

MERIDIANTM
YACHTS

490 PILOTHOUSE OWNER'S MANUAL

Date of Purchase _____

Port Engine Serial Number: _____

Starboard Engine Serial Number: _____

Hull Identification Number: _____

Hull Identification Number

- The Hull Identification Number (HIN) is located on the starboard side of the transom.
- Record the HIN (and the engine serial numbers) in the space provided above.
- Please refer to the HIN for any correspondence or orders.



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All Meridian products meet or exceed USCG (United States Coast Guard) and/or NMMA (National Marine Manufacturer's Association) construction standards. Manufactured with 1,1,1 Trichloroethane, a substance which harms public health and environment during the manufacturing process by destroying ozone in the upper atmosphere.

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Hazard Boxes & Symbols

The hazard boxes and symbols shown below are used throughout this manual to call attention to potentially dangerous situations which could lead to either personal injury or product damage. **Read ALL warnings carefully and follow all safety instructions.**

 **DANGER!**

This box alerts you to immediate hazards which *WILL* cause severe personal injury or death if the warning is ignored.

 **WARNING!**

This box alerts you to hazards or unsafe practices which *COULD* result in severe personal injury or death if the warning is ignored.

 **CAUTION!**

This box alerts you to hazards or unsafe practices which *COULD* result in minor personal injury or cause product or property damage if the warning is ignored.

NOTICE

This box calls attention to installation, operation or maintenance information, which is important to proper operation but is not hazard related.


FIRE
HAZARD!


EXPLOSION
HAZARD!


NO OPEN
FLAME!


ELECTRICAL
HAZARD!


HOT
HAZARD!


FALLING
HAZARD!


ROTATING
PROPELLER HAZARD!


RUN BILGE BLOWERS
FOR 4 MINUTES!


CO POISONING
HAZARD!

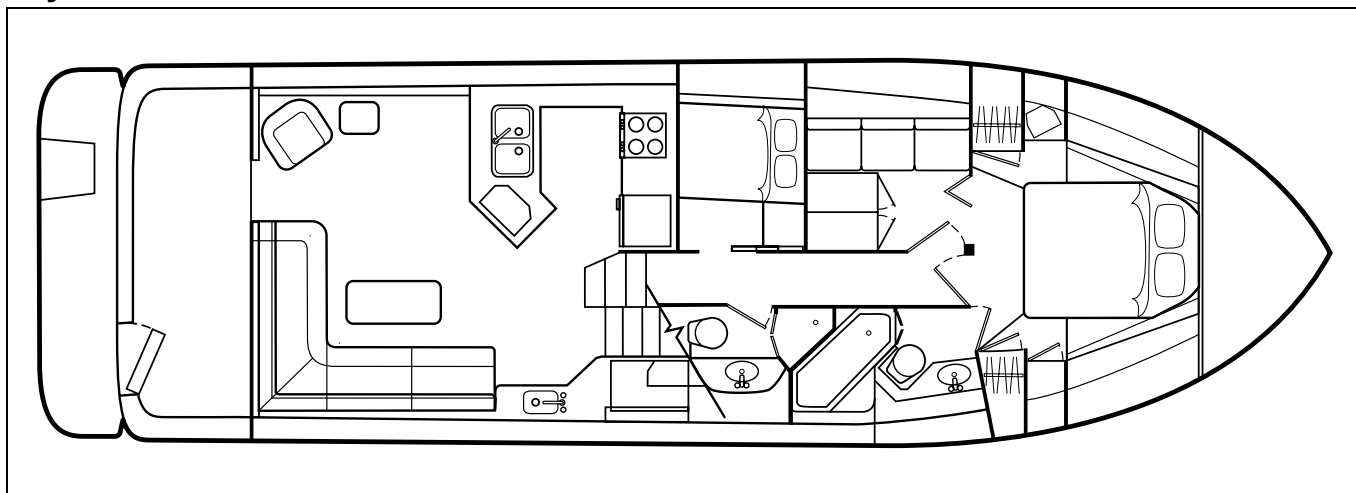
Chapter 1: Welcome Aboard!

- This *Owner's Manual* provides specific information about your yacht.
- Additional information about safe operating practices, general boating regulations, and proper maintenance techniques is included in the *Cruiser & Yacht Owner's Manual Supplement*.
- The engine and accessories installed on your boat come with their own operation and maintenance manuals.
- Unless noted otherwise, **all** engine and accessory literature referred to in this Owner's Manual is included in your owner's packet.
- Before using your yacht, study this *Owner's Manual*, the *Cruiser & Yacht Owner's Manual Supplement*, and **all** engine and accessory literature carefully.
- Keep this *Owner's Manual*, the *Cruiser & Yacht Owner's Manual Supplement*, and **all** owner's packet literature, on your yacht in a secure, yet easy to get to place.

Dimensions and Tank Capacities

Over-all Length	Bridge Clearance	Beam	Draft (Hull)	Draft (Maximum)	Fuel Capacity (gal.)	Freshwater Capacity (gal.)	Waste Holding Tank Capacity (gal.)
47' 4"	18' 2"	14' 11"	2' 11"	3' 4"	444	200	48

Layout View



Dealer Service

- Ask your dealer to explain **all** systems **before** taking delivery of your yacht.
- Your dealer is your key to service.
- Contact your dealer if you have any questions or problems with your new yacht.
- If your dealer cannot help, call our customer service hotline: 360-403-2198 or send us a FAX: 360-403-1158.
- Buy replacement parts from any authorized Meridian dealer.

Warranty Information

- Meridian offers an Express Limited Transferable Warranty on each new Meridian purchased through an authorized Meridian dealer.
- A copy of the Express Limited Transferable Warranty was included in your owner's packet.
- If you did not receive a copy of the Express Limited Transferable Warranty, please contact your dealer or call 360-403-2198 for a copy.

Boating Experience



WARNING!

CONTROL HAZARD!

A qualified operator *must* be in control of the yacht at *all* times. *DO NOT* operate your yacht while under the influence of alcohol or drugs.

If this is your first yacht or if you are changing to a type of yacht you are **not** familiar with, obtain handling and operating experience before assuming command of the yacht.

Take one of the boating safety classes offered by the U.S. Power Squadrons or the U.S. Coast Guard Auxiliary. For more course information, including dates and locations of upcoming classes, contact the organizations directly:

- U.S. Power Squadrons: 1-888-FOR-USPS (1-888-367-8777) or on the Internet at: <http://www.usps.org>
- In Canada, for the CPS courses call 1-888-CPS-BOAT.
- U.S. Coast Guard Auxiliary: 1-800-368-5647 or on the Internet at: <http://www.cgaux.org>

Outside the United States, your selling dealer, national sailing federation or local boat club can advise you of local sea schools or competent instructors.

Engines & Accessories Guidelines

NOTICE

When storing your yacht please refer to your engine's operation and maintenance manu-

- Your yacht's engines and accessories were selected to provide optimum performance and service.
- Installing different engines or other accessories may cause unwanted handling characteristics.
- Should you choose to install different engines or to add accessories that will affect the yacht's running trim, have an experienced marine technician perform a safety inspection and handling test **before** operating your yacht again.
- **Certain modifications to your yacht will result in the cancellation of your warranty protection. Always check with your dealer *before* making any modifications to your yacht.**

Engine & Accessories Literature

- The engines and accessories installed on your boat come with their own operation and maintenance manuals.
- Read and understand these manuals **before** using the engine and accessories.
- Unless noted otherwise, **all** engine and accessory literature referred to in this *Owner's Manual* is included in your owner's packet.

Safety Standards

 **DANGER!**



FALLING and ROTATING PROPELLER HAZARD!

NEVER allow anyone to ride on parts of the yacht *not* designed for such use.

- Sitting on seat backs, lounging on the forward deck, bow riding, gunwale riding or occupying the transom platform while underway is especially hazardous and *will* cause personal injury or death.

 **DANGER!**



CO
DANGER
CARBON MONOXIDE



ROTATING PROPELLER and CARBON MONOXIDE POISONING HAZARD!

- NEVER** allow anyone to occupy, or hang from, the back deck or swim platform while the engine(s) are running.
- Teak surfing, dragging, or water skiing within 20 feet of a moving watercraft can be fatal.

 **DANGER!**

PERSONAL SAFETY HAZARD!

ALWAYS secure the anchor and other loose objects *before* getting underway. The anchor and other items that are *not* properly secured can come loose when the yacht is moving and cause personal injury or death.

Your yacht's mechanical and electrical systems were designed to meet safety standards in effect at the time it was built. Some of these standards were mandated by law, all of them were designed to insure your safety, and the safety of other people, vessels and property.

In addition to this *Owner's Manual*, please read the *Cruiser & Yacht Owner's Manual Supplement* and all accessory instructions for important safety standards and hazard information.

Qualified Maintenance

 **WARNING!**

To maintain the integrity and safety of your yacht, allow *only* qualified personnel to perform maintenance on, or in any way modify: The steering system, propulsion system, engine control system, fuel system, environmental control system, electrical system or navi-

- Failure to maintain your yacht's systems (listed in the warning above) as designed could violate the laws in your jurisdiction and could expose you and other people to the danger of bodily injury or accidental death.
- Follow the instructions provided in the *Cruiser & Yacht Owner's Manual Supplement*, this *Owner's Manual*, the engine owner's manual and ***all*** accessory literature.

Structural Limitations

The command bridge, bow platform, and transom platform are designed to be lightweight for proper yacht balance. The load limit for these platforms is 30 pounds per square foot, evenly distributed.

Special Care For Moored Boats

NOTICE

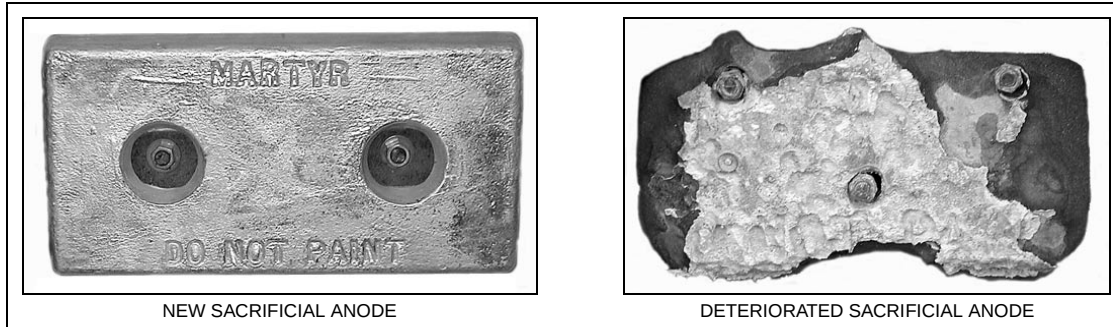
- To help seal the hull bottom and reduce the possibility of gelcoat blistering on moored boats, apply an epoxy barrier coating. The barrier coating should be covered with several coats of anti-fouling paint.
- Many states regulate the chemical content of bottom paints in order to meet environmental standards. Check with your local dealer about recommended bottom paints, and about the laws in effect in your area.

- Whether moored in saltwater or freshwater, your yacht **will** collect marine growth on its hull bottom.
- This **will** detract from the yacht's beauty, greatly affect its performance and may damage the gelcoat.
- There are two methods of slowing marine growth:
 1. Periodically haul the yacht out of the water and scrub the hull bottom with a bristle brush and a solution of soap and water.
 2. Occasionally re-paint the hull below the waterline with a good grade of anti-fouling paint.

Sacrificial Anodes (Zincs)

NOTICE

Do not paint between the zinc and the metal surface it contacts and do not paint over the



Your yacht features sacrificial anodes (zincs) to protect underwater metal parts from excessive deterioration. Check the zincs regularly and replace them if they have deteriorated more than 70%.

There are many factors that affect the rate at which the zincs deteriorate, including:

- Water temperature
- Salinity
- Water pollution

Stray electrical current from the yacht or dock may cause complete deterioration in just a few weeks. If there is rapid zinc deterioration, measure the electrolytic corrosion around your yacht with a corrosion test meter. If the zincs are **not** bonded correctly, they **will not** provide protection.

Boat Lifting



WARNING!

PERSONAL INJURY and/or PRODUCT OR PROPERTY DAMAGE HAZARD!

- Lifting slings may slip on the hull.
- Avoid serious injury or death by securing the lifting slings together *before* lifting.



WARNING!

PERSONAL INJURY and/or PRODUCT OR PROPERTY DAMAGE HAZARD!

- **NEVER** lift the yacht using the bow and stern eyes.



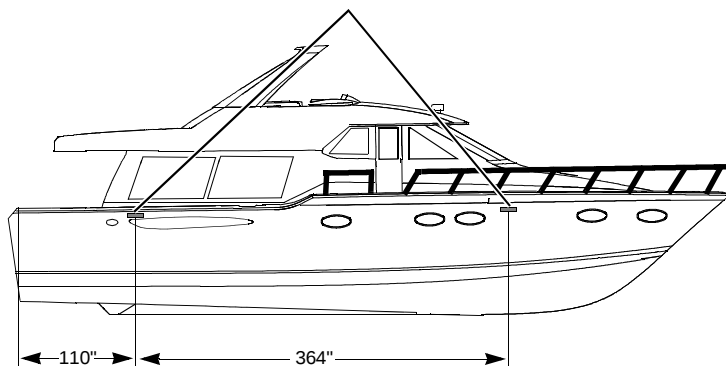
CAUTION!

PRODUCT or PROPERTY DAMAGE HAZARD!

- When lifting any yacht, *always* use a spreader bar. The spreader bar *must* be equal to the width of the yacht at each lifting point.

- **Always** follow the lift equipment's instructions and requirements.
- Water in the bilge can shift and change the balance of the load.
- If water is present in the bilge, pump or drain the water out of the bilge areas **before** lifting your yacht.
- When lifting your yacht, **always** position the lifting slings at the port and starboard, lifting sling label positions, as shown in the illustration on the right.

LIFTING SLING LABELS
(TYPICAL PORT & STARBOARD)



Carbon Monoxide (CO)

 DANGER!	
	• Carbon monoxide gas (CO) is colorless, odorless, tasteless, and extremely dangerous. • All engines, generators, and fuel burning appliances produce CO as exhaust. • Prolonged exposure to low concentrations or very quick exposure to high concentrations <i>will</i> cause BRAIN DAMAGE or DEATH. • Teak surfing, dragging, or water skiing within 20 feet of a moving watercraft can be fatal.

Facts about CO

- CO poisoning causes a significant number of boating deaths each year.
- Called the "silent killer", CO is an extremely toxic, colorless, odorless and tasteless gas.
- CO can harm or even kill you inside or outside your yacht.
- CO can affect you whether you're underway, moored, or anchored.
- CO symptoms are similar to seasickness or alcohol intoxication.
- CO can make you sick in seconds. In high enough concentrations, even a few breaths can be fatal.
- Breathing CO blocks the ability of your blood to carry oxygen.
- The effects are cumulative, even low levels of exposure can result in injury or death.

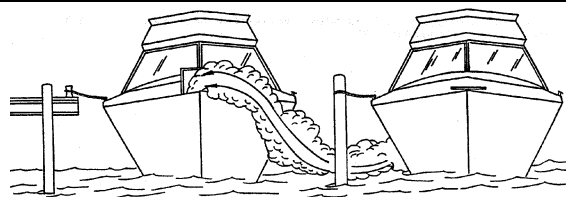
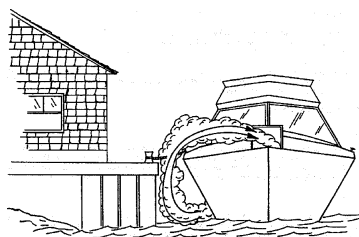
Factors That Increase the Effects of CO Poisoning

- Age
- Smokers or people exposed to high concentrations of cigarette smoke
- Consumption of alcohol
- Lung disorders
- Heart problems
- Pregnancy

Where and How CO Can Accumulate

Stationary Conditions That Increase CO Accumulations Include:

A. Using engine, generator, or other fuel burning device when yacht is

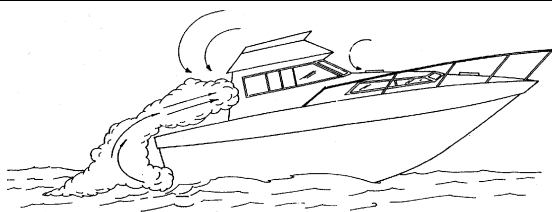


moored in a confined space.
B. Mooring too close to another boat that is using

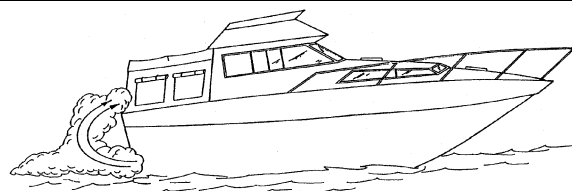
To correct stationary situations A and/or B:

- **Close all** windows, portlights and hatches.
- If possible, move your yacht away from source of CO.

Running Conditions That Increase CO Accumulations Include:



C. Running yacht with trim angle of bow too high.



D. Running yacht without through ventilation (station wagon effect).

To correct running situations C and/or D:

- Trim bow down.
- **Open** windows and canvas.
- When possible, run yacht so that prevailing winds help dissipate exhaust.

How to Protect Yourself and Others From CO

- Know where and how CO may accumulate in and around your yacht (see above).
- Maintain fresh air circulation throughout the yacht at **all** times.
- Know where your engine and generator exhaust outlets are located and keep everyone away from these areas.
- **Never** sit on, or hang onto, the back deck or swim platform while the engine(s) are running.
- **Never** enter the areas under swim platforms where exhaust outlets are located.
- Although CO can be present without the smell of exhaust fumes, if exhaust fumes are detected on the yacht, take **immediate** action to dissipate these fumes.
- Treat symptoms of seasickness as possible CO poisoning. Get the person into fresh air **immediately**. Seek medical attention—unless you're sure it's not CO.
- Install and maintain CO alarms inside your yacht. **Do not** ignore any alarm. Replace alarms as recommended by the alarm manufacturer.
- Follow the checklists provided on the next page.
- Get a Vessel Safety Check.

For information on how to get a free VESSEL SAFETY CHECK, visit www.vesselsafetycheck.org or contact your local U.S. Coast Guard Auxiliary or United States Power Squadrons®.

- U.S. Coast Guard Auxiliary: 1-800-368-5647 or on the Internet at: <http://www.cgaux.org>
- U.S. Power Squadrons: 1-888-FOR-USPS (1-888-367-8777) or on the Internet at: <http://www.usps.org>

Trip Checklist

- o Make sure you know where the exhaust outlets are located on your yacht.
- o Educate **all** passengers about the symptoms of CO poisoning and where CO may accumulate.
- o When docked, or rafted with another boat, be aware of exhaust emissions from the other boat.
- o Confirm that water flows from the exhaust outlet when the engines and generator are started.
- o Listen for any change in exhaust sound, which could indicate an exhaust component failure.
- o Test the operation of each CO alarm by pressing the test button.

Monthly Checklist

- o Make sure **all** exhaust clamps are in place and secure.
- o Look for exhaust leaking from exhaust system components. Signs include rust and/or black streaking, water leaks, or corroded or cracked fittings.
- o Inspect rubber exhaust hoses for burned, cracked, or deteriorated sections. **All** rubber hoses should be pliable and free of kinks.

Annual Checklist

Have a Qualified Marine Technician:

- o Replace exhaust hoses if cracking, charring, or deterioration is found.
- o Ensure that your engines and generators are properly tuned, and well maintained.
- o Inspect each water pump impeller and the water pump housing. Replace if worn. Make sure cooling systems are in working condition.
- o Inspect **all** metal exhaust parts for cracking, rusting, leaking, or loosening and check the cylinder head gasket, exhaust manifold, water injection elbow, and the threaded adapter nipple between the manifold and the elbow.
- o Clean, inspect, and confirm proper operation of the generator cooling water anti-siphon valve (if equipped).

Carbon Monoxide Alarm System

⚠ DANGER!	
	CARBON MONOXIDE POISONING HAZARD!
	• The house battery switch <i>must</i> be in the <i>On</i> position for the CO Monitors to work. • If your yacht will be unattended for an extended period of time, turn <i>Off</i> the house battery or the CO Monitors <i>will</i> drain the house battery.

NOTICE
The stereo memory and CO monitor(s) place a small, but constant drain on the battery. If your yacht will be unattended for an extended amount of time, plug into shore power with the battery charger turned <i>On</i>, or disconnect the battery if shore power is <i>not</i> an option.

- Your yacht features a carbon monoxide (CO) alarm system.
- **Do not** disconnect the alarm system.
- Read and understand the manufacturer's instructions for your CO alarm system. If you did **not** receive an instruction manual, call (800) 383-0269 and one will be mailed to you.

If your yacht is **not** equipped with a carbon monoxide alarm, consider purchasing one from your dealer or marine supply store.

