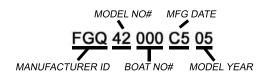


Operation, Maintenance & Warranty Manual

Fountain Express Cruisers 2005-06

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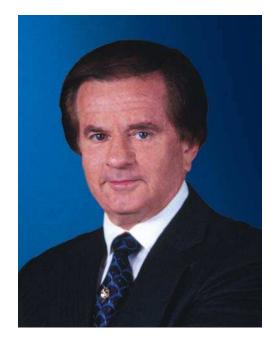
Model Name:
Serial Number:
Date of Purchase:
Dealership:
Record Your Engine & Drive Models Information Here
Engine Model:
Drive Model:
Engine Serial Number(s):
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Drive Serial Number(s):





FOUNTAINMERCURY

Thank you for your purchase of what I believe to be the finest high-performance express cruiser available. Our racing heritage, and ongoing domination of both the offshore racing circuits and the world speed record courses make Fountain Powerboats the ultimate choice for the performance boater. Having captured Boating Magazine's Boat of the Year Award, our 48EC sets



the standard for performance an luxury with speeds in excess of 60 miles per hour. I take a great deal of personal pride in our boats, and I would like to personally welcome you to the growing family of Fountain Powerboat owners. This vessel has been delivered to you with confidence, and it was produced using the latest techniques and strict quality control using ISO 9001 standards.

This manual was prepared to help you understand the operation and maintenance of your vessel so that you may enjoy many hours of boating pleasure. Please read through this manual and view the owner's video prior to operating your vessel.

I invite you to visit us on the web at www.fountainpowerboats.com for parts, accessories and our award winning Fountain apparel.





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FOUNTAIN POWERBOATS EXPRESS LIMITED TRANSFERABLE WARRANTY

TERM: As used in this Agreement, the term "customer" shall be deemed to include and to mean, without limitation, "consumer" and "purchaser," as the context may require. The consequences to, and the obligations of, each of the parties hereto shall be the same regardless of which of the above terms is used.

Note: FAILURE BY THE CUSTOMER OR THE DEALER TO RETURN TO FOUNTAIN AN ORIGINAL COPY OF THE WARRANTY REGISTRATION CARD, COMPLETED AND SIGNED BY THE CUSTOMER, WITHIN THIRTY (30) DAYS FROM THE DATE OF PURCHASE BY THE CUSTOMER WILL VOID THIS WARRANTY. FOUNTAIN EXPRESSLY MAKES THIS WARRANTY CONDITIONED ON THE RETURN OF THIS CARD TO FOUNTAIN WITHIN THIRTY (30) DAYS OF PURCHASE. This warranty gives the customer specific legal rights, and the customer may have other rights. Rights varying from state to state shall be addressed by corresponding Supplemental Dealer Sales Agreements.

Fountain Powerboat Dealers are not the agents of Fountain Powerboats, Inc. NO FOUNTAIN DEALER IS AUTHORIZED TO ALTER THE TERMS OF THIS WARRANTY IN ANY MANNER, EXCEPT WITH THE WRITTEN PERMISSION OF THE PRESIDENT OF FOUNTAIN POWERBOATS, INC.. THE CUSTOMER IS ADVISED TO DEMAND A COPY OF THIS WRITTEN CONSENT BEFORE RELYING ON ANY REPRESENTATIONS OR PROMISES THAT MAY VARY THE TERMS OF THIS WARRANTY. Fountain Powerboats, Inc. does not authorize its dealers or any other persons to assume for the company any liability in connection with this LIMITED EXPRESS WARRANTY or any liability or expense incurred in the repairing or replacing of its products other than those expressly authorized herein.

Fountain Powerboats warrants to the **ORIGINAL RETAIL CUSTOMER** each new boat to be free from defects in materials and workmanship, provided that the customer has maintained the same under normal, non-commercial use and stored same in accordance with Fountain Powerboats' recommendations.

Except as expressly indicated below, this warranty is for a term of one (1) year beginning with the delivery of the boat to the original retail customer. With respect to the structural portions of the hull and deck only, this warranty is for a term of six (6) years beginning with the delivery of the boat to the original retail customer. During this period, warranty repairs shall be made at

the selling dealer's store or service center or, at Fountain's discretion, at the Fountain factory on Whichard's Beach Road in Washington, North Carolina. This warranty may be transferred to a second or subsequent owner of the boat provided that the second or subsequent owner notifies Fountain Powerboats, Inc. in writing within thirty (30) days of the change of ownership, by way of a completed warranty registration card. A transferred warranty shall be limited in duration to the length of the original warranty period, running from the date of delivery to the original retail customer, and the second or subsequent owners shall be required to use the boat in a non-commercial manner, and maintain and store the boat in accordance with Fountain Powerboats' recommendations.

Transportation charges, if any, for Fountain Powerboats boats, to and from the dealer's service center, or to and from the Fountain manufacturing plant on Whichard's Beach Road in Washington, North Carolina, shall be the sole responsibility of the customer. All repairs under the terms of this warranty are subject to written authorization by factory-trained personnel whose decision shall be final.

The sales personnel or other employees of the selling Fountain dealer are not authorized to make warranties concerning Fountain boats. No other warranties are given beyond those set forth herein.

Please Note: In the event that a boat is on loan, has been leased, rented or continually used as a demo, the warranty will begin as soon as one of these scenarios occurs. In the event that Fountain discovers that this has occurred, the warranty will begin when Fountain, in its sole discretion, has determined that the use began.

The warranty provided herein is in lieu of all other express warranties and may not be extended or modified by anyone. Any implied warranties, including any implied warranties of merchantability or fitness for a particular purpose, are limited in duration to the period of the express warranty. Repair and/or replacement is the exclusive remedy for all claims of breach of warranty, both express and implied. Correction of non-conformities in the manner and for the period of time as set forth above shall constitute fulfillment of all Fountain Powerboats liability to the customer whether based on contract, negligence or otherwise. Fountain shall not be liable for incidental, consequential or special damages, such as but not limited to, damage to or loss of other property, equipment, loss of profits, cost of purchased or replacement goods, or claims of persons against the original customer. The remedies of the customer set forth herein are exclusive and the liability of Fountain shall not, except as expressly provided herein, exceed the price of the goods upon which such liability is based.

This warranty does not apply to the following:

- 1) Engines, out-drives, transmission and propellers or any other components of the powertrain or propulsion system. Custom-built Fountain engines are also excluded from the warranty.
- 2) Equipment and accessories not manufactured by Fountain.
- 3) Cracking, crazing, discoloration or blistering of gel coat finishes, powder coat finishes or paint finishes.
- 4) Carpet
- 5) Upholstery
- 6) Canvas
- 7) Windshield breakage, cracking or crazing.
- 8) Installation of engines by persons other than Fountain.
- 9) Costs for haul-out, launch, lift charges, towing, travel time charges, storage charges, dockage, insurance costs, and inconvenience for loss of time or income, etc.
- 10) The achievement of any particular performance or fuel consumption.
- 11) The cost of removing or replacing defective parts.

The following voids Fountain's warranty:

- 1) Subjecting the boat to accident, misuse, abuse or negligence.
- 2) Use of the boat for racing or engaging in a contest of speed or endurance of any type or modification of the boat in any way other than upon express instruction by Fountain.
- 3) Failure to perform periodic maintenance in accordance with Fountain recommendations.
- 4) Damage caused by improper mating of the boat to the trailer. The entire hull must be supported, which includes bunks that contour to support the step hull on the entire running surface, especially directly under the transom.

As an industry leader in research and development, Fountain Powerboats, Inc. reserves the right to change specifications, features and prices of its products without notification.

Warranty terms: Fountain's obligations under this express warranty and all other implied warranties are limited solely to the repair and/or replacement of any parts due to defective material or workmanship. The repair and/or replacement work is to be done by an authorized Fountain dealer or by Fountain within a reasonable time after the boat is delivered for repair. On the day of sale, the customer and selling Fountain dealer must complete and sign the warranty registration card, which is included with each boat. The selling dealer must return the warranty registration card to Fountain

Powerboats within thirty (30) days of the date of sale. However, if the dealer fails to return the warranty registration card to Fountain within the time period prescribed above, the customer's sole means of recovery shall be against the Dealer.

The customer must bring the Fountain boat to the authorized servicing Fountain dealer for such repair. No transportation charges will be paid by Fountain to transport the boat to a dealer or the Fountain factory for repair. Fountain is not responsible for engine removal and de-rigging. The customer must maintain the boat in accordance with commonly accepted practice and Fountain recommendations. Fountain boats are intended primarily for normal recreational and leisure time purposes and have not been designed or manufactured for heavy, commercial use. Therefore, Fountain is not liable for any consequential economic or physical damage resulting from any breach of any written or implied warranty.

Procedures for warranty repairs and replacements:

- 1. Upon receipt of the express limited transferable warranty card, a Fountain representative will be contacting you to determine where your boat shall be serviced, should the need arise.
- 2. You will then be assigned an authorized servicing center to perform your warranty work.
- Should you wish or need to take your Fountain boat to a different authorized servicing center for warranty work, please contact the Fountain Customer Service by the methods described below.
- 4. The Fountain boat must be returned to the authorized servicing dealer who has the primary responsibility to perform warranty repairs. In the event the servicing dealer has ceased to do business, or you are traveling or have moved to a different locale, work under the warranty may be performed by any authorized Fountain dealer provided you have pre-authorization from the factory. Except in the specific instances just stated, your warranty work should be done by the authorized servicing Fountain dealer. ANY AND ALL SERVICE QUESTIONS AND/OR REQUESTS MUST BE MADE BY PHONE TO 252-975-2000 OR 252-975-1132 OR BY MAIL TO FOUNTAIN'S PROPER MAILING ADDRESS AS FOLLOWS:

Fountain Powerboats, Inc.
Attention: Customer Service
P.O. Box 457
Washington, NC 27889

5. The authorized servicing Fountain dealer will examine the boat to determine if, in its opinion, a warrantable defect exists. The servicing Fountain dealer shall then report to Fountain whether a warrantable defect appears to exist. Fountain, at its option and sole discretion, will repair or authorize repair and/or replacement of all parts that are found to be defective. For repairs performed other than at the Fountain factory in Washington, North Carolina, an authorization form will have to be issued prior to any work performed. Prior written authorization from Fountain is required. You will be asked to sign a warranty form to assure Fountain that the warranty work has actually been performed to your satisfaction.

Limitation on implied warranties:

ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS EXPRESS WRITTEN LIMITED WARRANTY AND, LIKE THE EXPRESS WRITTEN WARRANTY, ARE LIMITED TO REPAIR AND/OR REPLACEMENT AS THE SOLE MEANS OF RECOVERY IN THE CASE OF BREACH.

Exclusion or limitation of damages:

Fountain will not be liable (a) for personal injury or property damage except personal injury or property damage caused by Fountain's negligence; (b) FOR ANY CONSEQUENTIAL ECONOMIC DAMAGES, DAMAGES TO PROPERTY, DAMAGES FOR LOSS OF USE, LOSS OF TIME, LOSS OF PROFITS, OR INCOME, OR ANY OTHER INCIDENTAL DAMAGES, OR FOR ANY DAMAGES REGARDLESS OF THEIR NATURE CAUSED BY THE CUSTOMER'S AND OR DEALER'S FAILURE TO FULFILL THEIR RESPONSIBILITIES AS SET FORTH HEREIN.

IT IS EXPRESSLY UNDERSTOOD AND AGREED TO BY FOUNTAIN, THE SELLING DEALER AND THE CUSTOMER, THAT ANY DISPUTE ARISING UNDER THE TERMS OF THIS WARRANTY WILL BE GOVERNED BY THE APPLICABLE LAWS OF THE STATE OF NORTH CAROLINA AND, EXCEPT WHERE SPECIFICALLY PROHIBITED OR LIMITED BY THE LAWS OF A PARTICULAR STATE, THAT FOR ANY DISPUTE ARISING UNDER THIS WARRANTY, THE PROPER FORUM WILL BE THE COURTS OF BEAUFORT COUNTY, NORTH CAROLINA OR, WHERE APPROPRIATE, THE FEDERAL DISTRICT COURT FOR THE EASTERN DISTRICT OF NORTH CAROLINA.

Note: Some states do not allow limitations as to the court in which a dispute may be resolved, so the foregoing provision may not apply in all cases.

This limited warranty, along with the Dealer Sales Contract, constitute the entire agreement and understanding between the customer and Fountain with respect to the purchase and sale of boats. No agreement or statement not contained in these agreements shall be binding upon Fountain as warranty or otherwise, and neither this limited warranty nor the Sales Contract shall be modified or amended unless it is in writing, executed by the President of Fountain Powerboats and the customer. The foregoing terms and conditions shall prevail notwithstanding any contrary terms and conditions of any other submitted by the customer for the boats. In the event that any of the above provisions should be held void by a state's court, all other warranty provisions shall remain intact.



IMPORTANT SAFETY INSTRUCTIONS



WARNING

- 1. Read the owners manual and watch the owner's video prior to operating the boat to understand and comply with systems and safety rules.
- 2. Always check your gas gauge before leaving the dock.
- Consult your engine information packet for recommendations and specifications concerning fuels, lubrication, and boat & engine service intervals.
- 4. Do not smoke while refueling. Fuel is very flammable.
- 5. Always maintain proper safety equipment before leaving the dock, including, but not limited to an anchor, anchor line, at least one life vest per person on board, a throw cushion with a 20' rope attached, a ships bell, fire extinguisher, first aid kit, signal kit, spare oil, spare transmission fluid, and an assortment of miscellaneous tools.
- 6. Always check fluid levels and do an overall general inspection of the engine compartment prior to starting the engines.
- 7. Change the oil and filters after every 20-30 hours of operation to help prevent engine damage.

- 8. Always monitor water pressure gauges. Loss of water pressure increases engine temperature and can cause severe damage to the engine(s).
- 9. Always monitor oil pressure gauges. If the oil pressure drops, severe engine damage could occur.
- Check all bilge pumps before each outing, and before leaving your boat moored to be sure they are fully functional, both in automatic and manual modes.
- 11. Do not leave the boat unattended or uncovered for long periods of time, or leave attached to mooring buoys in foul weather. Excess rain or high winds may cause sinking. Once bilge pumps run down the battery, bilge pumps will no longer operate and the boat will sink if water continues to enter the boat.
- 12. Review the performance report for proper trimming of the boat. Tests are based on calm water operations. Rougher water requires substantially different trim as shown in the owner's video manual. Usually as the water gets rougher, the tabs will need to go down and the drives will need to go in.
- 13. Always operate the blowers for at least 5 minutes before starting the engine(s) to insure that all gas fumes are removed. Gas fumes are heavier than air, and must be forced out of the bilge area.
- 14. Check the warning buzzer for sound to insure proper working order of this warning device.
- 15. Always start the boat with the drives and tabs in the down position.
- 16. Always start the boat with the shifters in the neutral position.
- 17. Always allow the engine to idle in the neutral position, and to attain normal operating temperature before shifting gears to prevent engine and gear damage.
- 18. Do not launch the boat if the drain plug is not installed.
- 19. Always wear your safety lanyard while under way.
- 20. Never trim the outdrive(s) out past 5.5 while on plane, and never independently trim the outdrives to allow more than 2 marks of trim separa-

tion between the drives on the trim indicators.

