top forward (towards you), disengaging the pegs at the rear, and lift the top of the stove up (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 are 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 the fuel quantity by raising the tank to the vertical position. When fuel is visible in the recess, discontinue filling.

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

Make certain that both burners are closed and follow the steps shown above in reverse order to reassemble the stove.

- *To Light:*
Turn the regulator knob counterclockwise (towards the + sign) to open the burner. Place a lighted match at the tank opening. (The match can be dropped in and removed at the next filling). If the stove is warm (from previous use), the burner may ignite suddenly and then instantly snuff itself out. If this happens, blow down into the burner opening to dissipate any alcohol fumes before attempting to relight the stove.
 - *To Extinguish:*
Turn the regulator knob clockwise (towards the - sign) to close the burner. Winterize your stove by burning all remaining fuel, and by following the directions provided in the manufacturer's instructions.
8. Electric Burners (if so equipped):
- *Never* attempt to use both alcohol and electric burners simultaneously. To do so will cause overheating which can destroy the electric burner elements.
 - After removing the cutting board or cover, turn the appropriate burner knob to the desired setting. Make sure both alcohol burner knobs are in the closed position. The electric burner element will then heat-up fairly rapidly for use in cooking.
 - When finished, turn the knob to the OFF position and allow the burner to cool-down completely before replacing the cutting board or cover back on the stove.
9. Regularly clean the stove as described in the owner's instructions that come with the stove.

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.

Freshwater System

Pressure type (demand) systems operate 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 whenever the water tank is empty. (Switches are located in the galley.)

Water System Specifications				
Model	Tank Location	System	Water Fill Location	Capacity (gallons)
2155 Ciera Sunbridge	port side engine well	hand pump	on the tank	13
2255 Ciera Sunbridge	port side engine well	hand pump	on the tank	13
2455 Ciera Sunbridge	port engine box	hand pump	port deck aft	13
2556 Ciera Command Br.	under salon floor	demand pump	stb side aft	35
2651 Ciera Sunbridge	midship under step	demand pump	port deck aft	25
2655 Ciera Sunbridge	under salon floor	demand pump	stb deck aft	19
2755 Ciera Sunbridge	under aft berth floor	demand pump	stb deck aft	28
2855 Ciera Sunbridge	under salon floor	demand pump	stb deck aft	19
3055 Ciera Sunbridge	under aft berth floor	demand pump	stb deck midship	26
3058 Ciera Command Br.	under aft berth floor	demand pump	stb deck midship	29

— continued on next page —

Water System Specifications (Con't)

Model	Tank Location	System	Water Fill Location	Capacity (gallons)
2159 Trophy Cuddy	port quarter berth	hand pump	stb mid deck	13
2302 Trophy Cuddy	under cabin floor	hand pump	stb mid deck	13
2459 Trophy Offshore	under cabin floor	hand pump	stb mid deck	13

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

1. Pump the bilges dry and remove all loose dirt. Be sure that 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 can be removed by using a bilge cleaner available from your dealer or a marina. Do not use flammable solvents.
2. Check all wiring to be sure it is properly supported, that its insulation is intact, and that there are no loose or corroded terminals. If there are corroded terminals, they should be replaced or thoroughly cleaned with sandpaper. Tighten all terminals securely and spray them with WD-40 or similar preservative.
3. 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 feel pliable. Tighten loose hose clamps and replace those that are corroded. Tighten any loose nuts, bolts, or screws. Operate seacocks to be sure they are in good condition.
5. Refer to your engine operating manual for engine maintenance details. 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 the terminals. Inspect the belts and tighten them if needed. Replace any belt that is cracked or frayed. Clean and lubricate the battery terminals; fill the battery cells with distilled water as needed.

Cabin and Topside Areas

1. 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.
2. Inspect and operate all heads, basins, showers and sinks. Also inspect the freshwater system plumbing, including the tank. Check and operate the water pumps, including the shower pump and sink drain pumps. Check all water lines and connections for leaks, and make sure all connections are tight.
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 the signalling equipment. Inspect anchor, mooring and towing lines and repair or replace as required. **DO NOT** stow wet lines or they may mildew and rot.
4. Salt and brackish water are capable of etching and damaging window glass. Keeping windows clean is the best preventive measure you can take. When window 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 cleaner made specifically for plexiglass. Never use a glass cleaning solution or a duster as these will scratch the surface. **DO NOT** use solvents such as acetone, kerosene, benzine, carbon tetrachloride, fire extinguisher fluid, dry cleaning fluid, or lacquer thinner since they will attack the surface. When you are finished, rinse with fresh water and dry with a clean, damp chamois using a blotting action.