More Information

For more information about how you can prevent carbon monoxide poisoning on recreational boats and other ways to boat more safely, contact:

United States Coast Guard
Office of Boating Safety (G-OPB-3)
2100 Second Street SW
Washington, DC 20593
www.uscgboating.org
1-800-368-5647

National Marine Manufacturers Association (NMMA)
200 East Randolph Drive
Suite 5100
Chicago, IL 60601-9301
www.nmma.org
312-946-6200

American Boat & Yacht Council, Inc. (ABYC)
3069 Solomon's Island Road
Edgewater, MD 21037-1416
www.abycinc.org
410-956-1050

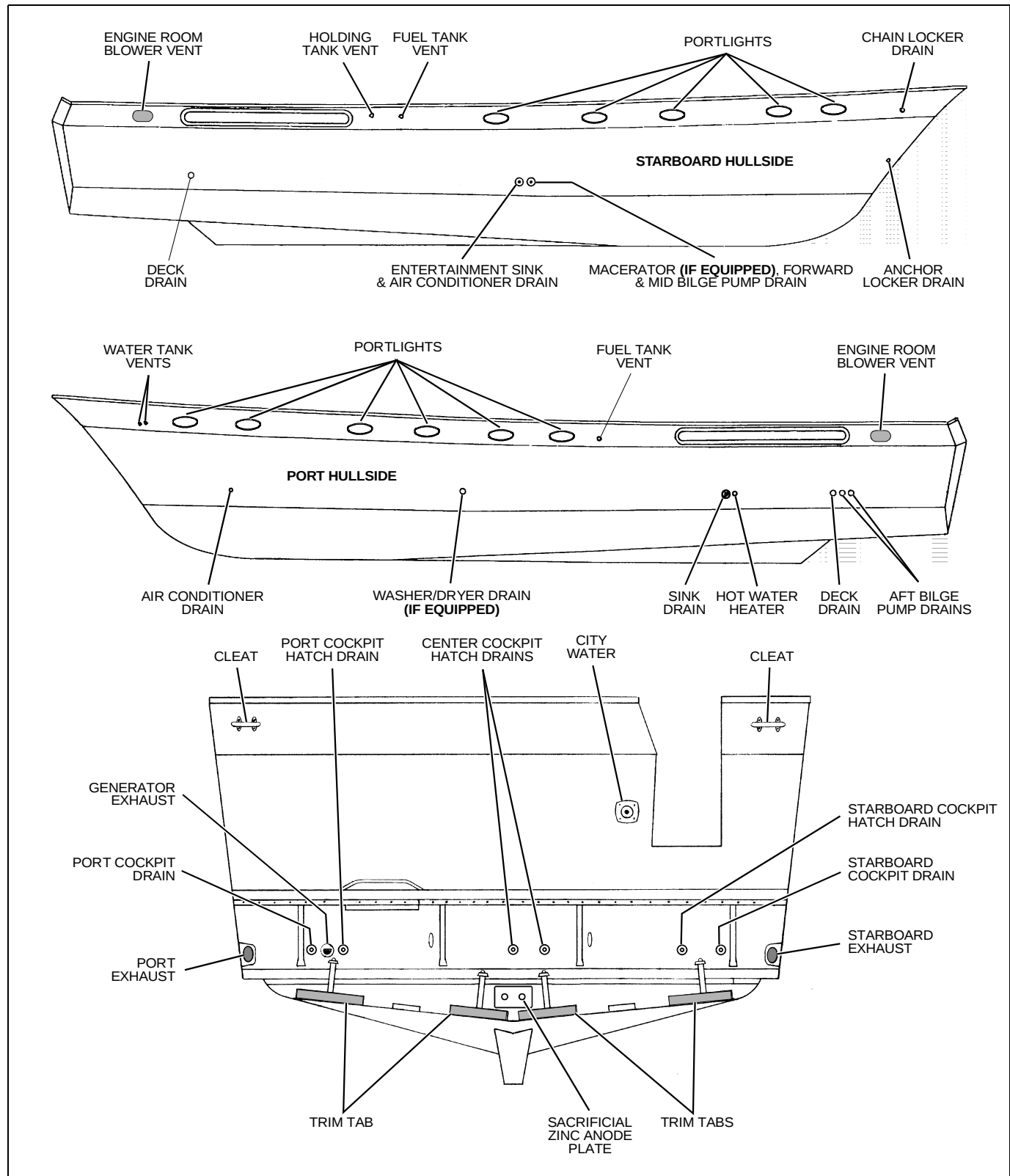
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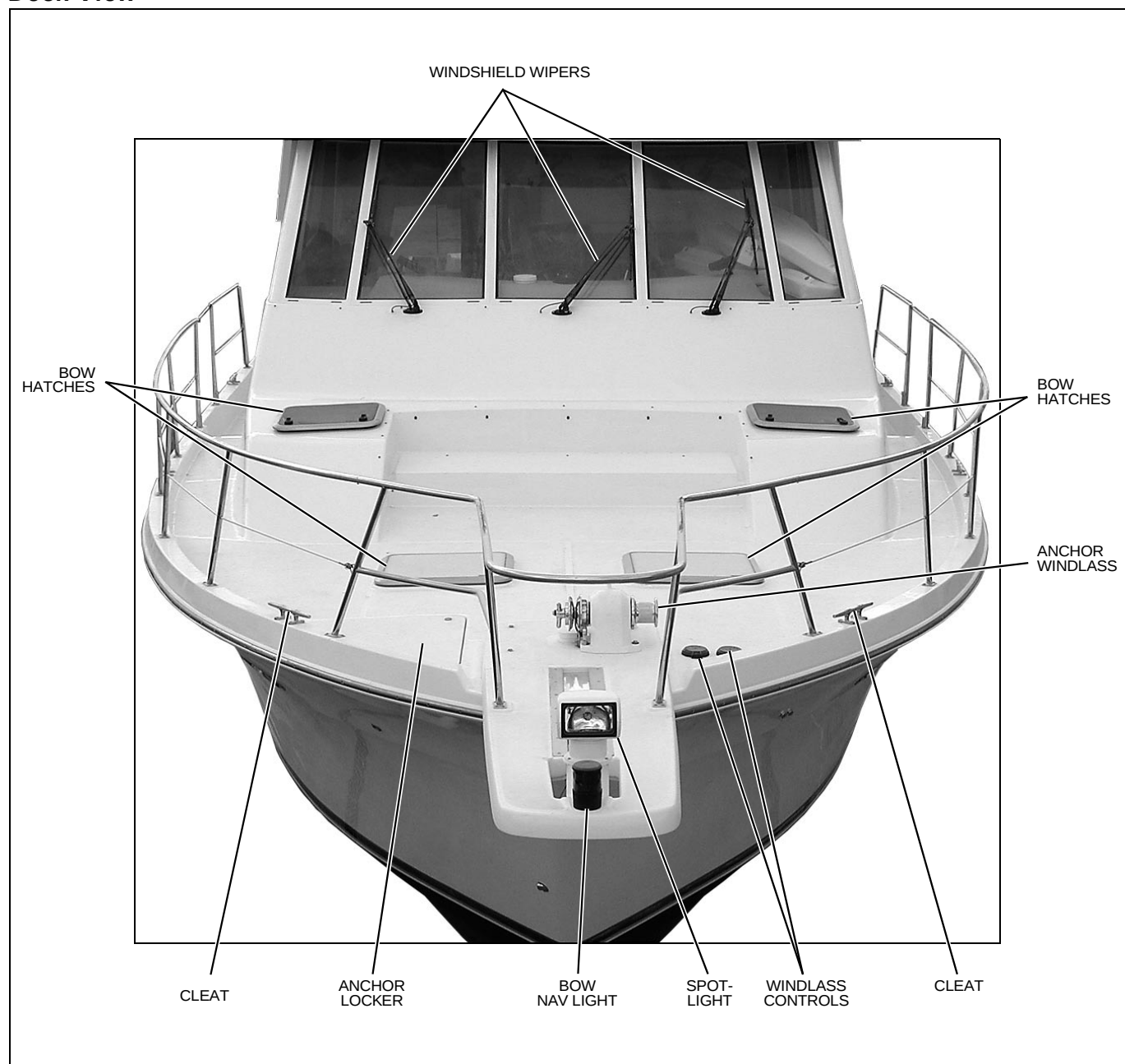
- U.S. Coast Guard Auxiliary: 1-800-368-5647 or on the Internet at: <http://www.cgaux.org>
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Chapter 2: Locations

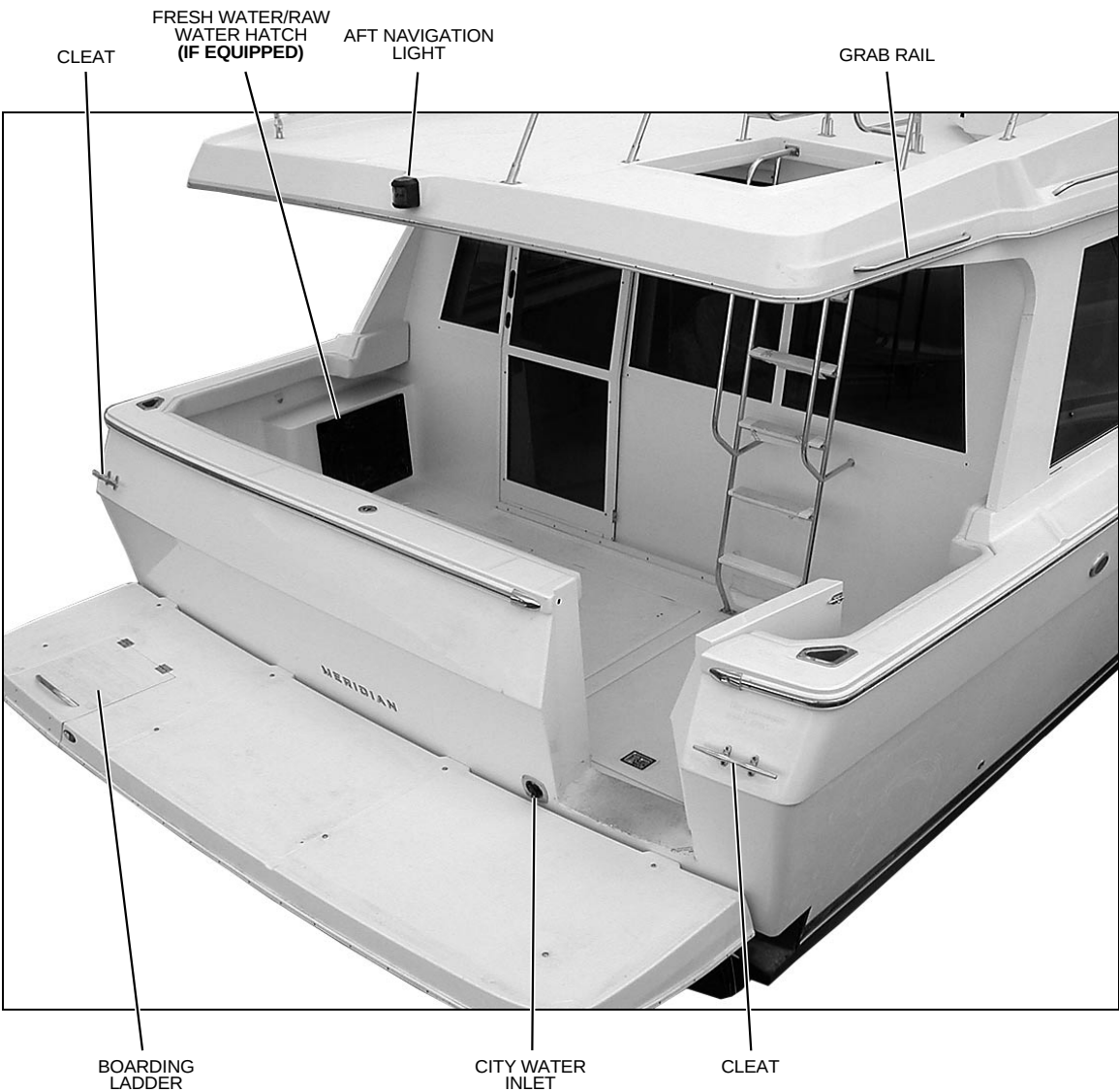
Exterior Views

Hull Views



Deck View

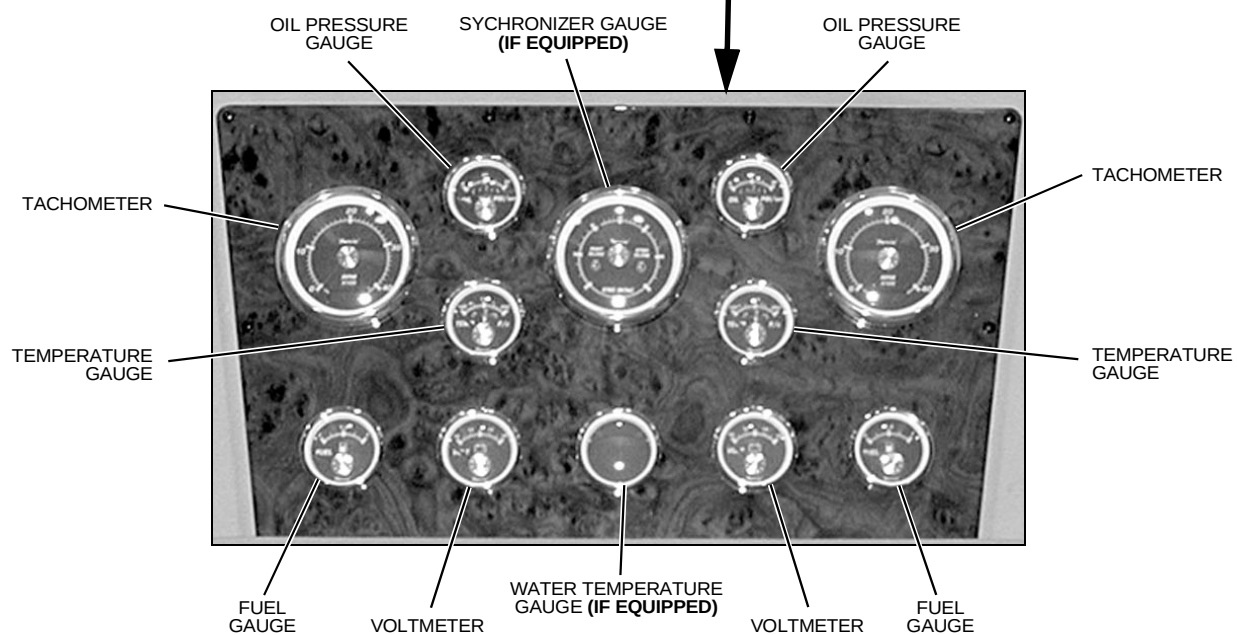
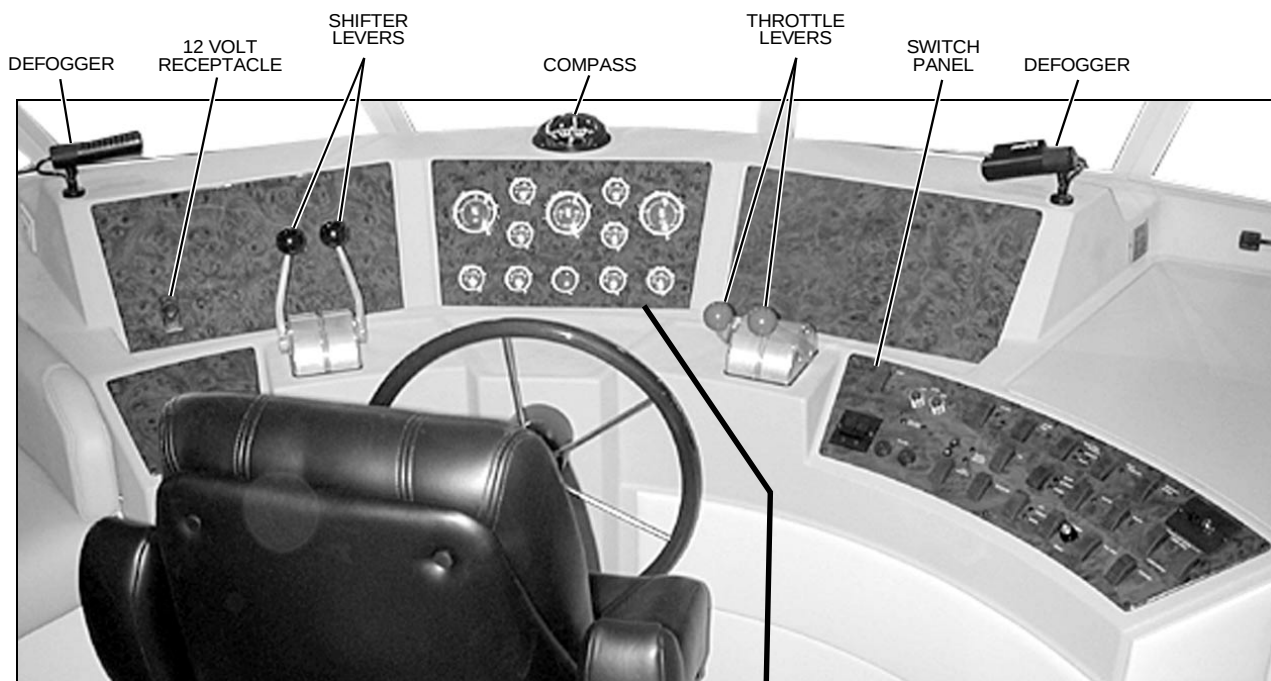
Aft Deck Views



Helm Stations

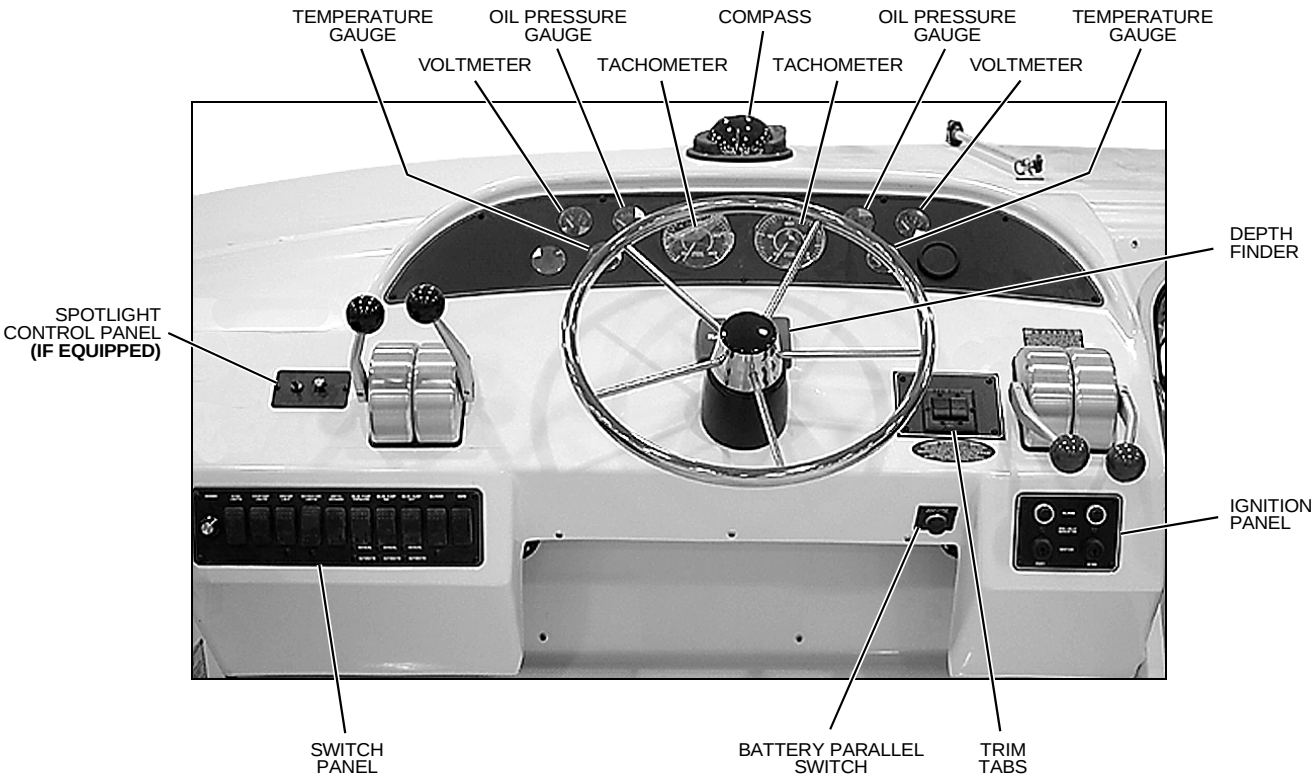
Pilothouse Helm Station

NOTE: TYPICAL HELM LAYOUTS SHOWN
ACTUAL LAYOUTS MAY VARY DEPENDING
ON ENGINE AND ACCESSORY OPTIONS



Command Bridge Helm Station

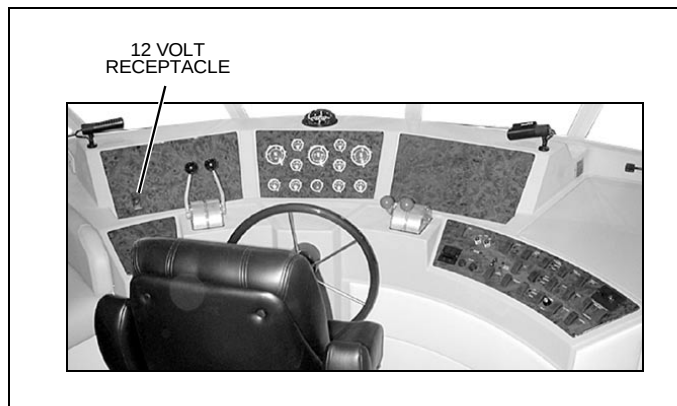
NOTE: TYPICAL HELM LAYOUTS SHOWN
ACTUAL LAYOUTS MAY VARY DEPENDING
ON ENGINE AND ACCESSORY OPTIONS



Component Locations

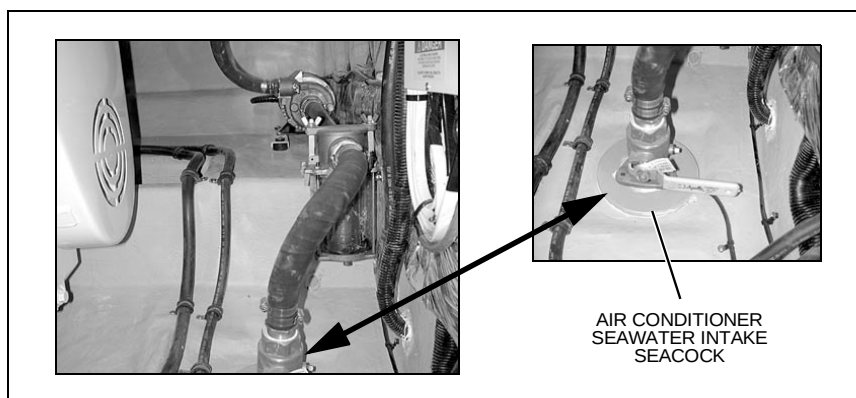
12-Volt Accessory Outlet:

- Located at the lower helm.