- 21. Never trim the outdrive(s) in past 3 while on plane.
- 22. Always check forward visibility before getting on plane.
- 23. Always slow down before turning the boat.
- 24. Turning maneuvers are safer if done in calm water. Fast turns in any conditions are dangerous.
- 25. Always look to the rear before turning. It is important to know what is around you at all times.
- 26. Do not operate the boat so that it leaves the water. It may harm the passengers. It will also cause over-rev related damage to the engine and/or outdrives, as well as undue stress on the boat and it's internal components.
- 27. Always be smooth, gentle and even with the throttles.
- 28. Never operate the boat at speeds that are beyond your capability, or the capabilities of the boat.
- 29. Always check oil and fluids after use. See engine manual for fluids and fluid levels.
- 30. Passenger safety is the boat owner/operators responsibility. Stop the engines before using the transom area as a swim platform or when swimmers are present in the area.
- 31. Do not operate this boat while under the influence of alcohol or drugs. Alcohol and drugs severely reduce the ability to react, especially in several different situations at once. Alcohol and drugs lead to incorrect judgments of speed, distance and direction. Alcohol and drugs reduce vision and the ability to fully comprehend emergency situations.
- 32. Always wash and flush engine(s) after use to keep corrosion damage to a minimum especially in using the boat in salt water.
- 33. Always be sure to support the bottom of the boat, including directly under the transom, when storing and/or trailering to prevent damage to the bottom of the boat.

- 34. Review the engine owner's manual for care and maintenance of your engine(s).
- 35. **THIS IS NOT AN EXHAUSTIVE LIST**. Always use common sense when operating your boat and seek proper guidance from qualified mechanics when making repairs.

By signing this warranty card the customer acknowledges that he or she 1) has viewed the Fountain Video Owner's Manual, 2) fully understands safe boating operation and every aspect of his/her Fountain boat. The customer also verifies that he/she has reviewed the Fountain performance report with the dealer and understands the proper trim settings for tabs and drives for all speeds, in all conditions, and while turning. The customer also verifies that the dealer has fully demonstrated this boat to him/her on the water and has demonstrated all systems and proper trimming of the drives and trim tabs for all sea conditions. The customer acknowledges that he/she has been informed of all potential hazards which can occur while boating. The customer also acknowledges that this boat should not be operated if any of the following are true: a) rough water, b) he/she is under the influence of drugs or alcohol, c) in severe weather, darkness, fog or low visibility. The customer acknowledges that he/she should wear their safety lanyard and life vest at all times and never turn the boat at an unsafe speed. The customer also acknowledges that he/she has read, understands, and agrees to abide by all of the important safety information on this warranty card.

This warranty registration must be completed and received by Fountain Powerboats within 30 days of purchase. Failure to do so will result in the warranty beginning on the date of delivery to the selling dealer. By signing, customer acknowledged having read and understood Fountain's Boat Warranty.

38 Express Cruiser

LOA: 37'11" / 11.55 m Beam: 10'6" / 3.19 m

Weight, Dry: 13,500 lbs / 6179 kgs Fuel Capacity: 270 gallons / 1021 L Cabin Headroom: 6'4" / 1.98 m Draft with drives down: 38" / .95m

Deadrise: 22 degrees Sleeping Capacity: 4

Bridge clearance with arch 9' / 2.73m

Twin 496 Mag HO w/ Bravo One drive 60+ mph or

Twin 315 HP Yanmar Diesel w/ Bravo One drive 49 mph

Standard Equipment

Aft cabin w/twin bed & comforter

Anchor, custom polished stainless steel, integrated, w/windlass

Anchor locker

Automatic Fire Suppression System

Batteries, (2) w/switches, custom heavy duty mounting brackets and

battery charger (30 AMP) Bilge Pumps (2) 1200 GPH

Bilge Blowers (2)

Bimini, w/front, side and aft enclosure

Bolster, Electric side-by-side at helm

Cabin Interior w/Dark Cherry Wood Trim

Cabin lighting

Cabin sofa

Carbon monoxide detector

Cleats, heavy duty 8"

Cockpit carpet

Cockpit table (removable)

Compass, electronic

Cooler storage area

Courtesy lights in cockpit

Cup holders in cockpit

Custom Fountain logo in red w/gold bolt

Dash w/Full instrumentation, depth gauge & Electronics area

Dockside pressure water hook-up

Engine hatch, motorized

Engine room lights

Fender storage

Forward cabin w/V-berth w/comforter & pillows, dresser and hanging closet

Fresh water, 50 gallon w/hot water heater

Fuel tanks, heavy duty, baffled, 3/16" thick aluminum; foamed, glassed and bolted in position w/stainless steel pickups, 270 gallon total capacity

Galley w/sink, microwave & refrigerator/freezer

Hanging locker, cedar lined

Head, enclosed fiberglass, vacu-flush, stand up w/shower

Horns, electric

Hot water heater, 6 gallons

Navigation lights

Positive lift hull, twin step, Generation III

Radar arch w/cockpit lighting

Reading lights in forward and aft cabins

Shore power

Steering, heavy duty hydraulic w/dual pumps

Stereo w/CD and remote

Swim platform w/transom shower, & swim ladder

TV/VCR combination

Table in cabin, removable

Throttle w/drive trim on handle

Trim tab indicators, mechanical

Trim tabs, heavy duty hydraulic, offshore hi-performance

Wet bar in cockpit w/Storage, pressurized sink & ice maker

Windlass

Windshield, wrap-around

48 Express Cruiser

LOA: 48'4" / 14.72 m Beam: 12' / 3.66 m

Weight, Dry: 22,000 lbs / 9988 kgs Fuel Capacity: 457 gallons / 1729 L

Draft with drives down: 46"

Deadrise: 22 degrees Cabin Headroom: 6' 5" Sleeping Capacity: 4

Fresh Water Capacity: 80 gal Holding Tank Capacity: 36 gal

Recommended Power: Triple 440 HP Yanmar Diesel with Twin Disc

Surface Drives - 60+ mph

Standard Equipment

A/C & heat w/ shore power & battery charger Aft cabin w/queen berth, comforter and closet

Air Vents, Integrated

Anchor locker

Anchor, custom polished stainless steel, integrated, w/windlass

Arch, Radar (forward facing)

Automatic fire suppression system

Batteries (4) w/switches

Battery Charger, 30 Amp

Battery boxes (4) w/custom heavy duty brackets

Bilge blowers (2)

Bilge pumps (2), 2000 GPH each

Bilge pumps, (2) water puppy style to totally dry bilge, 750 GPH each

Bimini, w/front, side and aft enclosure

Blower, exhaust in head, (2)

Bolster, electric side by side at helm

Cabin lighting

Cabin sofa, wrap around

Carbon Monoxide detector

Canvas enclosure, full rear (requires fuel vapor detector)

Cigarette lighter/Chart light

Cleats, (8) SS and (2) 8" pop up SS

Cockpit carpet

Cockpit table, (removable)

Compass, electronic

Cooler storage area under wet bar

Courtesy lights in cockpit

Cup holders in cockpit

Dash w/Full instrumentation, depth gauge & Electronics area

Depth gauge

Dockside pressure water hook-up

Engine hatch, motorized, hydraulic

Engine mounts, rubber isolated

Engine room lights

Fender storage

Forward cabin w/ king berth, comforter, pillows, w/dresser & cedar lined hanging closet

Fresh water, 72 gallons

Fuel tanks, (3) heavy duty, baffled, 3/16" thick aluminum; foamed, glassed and bolted in position w/stainless steel pickups, 457 gallons total capacity

Fuel vapor detector

Galley sink

Gauges, Livorsi & GPS Speedometer

Generator 6.5 KW

Generator, diesel (7.6 KW) for diesel boats only

Head, enclosed fiberglass, vacu-flush, stand up shower

Holding tank, 36 gallons

Horns, electric

Hour meter

Ice maker in wet bar (cockpit)

Kiekhaefer throttles w/drive trim on throttles

Microwave oven

Navigation lights

Non-skid walk around

Positive lift hull, twin step generation 3

Propellers, (3) 5 or 6 blade stainless steel

Radar arch w/cockpit lighting

Rear lounge seating

Refrigerator w/freezer compartment

Rub rail w/ stainless steel insert

Seating, 12-14 in cockpit

Shore power, (2) 50 Amp

Steering, heavy duty hydraulic w/dual pumps

Stereo w/CD and remote (3)

Stovetop w/two burners

Sun deck, expandable by raising power rear seating

Swim ladder

Swim platform

Table in cabin, removable

TV, plasma w/ DVD player (2)

Transom shower, hot/cold

Trim tabs, heavy duty

Trim indicators, mechanical, and trim switches on dash for both drives and tabs

Vac-u-flush head, (2) w/dockside pumpout - (2) 18 gallon holding tanks

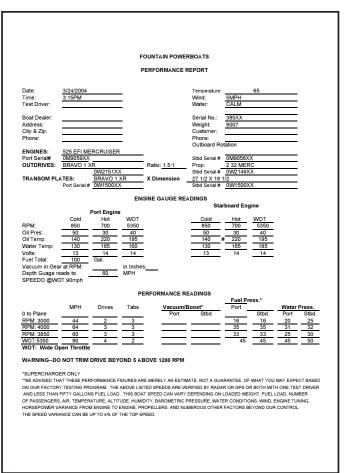
Water heaters, (2) 11 gallon

Wet bar in cockpit w/storage, pressurized sink and ice maker Windshield, wraparound

Performance Report:

Each Fountain Powerboat is water tested prior to delivery. This test information is recorded on the Performance Report, and this report is provided with every new boat purchase.

Use your performance report to see the optimum performance obtained on your boat at the factory, and as a reference for initial trim settings at various engine RPM and boat speeds.



BE ADVISED THAT THESE PERFORMANCE FIGURES ARE MERELY AN ESTIMATE, NOT A GUARANTEE, OF WHAT YOU MAY EXPECT BASED ON OUR FACTORY TESTING PROGRAM. THE ABOVE LISTED SPEEDS ARE VERIFIED BY RADAR OR GPS OR BOTH WITH ONE TEST DRIVER AND LESS THAN FIFTY GALLONS FUEL LOAD. THIS BOAT SPEED CAN VARY DEPENDING ON LOADED WEIGHT, FUEL LOAD, NUMBER OF PASSENGERS, AIR, TEMPERATURE, ALTITUDE, HUMIDITY, BAROMETRIC PRESSURE, WATER CONDITIONS, WIND, ENGINE TUNING, HORSEPOWER VARIANCE FROM ENGINE TO ENGINE, PROPELLERS, AND NUMEROUS OTHER FACTORS BEYOND OUR CONTROL. THE SPEED VARIANCE CAN BE UP TO 4% OF THE TOP SPEED.

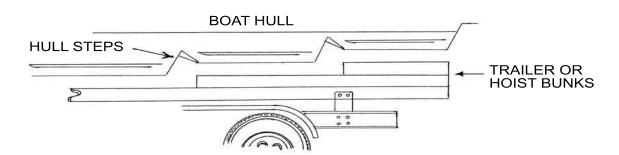
Hull Support

Note: When setting up boat trailer or hoist bunks, it is recommended to support hull steps as shown.

Hull support at the stern is essential due to the weight of the engine(s) and running gear.

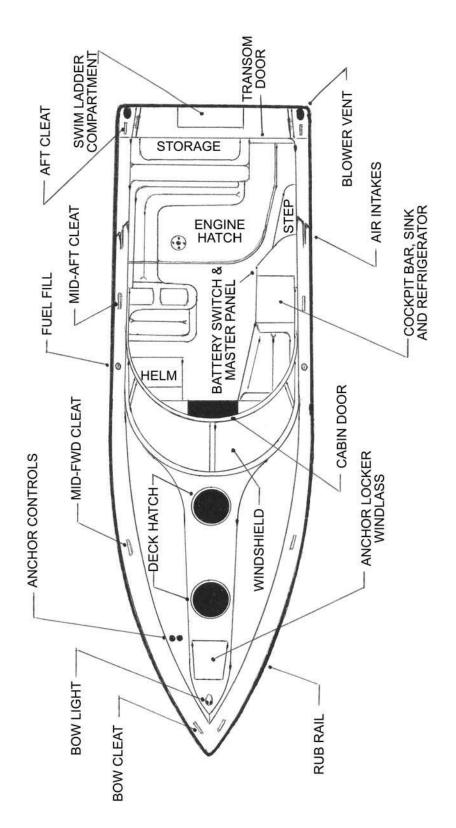


Incorrect hull support can have serious negative effects on the running surface of the boat by introducing either hook or rocker; damage to the strakes, steps or pad areas; or in extreme instances can cause severe structural damage to the hull both externally and internally.

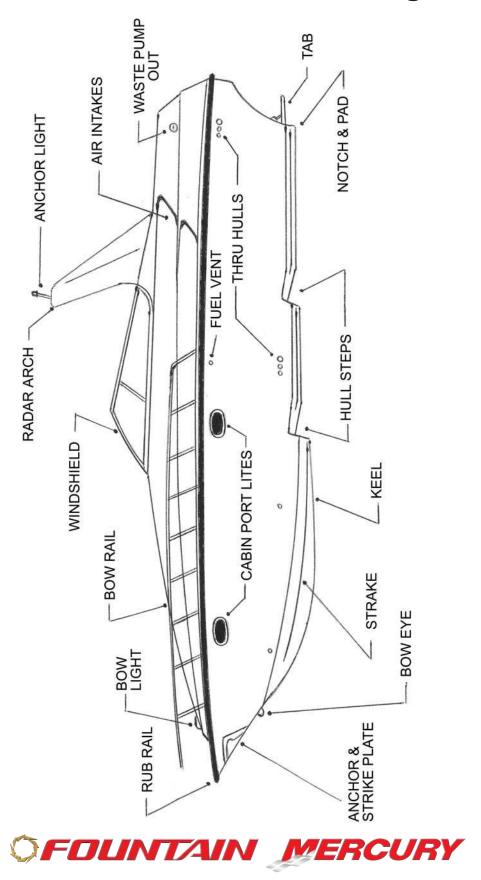


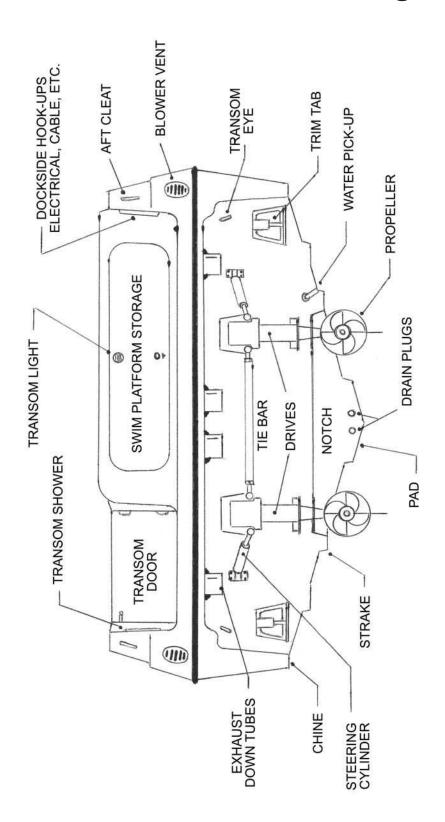
NOTE: WHEN SETTING UPBOAT TRAILER OR HOIST BUNKS IT IS RECOMMENDED TO SUPPORT HULL STEPS AS SHOWN.

DUE TO ENGINE AND RUNNING GEAR WEIGHT AT THE STERN HULL SUPPORT WILL ELIMINATE STRESS ON THE BOAT HULL.