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. Stainless steel railings and fittings should be cleaned with soap and water or household glass cleaner. Because irreversible pitting will develop under rust that remains on stainless steel for any period of time, it is best to remove rust spots immediately with brass, silver or chrome cleaner. Then coat the railing or fitting with a good automobile or boat wax. Never clean with mineral acids or bleaches. Also, do not allow stainless steel to come into continuous contact with iron, steel or other metals which could cause contamination leading to rust or corrosion.
7. 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 often be removed using a solution of hot water and laundry bleach (one cup of bleach to one gallon of hot water). Brush the solution into the affected area, let it 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 that you experiment with different brands to determine what you like best.
2. 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, obtain "patch paste" from your Bayliner dealer and follow this recommended procedure:

- Clean the 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 the paste to the gouge with a putty knife or flat-edged stick; try to match the paste to 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 the manufacturer's instructions. Also, never store rags that have been wetted with acetone, teak oil, fuel or any other solvent aboard your boat. Immediately remove them from the boat and discard them to prevent spontaneous combustion and fire.

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 on 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.

N O T I C E

Bayliner recommends 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 on any boat that is permanently moored. The barrier coating should be covered with several coats of antifouling paint. Note that 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 the ground wire and clean all contact surfaces.
 - The zinc anode may be deteriorated beyond effectiveness. Replace it when it has deteriorated 50% or more.
 - 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 that 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.
6. Flapper valves on cockpit scuppers should be checked often to see that they are pliable and are providing the proper 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 your boat is 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 you are storing your boat on its trailer:
 - Now is a good time to repack the trailer's wheel bearings. Your local auto service center can help you.
 - Block the trailer wheels off the ground to avoid tire deterioration.
 - Loosen the stern tie-downs to avoid stress on the hull.
4. If you are storing your boat up on blocks:

Use three blocks, each with at least two square feet of bearing surface. Place one block under each corner of the transom, with the third one going up forward under the keel. Preferably, the forward block should be V-shaped, and should be located under a bulkhead.
5. Refer to your engine manual for engine storage instructions.
6. Drain the freshwater tanks and lines by 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 all tanks and lines are empty and no water flows from any of the faucets. Also, drain the pump to prevent damage that can result from freezing.
7. Flush each head several times. If the boat is to be stored in salt-water, close the intake seacock, add fresh water to the bowl and allow it to stand for a day or more to dissolve accumulated salt. Then, with the seacock closed, flush the head until it is pumped dry. Pump out holding tank.
8. 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 batteries, and to the engine seawater cooling system.
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. It helps to stand mattresses and cushions on edge.
11. Defrost and dry out the refrigerator and freezer; leave the doors propped open. Leave all drawers and locker doors open.
12. Clean all deck hardware; then coat the hardware with rust inhibitor.

13. Lubricate the steering mechanism and throttle control linkage.
14. Close all seacocks.
15. Provide as much heat and ventilation for interior spaces as is safe and practical.