Air Conditioner Seawater Intake Seacock:

- Located in the engine room, forward of the port side engine.
- Access is through the top step in the salon.



Air Conditioner Unit - V-berth:

- Located in the port storage locker under the V-berth mattress.



Air Conditioner Unit - Salon:

- Located under the lounge seat cushion in the pilothouse.

LOUNGE SEAT
CUSHION**Air Conditioner Unit - Pilothouse:**

- Located under the pilothouse dash.
- Access the air conditioner unit through the ceiling access panel in the doorway of the V-berth.

CEILING ACCESS
PANEL**Batteries:**

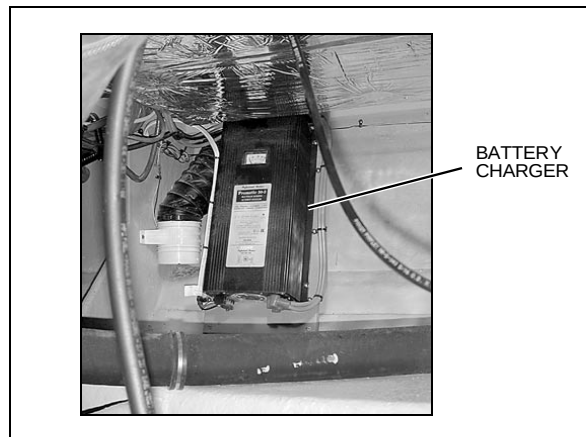
- Located in the cockpit machinery room.
- Access the machinery room through the starboard cockpit floor hatch.

BATTERIES

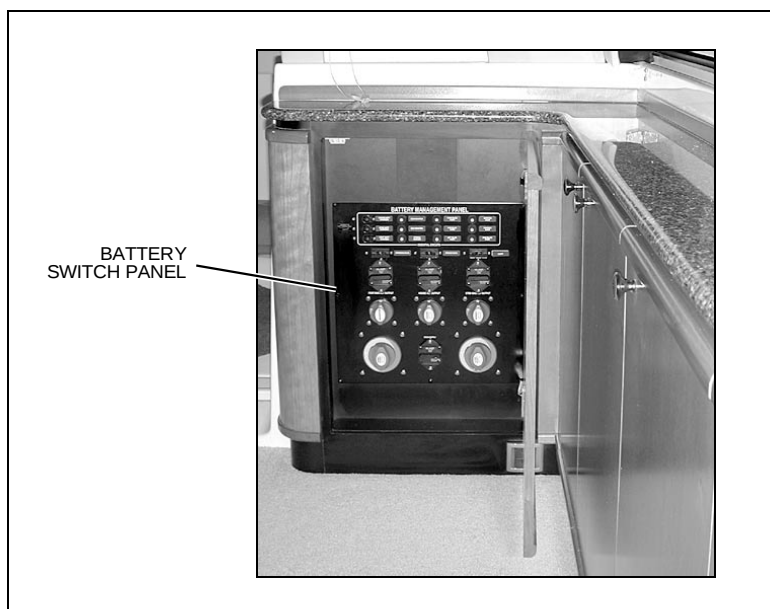


Battery Charger:

- Located in the engine room, aft of the port engine.
- Access to the engine room is through the top step in the salon.

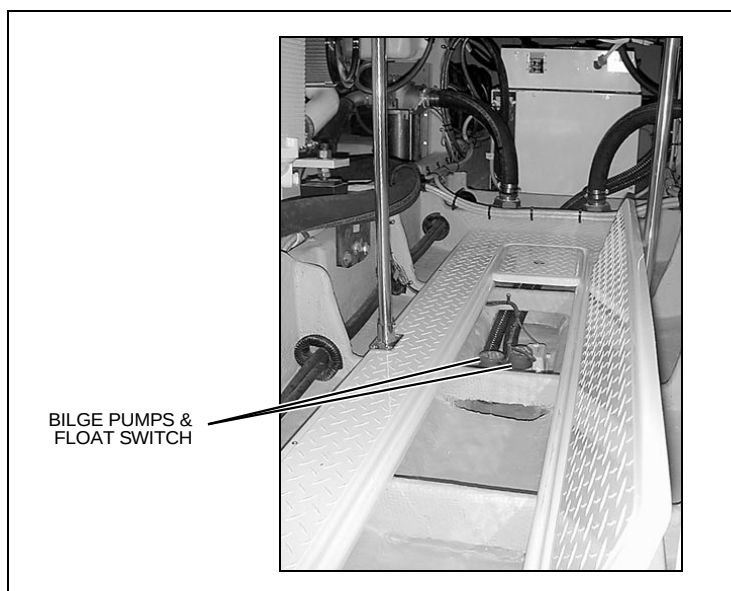
**Battery Switches:**

- Located inside the cabinet on the port side of the salon.



Bilge Pumps - Aft:

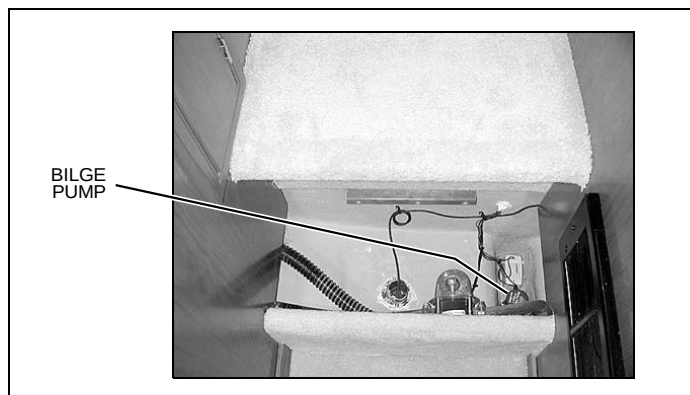
- Located in the aft engine room, in the floor hatch.
- Access to the engine room is through the top step in the salon.

**Bilge Pumps - Mid:**

- Located in the engine room.
- Access is through the top step in the salon.

**Bilge Pump - Forward:**

- Located in the hallway.
- Access is through the bottom step in the salon.



Carbon Monoxide Detectors (4 total):

Aft Berth - on the forward ceiling.

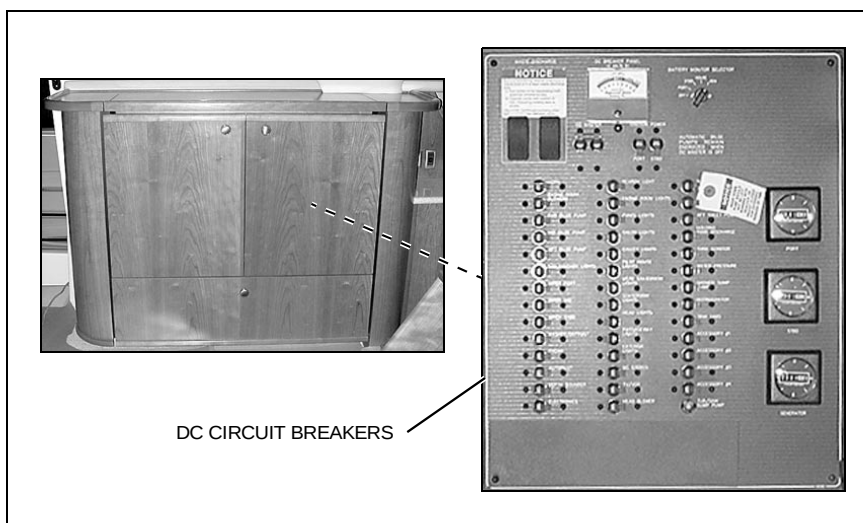
V-berth - on the starboard ceiling.

Mid berth - on the aft starboard wall.

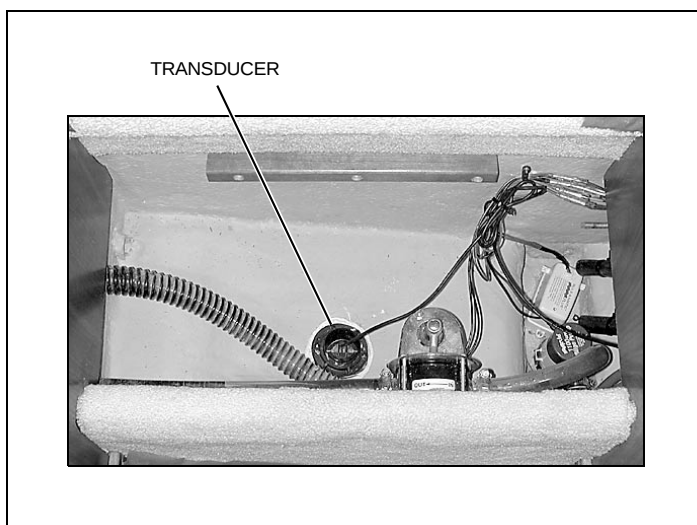
Salon - on the port side wall next to the hallway stairs.

DC Circuit Breakers:

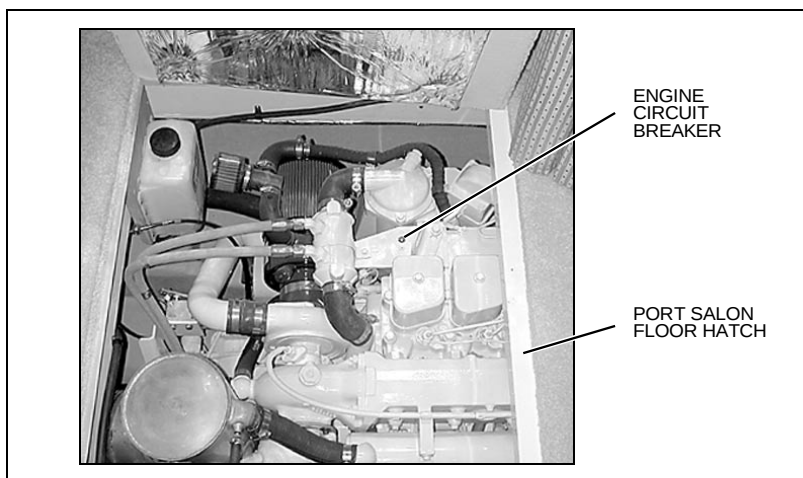
- Located in the electrical cabinet, on the starboard side of the pilothouse.

**Depth Sounder
Thru-hull Transducer:**

- Located under the hallway stairs.
- Access is through the bottom step in the salon.

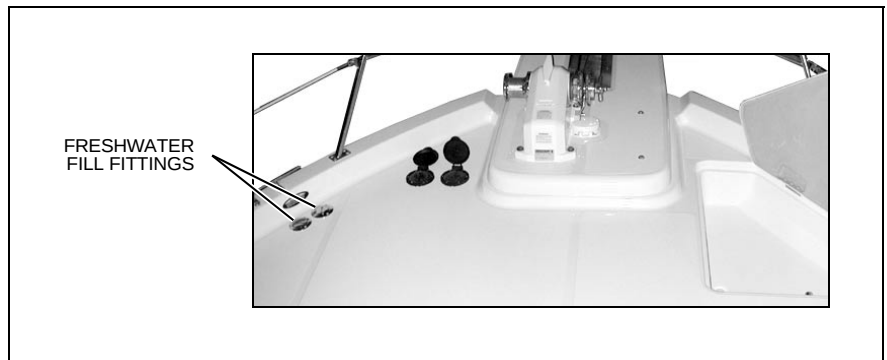
**Engine Circuit Breaker:**

- Located on each engine.
- Access the top side of each engine through the salon floor hatches.

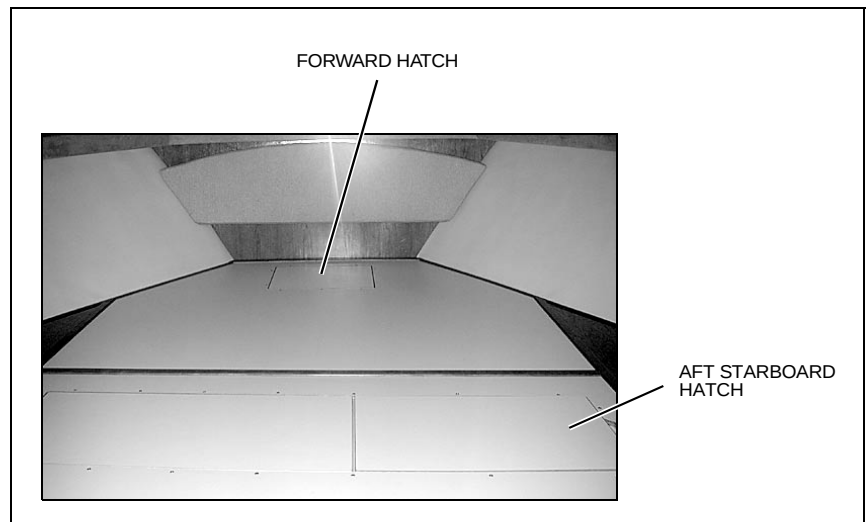


Freshwater Fill:

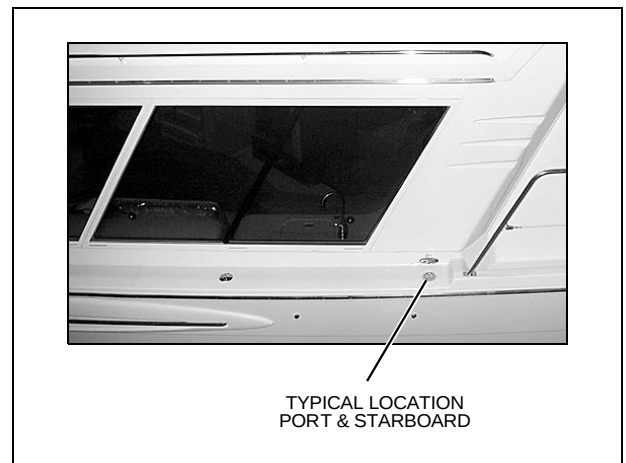
- Located at the bow, on the port side.

**Freshwater Tanks:**

- Located in the V-berth.
- Access to the forward tank is through the forward hatch, under the V-berth mattress.
- Access to the aft tank is through the hatch inside the aft starboard hatch, under the V-berth mattress.

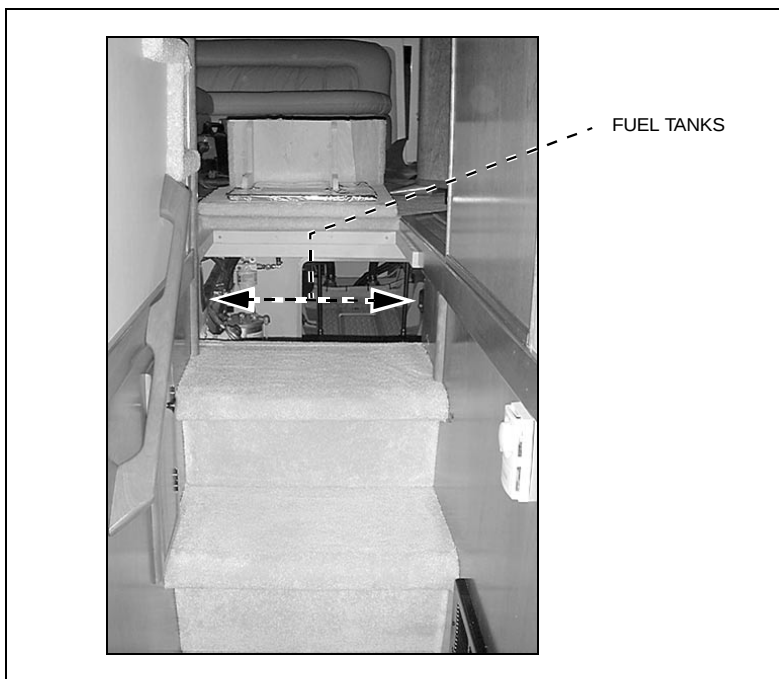
**Fuel Fills:**

- Located on the port and starboard deck trails.



Fuel Tanks:

- Located in the engine room; one is on the port side and the other is on the starboard side.
- Access to the engine room is through the top step in the salon.

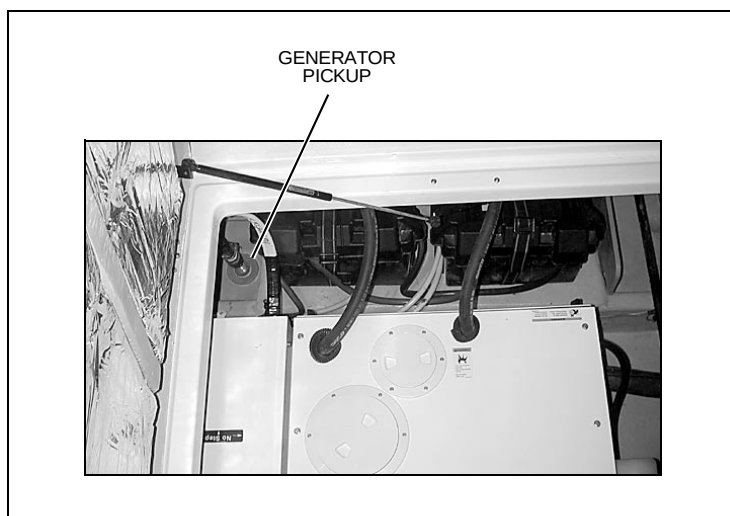
**Generator:**

- Located in the aft machinery room.
- Access to the aft machinery room is through the middle cockpit floor hatch.



Generator Pickup:

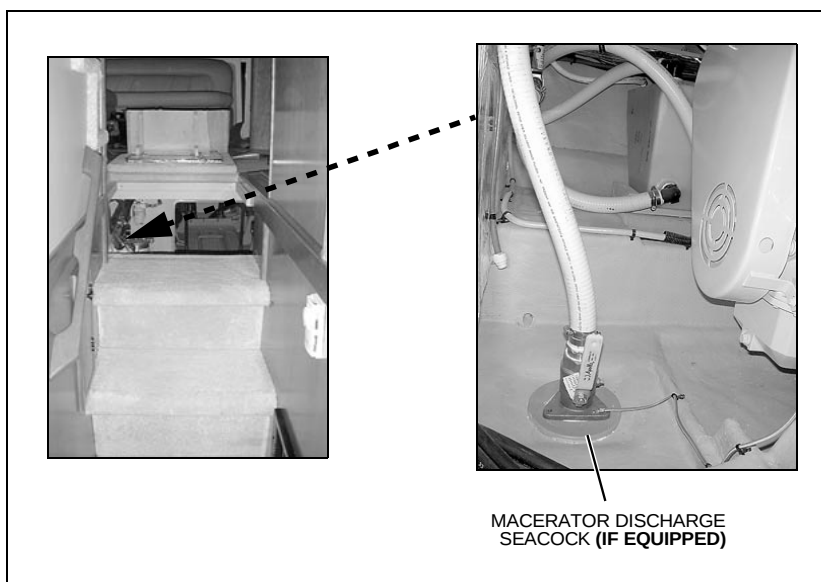
- Located in the aft machinery room.
- Access to the aft machinery room is through the middle cockpit floor hatch. The pickup is on the starboard side of the generator, forward of the batteries.

**Inverter:**

- Located in the salon.
- Access is through the aft wall hatch behind the couch.

**Macerator Underwater Discharge Seacock (If Equipped):**

- Located in the engine room on the starboard side, forward of the starboard engine.
- Access to the engine room is through the top step in the salon.



Marine Head (Electric) Seawater Intake Seacock:

- Located in the hallway.
- Access is through the hatch door in the starboard wall, next to stairs.



HATCH DOOR

Wall Vacuum Unit:

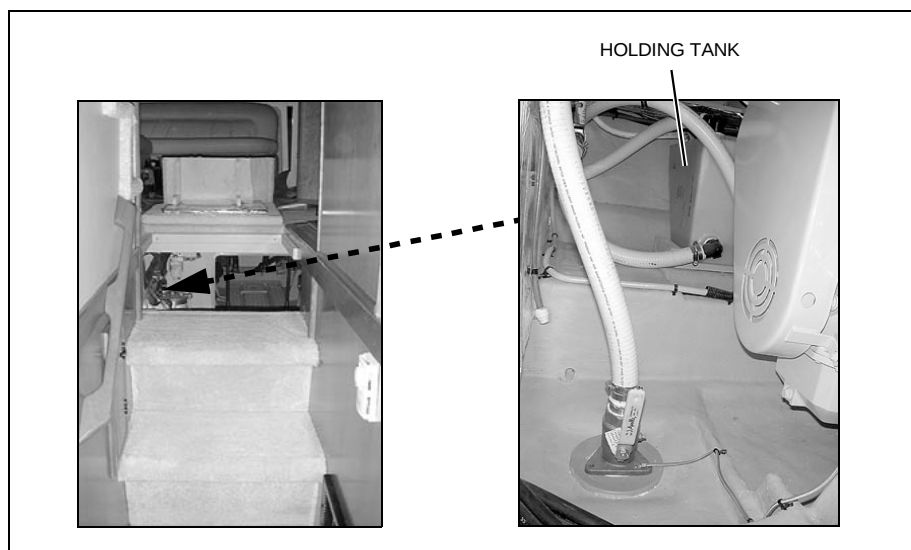
- Located in the hallway.
- Access is through the sliding doors in the hallway on the starboard wall.