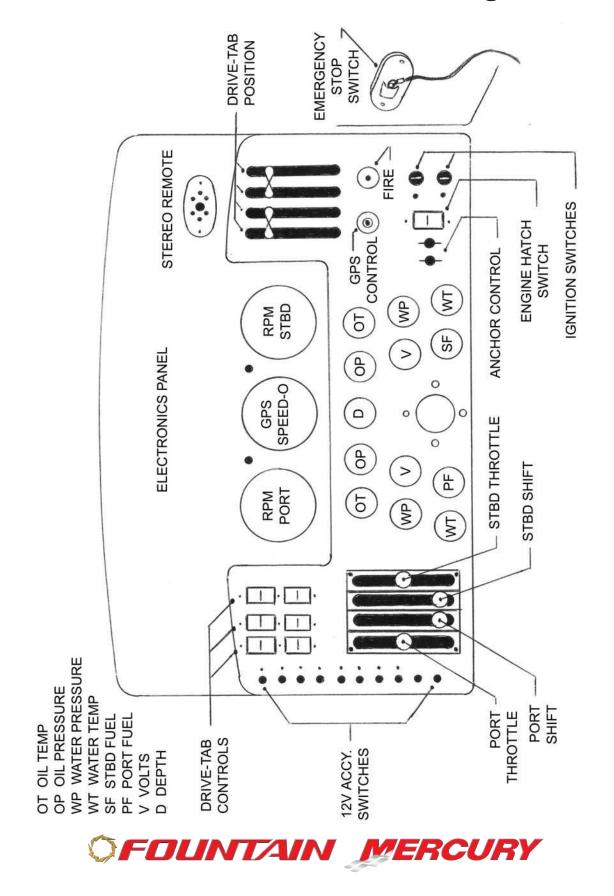


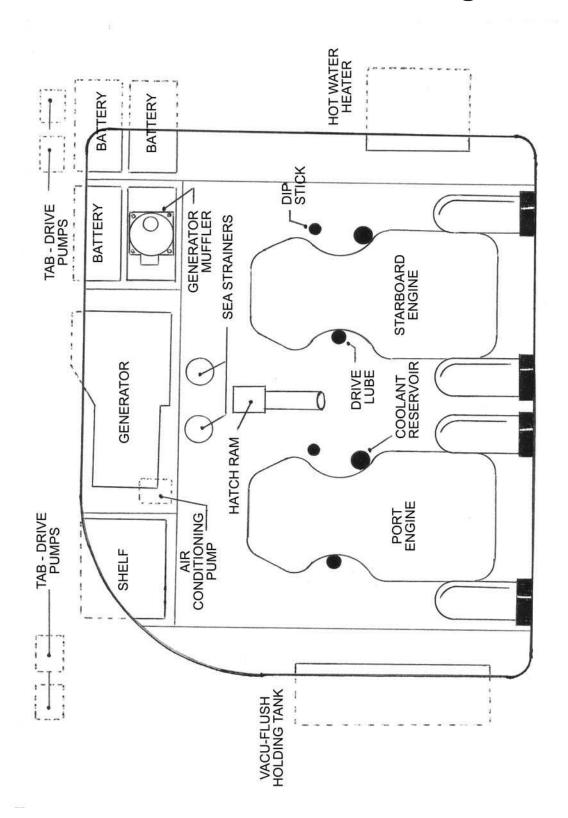




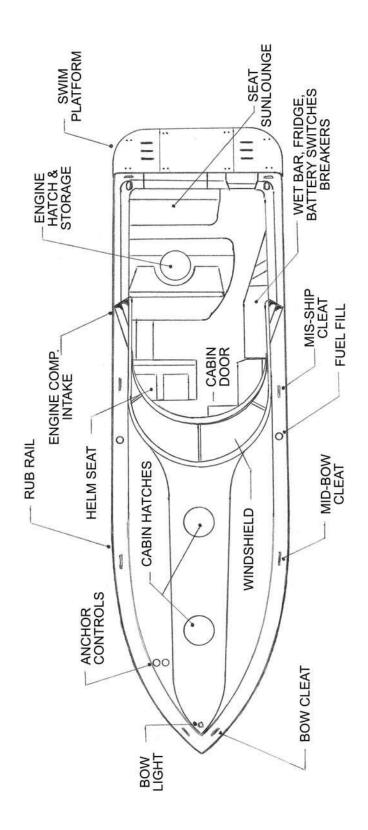




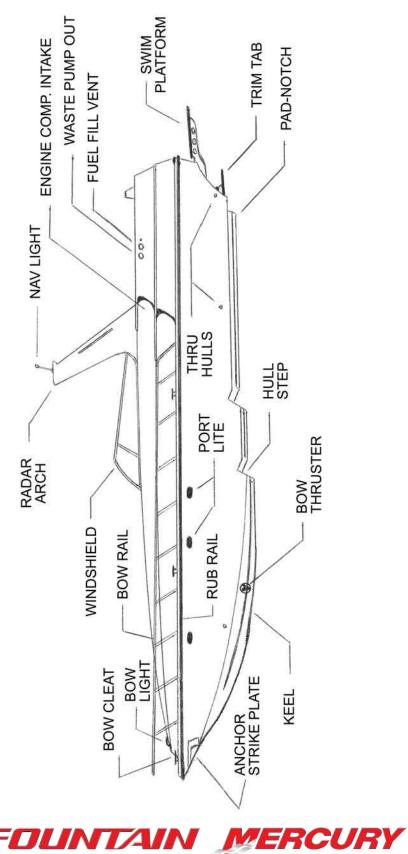


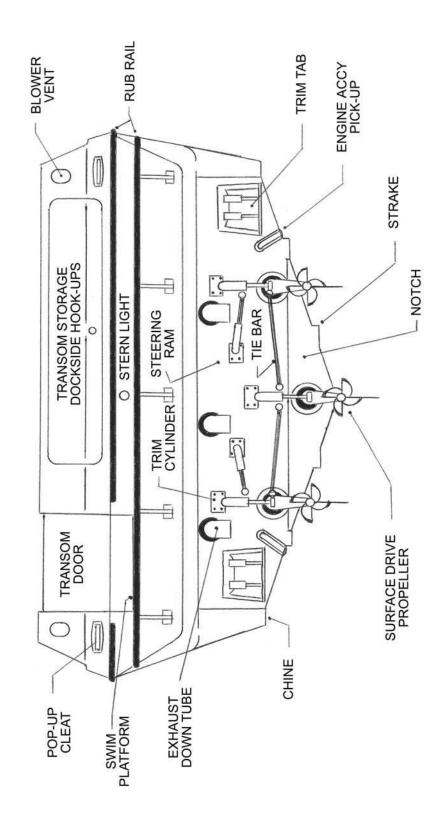




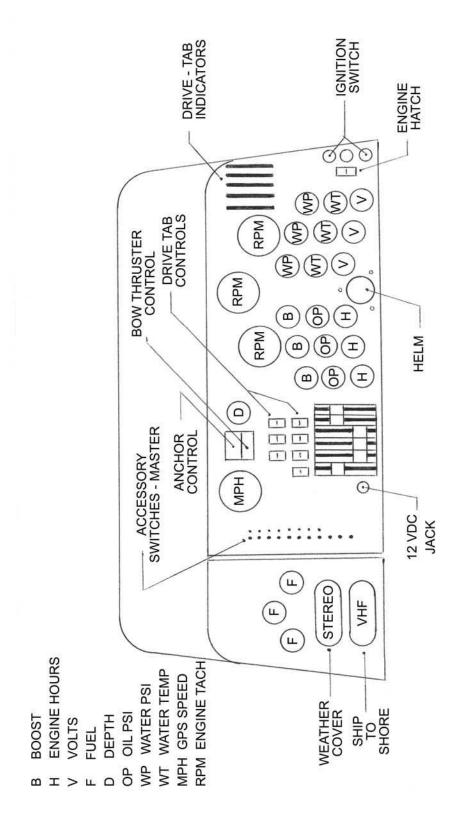




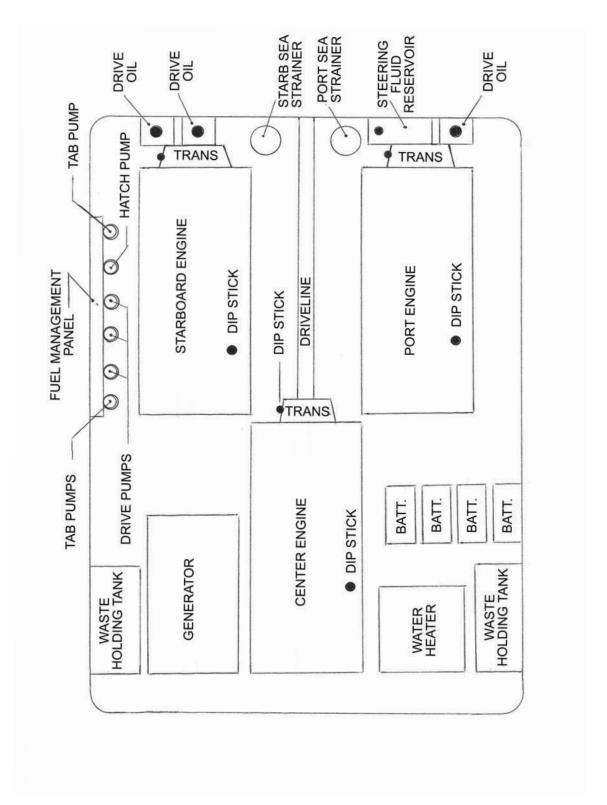














Equipment, Tools, Safety Equipment and Spare Items

These items are recommended to carry on your vessel for maintenance or minor trouble. Safety equipment for some items is required by law.

Tool Chest

Screwdriver (Phillips & Flat blade)

Pliers (Regular, Channel Loc, Vice Grip)

Wrench Set (Open End, Box, Allen, Adjustable, Propeller Wrench)

Socket Set (Metric & Standard)

Hammer

Jumper Cables (Standard Jumper plug cables provided with vessel)

Electrical Tape

Assorted Fasteners (Cable Ties, Electrical Connectors, Crimping tool,

Screws, Nuts, Etc.)

Grease Gun and Oils

Safety Equipment

Fire Extinguishers (Type ABC)

Personal Flotation Devices (Life jackets, 1 per person)

Throwable Flotation Device

Signaling Device (Ships Bell or Horn)

VHF Radio

First Aid Kit

Flashlight and Batteries

Anchor and Line

Dock Lines

Appropriate Charts for your Cruising Area

Miscellaneous Items

Spare Propellers (Thrust washers, Prop nuts and Lock washers)

Extra Engine Belts

Engine Oil (Recommended mfg weights)

Fuel and Oil Filters

Replacement Light Bulbs

Extra Spark Plugs

Assorted Fuses

We recommend that you strongly consider membership in a national towing service. This can dramatically reduce your costs of any towing service if it is ever needed on your vessel.

Pre-Boating Checks

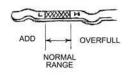
See Quick Reference Drawings for locating equipment and accessories

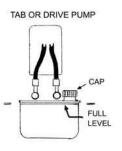
Before launching vessel, perform a visual inspection. Walk around, check hull and deck for any damage from trailer or docking, from the road or from your last trip. Check for damaged propellers and oil leaks from lower units, steering hoses, steering rams and trim tabs. Do not launch or run the vessel until questionable damage is repaired.

If boating at night, check navigation lights for proper operation.

- Open engine hatch and visually check bilge floor for leaking fluids, oil, and coolant or steering fluid. Find the source of any leak and repair as necessary.
- Check drive and tab pump fluid levels, fill as necessary.
- Check engine fluid levels (crankcase oil level, coolant if the engine is closed-water cooled, power steering fluid), and fill as necessary.
- Check for bad hoses or belts and replace as necessary.
- Check blower and bilge pump operation.
- Check below water line. Check hoses at pickups and thru hulls for looseness or damage. Replace, repair or tighten as needed.
- Check below waterline, hose pick-ups and through-hulls for looseness or damage. Replace, repair or tighten as necessary.





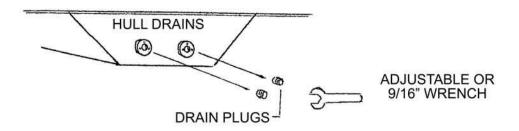


Check water tanks (fill for trip). Empty holding tank for trip.

Pre-Boating Checks



Make sure hull drain plug(s) are installed and tight, (located at the bottom of boat hull under the notch at the keel). FAILURE TO PROPERLY INSTALL THE DRAIN PLUG(S) MAY RESULT IN THE BOAT SINKING.



Note: 48 Express Cruisers are not equipped with removable drain plugs.

Now, you can safely launch your vessel and tie it to the dock. Perform the following in-water checks prior to departure:

Engine hatch open, check for any water leaks. Locate source of leak, repair or have repaired as necessary. (Note: bilge pumps will handle some water automatically or manually.)

Pre-Boating Checks



Fuel System

Everyone who owns or operates a boat must practice fire safety. Each year, boat fires and explosions injure hundreds of individuals and cause millions of dollars in property damage. Many of these accidents can be prevented.

Be alert to your boat's fuel system. Over time, fuel fittings and hoses wear out. Inspect these fittings and hoses regularly, especially near the engine where heat and vibration can accelerate deterioration.

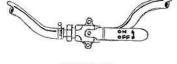
Schedule regular engine and exhaust system maintenance inspections by experienced and trained technicians.
Inspect fuel systems annually, particularly hoses, connections and tank surfaces. Use only USCG-approved fuel hoses.
Before fueling, shut down engines and auxiliary equipment and
all electrical equipment. Also, close hatches and doors on board Do not allow equipment or gear to contact fuel system compo- nents. Monitor side storage areas where fill and vent hoses are
located.
Do not store portable fuel tanks in enclosed areas, including engine room compartment (even though it may be "ventilated").
Ensure that all blowers and hoses are operational and intact. Verify good airflow at the vent on the boat.
Take a boating safety course and learn the correct type and use
of a fire extinguisher aboard the boat. Have the appropriate fire extinguisher on board at all times.
Make sure your passengers know the location of all fire extin-
UNISHELS OH DOMIN

Fueling

Fueling Procedure as Follows:

Refer to the owner's manual for your engines to determine the appropriate fuel grade for use in your boat.

✓ Close all fuel valves and shut off battery switches before fueling.



FUEL VALVE

- Do not smoke.
- Fill fuel tanks desired through proper fills. Tanks are as full as possible if fuel comes out of the vents. (Note, hose off boat of spilled fuel, and let the boat air out as necessary to eliminate any fuel vapors.)
- ✓ Open desired valve(s) for tank(s) you wish to run. Check bilge by smell for leaks or fumes. Turn off valve(s) if any leaks are present, repair or have repaired immediately. See engine compartment reference drawing for location.
- ✓ Operate the bilge blowers for at least 4 minutes before starting your inboard or sterndrive engine.



BE SURE TO CONFIRM DIESEL OR GASOLINE PRIOR TO FILLING YOUR BOAT WITH FUEL. CROSS-CONTAMINATION OF GASOLINE OR DIESEL FUEL CAN DAMAGE YOUR ENGINE, AND MAY VOID YOUR WARRANTY

Fueling



Warning: Fuel is a dangerous explosion and fire hazard. No smoking or sparks during fueling operations.



Warning: Do not start engine(s); turn on batteries, or electrical devices if fuel leaks or fumes are present.

HULL STEP TECHNOLOGY HAS CHANGED THE WAY WE NEED TO DRIVE!

WHILE SMOOTH OPERATION HAS ALWAYS BEEN THE KEY TO SAFE HIGH SPEED OPERATION, BEING SMOOTH AND USING COMMON SENSE IS EVEN MORE CRITICAL WITH TODAY'S FASTER, MORE TECHNOLOGICALLY ADVANCED HULL DESIGNS.