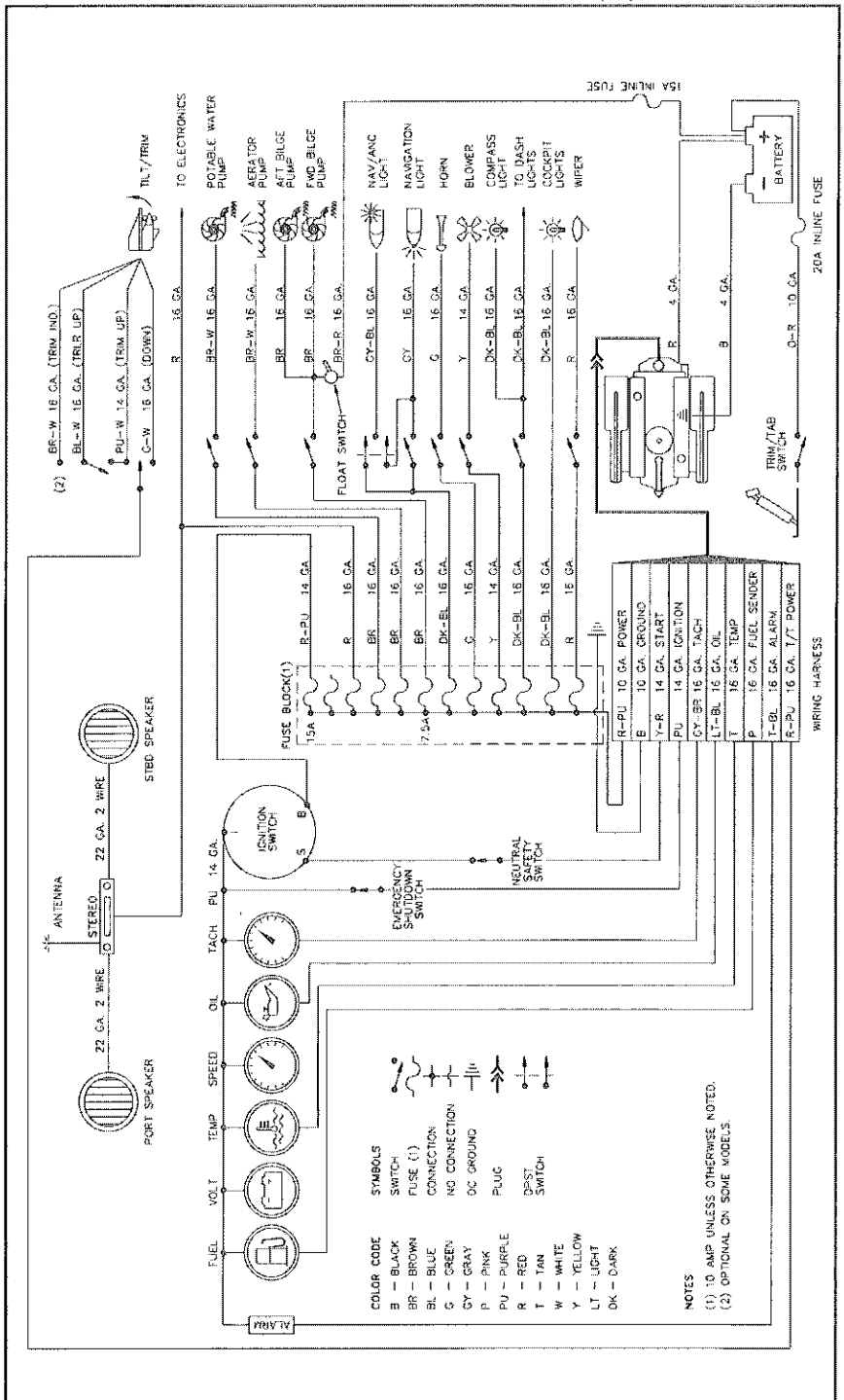
We hope these preventive measures will help make getting ready again in the spring easier. Should you have any questions, your Bayliner dealer is anxious to provide assistance.

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 the boat to the lowest point of the boat.
FATHOM:	A measurement of six feet, generally used to measure water depth.
FREEBOARD:	Vertical distance from the deck to the waterline.
GUNWALE:	The point where the 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; one nautical mile is 6,076 ft.; a land mile is 5,280 ft.
LEE:	Opposite side from which the wind blows.
MAYDAY:	International spoken distress signal for radiotelephone communications.
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 lifelines).
STARBOARD:	To the right side of the boat.
STERN:	The rear of the boat.
STERN DRIVE:	Inboard/outboard propulsion unit.
TRANSOM:	The vertical part of the stern.
WINDWARD:	The direction from which the wind is blowing.