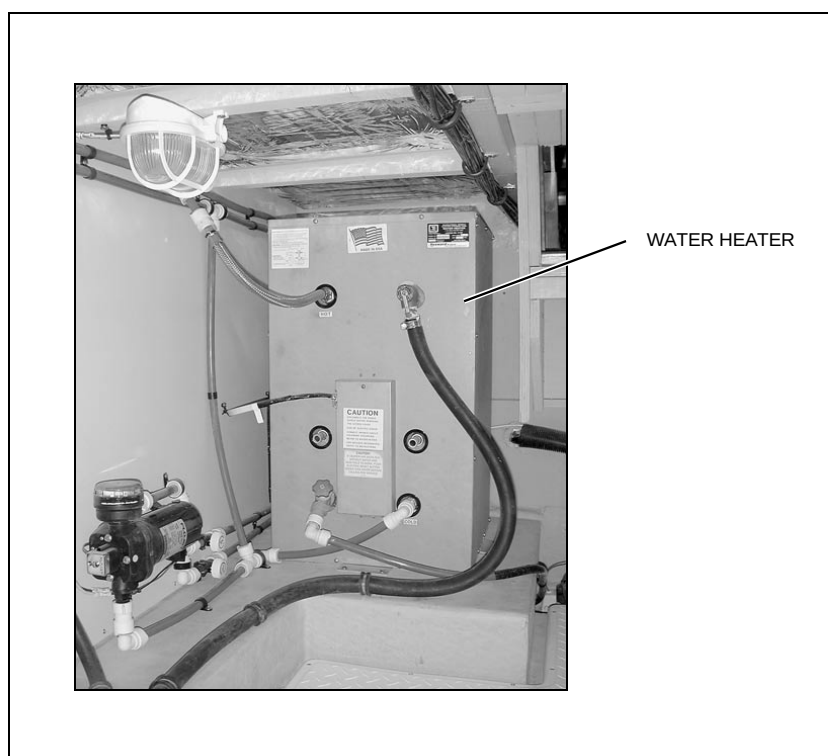
SLIDING DOORS

Waste Holding Tank:

- Located in the engine room on the starboard side.
- Access to the engine room is through the top step in the salon.

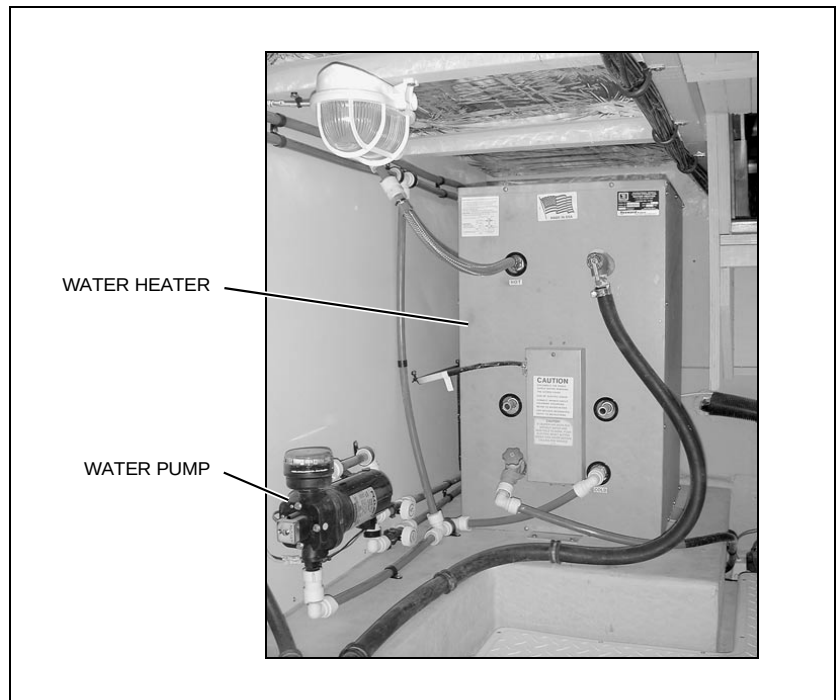
**Water Heater:**

- Located in the engine room, on the port side.
- Access to the engine room is through the top step in the salon.

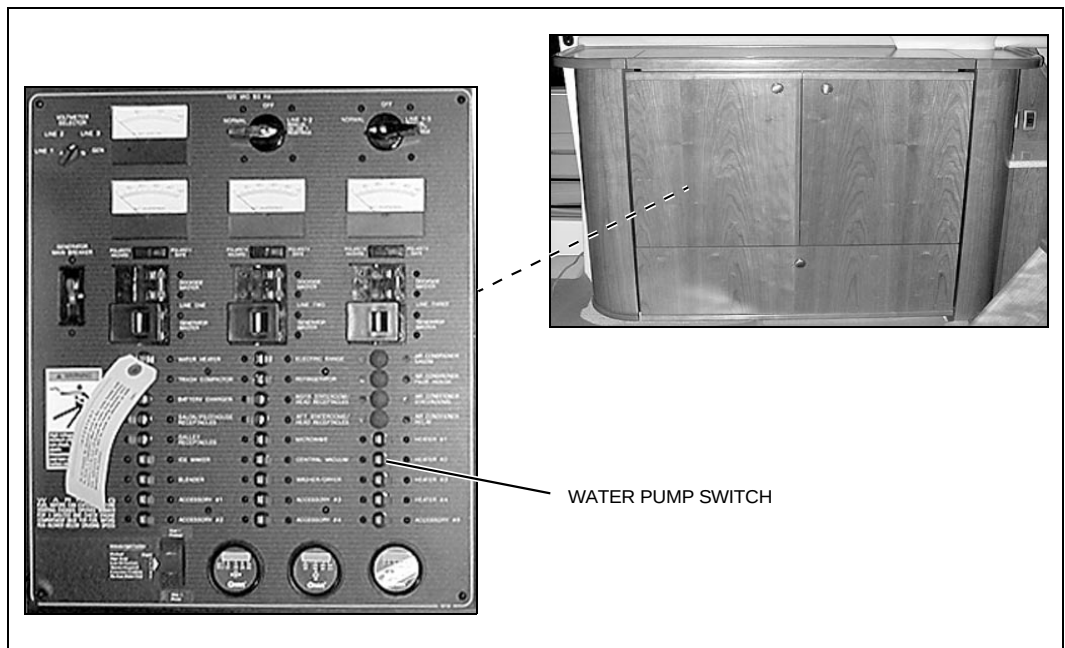


Water Pump:

- Located in the engine room, on the port side, aft of the water heater.
- Access to the engine room is through the top step in the salon.

**Water Pump Switch:**

Located in the electrical cabinet, on the star-board side of the pilot-house.



Chapter 3: Propulsion & Related Systems

Engine

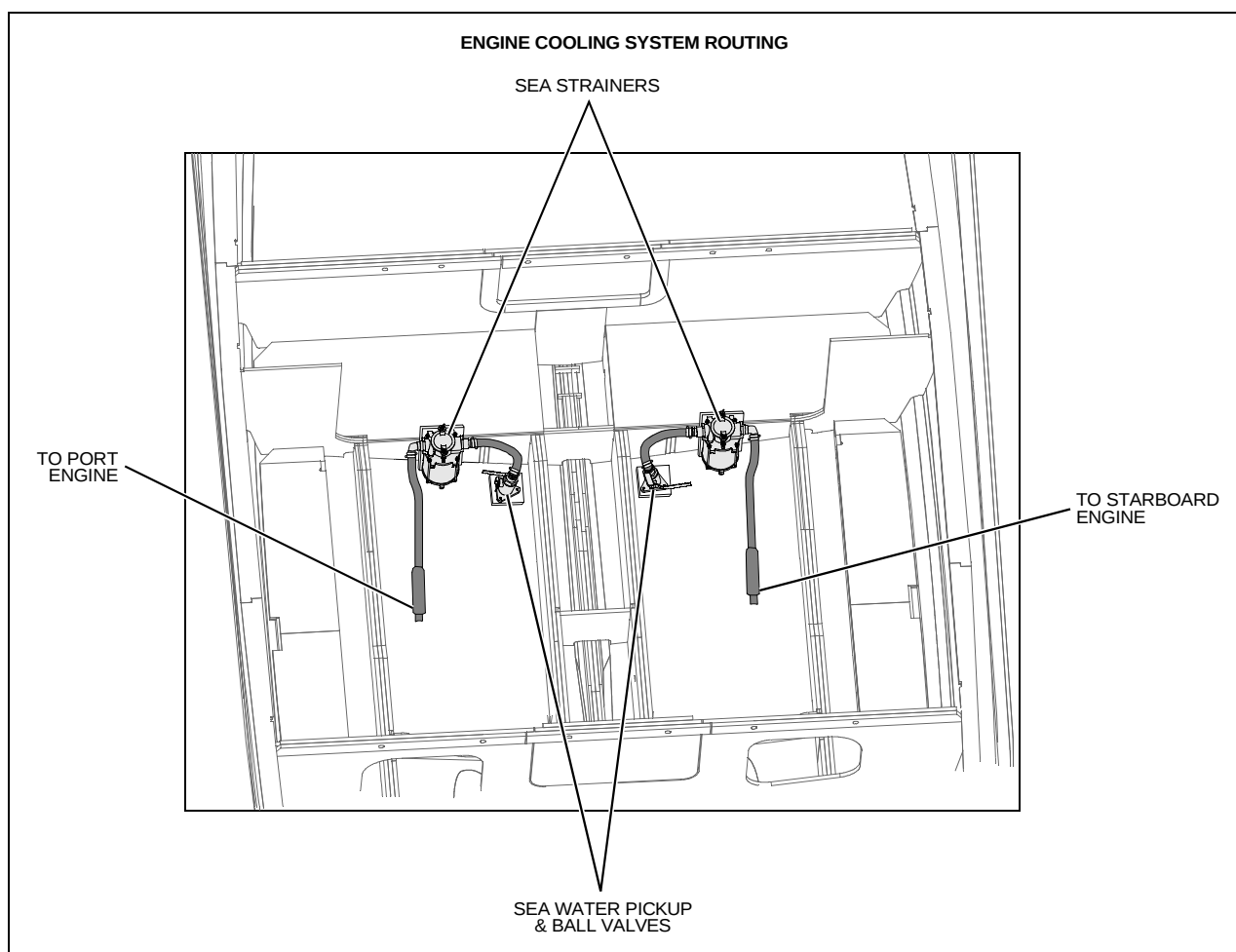
Read and understand the engine operation and maintenance manuals *before* using or working on the engines.

Engine Cooling System


CAUTION!

SYSTEM DAMAGE HAZARD!

The engine cooling system's seacocks *must* be *Opened before* engines are started and during engine operation.



The engine cooling system circulates raw water around components and also uses a freshwater heat exchanger on the engine to reduce engine temperature.

- Make sure both engine seawater intake valves (seacocks) are **Open before** starting the engines and keep the seacocks **Open** while the engines are running.
- The cooling system's seawater strainers should be checked for leaks and debris **every time** you use your yacht. For instructions on how to clean the seawater strainers, see the *Seawater Systems* section of this manual.

Exhaust System

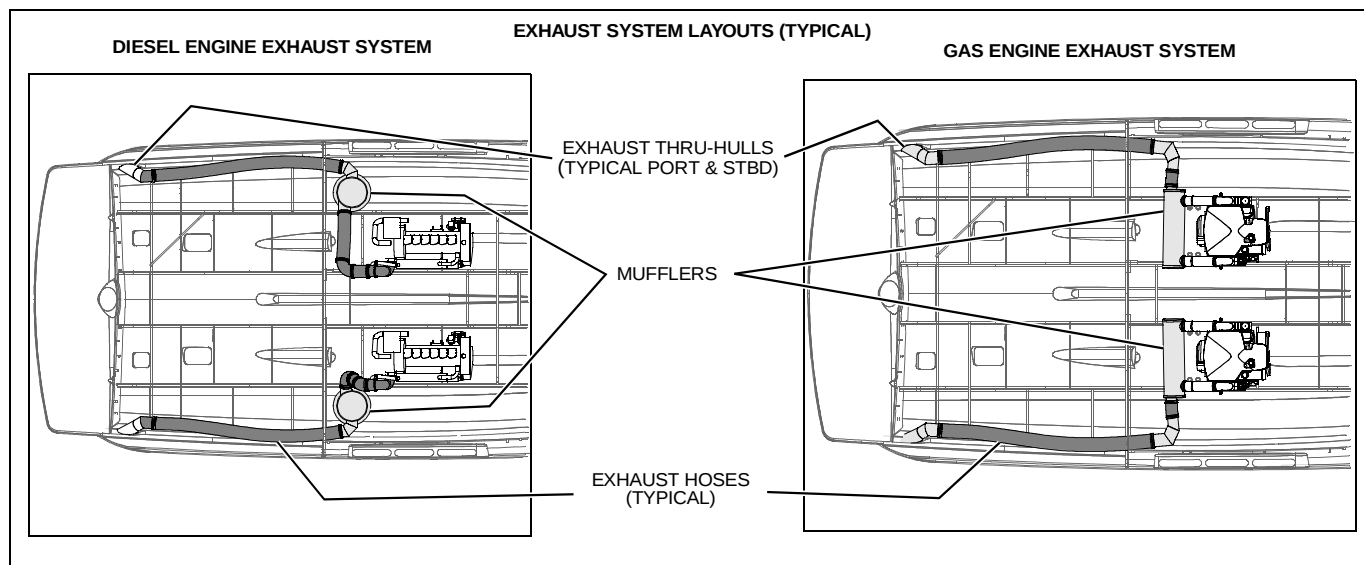
 **DANGER!**

CARBON MONOXIDE POISONING HAZARD!



Leaking engine and/or generator exhaust is a source of dangerous carbon monoxide gas (CO). Check *all* exhaust systems *before* each trip.

- Look for leaks in the exhaust systems of the propulsion engines and the generator.
- Look for discoloration, water leaks, carbon or stains around *all* joints.
- Make sure *all* of the exhaust clamps are in place and secured.
- Make sure the ventilation systems work and are *not* obstructed or restricted.
- To reduce the chance of CO entering the living spaces, fill any gaps around engine room plumbing, cableways, exhaust systems, doors, hatches, and access panels.



- The exhaust system is designed to keep seawater out of the engines in most sea conditions.
- However, ***do not*** anchor the stern to sea or shut the engines ***Off*** if high seas might flood the exhaust system.
- ***Always*** consider the sea conditions ***before*** anchoring or shutting ***Off*** the engines.

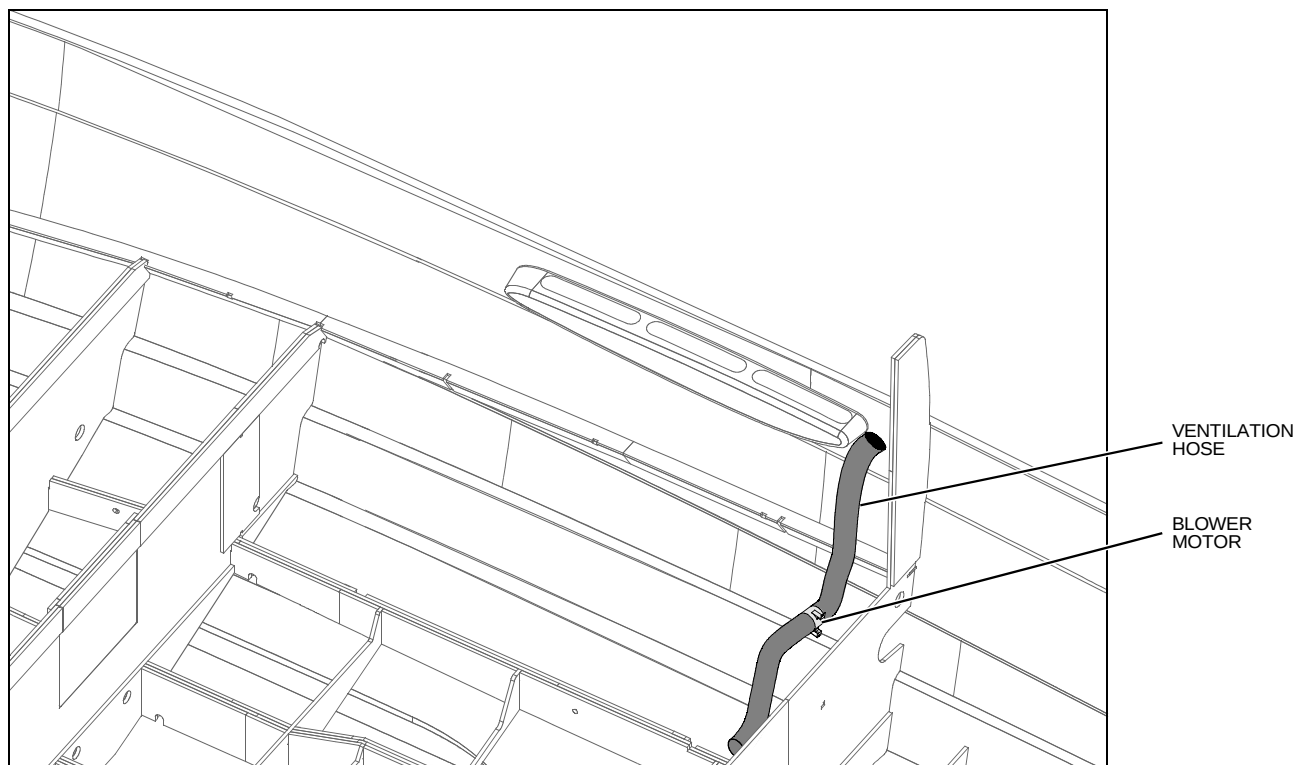
Engine Room Ventilation System

! **WARNING!**

FIRE/EXPLOSION HAZARD

- Use of the blower system is *NOT A GUARANTEE* that explosive fumes have been removed.
- If you smell fuel, *DO NOT* start the engines or generator and *DO NOT* turn *On* any electrical devices.
- If you smell fuel and the engines and/or generator are already running, shut *OFF* the engines and/or generator and turn *OFF all* electrical devices. Investigate *immediately*.

BILGE BLOWER SYSTEM ROUTING (TYPICAL)



- The bilge blowers remove explosive fumes from the engine room.
- Fresh air is drawn into the engine room through the deck vents.
- The bilge blower switch is located on the switch panel at the helm.

To make sure the engine room is properly ventilated:

- Always** run the bilge blowers for at least four minutes **before** starting the engines or the generator (if equipped).
- Continue to run the blowers until your yacht has reached cruising speed.
- Always** run the blowers when operating the yacht below cruising speed.

Fuel System



WARNING!



FIRE, EXPLOSION AND OPEN FLAME HAZARD!

- It is very important that the fuel system be inspected thoroughly the first time it is filled and at each subsequent filling.
- The fueling instructions in the *Cruiser and Yacht Owner's Manual Supplement* and the fuel recommendations in the engine operation manual *must* be followed.



CAUTION!

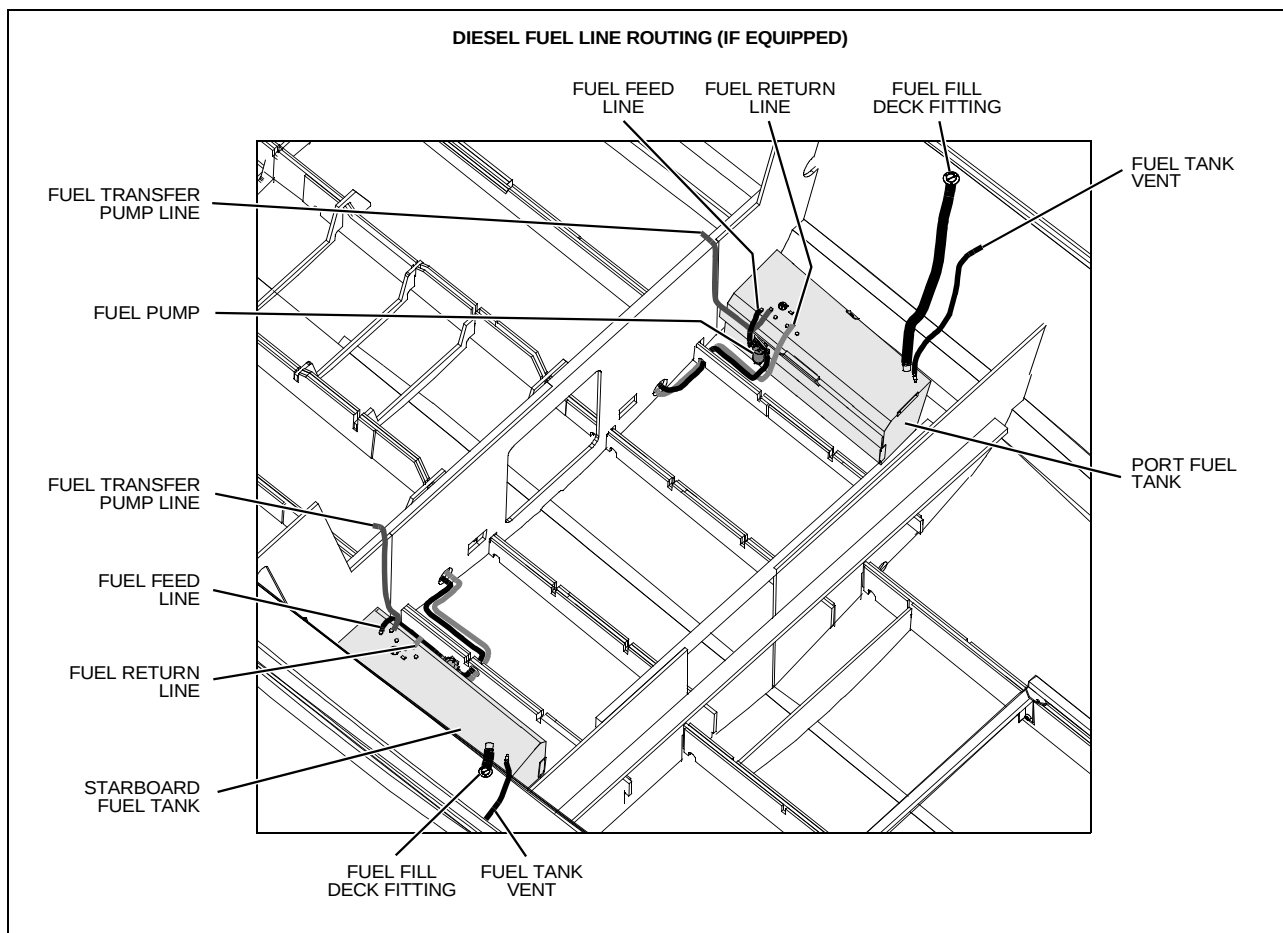
- Air in the diesel supply system can stop an engine or severely restrict performance. If you suspect air in the fuel lines, refer to your engine operation manual for detailed instructions on how to bleed the system.