THE NEW TECHNOLOGY HAS ALLOWED LARGER, LONGER, HEAVIER BOATS TO TRAVEL AT MUCH FASTER SPEEDS, WITH STANDARD HORSEPOWER. THE SIMPLE FACT IS THAT THINGS HAPPEN MUCH FASTER AT HIGHER RATES OF SPEED, AND LARGER BOATS SIMPLY CARRY MORE ENERGY ONCE IN MOTION.

INCORRECT TRIM SETTINGS OR IRRATIC TURNING MANEUVERS, WHILE STILL DANGEROUS AT SLOW SPEEDS, CAN BE DISASTROUS AT HIGH SPEEDS.

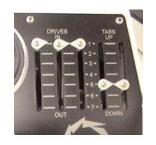
AT HIGHER RATES OF SPEED, THERE IS LITTLE OR NO WARNING BEFORE THE BOAT REACTS TO RAPID TURNS OR INCORRECT AND/OR ABRUPT TRIM CHANGES.

COMMON SENSE IS YOUR BEST DEFENSE!

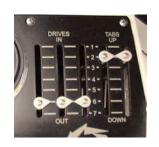
NONE OF US WOULD TAKE A NEW CORVETTE OUT, RUN IT UP TO 60MPH, GRAB THE WHEEL AND MAKE AN ABRUPT 180 DEGREE TURN ON THE WHEEL. THE SAME CONCEPT APPLIES TO BOATS.

KNOW YOUR LIMITATIONS, AS WELL AS THE LIMITATIONS OF THE EQUIPMENT, AND DRIVE WITHIN THEM.

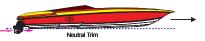
IMPORTANT TERMINOLOGY













<u>NEGATIVE TRIM</u>

TABS OR DRIVES
TRAILING EDGE
BELOW THEORETICAL
RUNNING SURFACE

NEUTRAL TRIM

TABS OR DRIVES IN-LINE WITH THE THEORETICAL RUN-NING SURFACE

POSITIVE TRIM

TABS OR DRIVES
TRAILING EDGE
ABOVE THEORETICAL
RUNNING SURFACE

TRANSOM LIFT – BOW DOWN

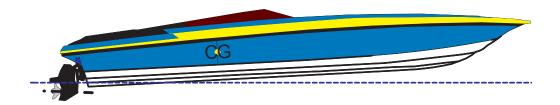
NO LIFT

BOW LIFT – TRANSOM DOWN

KEY TECHNOLOGY POINTS

- ✓ STEPS CHANGE THE ANGLE OF ATTACK, CHANGING PERCEIVED NEUTRAL TRIM SETTINGS.
- ✓ STEPS CONTROL PRESSURE.
- ✓ STEPS ALLOW LOWER DRIVE ANGLES WHICH FOCUS 100% OF THE THRUST AT PUSHING THE BOAT, RATHER THAN USING THRUST TO CHANGE THE ANGLE OF ATTACK.
- ✓ WATER PRESSURE MOVES FORWARD ALONG THE HULL, NOT BACKWARD. THINK OF STEPS AS A HORIZONTAL STRAKE.
- ✓ A NEGATIVE TRIM SETTING UPSETS THE PRESSURE ON THE HULL CREATING A POTENTIALLY UNSTABLE SITUATION AT HIGHER SPEEDS.
- ✓ THE PAD CREATES A STABLE PLATFORM FOR THE BOAT TO RIDE ON AT SPEED, AND ACTS AS A WIDE STRAKE.
- ✓ A NOTCH ALLOWS FOR HIGHER DRIVE PLACEMENT AND IMPROVED PROPELLER EFFICIENCY FOR EXCEPTIONAL HIGH AND LOW SPEED PERFORMANCE.

TRADITIONAL V-BOTTOM TECHNOLOGY



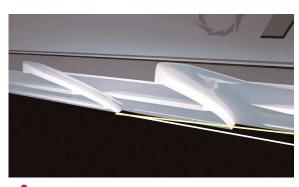
A V-BOTTOM BOAT RUNS MAXIMUM SPEEDS WITH MINIMAL HULL CONTACT. HULL CONTACT WITH WATER CREATES ADHESION.

A TRADITIONAL V-BOTTOM BOAT REQUIRES A GREAT DEAL OF POSITIVE TRIM TO AFFECT A MODERATE RELEASE OF HULL CONTACT WITH THE WATER.

POSITIVE TRIM USES HORSEPOWER TO CARRY THE BOW OF THE BOAT AT THE PROPER ANGLE OF ATTACK, AS WELL AS PROPEL IT THROUGH THE WATER.

A TRADITIONAL V-BOTTOM RUNNING AT MAXIMUM SPEEDS HAS VERY LITTLE HULL CONTACT FORWARD OF THE BALANCE POINT, THEREFORE IN ORDER TO TURN THE BOAT, IT MUST BE SET BACK INTO THE WATER, USUALLY BY MOVING THE TRIM INTO A NEGATIVE POSITION.

STEP-BOTTOM TECHNOLOGY



- TRADITIONAL BOTTOM KEEL LINE
- STEP BOTTOM KEEL LINE

THE "TRUE" BOTTOM OF A STEP BOTTOM BOAT IS THE IMAGINARY SURFACE CREATED BY RUNNING A LINE FROM THE FORWARD STEP TO THE TRANSOM AT THE KEEL.

STEPS EFFECTIVELY "LOWER" THE TRANSOM THEREBY CHANGING THE NATURAL ANGLE OF ATTACK.

STEP BOTTOM BOATS RUN BEST IN A NEUTRAL TRIM POSITION DUE TO THE NATURAL ANGLE OF ATTACK AND THE REDUCED SURFACE ADHESION CREATED BY THE STEPS.

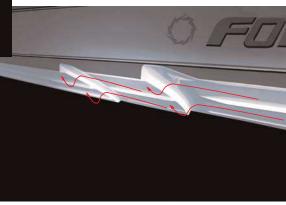


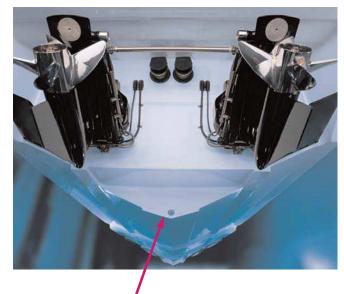
O FO

A STRAKE IS A STEP THAT RUNS
PARALLEL TO THE KEEL, WHICH
BREAKS THE SURFACE TENSION OF THE
WATER FLOWING OVER IT. AT
SUFFICENT SPEED, THIS BREAK
CHANGES THE RUNNING SURFACE
ALLOWING THE HULL TO RELEASE AND
RIDE UP TO THE LEVEL OF THE STRAKE.

A STEP ACTS AS A HORIZONTALLY POSITIONED STRAKE, WHICH BREAKS THE SURFACE TENSION OF THE WATER FLOWING OVER IT.

THIS BREAK ALLOWS THE BOAT TO MAINTAIN MINIMUM SURFACE ADHESION WHILE MAINTAINING THE PROPER ANGLE OF ATTACK AND DRIVE THRUST ANGLE.



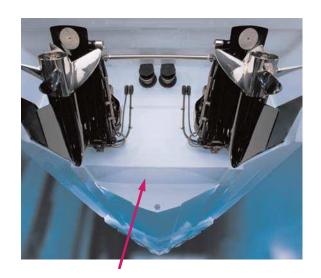


PAD KEEL

A PAD KEEL IS A WIDE STRAKE, THAT PROVIDES THE SAME BREAK IN PRESSURE AND ADHESION AS TRADITIONAL STRAKES.

THE TRADITIONAL V-BOTTOM
MAINTAINS THE SAME "HIGH" DEAD
RISE ANGLE FROM THE STRAKE TO
THE KEEL. THE PAD KEEL IS A 12"15" "PLATFORM" AT A LOWER DEAD
RISE ANGLE THAN THE HULL.

THE PAD KEEL PROVIDES THE ULTIMATE RUNNING SURFACE FOR THE KEEL AT EXTREME SPEEDS, PROVIDING INCREASED STABILITY AND A REDUCED TENDANCY TO "CHINE WALK".

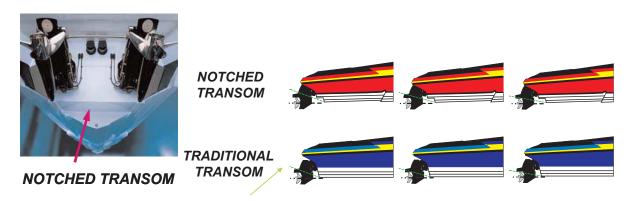


NOTCHED TRANSOM

GENERALLY SPEAKING, A HIGHER X-DIMENSION, UP TO A REASONABLE LIMIT, REPRESENTS INCREASED TOP END PERFORMANCE BY REDUCING HYDRODYNAMIC DRAG CREATED BY THE SUBMERGED GEAR CASE.

THE TRADE-OFF IS THAT WITH A
HIGHER X-DIMENSION COMES POOR
LOW SPEED PERFORMANCE CREATED
BY AIRIATION OF THE PROPELLER.

A NOTCHED TRANSOM HAS THE SAME EFFECT AS A "STAND-OFF BOX" WHICH ALLOWS A HIGHER X-DIMENSION WHILE MAINTAINING NON-AIRIATED WATER FLOW TO THE STERNDRIVES AT LOWER OPERATIONAL SPEEDS.



REPRESENTS FLOW OF WATER OVER PROPELLER

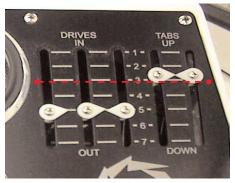
AS THE BOAT MOVES FORWARD, THE DISPLACEMENT OF THE HULL CAUSES WATER TO FLOW BACK AND UP FROM THE TRANSOM OVER THE STERNDRIVES. AS THE BOAT SPEED INCREASES, THE UPWARD ANGLE OF THIS WATER FLOW DECREASES AS THE BOAT PLANES OFF, APPROACHING ZERO DEFLECTION (NO UPWARD TRAVEL).

THE NOTCHED TRANSOM HAS INCREASED WATER FLOW OVER THE STERNDRIVES AT LOWER SPEEDS THAN THE TRADITIONAL TRANSOM, THEREBY INCREASING PROPELLER EFFICENCY, ESPECIALLY IN HIGH X-DIMENSION APPLICATIONS.

THE INCREASED EFFICENCY RESULTS IN FASTER TIME ON PLANE, LITTLE OR NO PROPELLER CAVITATION AT LOW SPEEDS, AND INCREASED THROTTLE RESPONSE.

HIGH-SPEED OPERATION

(Refer to the Performance Report)





Smooth Water

Rough Water

DRIVES @ 4 1/2 - 5 1/2 TO WOT

TABS @ 2 ½ - 2 ¾ FOR SMOOTH CONDITIONS

MORE TAB FOR ROUGHER CONDITIONS UP TO 4 ½ TYPICAL MAXIMUM

TYPICAL ROUGH WATER SET UP: TABS @ 4 & DRIVES @ 4



TURNING SET-UP:

- **✓ AVOID HIGH SPEED TURNS EXCEPT IN EMERGENCIES**
- ✓ REDUCE THROTTLES TO ALLOW FOR ACCELLERATION IF NEEDED
- ✓ REDUCE DRIVES TO NO LESS THAN NEUTRAL (TYPICALLY 3)
- ✓ LOWER TABS TO 4 4 1/2 DEPENDING ON WATER CONDITIONS
- ✓ MAINTAIN <u>MAXIMUM</u> RADIUS TURN FOR THE SITUATION. DO NOT TURN MORE SHARPLY THAN NECESSARY
- ✓ MAINTAIN SMOOTH, GRADUAL TURN NO SHARP OR ABRUPT MOVEMENTS OF THE WHEEL
- ✓ FEEL CLOSELY FOR ANY INDICATION OF LOSS OF "TRACTION" IN TURN. IMMEDIATELY REDUCE RATE OF TURN AND OR THROTTLE ACCORDINGLY.

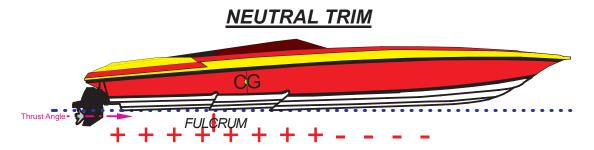
TURNING A STEP BOTTOM BOAT



"TRADITIONAL" TURNING TECHNIQUES ARE THE BASIS FOR MOST INCIDENTS INVOLVING STEP BOTTOM BOATS.

TRADITIONAL V-BOTTOMS REQUIRE GREATER POSITIVE TRIM TO ATTAIN TOP SPEEDS, AND TRADITIONALLY OPERATORS APPLY NEGATIVE TRIM TO BRING THE BOAT BACK INTO CONTACT WITH THE WATER PRIOR TO TURNING.

NEGATIVE TRIM WHILE TURNING A STEP BOTTOM BOAT CAN CAUSE SEVERE AND VIOLENT SPIN-OUTS.

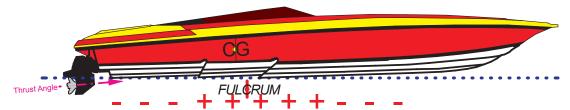


WHEN THE BOAT IS TRIMMED IN THE NEUTRAL POSITION, PRESSURE, AND THEREFORE CONTACT, IS FOCUSED AROUND THE CENTER OF GRAVITY AND TOWARD THE TRANSOM.

CONSISTANT HULL CONTACT IS MAINTAINED FROM THE FORWARD STEP TO THE TRANSOM PROVIDING A STABLE RUNNING PLATFORM.

THE TURNING FULCRUM WILL TYPICALLY BE LOCATED AROUND THE HIGHEST AREA OF HULL CONTACT PRESSURE.

NEGATIVE TRIM TRANSITION

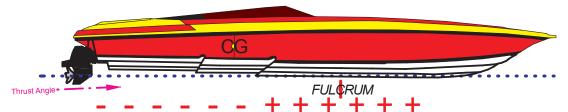


AS THE TRIM ANGLE MOVES TO THE NEGATIVE POSITION CREATING AN UPWARD THRUST ANGLE ON THE TRANSOM, HULL PRESSURE IS MOVED FROM THE TRANSOM OF THE BOAT TOWARD THE BOW.

HULL CONTACT PRESSURE BEGINS TO MOVE FORWARD OF THE CENTER OF GRAVITY (CG).

AS THE PRESSURE MOVES FORWARD WITH CONTINUED NEGATIVE TRIM, THE TURNING FULCRUM MOVES FORWARD OF THE CG.

NEGATIVE TRIM EFFECT

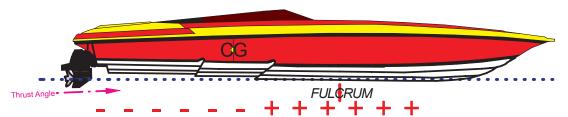


CONTINUED NEGATIVE TRIM WILL ULTIMATELY MOVE THE MAJORITY OF THE HULL CONTACT PRESSURE COMPLETELY FORWARD OF STEPS.

HULL CONTACT PRESSURE IS NOW SIGNIFICANTLY FORWARD OF THE CENTER OF GRAVITY (CG).

IN THE CASE OF A STEP BOTTOM BOAT, THE HULL OF THE BOAT AFT OF THE CG NOW HAS LITTLE OR NO CONTACT PRESSURE AND THE TURNING FULCRUM IS NOW SIGNIFICANTLY FORWARD OF THE CG.