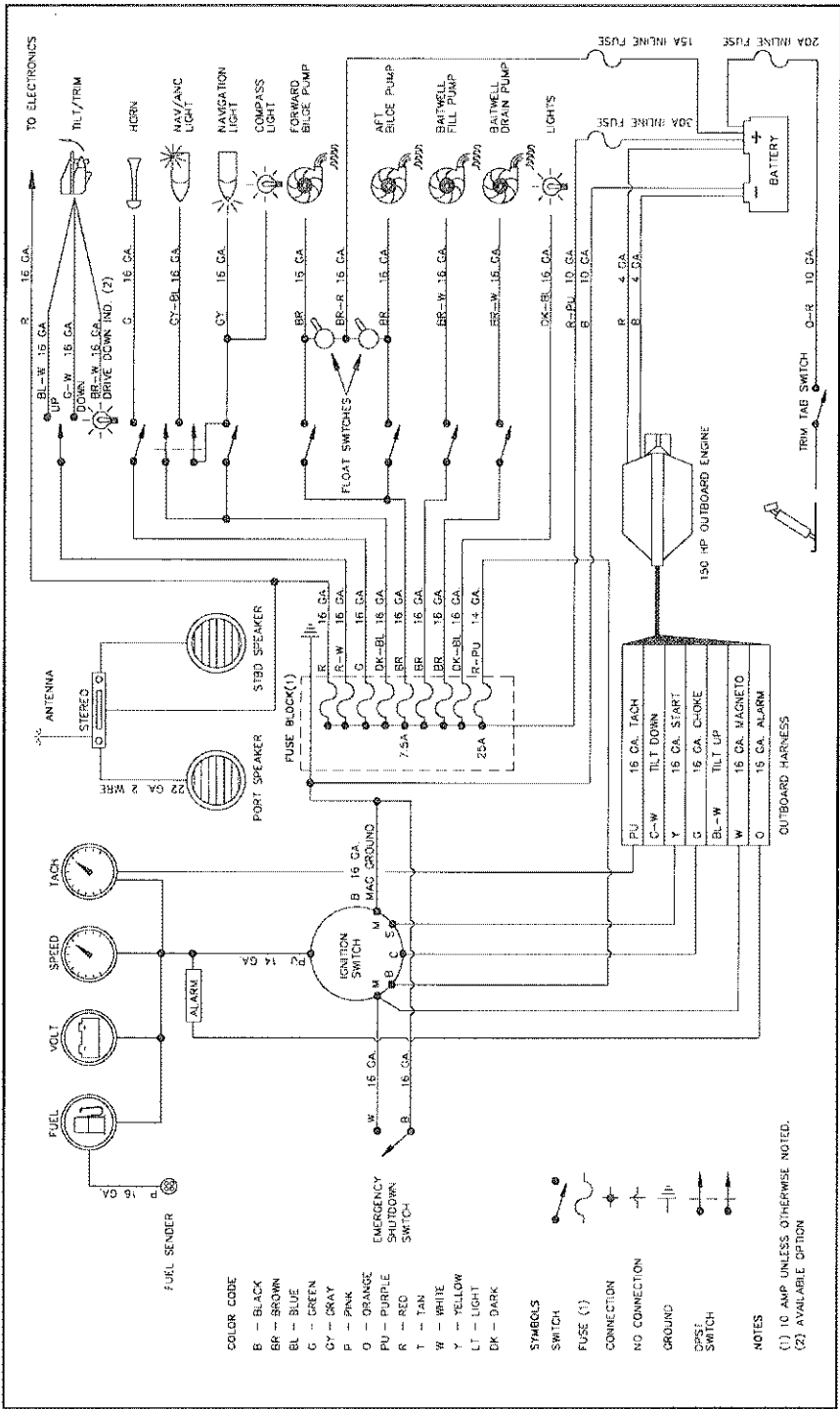
WIRING DIAGRAM

Trophy 2159 Cuddy and
Trophy 2459 Offshore



WIRING DIAGRAM

Trophy 2302 (single-engine) Cuddy



NOTICE

Fuse protection for single bilge blower applications has been changed since this manual was printed. An **ATC 5-amp fuse** is used in place of the 10-amp fuse now shown. This change affects wiring diagrams for the following models:

Ciera 2255

Ciera 2655

Trophy 2159

Ciera 2556

Ciera 2755

Trophy 2459

USM P/N 35653

BAYLINER MARINE CORPORATION, P.O. BOX 24467, SEATTLE, WA 98124

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