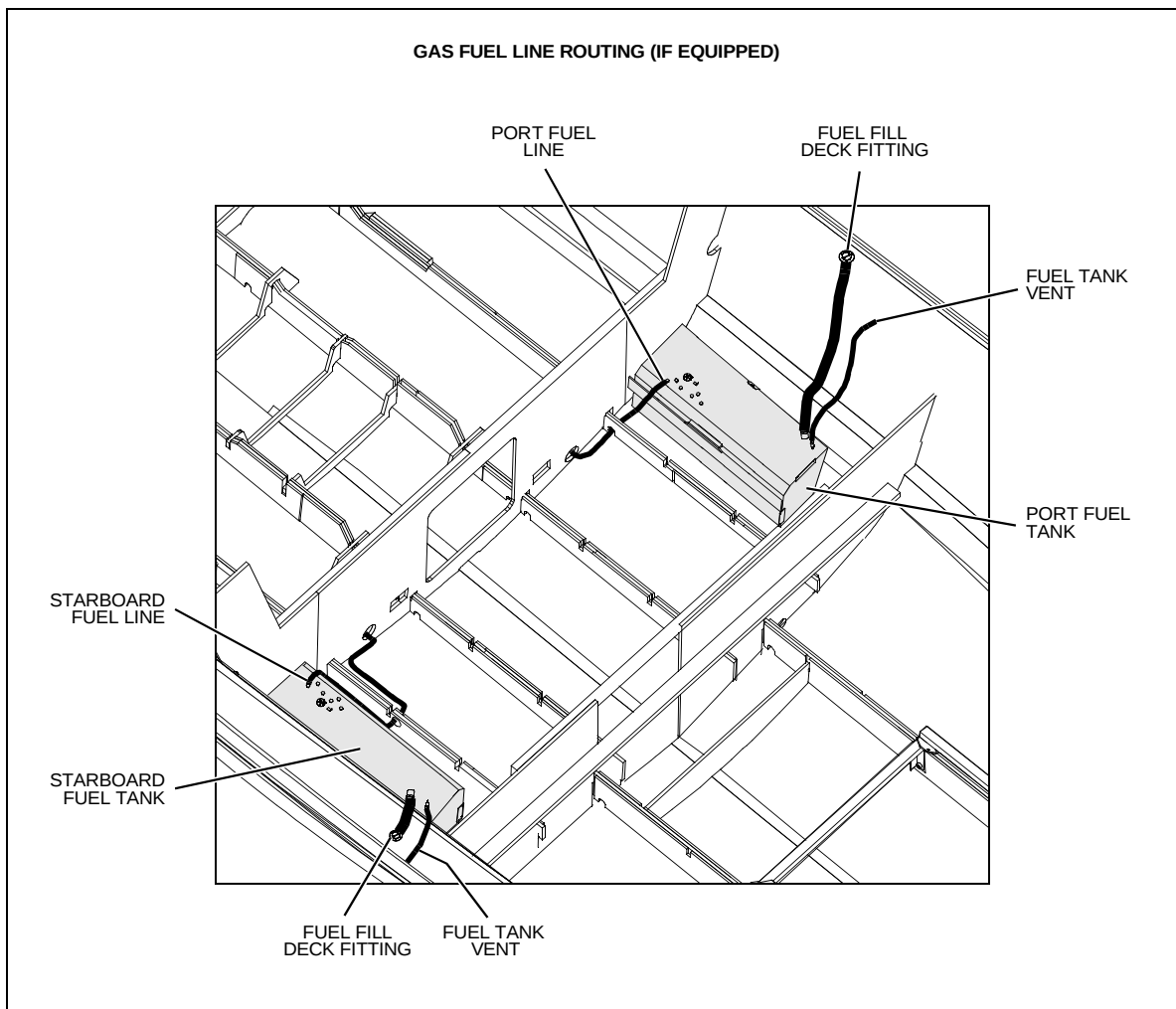


CAUTION

Avoid the storage or handling of gear near the fuel lines, fittings and tank.

Carefully read the fuel section of both the *Cruiser and Yacht Owner's Manual Supplement* and the engine operation manual, paying special attention to the subject of *fuel recommendations*.





Fuel Fills & Vents

- The fuel fill fittings are marked “Diesel” or “Gas”.
- If you experience difficulty filling the fuel tank, check to see if the fuel fill hose is kinked or collapsed. If there are no visible signs of a problem, contact your local dealer.

Fuel Transfer Pump (Diesel Engines Only)

CAUTION!

ENVIRONMENTAL HAZARD!

NEVER transfer fuel into a full (or nearly full) fuel tank. Fuel transferred into a full tank may spill overboard through the tank venting system.

Your yacht may feature a fuel transfer pump which pumps fuel from one tank to another. The fuel transfer pump switch is located at the upper helm station.

Fuel Filters

- The fuel pickup tube (located inside the fuel tank) is equipped with a fine mesh screen filter.
- In addition, when supplied by the engine manufacturer, a fuel filter is installed on the engine.
- Periodically replace the fuel filters to make sure they remain clean and free of debris.
- Consult with your selling dealer or local marina concerning fuel additives that help to prevent fungus or other buildup in your fuel tank.

Anti-siphon Valve (Gas Engines Only)

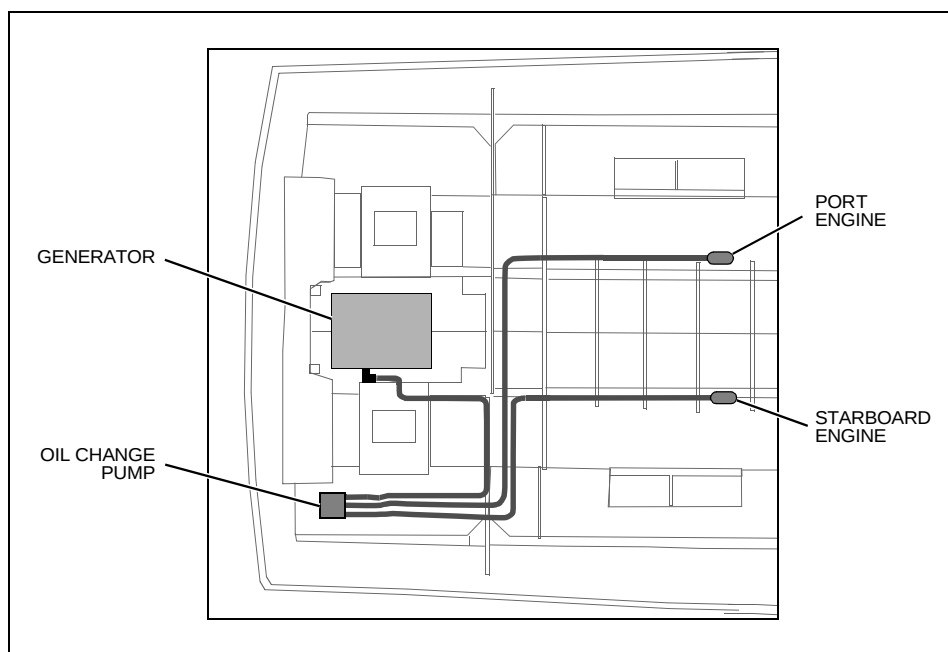
NOTICE

- **If an engine running problem is diagnosed as fuel starvation, check the anti-siphon valve. If the valve is stuck or clogged, change or replace it while the engine is *shut down*.**
- **NEVER** run the engine with the anti-siphon valve removed, except in an emergency.

- Gas fuel systems are equipped with anti-siphon valves.
- The valves are located at the point where the fuel feed line attaches to the fuel tank.
- The valve is spring loaded and is opened by fuel pump vacuum.
- This valve will prevent fuel from siphoning from the tank in the event of a fuel line rupture.

Oil Change System (If Equipped)

Your yacht may feature an oil change pump to simplify draining and filling engine and generator oil. See the oil change system instructions for information on the use of this system.



Fire Suppression System (If Equipped)

Before using your boat for the first time, read and understand the fire suppression system's instruction and maintenance manual and follow **all** warnings.

Observe the following:

- The system will go off automatically whenever direct heat from a fire is detected in the engine compartment.
- The system can be set off manually by pulling the T-handle (labeled "FIRE") at the helm.
- The system can only be set off once. After the system is discharged it **must** be refilled and refurbished **before** it can be used again.

Shaft-Transmission Alignment



CAUTION!

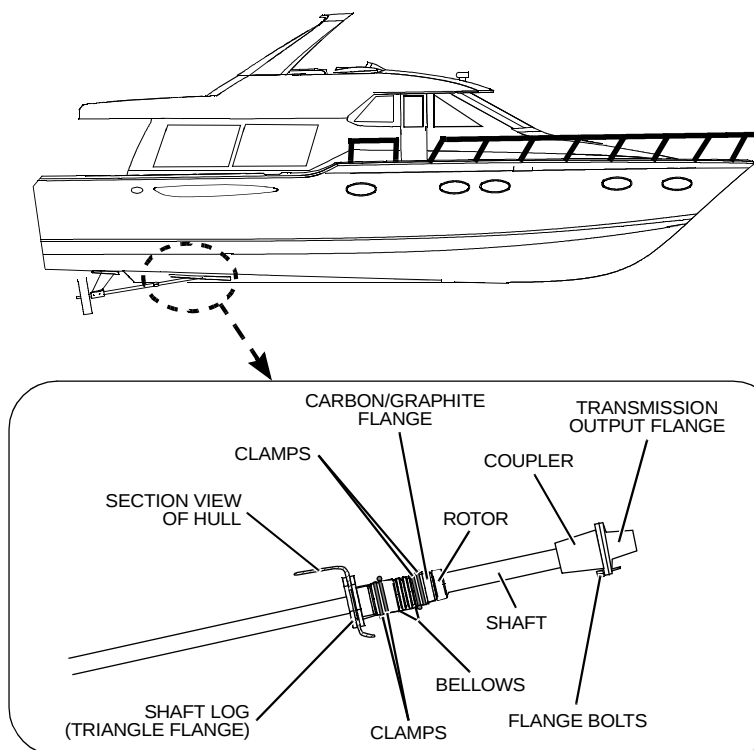
SYSTEM DAMAGE HAZARD!

- If you suspect a shaft-transmission misalignment, have a qualified mechanic perform an alignment inspection as soon as possible.
- Continued use may lead to premature engine, transmission, shaft, shaft seal and/or hull damage!

Alignment between the engine transmission output shaft and the propeller is very critical. The alignment has been performed at the factory and was rechecked by the dealer after the yacht had been in the water for 48 hours.

- An alignment inspection should be performed by a marine mechanic as part of the routine maintenance program after the initial 30 hours of operation, then every 60 hours and whenever unusual noise or vibration is noticed.
- Shaft-transmission alignment should be performed by a marine mechanic since it requires moving the engine and prop shaft.
- To insure proper alignment after a haulout or dry storage, wait 48 hours after launching before final alignment adjustments by a marine mechanic are made.

TRANSMISSION-TO-PROP SHAFT COMPONENTS (TYPICAL)



Shaft Log Packless Sealing System

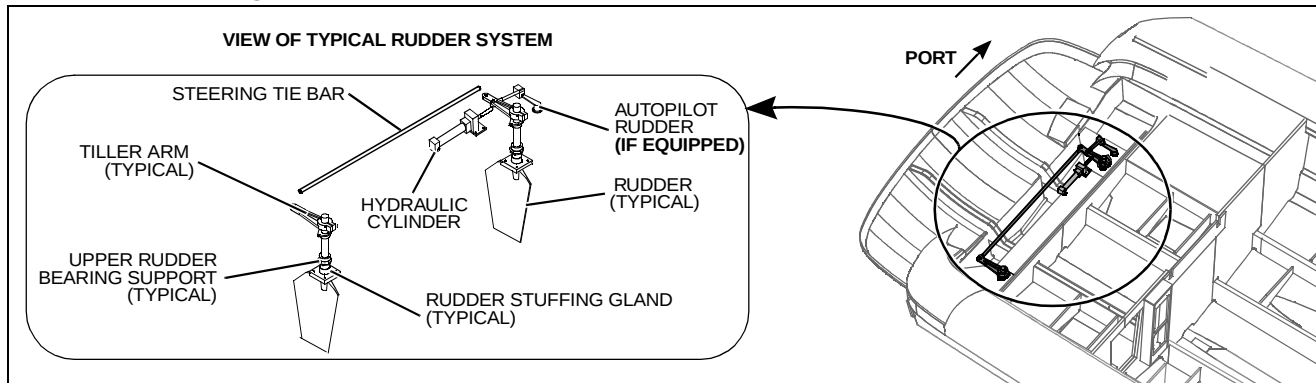
The shaft log packless sealing system's shaft seal is a maintenance-free, watertight seal that does **not** require packing or adjustments.

Chapter 4: Controls and Gauges

Steering

- This yacht features a hydraulic steering system.
- Yacht steering is **not** self-centering.

Rudder Stuffing Gland



- The rudder stuffing gland is part of the assembly where the rudders emerge from the bottom of the yacht.
- The shaft stuffing gland should **not** leak any water.
- If a leak develops, it can usually be stopped by tightening the packing gland nuts **slightly**.
- **Do not** over tighten the packing gland nuts.
- If stuffing gland leakage becomes excessive, packing replacement can be performed as follows:
 1. Remove the yacht from the water.
 2. Loosen the packing gland nuts and back the packing gland from the sleeve.
 3. Remove the old packing.
 4. Wrap new packing around the shaft.
 5. Cut the rings with a razor blade at an angle approximately 30 degrees to the long axis of the shaft.
 6. Stagger the ends of each ring around the shaft and insure that the rings are at the bottom in the sleeve.
 7. Tighten the packing gland nuts until resistance is felt.

Autopilot (If Equipped)



WARNING!

- **Never** leave the helm while the autopilot system is **On**!
- A qualified operator **must** monitor the autopilot system at **all** times and keep lookout for other marine traffic and other hazards.

NOTICE

- The autopilot system is **only** an aid to navigation.
- It's accuracy can be affected by many factors, including equipment failure or defects, environmental conditions & improper handling or use.

- **Before** using the autopilot system, read the autopilot instruction manual(s).
- The autopilot system can be turned **On** at the upper helm station.
- The autopilot **will** aid you in maintaining the chosen course of your yacht.

Shift/Throttle Controls



WARNING!

LOSS OF CONTROL HAZARD!

Improper maintenance of shift/throttle hardware may cause a sudden loss of control!

Read **all** of the information about the shift/throttle controls in the shift/throttle controls' manual, the engine operation manual, and the *Cruiser & Yacht Owner's Manual Supplement*.

Engine Synchronization (If Equipped)

Follow the instructions in the synchronization section of the shift/throttle controls' manual.

Trim Tabs



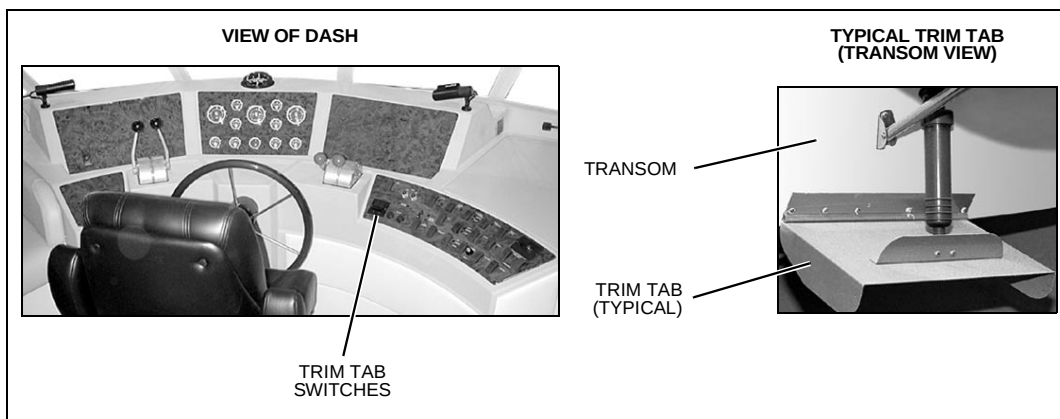
WARNING!

LOSS OF CONTROL HAZARD!

Improper use of trim tabs will cause loss of control!

- **Do not** allow anyone unfamiliar with trim tabs to use them.
- **Do not** use trim tabs in a following sea as they *will* cause broaching or other unsafe handling characteristics.
- **Do not** use trim tabs to compensate for excessive unequal weight distribution.

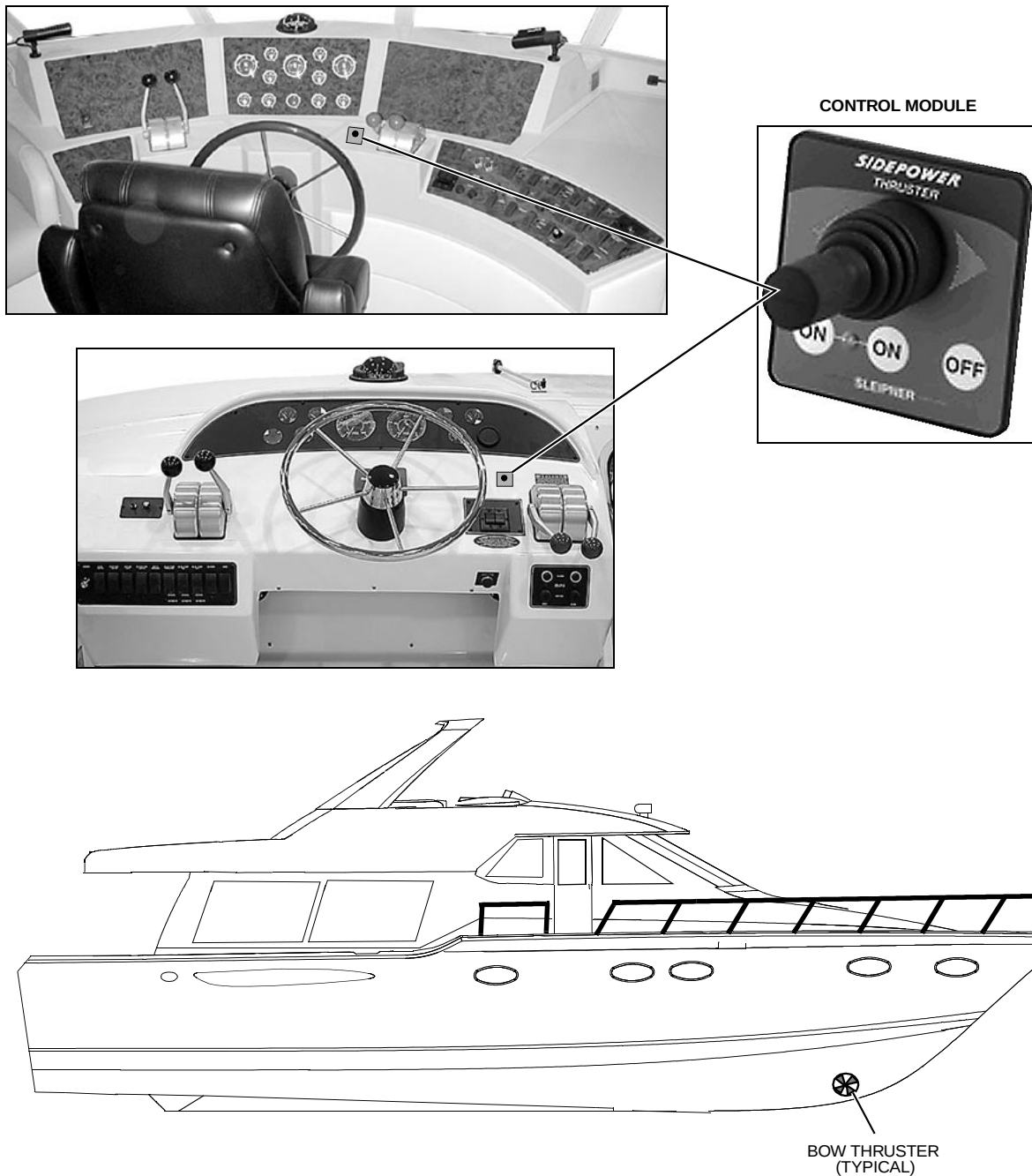
- The trim tabs may be used to help keep your yacht level at cruising speeds.
- The trim tabs are controlled by two rocker switches at the helm.
- **Before** using the trim tabs read and understand the trim tab operation manual.