NEGATIVE TRIM EFFECT



WITH THE FULCRUM, OR PIVOT POINT FORWARD OF THE CG, A VERY UNSTABLE SITUATION IS CREATED. THIS SITUATION CAN BECOME DISASTEROUS IN A TURN AS THE LEVERAGE CREATED BETWEEN THE TRANSOM OF THE BOAT AND THE FULCRUM IS GREATEST.

THIS IS COMBINED WITH THE DECREASED HULL PRESSURE AFT OF THE CG.

THE RESULT IS AN IMMEDIATE AND VIOLENT TENDANCY TO SPIN-OUT.



TURNS AT VARIOUS SPEEDS

- ASIDE FROM LOW SPEED OPERATION, AND PARTICULARLY IN BOATS WITH LARGER STEPS, THERE IS NO REASON TO LOWER THE DRIVES TO LESS THAN NEUTRAL WHEN TURNING.
- REMEMBER, ON A STEP BOTTOM BOAT AT SPEED, LOWERING THE DRIVES BELOW NEUTRAL CHANGES THE THRUST ANGLE IN SUCH A WAY AS TO CHANGE THE PRESSURE ON THE STERN SECTION OF THE BOAT, CAUSING A LOSS OF ADHESION, AND CREATING AN UNSTABLE CONDITION THAT IS EXAGGERATED DRAMATICALLY WHEN TURNING.



SUMMARY

TRIM TO MAINTAIN DIRECT LINE OF THRUST (NEUTRAL AS MINIMUM SETTING).

MAINTAIN CONTINUOUS HORIZON POSITIONING. IF YOU LOOSE THE HORIZON, YOU ARE LIKELY TRIMMED TOO HIGH.

USE COMMON SENSE & DISCRETION.

NEVER MAKE ABRUPT MANEUVERS OR TRIM CHANGES.

FEEL CLOSELY FOR ANY INDICATION OF LOSS OF "TRACTION" IN A TURN. IMMEDIATELY REDUCE RATE OF TURN AND/OR THROTTLE ACCORDINGLY.

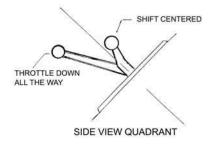
DRIVE WITHIN YOUR ABILITIES, AND WITHIN SAFETY PARAMETERS.

Leave engine hatch door open before you begin starting procedures. Familiarize yourself with the dashboard, side panel, gauges, switches and controls.

Turn on your battery switches to the desired positions. (Port, (Center), Starboard, 1-2 or All) Battery Switches are located under the cockpit sink unit. ("Both" & "Parallel" link all of the batteries in Parallel. This will utilize all of the batteries for engine starting; however, a single "bad" battery could cause the others to drain.)



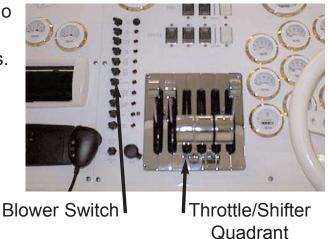
On gasoline powered boats, locate blower toggle switch on left hand side of dashboard, above the throttle/shifter quadrant. Flip on blower switch, red indicator light will illuminate. (Blowers are running) Run blowers for at least five (5) minutes before starting engines. Diesel powered boats may or may not have engine compartment blowers. Note: Blowers should be run until vessel is under way.



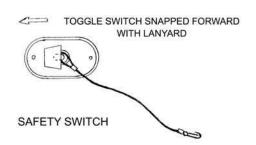
Make sure shift handles on quadrant (shifters are the shorter handles) are centered in the slot, as felt by a detente click. Note: Engines will not start if the shifters are not completely in the neutral position.

Make sure the throttle on quadrant (throttles are the taller handles) are all the way down in the slot. Note: most modern marine engines

are fuel injected, and therefore do not need to be pumped up and down to start and idle the motors.



Make sure safety switch is armed (Gasoline Engines Only). This switch should have the lanyard on the toggle and be attached to the driver for safety. Note: The engines will not run unless this switch is in the run position.



Trim drive(s) to the in position before starting the engine(s).



Locate the ignition key switches at the lower dashboard. Insert keys into switches. Turn each to the on position only (one click to the right-clockwise). Indicator lights and audible alarms will sound for a moment to indicate that systems are operational. Note: Fire system light will stay on until key switch is turned off. With the keys in this position (engines cold) the only gauges that should indicate are the fuel and volt gauges.



Turn key(s) to the full right start position until the engine starts, and then release the key. It will spring back to the on-run position. **Note:** Do not turn key to the start position with the engine running or starter and/or engine damage may occur.

(Note: On diesel packages, push the key "IN" and turn left-counter clockwise to shut off the engines.)

Confirm water flow through the engine by way of the water pressure gauges, and flow of water from the exhaust tips located under the swim platform.

Let the engine(s) warm up sufficiently before getting under way.

Check your bilge and engine compartment once more for any leaks or unusual noise. Engine hatch may now be closed.

While at the dock, raise throttle slightly for throttle response. Bring throttle back to idle and check shifters for forward and reverse operation.

Check operation of equipment for trip (VHF, GPS, Depth Gauge, Horns, etc.) Inform passengers of location of all safety equipment, seating and grab rails.

Untie dock lines and stow them away. Push vessel away from dock, or utilize the bow thruster to push away (if so equipped), and shift into desired gear. (The bow thruster is described in the "Electrical System & Optional Equipment" section.)

Pilot (helm) bolster and passenger bolster have rocker switch activated drop out seat bottoms for stand-up or sit-down operation. Adjust these as necessary for a comfortable position.



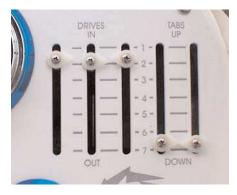
Warning: With the vessel in motion, pay close attention to heading and water depth. Use caution in shallow water operation.

With the shifter(s) forward, set up the drives and tabs as follows:

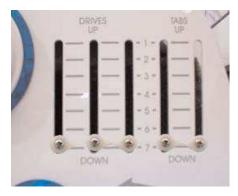
Using either the rocker switches located on the dash above the quadrant, or the small rocker switch located on the end of the throttle lever, position the drives to the full "IN" position as indicated on the drive indicators.



Using the rocker switches on the dashboard above the quadrant, lower the trim tabs to the full down position, as indicated on the trim tab indicators.

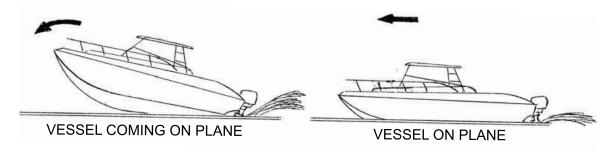






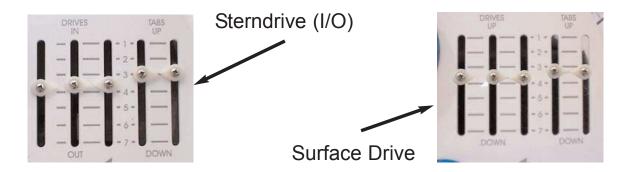
Surface Drive

With one hand on the throttles and the other hand on the steering wheel, move the throttles forward evenly and smoothly until the vessel comes on plane. (Plane is typically used to describe the vessels transition from static depth in the water to riding on the water's surface.



As the boat planes off, use the rocker switches to bring the drives out to the neutral position (defined as the propeller shaft parallel to the running surface), typically indicated by the number 3 on the drive indicator.

Using the rocker switches for the tabs, run them up until the desired ride attitude is achieved.





Warning: Never run the vessel at higher speeds with the tabs or drives at the extreme in/out - up/down positions. Never trim the drives to less than 3 on the drive trim indicator while the boat is on plane.

You will learn to adjust your vessel for a comfortable ride attitude depending upon loading and balance to achieve desired performance. Take note of your indicator positions to aid in your running setup.

Always monitor your gauges, warning lights and audible warning alarms. Back off of the throttles, bring the boat to a complete stop, put the shifters in the neutral position, and shut down the engine(s) at the sign of any problem. Check the engine compartment for possible repair. Note: Vessel can be run back to port on one engine if necessary (in a multi-engine configuration boat), as long as you do not overwork the running engine. Call for help or tow-in if necessary.

While under way, it is necessary to frequently check the instrumentation for any possible sign of trouble.

Instrumentation:

Tachometer - The tachometer indicates the engine's revolutions per minute (RPM). Use the tachometer to monitor engine speed to avoid exceeding the maximum RPM rating for your engine.

Temperature Gauge - The temperature gauge indicates the engine coolant temperature. If the gauge reads in the danger area, shut off the engine, locate and repair the problem.

Oil Pressure Gauge - The oil pressure gauge indicates the engine oil pressure. If the gauge reads low shut off the engine and repair the problem before re-starting the engine.

Fuel Gauge - The fuel gauge indicates the approximate fuel level. At times your gauge may provide an inaccurate reading because of the water conditions and the level of the boat in the water. It is a good idea to keep track of the fuel you have dispensed in the tank, running

time and fuel usage estimates to ensure you have an adequate fuel supply for your trip.

Compass - The compass your boat is equipped with is an excellent aid in navigation. Several factors can influence the operation of your compass, such as the needle deflection caused by metal components or the use of electrical equipment on your boat.

Keep a log on engine hours for timely service and maintenance to keep your Fountain running strong, and to prevent possible premature equipment failure. Refer to engine and accessory manufacturers manuals for service intervals. You engine hour meter is located in the engine compartment on the starboard gunwale lip.

Electrical System:

Your Fountain Powerboat is equipped with standard 12VDC power. All vessel power is operated by battery switch(s). Lights and accessories are protected by fuses or breakers. These are located under the rear seat or under the dashboard wall. Note: See trouble-shooting section for fuse replacement or breaker reset procedures.



Do not use 12 volt power accessories for long periods of time without engines or generator running to insure that batteries will not run down

Stereo, VHF and GPS, whether standard or optional upgrades should include manuals provided by the original equipment manufacturer. Please refer to these manuals for proper usage and maintenance of these electronics.

VHF and GPS options are very useful and are recommended for easy navigation and trip plotting. VHF radio is the communication used by marine and aircraft, and is very useful for emergency, ship to ship, or ship to shore communications.

Shore power will provide 110-volt AC power to outlets and optional appliances. This option is for use at dockside only, and requires the provided shore power plug. All AC power is controlled by a master AC panel in the cabin, with breakers and volt meters. Be sure to turn off



all breakers on the AC Main panel before connecting to the shore power outlet at the dock. (For 240V systems, refer to 240V Section)



ALWAYS plug in the shore power cord with the main breaker panel switched off, and plug in the **VESSEL END FIRST**, then plug into the dock side power to avoid dropping a "hot" cord into the water. When disconnecting the

shore power, reverse the procedure. (Disconnect dockside first.)

On the AC panel, slide the cover up exposing the shore power breaker, and turn on the breaker to utilize shore power.

A safety cover is provided over the switches that direct power to the panel to prevent both shore power and generator power from being used simultaneously. For shore power operation, plug the outlet into the boat receptacle then plug into the dockside shore power outlet. On the boat AC panel, slide the cover down exposing the shore power breaker, and turn on the breaker to utilize shore power.



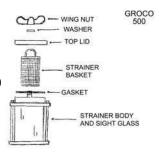
Generator Operation:

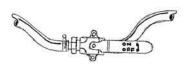
Generator/Shore Power Select

All Fountain cruisers are typically equipped with an AC generator. This will provide 110-volt AC power to outlets and optional appliances while away from the dock, or in locations that do not have dock-side power available. Power is controlled by a master AC panel in the cabin, with breakers and volt meters. It is important to understand the operation of this system when switching from shore power to generator power.



Before use, always make certain that water control valves to the generator are open, and the sea strainers are clean, or severe damage may occur to your generator. Always confirm water





flow from the generator by visually checking for water

flow from the generator exhaust vent. If water is not flowing from the exhaust, shut off the generator immediately.

Read and familiarize yourself with the owner's manual provided by your generator manufacturer for more specific details of operation.

☐ Turn the generator battery switch on. The generator battery switch is located in the wet bar cabinet in the cockpit.

- ☐ The generator can be started (2) ways-either in the engine compartment or on the main panel in the salon.
- ☐ It may be necessary (depending on the model of your generator) to hold the "Pre-Heat" button, (particularly in diesel applications), while starting the generator. Refer to the manufacturer owner's manual for specific details.
- Once the generator has started, flip the main breaker on the generator face to the on position, (if so equipped).

Note: The generator will shut itself down at sign of trouble, including overheat, low oil, etc. The generator has it's own battery and on-off switch. There is also a cross-over switch to utilize engine batteries for start-up.

On the AC panel, slide the cover up exposing the generator breaker, and turn on the breaker to utilize generator power.

A safety cover is provided over the switches that direct power to the panel to prevent both shore power and generator power from being used simultaneously. For shore power operation, plug the outlet into the boat receptacle then plug into the dockside shore power outlet. On the boat AC panel, slide the cover down exposing the shore power breaker, and turn on the breaker to utilize shore power.



Generator/Shore Power Select

Most AC panels will have a "transfer" breaker which will allow both sides of the breaker panel to be energized from either a single shore power connection or the generator. If two shore power receptacles

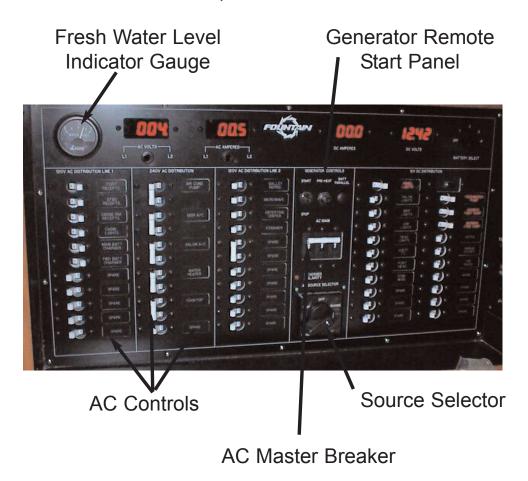
are provided and utilized, both panels will be powered without the use of the transfer switch. (This is not applicable on 240V systems. See the 240V section below for more details on the operation of the 240V system panel.)

Transfer Switch

51

240V Shore Power Systems

48 Express Cruisers may be equipped with a 240V shore power system which is becoming more and more popular in marinas, especially newer marinas. This systems works the same as a tandem 120V system (2x 120V shore power hook-ups and a transfer switch) except that it handles the transfer of power internally from 240V to 120V. Additionally, since the system is 240V, there is no transfer switch to power both banks of the AC panel.



The panel has an integrated master switch to determine ship or shore power. It also includes the remote starter panel for the generator, as well as the fresh water level indicator.

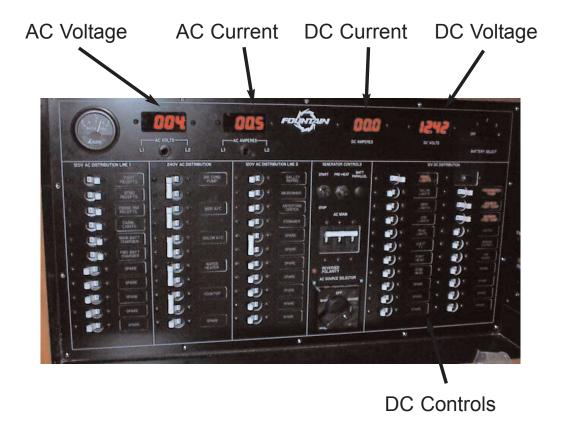
Backlit labels indicate that a circuit is turned on, and has power from the panel.