Note the following:

- Once cruising speed is reached, the port or starboard trim switch may be used (one at a time) to level the yacht.
- Perform trim tab adjustment with several short touches to the switch rather than one long one.
- After each short touch allow several seconds for the hull to react.
- The trim tab hydraulic fluid reservoir is located in the engine compartment. The fluid level **must** be checked periodically (at least once a year) and refilled as necessary.

Docking On Command (D.O.C.) System (If Equipped)



- The D.O.C. system features a bow thruster.
- The thruster can be controlled from either helm.
- During docking, the thruster can assist you in maneuvering your yacht in close quarters.
- Read the D.O.C. system's user manual **before** using the D.O.C. system for the first time. Follow **all** user precautions carefully.

Gauges

Cleaning Gauges



CAUTION!

PRODUCT or PROPERTY DAMAGE HAZARD!

- Use **only** mild soap and water to clean the gauge lenses and bezels.
- Use of other cleaners, including common window cleaning solutions, may cause the lenses to crack.

Gauge Fogging

- Moisture may occasionally find its way into the gauges causing lens fogging.
- Turning on the gauge lights will help dry the lenses.
- Fogging **will not** harm the gauges.

Radio Transmission Interference

VHF or other radio transmissions may cause brief erratic readings on tachometers and/or synchronizers. This **will not** damage these gauges or affect their accuracy when **not** transmitting.

Twin Engine Readings

It is normal for tachometers and other gauges to have slightly different readings between engines.

Fuel Gauge

It is normal for the pointers on your fuel gauges to bounce as fuel sloshes back and forth in the fuel tanks.

Synchronizer

The synchronizer **will** help you run both engines at the same RPM (rotations per minute). Running synchronized engines will improve efficiency and reduce vibration.

- When both engines are running at the same RPM the pointer on the synchronizer **will** be in the center position.
- If one engine is running slower than the other the pointer **will** swing towards the slower engine.
- Center the pointer by adjusting the RPM on either engine.

Chapter 5: Navigation & Communication Equipment

Before using these systems for the first time, read and understand the instruction manuals and note the following:

Compass

NOTICE

- Compass accuracy can be affected by many factors.
- Have a qualified technician calibrate your compass. Make sure the technician gives you a deviation card which shows the corrections to apply in navigational calculations.
- Keep a copy of the deviation card at each helm.

Global Positioning System (GPS) (If Equipped)



WARNING!

The *GPS* system should *not* be relied upon as the only aid to navigation. A qualified operator must monitor the *GPS* system at *all* times and keep look-out for other marine traffic and possible collision situations.

NOTICE

The *GPS* system is *only* an aid to navigation. It's accuracy can be affected by many factors, including equipment failure or defects, environmental conditions & improper handling or

GPS receivers provide reliable and accurate position data, anywhere in the world.

Depth Finder



WARNING!

- **DO NOT** use the depth finder as a navigational aid to prevent collision, grounding, yacht damage or personal injury.
- When the yacht is moving, submerged objects *will not* be seen until they are already under the yacht.
- Bottom depths may change too quickly to allow time for the yacht to react.
- If you suspect shallow water or submerged objects, run the yacht at very slow speeds.

VHF Radio (If Equipped)

- The VHF (Very High Frequency) radio can be used to access weather reports, summon assistance or contact other vessels as permitted by the FCC (Federal Communications Commission).
- Contact the FCC for licensing, rules and regulations concerning VHF radio usage.

Radar (If Equipped)



WARNING!

Radar is meant to help the navigator, *not* replace him/her. The operator is responsible for keeping a visual look-out for possible collision situations. *No* single navigation aid (including this radar) should be relied upon as the *only* method for navigating your yacht.

NOTICE

The radar system is *only* an aid to navigation. It's accuracy can be affected by many factors, including equipment failure or defects, environmental conditions & improper han-

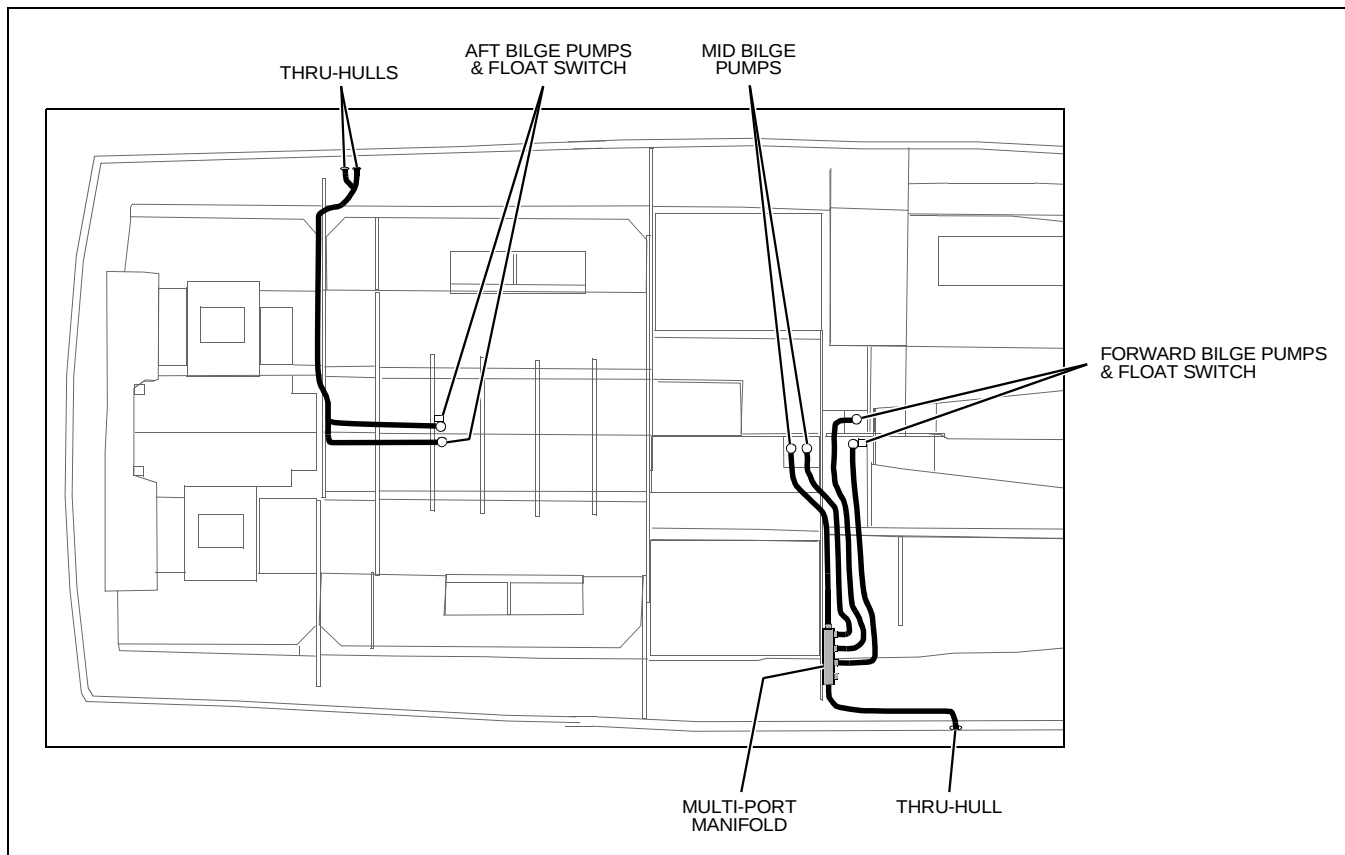
- The marine radar system gives you a complete and accurate 360° radar view of other vessels, buoys, and landfall surrounding your vessel.
- To turn this system **On**, the RADAR switch on the DC breaker panel must be switched **On**.

Chapter 6: Plumbing

Bilge Pumps

NOTICE

Discharge of oil, oil waste or fuel into navigable waters is prohibited by law. Violators are subject to legal action by the local authorities.



- Your yacht is equipped with five bilge pumps which are used to pump water out of the bilge.
- The bilge pumps are controlled by automatic float switches (autofloat switches) and/or switches at the helm.
- The bilge pumps are wired directly to the battery so they will normally function even when the yacht is completely shut down and left unattended.

Bilge Pump Testing

Bilge pumps are critical to the safety of your yacht. Check the bilge pumps often to make sure that they are working properly. Test each pump individually.

To test each bilge pump:

1. Turn **On** the manual switches at the helm.
2. Make sure that water in the bilge is pumped overboard.

If there is water in the bilge and the pump motor is running but **not** pumping:

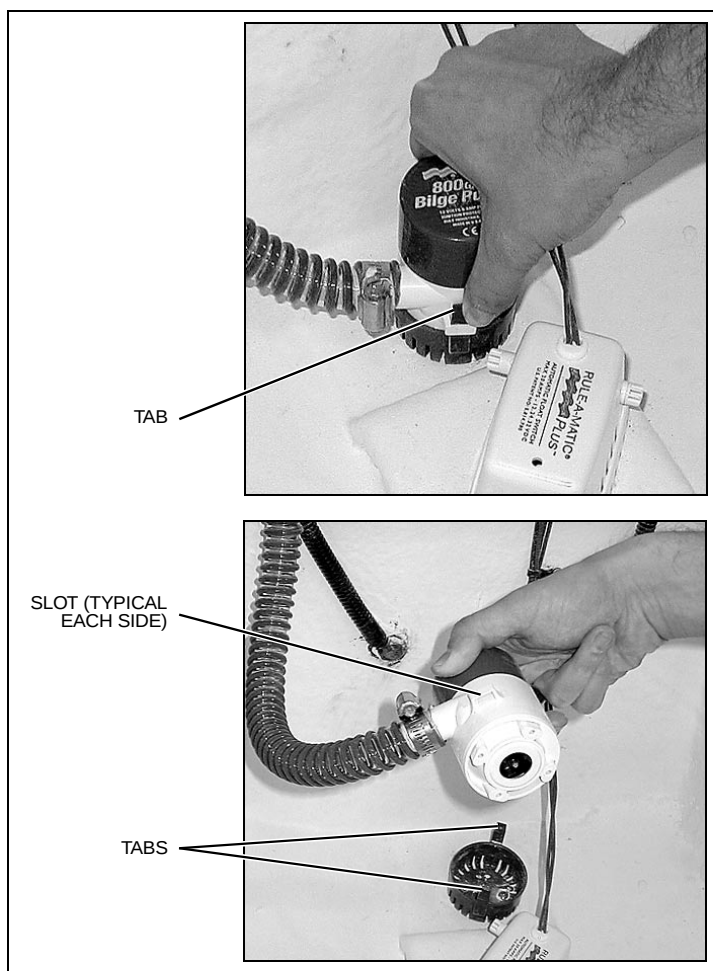
1. Inspect the discharge hose for a kink or collapsed area.
2. Check the bilge pump housing for clogging debris as follows:

To check for clogging debris in pumps:

1. With your thumb and forefinger squeeze the holding tabs on each side of the power cartridge.
2. Lift out the power cartridge.
3. Check the pump and the housing and clear any debris.

Reinstall the power cartridge:

1. Align the tabs and slots and press firmly until the tabs click into place.
2. Make sure that the power cartridge is locked into place.

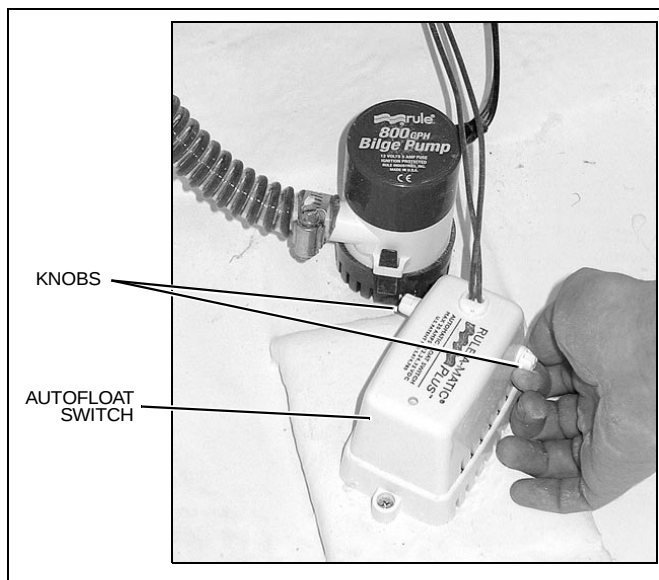


Autofloat Switches

- The automatic bilge pumps use float (autofloat) switches to automatically turn **On** the pumps whenever water rises to a preset level in the bilge.
- The autofloat switches are normally mounted next to the bilge pumps they control.
- The autofloat switches should be tested often for proper operation as follows.

To test a float switch:

1. Turn **On** the float switch by twisting the white plastic knob 1/4 turn.
2. The bilge pump should turn **On**.
3. If twisting the knob does **not** turn the pump on, check the circuit breaker on the battery management panel.
4. If the circuit breaker is on, but the pump still does **not** work, it may indicate a bad switch or possibly a low battery.
5. Release the knob to lower the float and return the float switch to auto mode.



CAUTION!

When the test is completed on each float switch, you **MUST** push the test button *all the way down* to the auto position to return the switch to auto mode!

Seawater Systems

Seacocks



CAUTION!

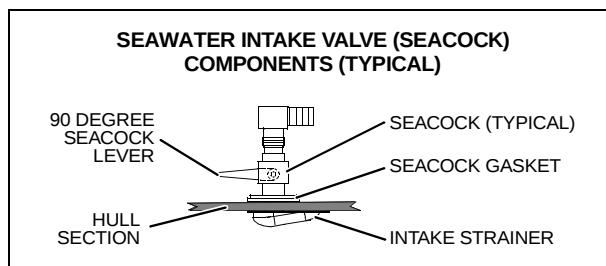
SYSTEM DAMAGE HAZARD!

- **Before using a seawater intake system, make sure that the system's seacock is in the *Open* position *before* the system is started and keep the seacock *Open* until the system is shut *Off*.**

A seacock is a valve, controlled by a 90° lever, used to manage the intake of seawater through the hull and below the water line. Seacocks are typically used on your yacht in the following seawater intake systems:

- Engines
- Generator (if equipped)
- Air conditioning system (if equipped)

Before using any of these systems, make sure that the system's seacock is **Open** and remains **Open** until the system is shut **Off**.



Seawater Strainers

- Seawater strainers are used in water pickup systems to filter incoming seawater.
- A seawater strainer is located near each system's seacock.
- Check the strainers for leaks and/or debris **every time** you use your yacht.
- If debris is found, clean the seawater strainer as follows:



CAUTION!

FLOODING HAZARD!

- **The seacock that sends seawater to the strainer *must* be *Closed* *before* disassembling the seawater strainer to prevent the yacht from taking on water through the seawater strainer assembly.**
- **Keep the seacock *Closed* until the seawater strainer is completely reassembled.**

SYSTEM DAMAGE HAZARD!

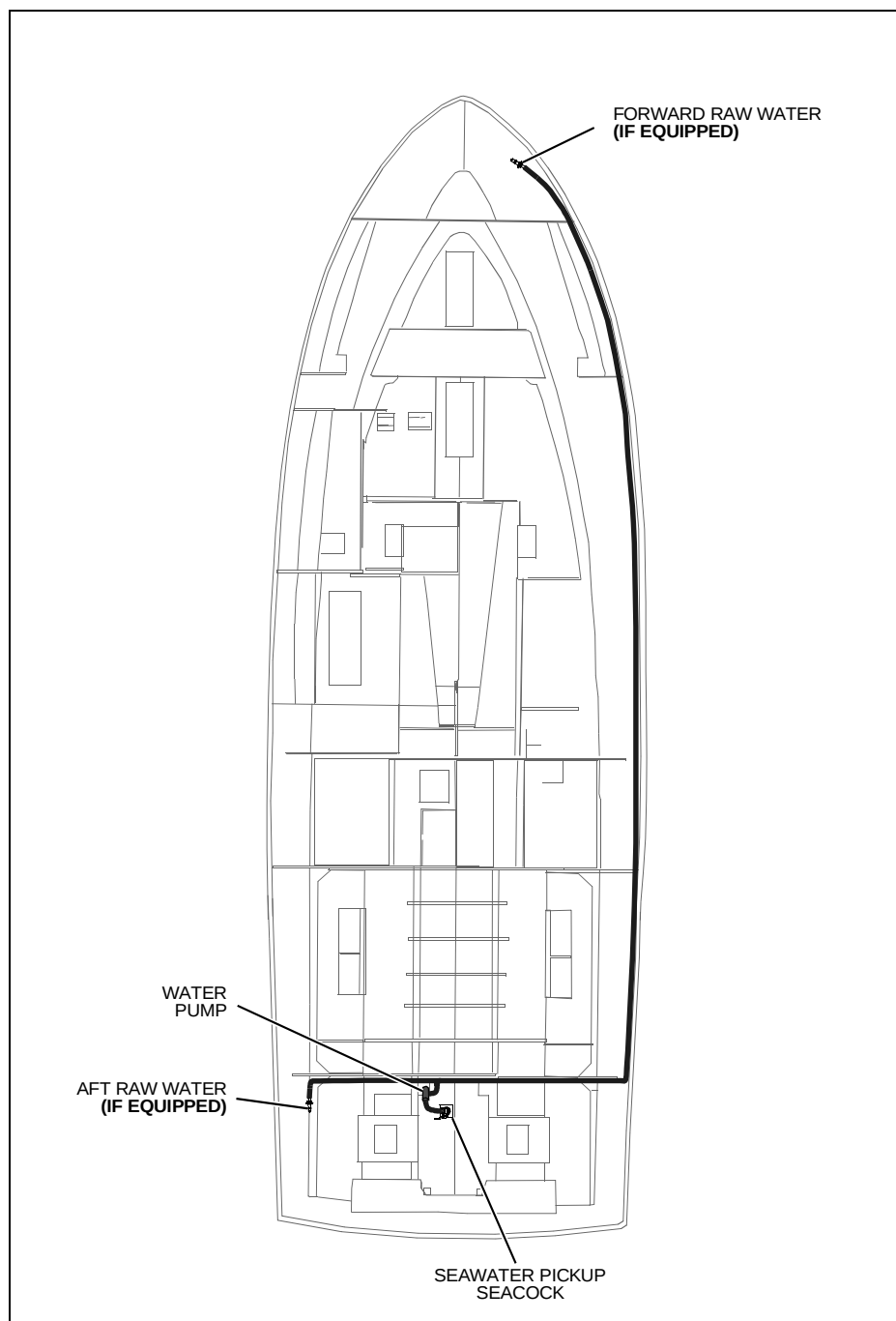
- **After reassembling the seawater strainer, make sure that the seacock valve is *Open* *before* using the component/system.**

1. Make sure the component/system (generator, air conditioning system, etc.) that the strainer is connected to is turned **Off**.
2. **Close** the seacock that sends seawater to the strainer you are about to clean. The seacock must remain **Closed** until the strainer is completely reassembled.
3. Take apart the seawater strainer.
4. Remove the debris.
5. Flush the strainer with water.
6. Reassemble the seawater strainer.
7. **Open** the seacock and check for leaks around the strainer. If no leaks are found, you may use the component or system.

Raw Water Washdown (If Equipped)**CAUTION!****FLOODING & SWAMPING HAZARD!**

NEVER leave the boat unattended while using the "raw water" feature. Any leak or break in the system may allow large amounts of water to accumulate in the bilge that could cause swamping of the batteries and engines or sinking of the boat.

- **Always** make sure the seacock is **Open** before turning the raw water washdown system **On**.
- The seacock is accessed through the V-berth floor cut-outs.



Freshwater System



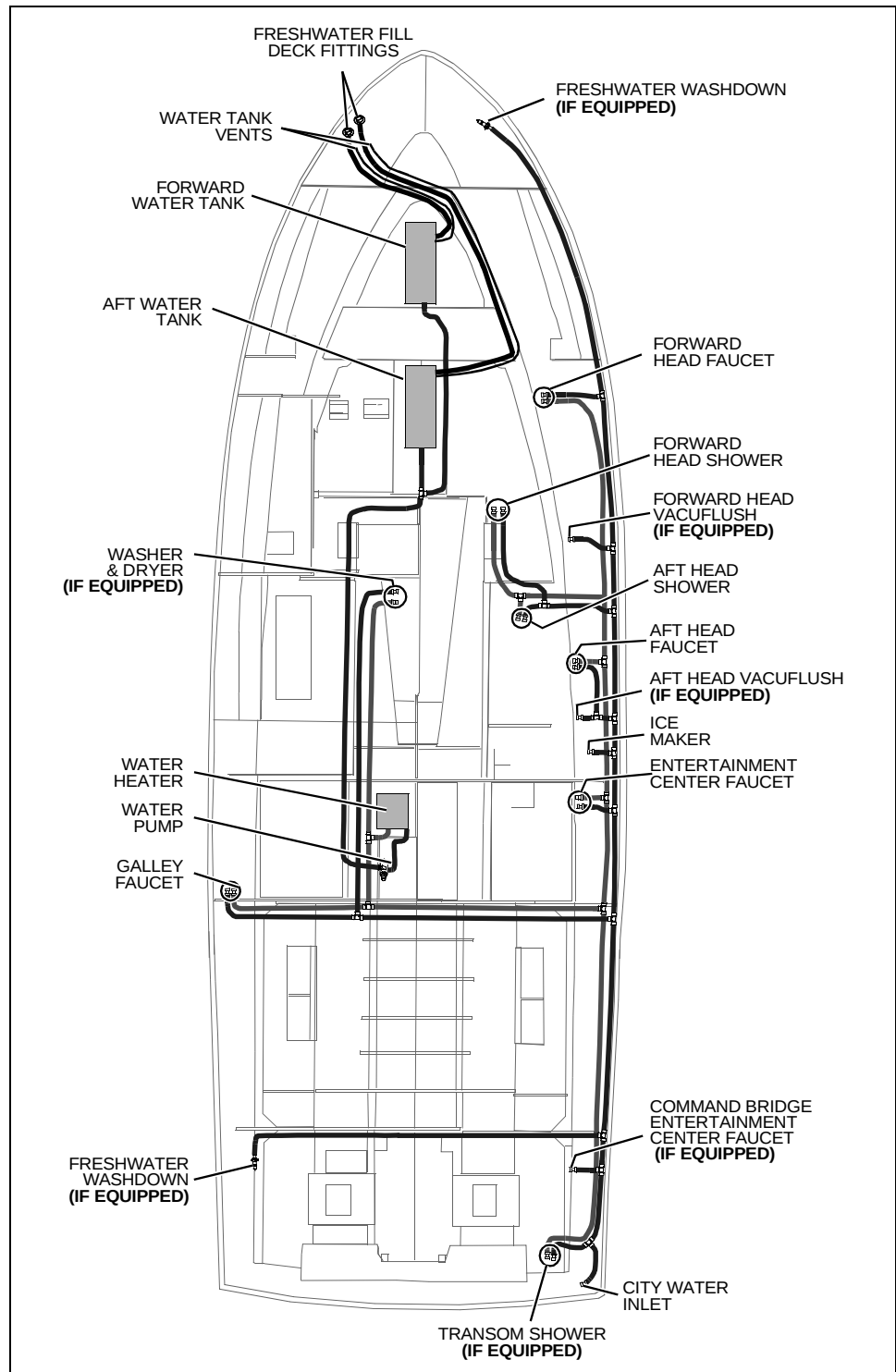
WARNING!

- Only use safe drinking (potable) water in your yacht's freshwater system.
- Only use a sanitary drinking water hose to fill the water tank or connect to city water.
- Never use a common garden hose for drinking water.

- Read the *Freshwater system* section in the *Cruiser & Yacht Owner's Manual Supplement*.
- Your yacht is equipped with a pressure type (demand) freshwater (potable) system.
- This system can be pressurized by turning **On** the water pump.
- See the *Component Location* section of this *Supplement* for the location of the water pump switch.
- Since the water pump requires DC power, the battery switch **must** be **On**

Observe the following about the freshwater system:

- Turn **Off** the water pump when the yacht is **not** in use or the water tank is empty.
- Inspect and clean the water filter often (located on the water pump).
- When your yacht is to be left unattended for long periods of time, pump the water tank dry to prevent stored water from becoming stagnant and distasteful.
- If the freshwater system needs to be disinfected, ask your dealer about treatments available for your yacht's system.



Freshwater System Winterization



CAUTION!

WATER SYSTEM DAMAGE HAZARD!

Never blow compressed air through the water system when *all* of the faucets are *Closed*.

1. Turn **On** the water system switch.
2. **Open all** of the faucets and showers and let the water system drain completely.
3. Turn **Off** the water system switch.

Any remaining water **must** be removed from the water lines. There are two ways to remove the remaining water from the lines:

- Compressed Air
- Gravity Draining

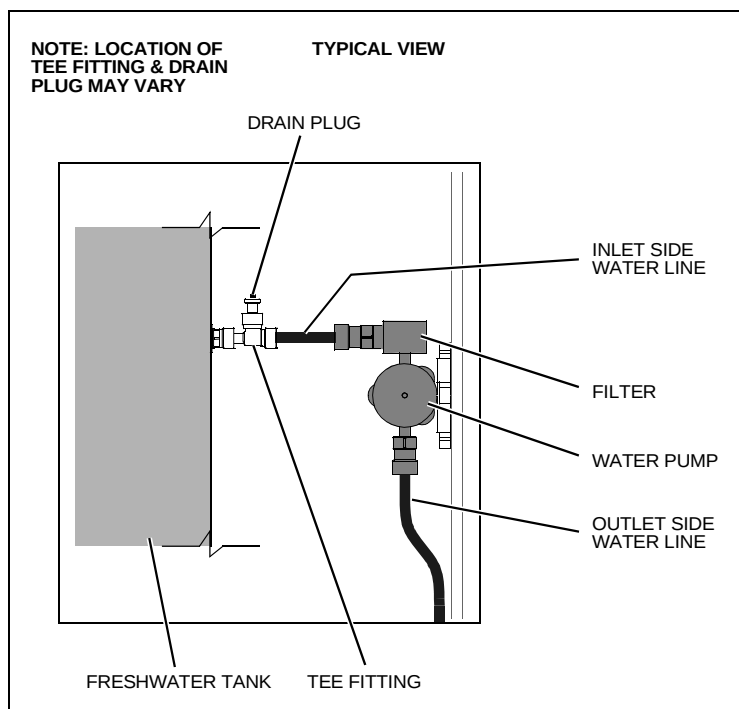
Compressed Air

You **must** have an air compressor with an air hose and an air nozzle.

1. Remove the water line from the outlet side of the water pump (opposite side from filter).
2. **Open** the faucet that is furthest away from the water pump.
3. Place the air nozzle against the end of the just removed water line and blow air through the system.
4. When water stops coming out of the **Open** faucet, stop the air and **Close** the faucet.
5. One at a time, repeat this process on **all** faucets and showers.

Gravity Draining

1. **Open all** faucets and showers.
2. Remove the drain plug from the tee fitting on the freshwater tank.
3. When the water has stopped draining from the freshwater tank, replace the drain plug.



Water Heater

! WARNING!

! HOT HAZARD!
Water heated by the water heater can reach temperatures hot enough to scald the

! CAUTION!

WATER HEATER DAMAGE HAZARD!

- **DO NOT** turn **On** the water heater electrical circuit on the AC panel until the water heater tank is **COMPLETELY** filled with water.
- Even momentary operation in a dry tank *will* damage the heating elements.
- Warranty replacements **WILL NOT** be made on elements damaged in this manner.
- The tank is full if water flows from the tap when the hot water is turned **On** in the galley.
- The water heater should be drained and the power turned **Off** when the possibility of freezing exists.

NOTICE

If your yacht is connected to shore power or generator power, but the water heater is *not* working:

- Make sure the water heater circuit breaker on the AC panel is switched **On**.

If the circuit breaker on the AC panel is **On**, but the water heater is still *not* working:

- Consult with your dealer about checking the "push to reset" circuit breaker located on the water heater.

- Read the water heater instruction manual and heed the warnings above.
- The water heater is connected to the 120-volt, AC power system.
- Turn **On** the water heater breaker on the AC panel to heat the water.

Winterizing the Water Heater

1. Turn **Off** the water heater breaker.
 2. Disconnect the hose (A) attached to the pressure relief valve (B).
 3. If there is any water in this hose, drain it into the bilge or into a bucket.
 4. **Open** the pressure relief valve (B).
 5. **Open** the drain valve (C).
- Leave the pressure relief and drain valves **Open** until you fit out the boat after storage.



Transom Shower

- Your yacht features a freshwater transom shower.
- Read the manufacturer's instructions **before** using the transom shower for the first time.
- The water pump switch **must** be turned **On before** using the transom shower.



TRANSM
SHOWER

City Water Inlet

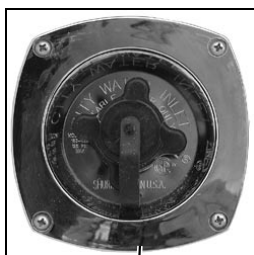


CAUTION!

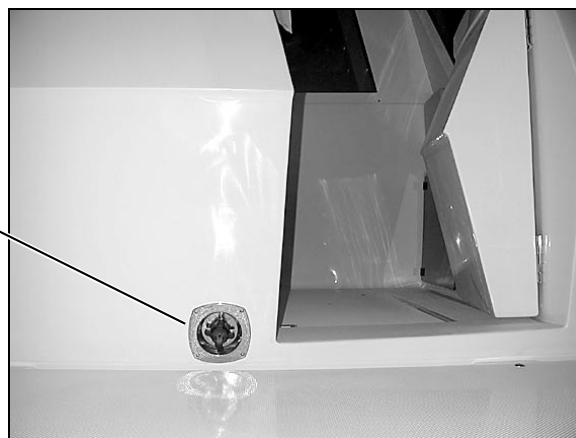
FLOODING & SWAMPING HAZARD!

NEVER leave the yacht unattended while using the "city water" feature. Any leak or break in the system may allow large amounts of water to accumulate in the bilge that could cause swamping of the batteries and engines or sinking of the yacht.

- Read the "City Water Hookup" portion of the *Freshwater System* section in the *Cruiser & Yacht Owner's Manual Supplement*.
- When the yacht is connected to a dock-side water supply, the freshwater system is pressurized. You **do not** need to turn **On** the water pump's DC breaker, located on the DC panel.



TYPICAL CITY
WATER INLET



Drain Systems

Deck Drains

- Water on the deck is drained overboard through the deck drains.
- Keep the deck drains free of debris.

Sink Drains

Gray water (water from the sinks) is gravity drained overboard.

Shower Drain System

- The shower is drained into a sump box.
- A float switch automatically turns **On** the sump pump.
- The sump pump pumps the shower water overboard.

Sump Box Cleaning

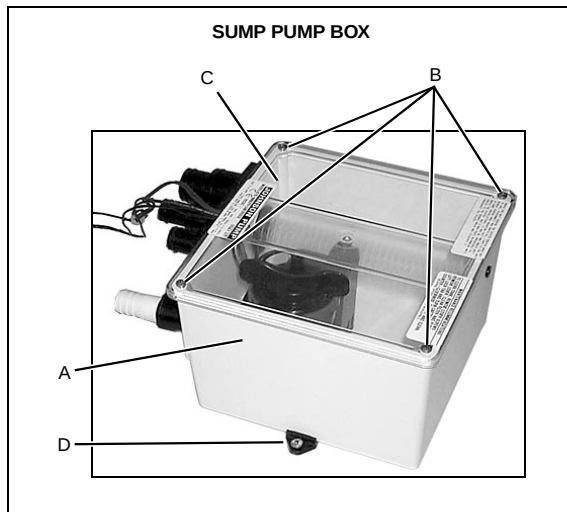
Periodically clean the sump box (A), filter, and pump as follows:

1. Remove the cover screws (B) and the cover (C).
2. Remove any debris from the box and the filter.
3. Clean the sump pump as outlined in the Bilge Pump section of this manual.

Sump System Winterization

Drain the sump pump system in the winter months when **not** in use.

1. Disconnect and drain **all** lines to the unit.
2. Remove the screws from the mounting feet (D) and drain the system.
3. Reinstall the screws in the mounting feet and reconnect the system.



Marine Head with Holding Tank

NOTICE

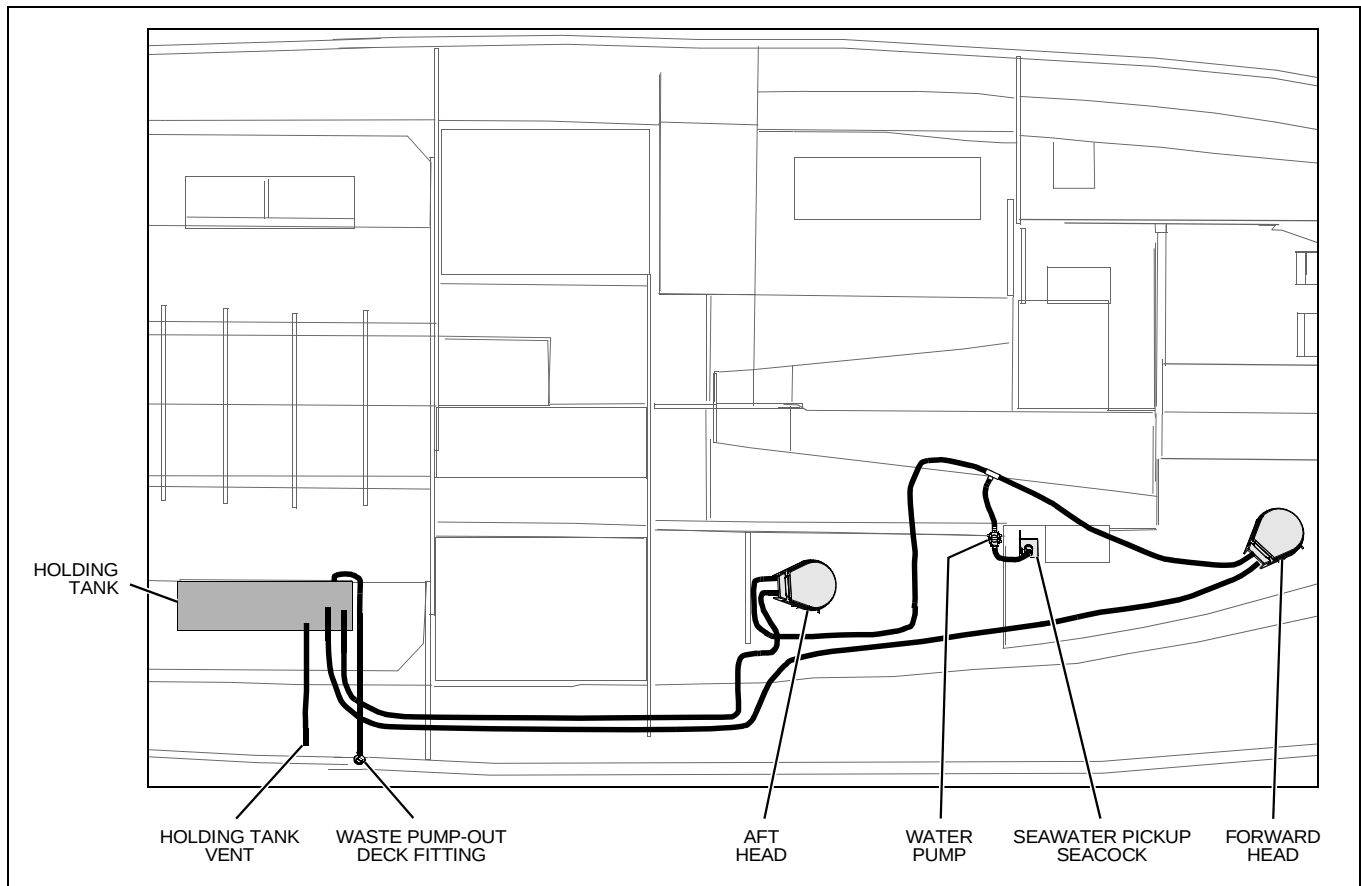
Check with local authorities for regulations regarding the legal use of marine head systems.

- Read the marine head operation and maintenance manual **before** using the marine head for the first time.
- The holding tank is plumbed to a waste fitting on the deck for dockside pump-out.
- Check the content level of the holding tank by looking at the side of the tank.
- Empty the holding tank at every opportunity.

Winterizing The Marine Head

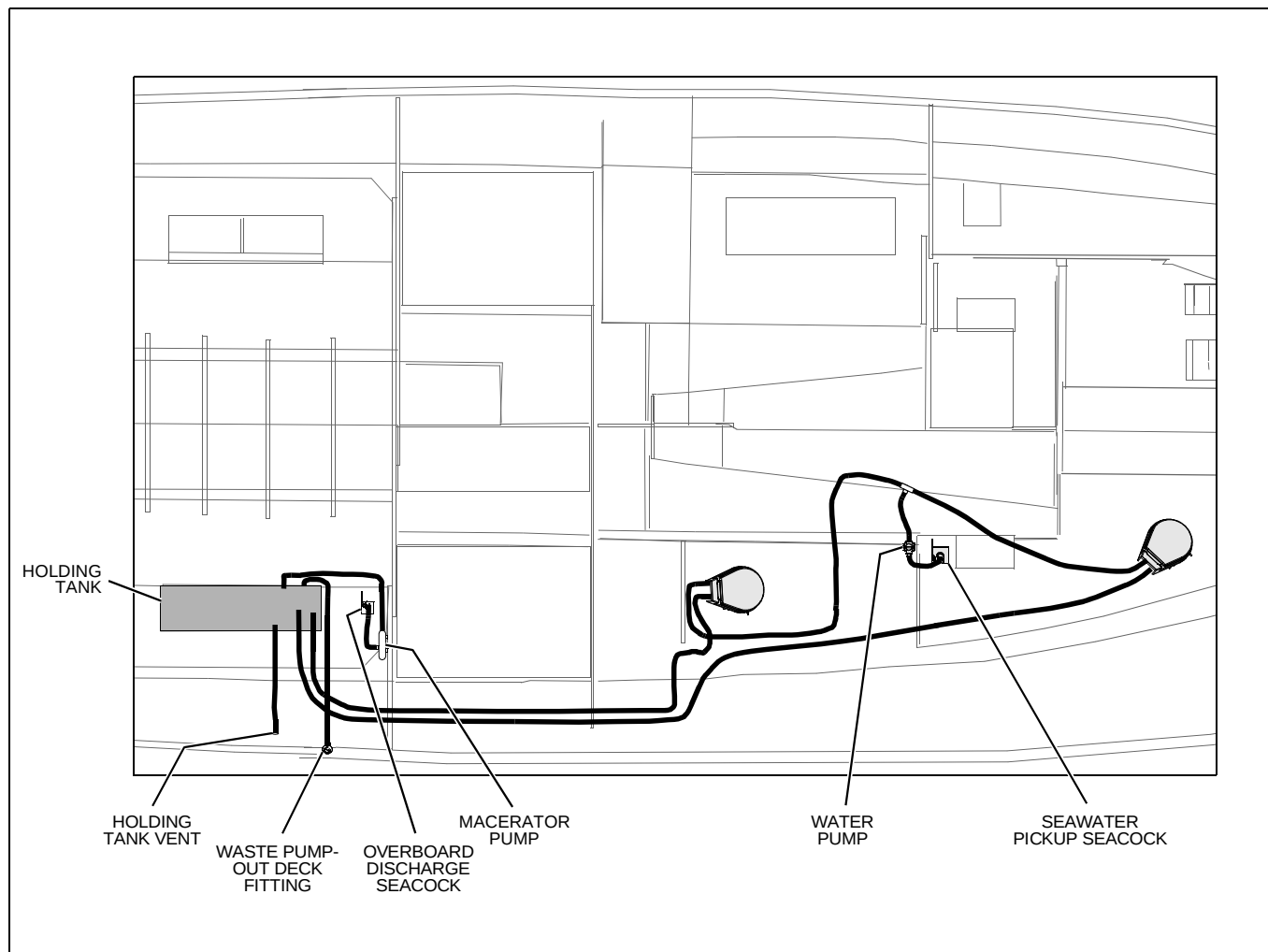
1. Shut **Off** the seawater intake seacock (if equipped) and pump the head until the bowl is dry.
 2. Remove the drain plug in the base and pump again to remove **all** of the water.
- **Do not** fill the bowl with anti-freeze.
 - **Close** the intake seacock while the yacht is underway or whenever the yacht is left moored in the water.

Electric Head



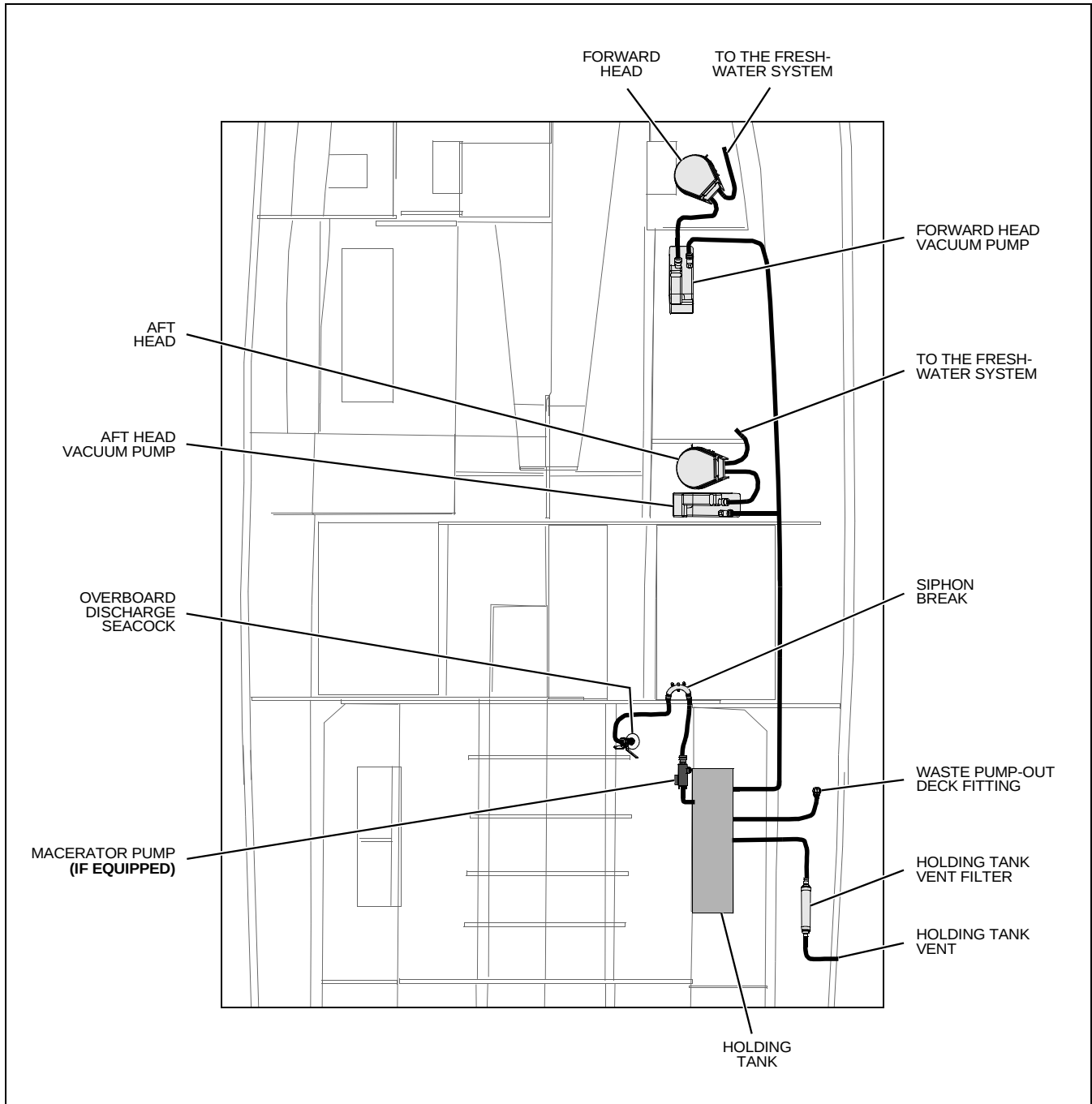
Macerator (If Equipped)**NOTICE**

Check with local authorities for regulations regarding the legal use of marine head systems.