The center of the panel has a master AC breaker which must be switched on for the panel to have power, weather from the generator or from the shore power cord.

Connect the shore power cable in the same manner as described for the 120V cable, making sure to hook up the boat side o the cable first, then connect the cable to the dock side power outlet to prevent to possibility of dropping a "hot" cord into the water.

After connecting the shore power cord, turn on the master AC breaker on the panel.

The DC side of the panel is illuminated the same as the AC side, and has meters to display the available voltage to the panel.

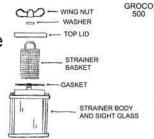


Air Conditioning

Air conditioning and heat is another option operated by shore power or optional generator. This unit is operated by its own control panel, controlling on/off and temperature settings. See the manufacturers owner manual for specific operating instructions of your air conditioning unit.



Before use, make sure that all valves controlling water flow to the unit are in the open position, and the sea strainer is clean.



- ☐ Turn on the AIR COND PUMP breaker on the main panel in the salon.
- ☐ Turn on the breaker for the specific air conditioner you want to use: AIR COND AFT or AIR COND FWD.
- ☐ The air conditioner thermostat display will come on. Press the up or down arrows to adjust the temperature.

Toilet and Sanitation

Fountain Cruisers are equipped with a Vacu-flush head, a macerator pump and holding tank and may also be equipped with an overboard discharge.



Consult your local laws regarding the overboard discharge of waste. Some areas prohibit the dumping of any sewage, and may require that the overboard discharge valve (y-valve) be locked in the closed position to prevent discharge. It is recom-

mended that holding tanks be emptied out after every trip if used. It is also recommended that the overboard dump be locked in the closed position unless used in accordance with local laws regarding the dump-



Y-Valve (exposed)

ing of sewage. Overboard discharge requires the valve to be in the "overboard" position, and switch activation to operate the pump.

The waste water system directs waste water from several locations (head, sinks, etc.) to a sump that contains a float switch and pump to pump the water to the waste holding tanks in the engine compartment. The tanks (one on the port side and one on the stbd side) must be emptied when they become full.





Port & Starboard Overboard Waste Valves



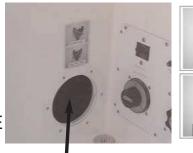
Overboard Discharge Pump Switch



Waste Tank Monitor

Overboard Discharge Operation:

- 1. Turn the Y-valve to the overboard position.
- 2. Open the waste thru-hull valve in the engine compartment.
- 3. Flip the OVERBOARD DISCHARGE switch in the wet bar cabinet for the





Y-Valve Location (Port 48EC)

corresponding tank you want to empty.

4. When the tank is empty, release the OVERBOARD DIS-CHARGE switch. Turn the Y-valve to the original position and close the waste thru-hull.

Dockside Pump-out:

The services of a dockside pump out station is needed to empty the holding tank. Be sure the hose is inserted in the deck plates labeled WASTE.



Fresh Water Supply

Water for cabin galley and sink is supplied by an electrical pump and water tank. Tank level is monitored by indicator lights for full or empty. Tank is filled by a customer-supplied hose. Dock side pressurized water can be utilized to provide endless water while docked. See quick reference for fitting location. Note: Use an approved hose for filling a potable water tank in any vessel.

When using the water supply provided at the docks there is no need to turn on the FRESHWATER PUMP breaker. The water supply is already pressurized and will support all systems in the boat. The dock side water WILL NOT fill the on board freshwater tanks. Attach the dockside water hose to the water inlet.

Onboard Fresh Water System Operation:

- ☐ Turn the FRESHWATER PUMP breaker on. The freshwater gauge on the main panel will not operate if the breaker is not on.
- ☐ Fill the fresh water tanks as needed using the aft "water" fill on the port side of the deck.





Warning: Water system must be purged of winterization fluid used during shipping of the boat during the winter months. Pink fluid should be run out of the water tap and flushed out.

Engine Optional Equipment

Silent Choice Exhaust: This option allows vessel pilot to choose straight out exhaust or quieter operation at the flip of a switch. This is located at the pilot's right side helm switch panel, labeled "Exhaust Open or Closed". Note: This system may not be legal for operation in certain areas. It is the responsibility of the vessel owner to know and understand the local noise laws, and outfit the vessel accordingly. It is strongly recommended that the vessel operator use common sense and courtesy when operating the boat in marinas, around homes, and in areas that excessive noise would be inconsiderate and/or inappropriate.



Warning: Some waterway areas have noise level laws that are very strictly enforced. Check with the local laws in your area prior to operating your boat.

It is also recommended by many engine manufacturers to not use a switchable exhaust system at higher speeds due to potential engine damage that may occur.

Engine fresh water flush:

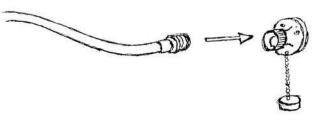
This option allows you to flush out your engine of saltwater and silt after a trip. This system can be used at dockside, trailer or on a hoist. It is also used to run the engine(s) while the boat is out of the water for diagnostic and troubleshooting service. Use this step-by-step procedure as follows:

Engine flush valves are located inside the engine compartment on the inner transom above each of the engine drive gimbals. The garden hose fitting for the flush system is located on the engine compartment lip.

Note: Diesel powered boats are flushed at the sea strainers, and do not have separate flushing valves or water inlets on the deck.

Make sure that the boat attitude is NOT bow down. Raise the bow of the boat to get the engine exhaust tips to angle downward so as to insure that flush water does not flow back into the exhaust pipes, and thus into the engine. Severe engine damage will occur is water is ingested by the engine(s) through the exhaust pipes.

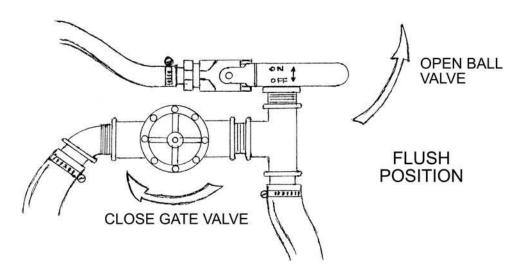
Remove the spin-off cap on the garden hose fitting, and let it hang on the chain. Attach garden hose to the fitting.



Make sure that the garden hose is not kinked or turned off during the flushing procedure. Failure to do so will result in engine overheating and possible damage.

Run only one engine at a time using it's corresponding flush valve. Do not run the engine until water is observed running out of the exhaust pipes. Failure to do so will damage the water pumps and overheat the engine(s).

On one valve only, throw the yellow handle ball valve up (in-line with the valve body) to open the line from the garden hose inlet to the engine. Close the gate valve to shut off water flow back through the drive.



Turn on the garden hose all the way, and wait for water to come out of the exhaust pipes.

Start the engine corresponding to the valve you just set up to flush, and run the engine (at idle) the desired time to flush out the engine. Continually monitor the engine gauges while flushing to verify engine temperature.

When finished flushing, shut down the engine first, and then turn off the garden hose. Return the engine flush valve to the run position (turn the ball valve to the off position, perpendicular to the valve body, open the gate valve by turning counterclockwise).

Repeat the procedure for each engine.



Make sure that you return the flush valve to the run position as described above. Failure to do so will result in damage to the water pump, and may cause severe engine damage.

Remove the garden hose from the fitting, and re-cap the fitting.

Battery Charger:

A battery charger is used with shore power while docked, on the trailer, or on your hoist. This unit will keep your batteries charged and monitored while the vessel is shut down for a period of time. This unit is located inside the mechanical access or in the engine compartment of inboard powered boats. Refer to the quick reference drawings for the location of the charger. The battery charger has indicator lights to show low or full charge.

With the boat attached to shore power, or with the generator running, turn on the BATTERY CHARGER breaker on the main AC/DC panel.

Dockside Communications or Television (Cruisers Only):

For dockside communications or TV operation, optional jacks for cable TV and telephone are located near the shore power plug receptacles. See the quick reference drawing for location of the receptacles.

	Turn	on tl	he l	breake	r/s fo	or the	TV	and	DVD	player	on	the	AC
Main	n Pan	el											

- Turn on the TV and the DVD player.
- Turn the TV to VIDEO 1
- Insert DVD disc and press PLAY.

Windlass Anchor:

- Turn on the WINDLASS breaker on the AC Main Panel
- Go to the bow and unlatch the windlass
- Use the foot pedal on the deck or the switch at the helm to raise and lower the anchor



Windlass Anchor Compartment



Foot Pedals





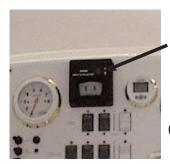
Be sure to re-latch the anchor before getting under way to prevent accidental lowering of the anchor.

Failure to do so can cause serious damage to the boat, as well as possible personal injury should the anchor be lowered while under way.

Bow Thruster:

The bow thruster allows you to move the boat laterally, allowing you to push away from or pull towards the dock, or for low speed maneuvering while off plane. The bow thruster has it's own battery and charger located under the forward stateroom v-berth. Confirm that the switch mounted in this compartment is "ON" if the bow thruster does not operate. Refer to the manufacturers operations manual for the installed thruster for detailed operation and service procedures.

- ☐ Turn on the BOW THRUSTER breaker on the Main AC panel
- ☐ Use the switch pad at the dash to maneuver the boat



Bow Thruster Control Panel

Bow Thruster Compartment Switch



Auxiliary Bilge Pump:

Auxiliary bilge pumps are located in the engine compartment, one on the portside transom and one on the starboard transom. These pumps (water puppies) remove the excess low level water in the engine compartment that the regular bilge pumps cannot access. Water is routed from the strainer in the aft engine compartment through a filter, to the pump, out through the sea chest and out of the boat via a thru-hull (port and starboard sides)

A sensor located underneath the center of the engine room floor sets off an indicator light located next to the ACC (water puppies) switch light on the dash. Pumps should be turned on if the warning light is on or if the water is accumulating in the engine compartment. Pumps should be switched off when water has been removed.

For additional convenience, there is an on/ off switch on the starboard side of the engine compartment.

Appearance and Care

Exterior:

☐ Hull, Deck Fittings and Windshield. Hull and deck surfaces are gel coat and polyurethane painted graphics.



Warning: Do not use any harsh detergents or solvents on gel coat or painted surfaces.

- □ Wash hull and deck with boat soap. Rinse well with water, and towel dry. (Soft terry cloth or chamois).
- □ Protect hull and deck with top grade fiberglass wax. Use fiberglass polish for faded or scratched surfaces, the re-wax.
- ☐ Use a gel coat repair kit for any chips or gouges. Finish, polish and re-wax.
- □ Stainless fittings can be wiped clean. Hand rub metal polish and wax.
 - □ Powder coated fittings: Use mild hand rub polish and wax.



- ☐ Windshield: Wash with mild soap and water. Do not use Windex, chemicals, or any abrasives.
- □ Cabin and Fixtures: Cabins are not unlike household cleaning
- □ Vacuum carpet and shampoo when needed. Spot removers and freshener will keep the carpet clean and fresh.
- □ Upholstery: Use a good quality vinyl cleaner and conditioner.

Appearance and Care

	Counter tops, sinks, glass, etc.: Use household cleaning products to keep these items clean.					
	Do not run garden hose in cabin.					
	Do not use harsh chemicals, solvents or abrasives.					
	Do not spray water or cleaners in master electrical panel.					
Cockpit, Upholstery, Dashboard:						
	Cockpit has removable carpet. This can be vacuumed and shampooed as needed.					
	Upholstery: Use a good vinyl cleaner and conditioner.					
	Under the cockpit removable carpet is a non-skid gel coat fiber- glass floor. This can be cleaned with a scrub brush using soap and water, then rinse well.					
	Dashboard: Wipe well with a damp cloth and dry with a terry towel.					
	Do not flood dash with hose water. (Light spray is ok.)					
	Do not use chemicals or abrasives on the dashboard. Gauge lenses could become scratched or clouded.					
Engine(s) and Engine Compartment:						
	With drain plugs removed, tilt boat with the bow as high as possible. Hose out bilge with soap and water. For greasy areas, use a marine bilge degreaser. Rinse with fresh water. Note: If stringer sections fill up with water, clear drain plug fittings and drain holes with a stick or rod.					
	Lightly rinse engine components, generator housing and acces-					

Appearance and Care

sories, pat dry and coat with a protectant such as CRC or WD-40. Do not flood engines, or other components in the engine compartment with water.

- Be aware of local laws regarding discharge of oily or greasy water from the bilge while cleaning. It is unlawful to discharge oil into the water per federal law.
- □ Polish stainless pipes and metals with stainless steel polish and rags.

Storage

We do not recommend storing the boat in the water on a mooring buoy, or tied to a dock. It is impossible to project situations that could result in the boat becoming swamped, resulting in significant damage, or total loss.

Store the boat with the cockpit cover on, and any provided poles installed to prevent pooling of water on the cover.

When possible, cover the entire boat to protect from UV rays and the elements.

Always store the boat in a "bow up" position. This way, any water that may be in the boat, or find its way into the boat will move toward the back and exit through the drain plugs.

Remove drain plugs when stored on the trailer.

We recommend the use of a dehumidifier in the cabin to prevent moisture damage while storing the boat in moist climates.



Always winterize your boat for storage in freezing climates. Be sure to winterize all water systems, engines and drives, and generator systems. Refer to a qualified marine technician for this service. Freezing can cause severe damage to marine engine components, water systems and drive units.



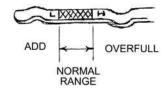
It is recommended that you have your boat "bottom painted" with an approved "anti-fouling" finish if you plan to store it in the water for more that 48 hours at a time. Extended submersion of painted surfaces can result in blistering and other paint damage that is not covered under warranty.

Do it Yourself Maintenance

Many service and maintenance items can and should be performed or checked regularly. Before going on a boat trip, check all of your fluid levels. Safe boating starts with good maintenance.

Check engine oil and generator oil if so equipped (4-stroke Outboards, and all Inboards):

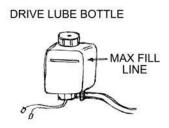
With engine off, pull up the dipstick, (see engine compartment quick reference drawing or engine manufacturers manual for location of dipstick), wipe dipstick clean and push dipstick back into the tube. Pull out and check level with the marks on the dipstick.



Add recommended oil for your particular engine or generator per the manufacturers manuals. Do not overfill. Filling caps are labeled. Change oil and filters as recommended.

Check stern drive lubrication (inboard applications):

Check level of drive lube marked on the drive lube bottle, located on the inner transom above the drive plates, or attached to the engine.



Use the lubricant recommended in the manufacturers manual. Change drive lube at recommended intervals.

If drive lube seems to be draining down frequently or is milky looking, the drive needs to be serviced immediately. Slight oil usage is normal.

Engine and Generator Coolant:

Some engines and all generators are equipped with closed cooling systems. Please refer to your engine manufacturers manual for clari-

Do it Yourself Maintenance

fication as to which system is provided on your engine package. Check the level by visually inspecting the reservoirs, and top off as necessary with pre-mix coolant.

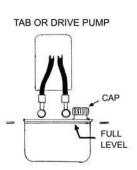
Engine coolant reservoirs are mounted on the engines. The generator reservoir is mounted separate from the generator. See the quick reference engine compartment drawing for coolant reservoir locations.



If coolant is draining down frequently, engine or generator may have a leak that needs to be serviced. Inadequate engine coolant can cause severe engine/generator damage.

Drive and Trim Tab Pumps:

Inboard drive pumps are typically the upper pumps on the engine compartment panel on the back seat bulkhead. The drive trim oil level has to be checked with the drive(s) all the way in the IN position. Remove the twist off yellow cap, and top off with 10-30 non-detergent motor oil up to just under the cap neck.



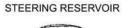
Tab pumps are typically located just below the drive pumps on the same panel. These pumps are checked and filled in the same manner as the drive pumps except that they need to be checked and filled with the tabs in the UP position.

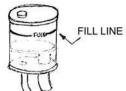
See quick reference engine compartment drawings for pump locations. Refer to the engine manufacturer's manual for recommended oil, and swivel bracket plug location.

Do it Yourself Maintenance

Steering Fluid Reservoir:

Unless leaking or fluid is discolored from the faulty power steering pumps, service is typically minimal. If fluid is leaking, or discolored, have the system serviced and repaired immediately. Reservoir can be topped off to the full line with





Dextron III transmission fluid. (Do not use Type F, or automotive power steering fluid.) Reservoir is located on the engine, or may be mounted to the engine compartment lip.



Fuel System Maintenance: (To be performed at least annually by a qualified marine technician)

- Replace fuel system components if any evidence of cracking, corrosion or deterioration is found.
- 2. Inspect fuel tanks annually. Remove inspection covers in engine compartment and check to see if any standing water is present on the tanks. Check the connections at the forward portion of the tanks by removing the foot wells, or side panes to gain access to the fill, vent lines and fittings. If water is found, consult an authorized Fountain Powerboats repair facility. The fuel tanks in your Fountain are an integral part of the boat. They are installed under the cockpit floor using screws, fiberglass, and foam to isolate the tank from the hull bottom.
- 3. Be sure the fill pipe is properly grounded. Check electrical connections at fuel fills and fuel level senders for corrosion or loose connections.
- 4. Check bilge blowers for proper operation.
- 5. Ensure that heating and cooking appliances on board are secured and operate properly. Refer to appliance owner's manual for guidance on inspecting for leaks in valves and connections. Never use a match to inspect for leaks.
- 6. Ensure that flammable items are stowed safely and cannot contact cooking, heating appliances or hot engine parts.

Do it Yourself Maintenance

- 7. Ensure fire extinguishers are USCG-approved and are in good working order.
- 8. Repair all bare wires or loose electrical connections that might cause a short in your boat's electrical system and start a fire.
- 9. Do not store disposable propane cylinders or charcoal lighting fluid on board the boat.
- When replacing starters, alternators, generators or other electrical equipment, use only ignition-protected parts. Do not use automotive parts.

Battery Maintenance:



Warning: Battery electrolyte is very corrosive and explosive. Protect your eyes and skin when working with batteries. Keep batteries clear of flames or sparks.

Pull off battery caps (unless battery is a "maintenance free" sealed battery) and check the electrolyte level. Fill each hole to the inner edge of the hole. Use battery electrolyte fluid or distilled water.

Clean battery terminals with a mixture of baking soda and water. Rinse, clean, and then coat each terminal with a battery grease or Vaseline. Make sure not to get any of the baking soda solution into the battery caps.

Engine to Drive Coupler (Sterndrive):

There is a grease fitting located behind the engine at the gimbal to drive coupler. This fitting needs to be greased periodically, but do not over grease. (Two pumps from a grease gun are sufficient.)

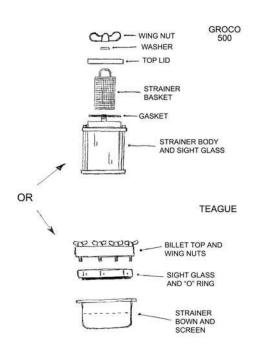
Do it Yourself Maintenance

Sea Strainers:

Sea strainers protect important pumps on the engines, generator, and air conditioning units from sand, trash and marine growth in the water.

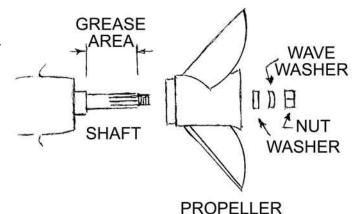
Check and clean them out as needed.

Warning: If the vessel is in the water during sea strainer cleaning, shut off all ball valves feeding the strainer(s). Failure to do so will result in flooding the boat.



Propellers:

Remove propellers regularly and coat the shafts with the recommended grease. This will keep the propellers from seizing to the shaft allowing for easy removal. After each use, wash the propellers (along



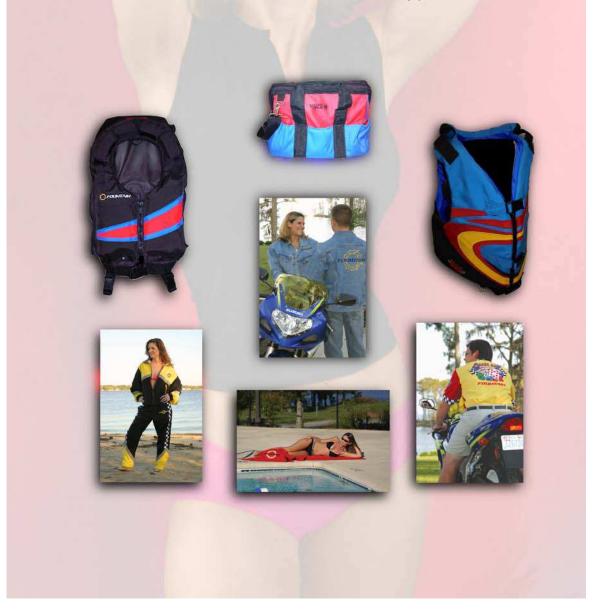
with the boat) and spray them with a coat of CRC or WD40 to protect against excessive corrosion.

Have the propellers reconditioned if damaged, bent, chipped, or cracked. Damaged propellers can cause additional damage to the drive units, couplers and/or engine.

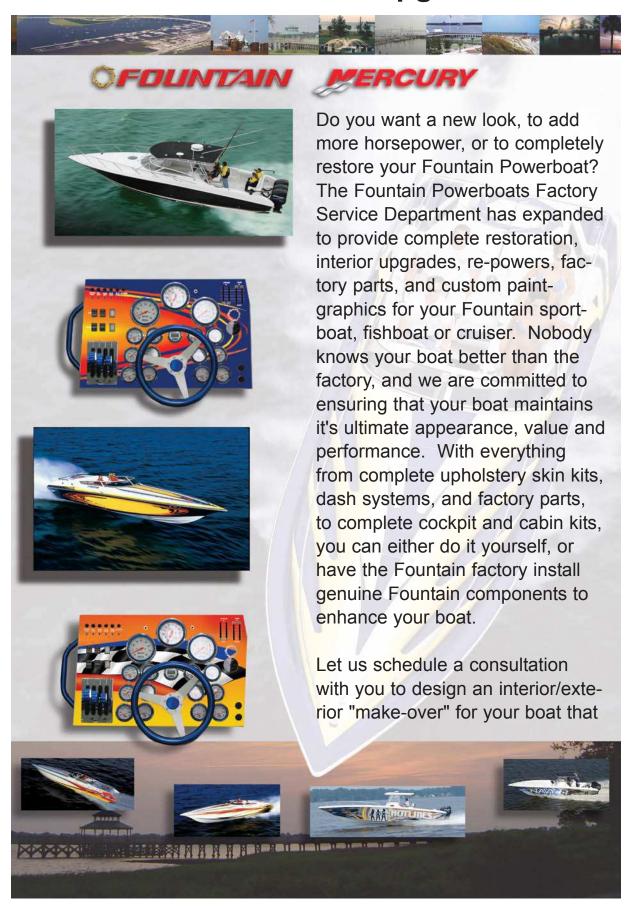
Other services are needed at regular intervals. Unless you are trained and/or are mechanically inclined, these services are best left to a trained factory technician.

Accessories & Apparel

Fountain Powerboats offers a complete line of award winning apparel and accessories for your boat. Show off your Fountain pride with everything from custom leather jackets to fashionable casual attire, super sized beach towels to travel gear, and more. Fountain offers custom "poker run" safety vests in both inflatable and traditional styles. Both feature the Fountain logo, and can even be custom ordered in colors to match your boat's graphics. Fountain also offers complete tool kits by Matco Tools, and cleaning materials from Swipes to keep your boat in top shape. Check us out on the web at www.fountainpowerboats.com for more information, or to order Fountain accessories and apparel.



Refurbishment & Upgrades



Refurbishment & Upgrades

FDUNTAIN



suits your personality and budget. An updated look will add resale value, and give you that "new boat" look and feel for a fraction of the cost of a new boat.

In addition to "upgrade" work and parts, we have all of the necessary resources to provide you with maintenance and service on your Mercury engine drive train components as well as Fountain and Mercury warranty service.

So whether you want to spruce up your boat's appearance, or show your friends the transom of your boat in the next poker run or fishing tournament as you pull away with new power, Fountain's Service Department is your one-stop-shop for all of your Fountain Powerboat needs.

Complete Upholstery Skin Kits

Complete Cockpit Kits, Including Bolsters & Hardware

Complete Custom & Standard Dash Panels

Custom and Standard Graphics Packages

Windshields, and Plexi-Glass Components

Towers & Leaning Posts

Custom Powder Coating

Bottom Blueprinting Services

Complete Fiberglass and Mechanical Repair

Specialty Parts, Poker-Run Vests, Racing Vests & Intercoms

Rebuilt 5.0kw Westerbeke Generators

Factory Re-Power, Including Engines and Drives

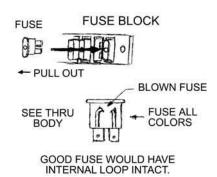
Troubleshooting

Electrical:

12Volt DC equipment and accessories:

Many problems can be solved or traced to blown fuses or popped breakers. Also check for loose or corroded wires at battery and ground blocks. In the case of cruisers, many times it is a matter of not having the correct breaker switch turned on. All cabin electrical items are controlled through the AC/DC panel. If an electrical component is not operating, check to insure that the breaker switch is turn on for that particular accessory.

Corrosion found in bulb sockets or wires and terminals can be removed by cleaning with a brush. Reassemble and spray with a corrosion inhibitor.



Replace any blown fuses or bad bulbs. If fuses or breakers keep blowing or popping, a wiring or component problem is likely present and will need to be repaired.

110 Volt AC equipment should only be repaired by a trained electrician. Unless you are trained in household electrical systems and components this is best left to a professional. Make sure that your AC panel breakers and transfer switches are in the correct position for the desired operation.

Note: AC power is not available on some models.

Fluid Leaks:

Most of these leaks can be repaired with common tools. Hose

Troubleshooting

clamps and wrenches can cure most hose and fitting leaks. Check all hoses and fitting regularly.

Likely locations for fluid leaks would be in the engine compartment (water, oils, fuel); under the dash (steering fluid); at the transom (steering fluid, drive fluid, hydraulic fluid); cabin (water from fresh water systems, water from faulty hatch seals).

Engine:

Engine will not crank:

Check for battery switch position. They need to be in the on position.

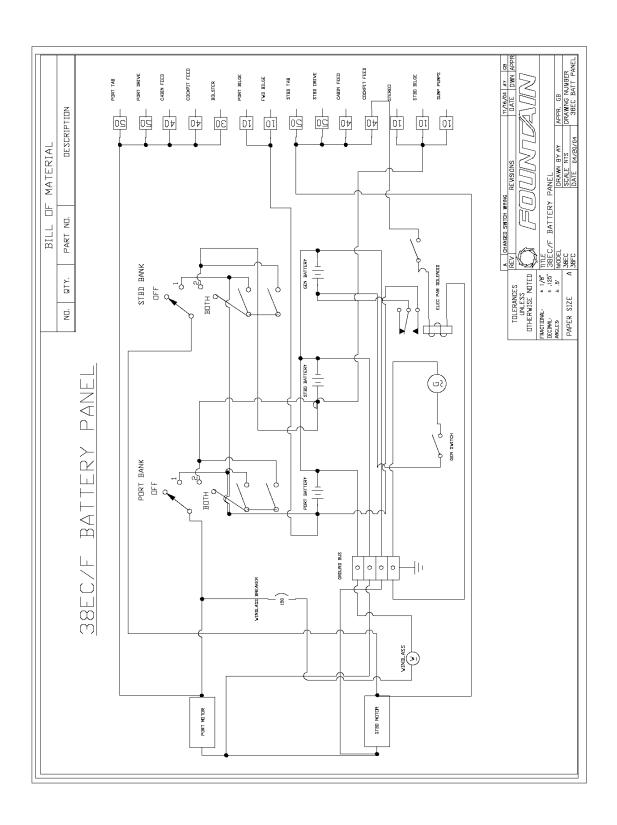
Check volt gauges for at least 10-12 volts with the key on. If low, it would indicate a bad battery, a draw on the battery causing it to lose power, charging system problem preventing the battery from being charged while under way, or shore power charger problem preventing the battery from being charged while the boat is plugged into shore power.

Check that the gearshift levers are in Neutral.

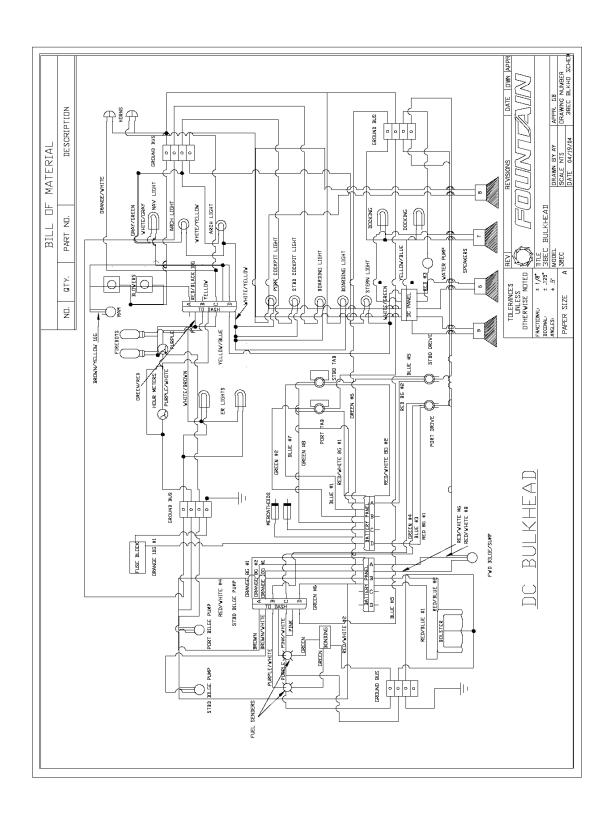
Key switch breakers popped. Reset by pressing the rubber breaker button next to the key switch.

If the engine cranks but does not start, check the position of the safety lanyard switch, and insure that it is in the run position. (Gasoline powered boats)

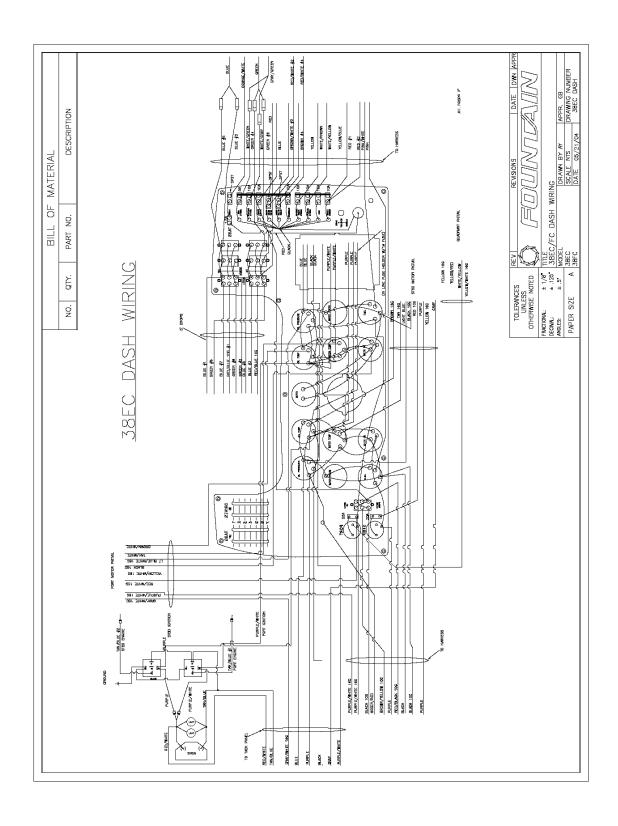
Note: See pre-check section of this manual to avoid most common problems. Trained technicians should service any major problems.



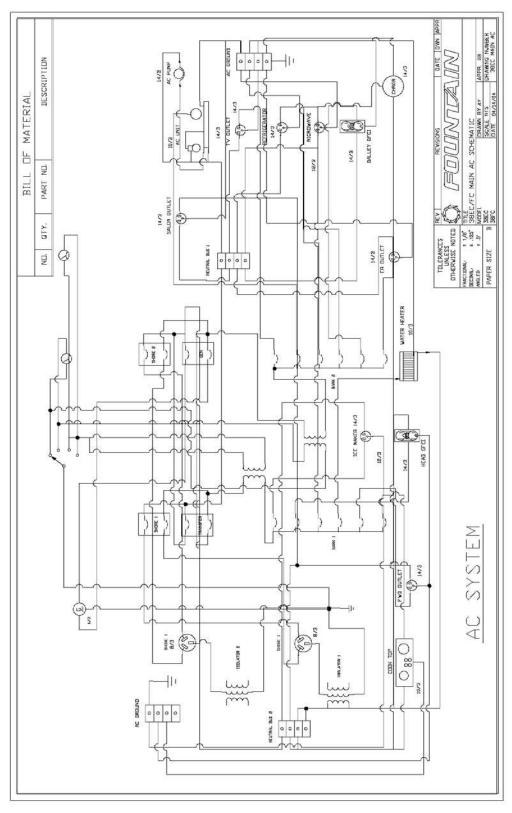




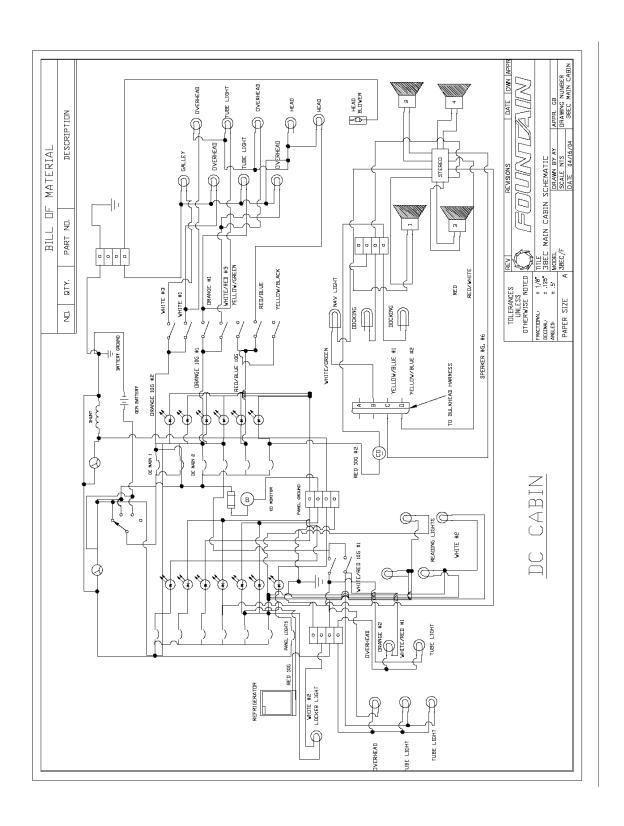




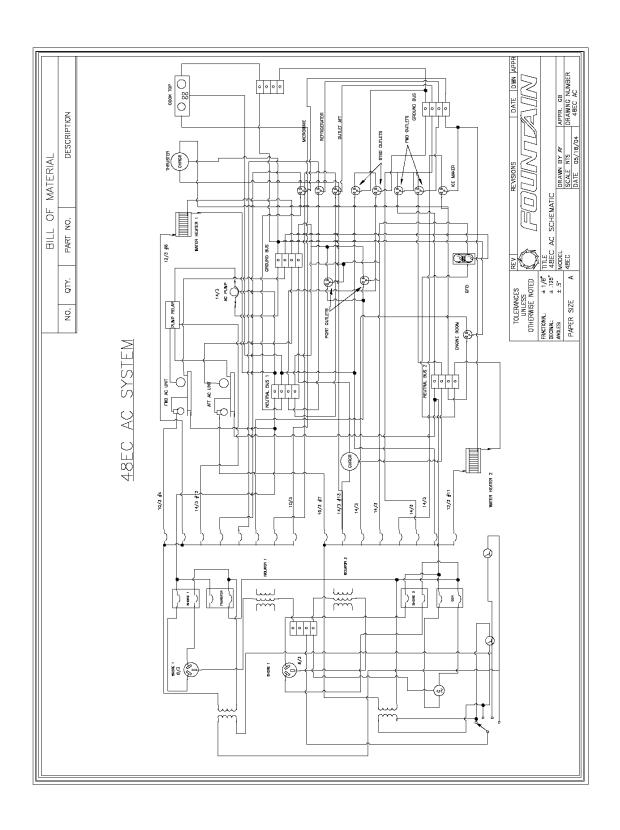




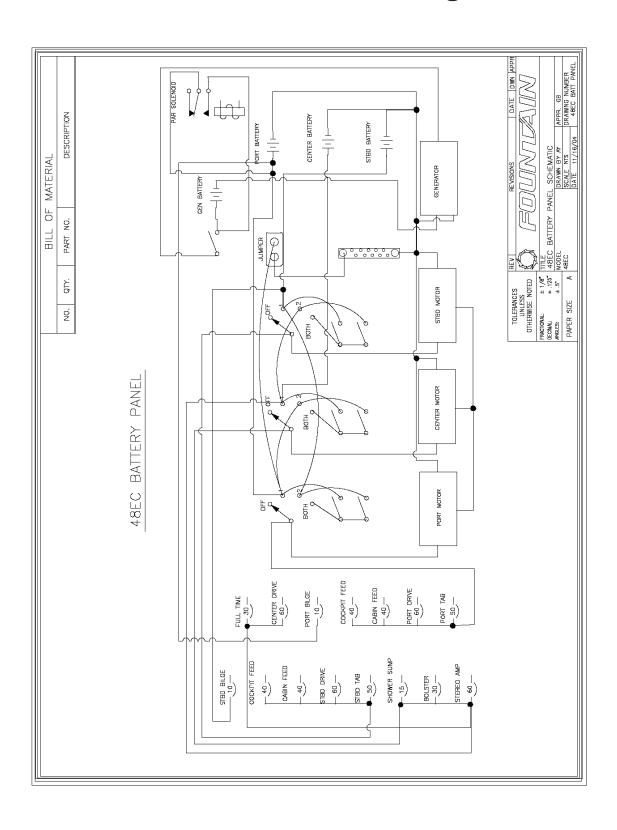




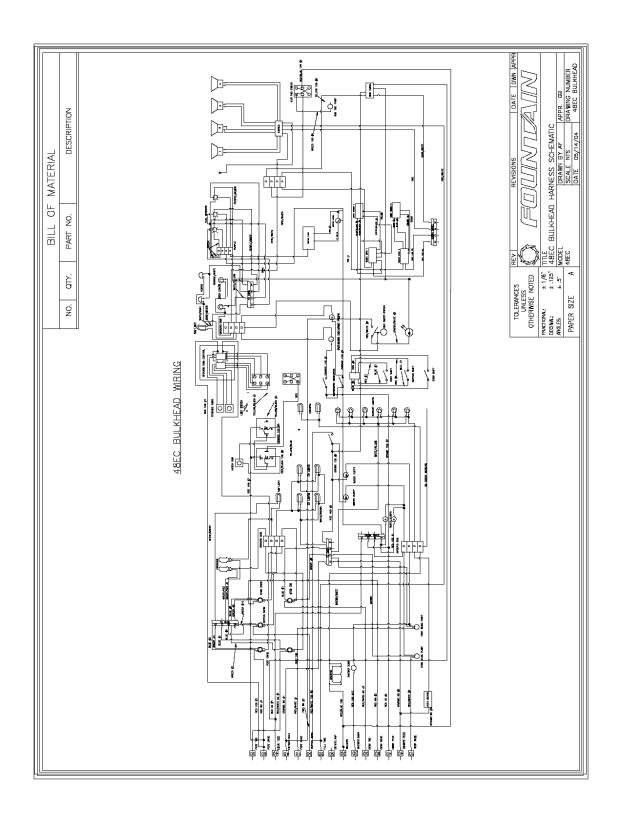




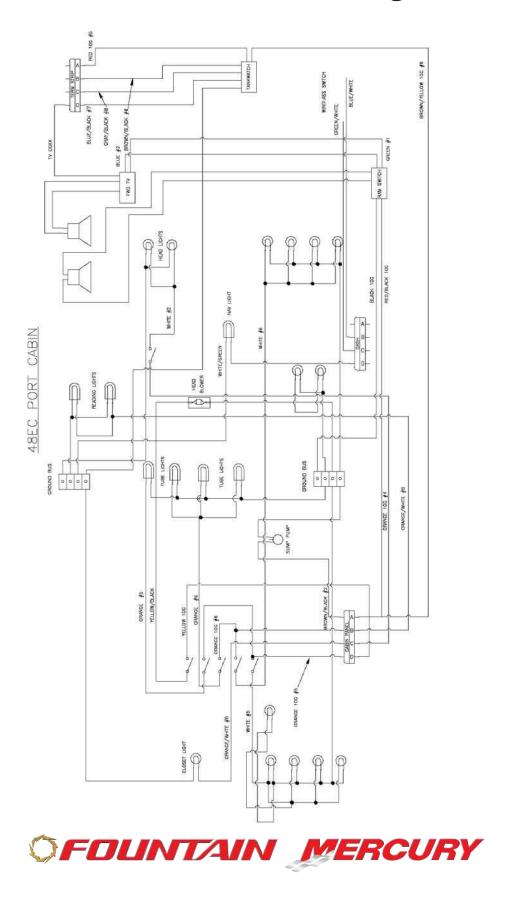


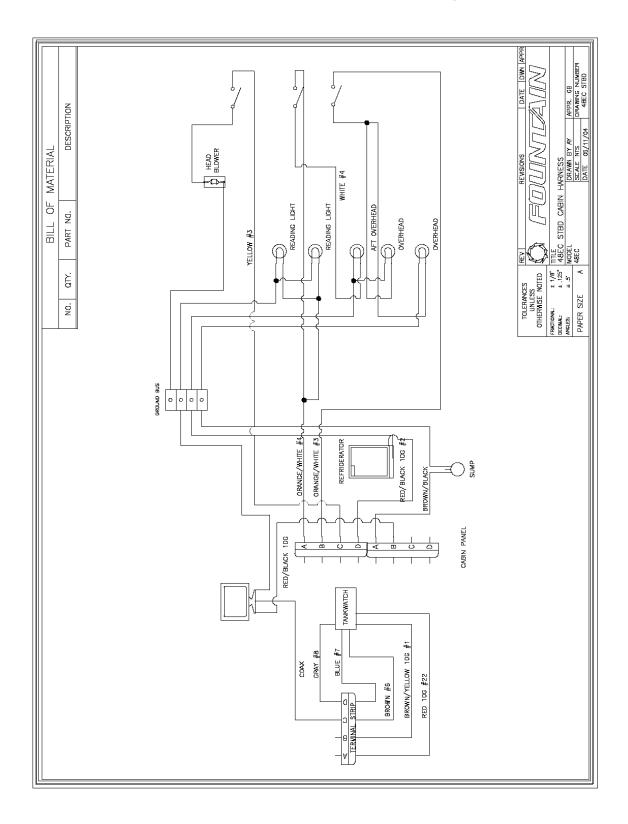






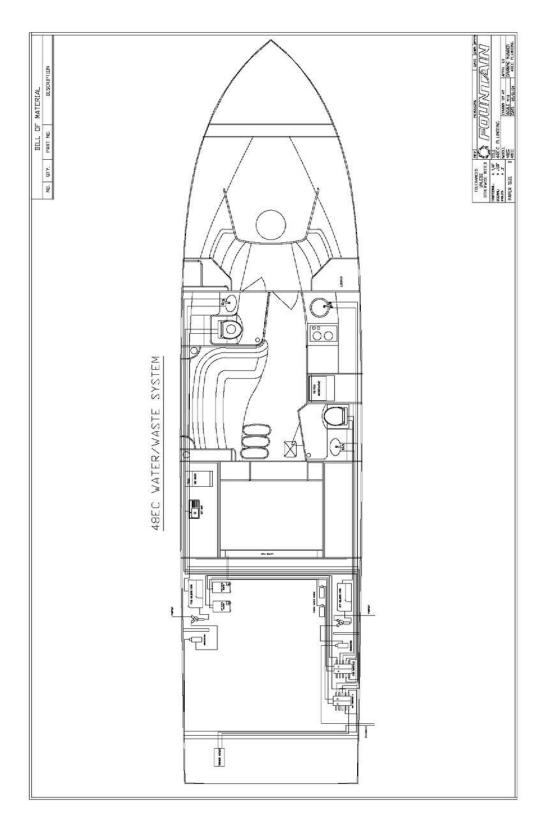








Plumbing Schematic Diagrams





THIS MANUAL IS NOT INTENDED TO BE ALL INCLUSIVE, AND IS NOT A SUBSTITUTE FOR GENERAL BOATING KNOWL-EDGE OR PRACTICE OF COMMON BOATING SAFETY PROCEDURES.

FOUNTAIN POWERBOATS RECOMMENDS BOATERS PARTICI-PATE IN AN APPROVED UNITED STATES COAST GUARD BOATING COURSE, AND THAT ALL BOATERS OBSERVE SAFE BOATING PRACTICES, INCLUDING BOAT HANDLING, SYSTEMS OPERATION, NAVIGATION, AND MAINTENANCE.

PLEASE BE SURE TO REFER TO THE SPECIFIC OWNERS MANUALS FOR THE SYSTEMS INCLUDED ON YOUR BOAT THAT ARE NOT MANUFACTURED BY FOUNTAIN POWER-BOATS, INCLUDING BUT NOT LIMITED TO THE POWERTRAIN, GENERATOR SYSTEMS, AIR CONDITIONING SYSTEMS, AC POWER SYSTEMS, NAVIGATION SYSTEMS, ENTERTAINMENT SYSTEMS, ETC.

IT IS THE BOAT OWNERS RESPONSIBILITY TO KNOW AND UNDERSTAND ALL OF THE EQUIPMENT ON BOARD YOUR BOAT.

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Fountain Powerboats, Inc.
P.O. Drawer 457
Washington, NC 27889
252-975-2000
www.fountainpowerboats.com
ASE Symbol: FPB