To use the macerator to pump waste directly into the water (where regulations permit):

1. **Open** the underwater discharge seacock.
2. Press both macerator switches at the same time to run the pump. **Do not** continue running the macerator if the waste holding tank is empty.
3. **Close** the underwater discharge seacock when you are done pumping.

VacuFlush (If Equipped)

- The VacuFlush head system uses a vacuum pump and freshwater from the water tank to flush waste from the toilet into the holding tank.
- The holding tank is plumbed to a waste fitting on the deck for dockside pump-out.
- For winterizing instructions, refer to the VacuFlush head, operation and maintenance manual.

Chapter 7: Deck Equipment

Cleats

 WARNING!
<i>PERSONAL INJURY and /or PRODUCT or PROPERTY DAMAGE HAZARD!</i>
• NEVER lift the yacht using the cleats.

Carefully read the section on towing in the *Cruiser & Yacht Owner's Manual Supplement* **before** towing anything behind the yacht or having the yacht towed by another vessel.

Windlass (If Equipped)

 CAUTION!
<i>PRODUCT DAMAGE HAZARD!</i>
• DO NOT pull the yacht to the anchor using the windlass or continue to run the windlass if it has stalled or is overloaded.

- Your yacht may feature an anchor windlass.
- Read and follow the manufacturer's instruction manual **before** using the anchor windlass for the first time.
- The windlass can be controlled from a switch at the helm or from the deck foot switches.
- Make sure the windlass breaker is turned **On before** using the anchor windlass.
- To haul the anchor, use engine power (**not** the windlass) to move the yacht to, and directly above, the anchor.
- Using the windlass, dislodge the anchor from the bottom by pulling it straight up.

Davit (If Equipped)



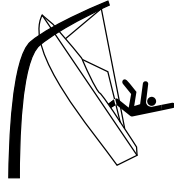
WARNING!

PERSONAL INJURY and /or PRODUCT or PROPERTY DAMAGE HAZARD!

- Water is heavy. Lifting a dinghy to drain its bilge may exceed the davit's load limit.
- Also, use extreme care when using the davit in rough weather or sea conditions as the load may swing out of control.



WARNING!



PERSONAL INJURY, FALLING HAZARD!

- Falling from a suspended boat may cause injury or death.
- Do not allow passengers in a suspended boat.
- Davit load *not* to exceed 750 lbs.
- Only use the davit when it is securely locked in the upright position.

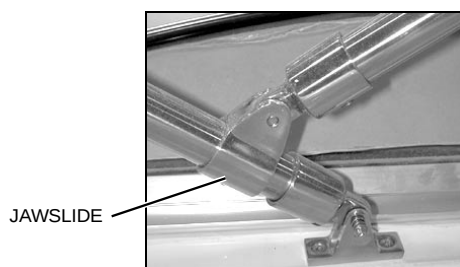
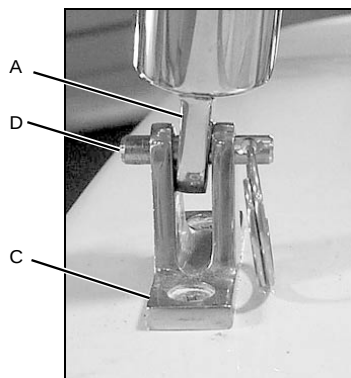
- **Before** using the davit read the davit's operating instructions and heed the warnings above.
- Make sure that the davit breaker is turned **On before** using the davit.

Canvas



CAUTION!

Take down and securely stow the canvas top, side curtains and back cover *before* transporting your yacht by road.



1. Insert the end eyes (A) of the main bows (B) into the deck hinges (C) and secure with the pins (D).
2. Insert the end eyes of the braces (E) into the deck hinges.
3. Pull the secondary bows (F) aft and zip the canvas top to the radar arch.
 - The jaw slides should **not** need to be adjusted.
 - However, if you think the jaw slides need to be adjusted, obtain the measurements from your selling dealer.

Chapter 8: Appliances & Entertainment Systems

NOTICE

Always keep an approved ABC-type fire extinguisher in galley area.

All appliances and entertainment systems installed on your yacht come with their own manuals. These manuals contain detailed instructions and important safeguards. Thoroughly read and understand these manuals **before** using your yacht's appliances and entertainment systems.

- Make sure the AC breaker is turned **On** for the appliance you wish to use.

Refrigerator

Your yacht features a 120-volt AC/12-volt DC refrigerator. The refrigerator runs on 12-volt DC power unless 120-volt AC power is being supplied by the shore power **and** the AC refrigerator breaker is **On**.

Range/Oven



WARNING!



BURN HAZARD!

- **Do not touch stove burners, grates or areas near the stove units as they may be hot even when they are dark in color. Areas near burners and grates may become hot enough to cause burns.**
- **During and after use, do not touch or let clothing or other flammable material come in contact with heated units or areas near the units (burner tops, main frame sides and back, sea rails and pot holders) until they have had sufficient time to cool.**

Your yacht is equipped with an electric range/oven. **Before** attempting to use the range/oven, make sure the breaker switch on the AC master panel is **On**.

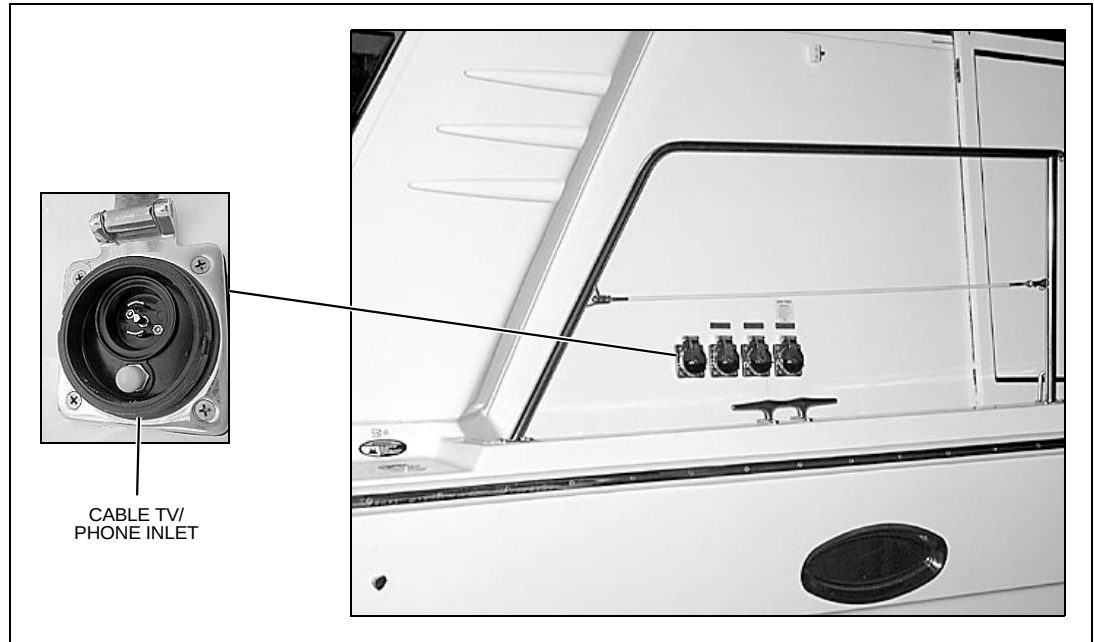
Audio & Visual Equipment

NOTICE

AM radio reception may be impaired anytime the engine is running.

Dockside Television & Telephone Inlet

- If you want to watch cable TV or use a telephone, plug a dockside source into the TV/telephone inlet



Chapter 9: Lights

Care and Maintenance

All of the lights installed on your yacht are of top quality, but you should be aware that failure may periodically occur for a variety of reasons:

1. There may be a blown fuse - *replace the fuse*.
2. The bulb may be burned out - *carry spare bulbs for replacement*.
3. A wire may be damaged or may have come loose - *repair as required*.
4. The bulb base may be corroded - *clean the base and coat it with non-conductive electrical lubricant*.

Interior & Exterior Lights



CAUTION!

- **Be conservative in the use of battery power.**
- **Prolonged use of cabin interior lights (overnight) will result in a drained battery.**

- The lights are powered by the yacht's 12-volt DC system.
- The battery switch **must** be in the **On** position for the lights to work.
- There are **On/Off** light switches for different sets of lights on the cabin wall.
- Some individual lights also have a switch on the light.

Spotlight (If Equipped)

- Your yacht may feature a spotlight on the command bridge.
- The spotlight controls are located at the upper helm station.
- Read the spot light operating instructions **before** using the spotlight.

Chapter 10: Heating & Air Conditioning

Air Conditioning System (If Equipped)

 **DANGER!**



CARBON MONOXIDE POISONING HAZARD!

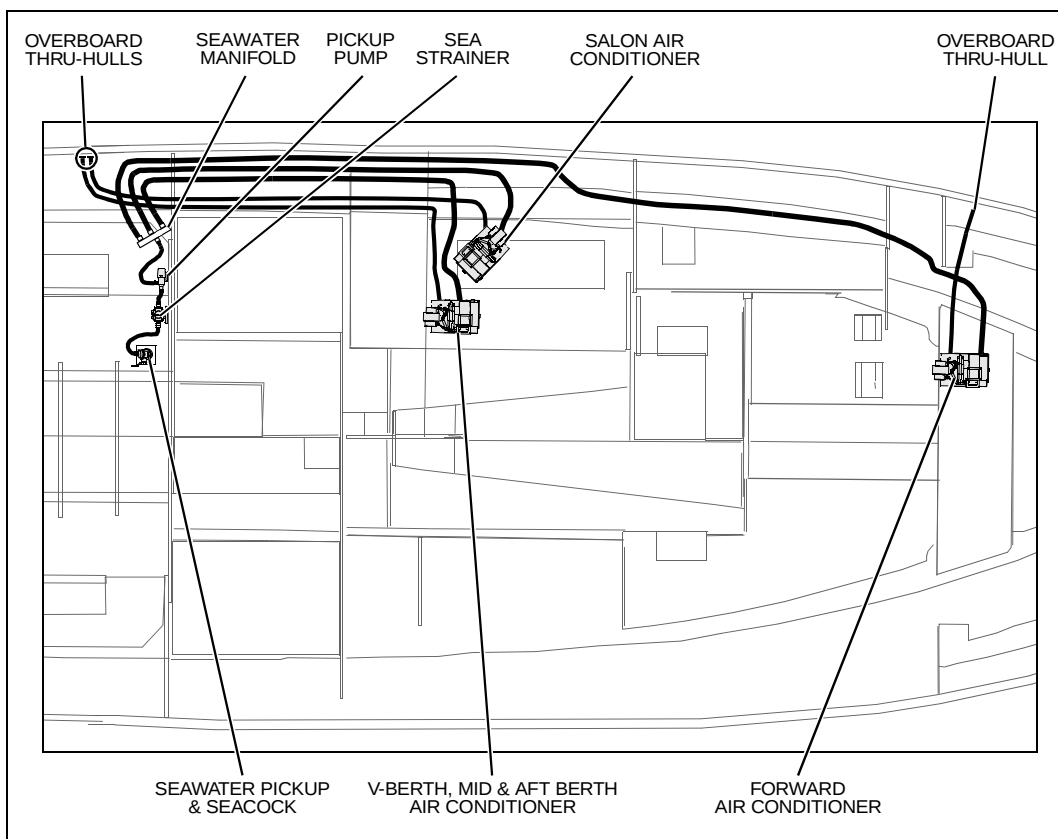
Dangerous carbon monoxide gas (CO) can be brought into the boat through the air conditioning system.

 **CAUTION!**

SYSTEM DAMAGE HAZARD!

The air conditioning system's seacock *must* be *Opened before turning On* the air conditioner and *must remain Open* during use.

- Read the air conditioner manual **before** using the air conditioning system.
- **Before** using the air conditioning system, make sure the breakers on the AC main distribution panel are turned **On** and make sure the system's seawater pickup seacock is **Open**. The seacock **must** remain **Open** anytime the air conditioner is in use.
- The seawater pickup strainer should be checked for debris according to the directions given in the *Seawater Strainer* section of this manual.



Electric Heaters (If Equipped)

Your yacht may feature electric cabin heaters. Operating instructions for this system can be found in the manufacturer's instruction manual.

- **Before** using the electric heaters, make sure the breakers on the AC panel are turned **On**.
- The thermostat control is located on the port bulkhead of the salon

Heat Exchanger Cabin Heat (If Equipped)

Your yacht may feature a heat exchanger cabin heater. This heater runs directly off the starboard engine.

Before using the heat exchanger cabin heater:

1. Read the manufacturer's instruction manual.
 2. Make sure the circulation loop shut-off valve is **Open**.
 3. Turn **On** the circuit breaker for the heater fan.
- If the heat exchanger circulation loop is **Open** and the starboard engine is running, the heater will radiate heat even if the heater fan is turned **Off**.
 - **All** circulation to the heater can be shut **Off** by **Closing** the circulation loop shut-off valve.

Chapter 11: Electrical System

DANGER!



EXTREME FIRE, SHOCK & EXPLOSION HAZARD!

- To minimize the risks of fire and explosion, **NEVER** install knife switches or other arcing devices in the fuel compartments.
- **NEVER** substitute automotive parts for marine parts. Electrical, ignition and fuel system parts were designed and manufactured to comply with rules and regulations that minimize risks of fire and explosion.
- **DO NOT** modify the electrical systems or relevant drawings.
- Have qualified personnel install batteries and/or perform electrical system maintenance.
- Make sure that *all* battery switches are turned *Off before* performing any work in the engine spaces.

WARNING!



FIRE & EXPLOSION HAZARD!

- Fuel fumes are heavier than air and *will* collect in the bilge areas where they can be accidentally ignited.
- Visually and by smell (sniff test), check the engine and fuel compartments for fumes or accumulation of fuel.
- **ALWAYS** run the bilge blowers for at least four minutes prior to engine starting, electrical system maintenance or activation of electrical devices.
- Minimize the danger of fire and explosion by not exposing the batteries to open flame or sparks. **NEVER** smoke anywhere near the batteries.

CAUTION!



SHOCK & ELECTRICAL SYSTEM DAMAGE HAZARD!

NEVER disconnect the battery cables while the engine is running since it can cause damage to your yacht's electrical system components.

NOTICE

Electrical connections are prone to corrosion. To reduce corrosion caused electrical problems, keep all electrical connections clean and apply a spray-on protectant that is designed to protect connections from corrosion.

12-Volt DC System

Batteries

- The batteries supply electricity for lights, 12-Volt accessories, and engine and generator starting.
- The Electrical section of Chapter 8, in the *Cruiser & Yacht Owner's Manual Supplement*, provides battery care and maintenance instructions.

Fuses and Circuit Breakers

- Fuses and circuit breakers for engines and main accessory power are on the DC main distribution panel and on the battery switch panel.
- Some equipment may have secondary fuse protection at the unit, behind the battery switch panel, or at the batteries.
- Electronics power is provided at the helm station.

12-Volt Accessory Outlet



CAUTION!

DO NOT use the 12-volt accessory outlet with a cigarette or cigar lighter. High temperatures may melt the outlet.

- Your boat features a 12-volt accessory outlet at the helm.
- The outlet can be used with any 12-volt device drawing 15 amps or less.
- The 12-volt accessory outlet is protected by a 15 amp circuit breaker on the main dc breaker panel.

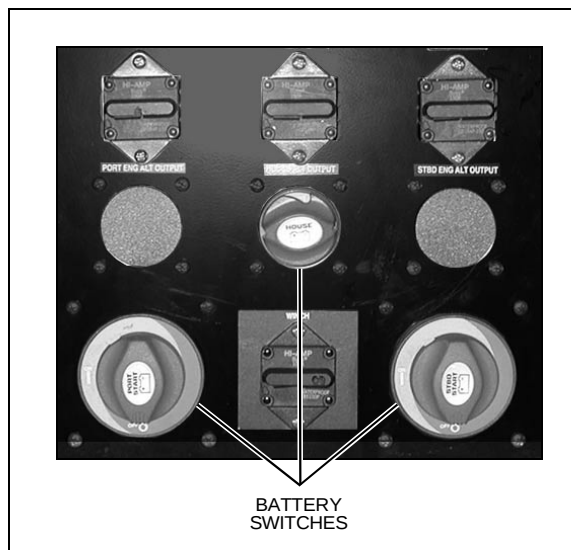
Battery Switch



CAUTION!

- The parallel switch should be turned on *only* in emergencies.
- *Never* disconnect the battery cables or turn off the main battery switches while engines are running as this can cause damage to your boat's electrical components

- A separate rotary battery switch is provided for each battery.
- The batteries supply electricity for lights, 12-Volt accessories, and engine and generator starting.
- Some "Standby Loads", such as the CO monitors, the automatic bilge pumps, and the stereo memory, are *not* affected by the battery switch since they are wired directly to the battery (see the *Wiring Diagrams* in this manual for more details).



Alternators

The engine alternators *will* keep the batteries properly charged when running at cruising speeds.

Battery Charger



CAUTION!

ENGINE & ELECTRICAL SYSTEM DAMAGE HAZARD!

NEVER run the yacht's engine and the battery charger at the same time.



CAUTION!

The battery charging systems (alternator and battery charger) installed on your yacht are designed to charge conventional lead-acid batteries. *Before* installing gel-cell or other new technology batteries, consult with the battery manufacturer about charging system

Your yacht features a battery charger. Thoroughly read and understand the battery charger manual *before* using the battery charger for the first time.

- The battery charger *will* charge the yacht's batteries whenever the yacht is plugged into 120V/60Hz shore power and the "BATTERY CHARGER" AC breaker is **On**.
- The battery charger is independent of the battery switch. The battery switches *do not* need to be **On** for proper charging.
- You may use DC powered electrical systems, such as the lights and stereo when the battery charger is **On**, but there *will* be a corresponding drop in charger performance.

Alternating Current (AC) System



CAUTION!

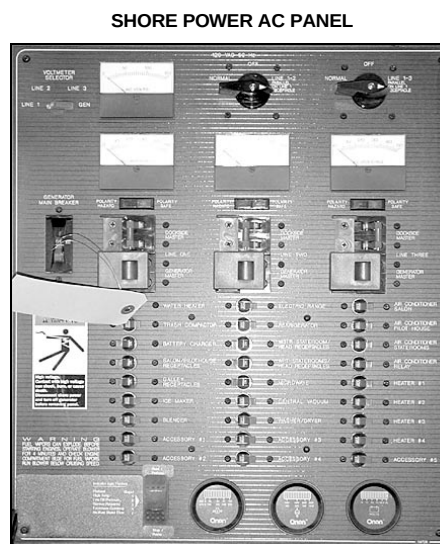
WATER HEATER DAMAGE HAZARD!

- **DO NOT** turn **On** the water heater AC panel electrical circuit until the water heater tank is **COMPLETELY** filled with water.
- The tank is full if water flows from the tap when the hot water is turned **On** in the galley.
- Even momentary operation in a dry tank *will* damage the heating elements.
- Warranty replacements **WILL NOT** be made on elements damaged in this manner.

NOTICE

Whether using shore power or generator power, the simultaneous use of several AC components can result in an overloaded circuit. It may be necessary to turn **Off** one or more accessories in order to use another accessory.

- The AC system can be energized by shore power.
- The master circuit breakers, located on the AC panel, provide power source selections to AC powered accessories.
- Individual breakers **must** be turned **On** to supply power to the accessories you wish to use.
- The AC panel may contain inactive circuit breakers for accessories that are not available for this model yacht.



Shore Power



DANGER!



FIRE, EXPLOSION & SHOCK HAZARD!

- **DO NOT** alter shore power connectors and use only compatible connectors.
- **Before** plugging in or unplugging the shore power cord to your boat, make sure *all* breakers and switches on the AC master panel are turned **Off**.
- To prevent shock or injury from an accidental dropping of the “hot” cord into the water, **ALWAYS** plug the shore power cord to the boat inlet first; then to the dockside outlet. When unplugging from shore power, unplug the shore power cord from the dockside outlet first.
- **NEVER** leave a shore power cord plugged in to the dockside outlet only.
- Only use shore power cords approved for marine use. **NEVER** use ordinary indoor or



WARNING!



SHOCK & ELECTRICAL SYSTEM DAMAGE HAZARD!

- Monitor the polarity indicator lights **EVERY TIME** you connect to shore power.
- If a reversed polarity light turns **On** when you are connecting to shore power, **DO NOT** turn on the main breaker switches.
- Instead, **IMMEDIATELY** unplug the shore power cord (**ALWAYS** from the dockside outlet first) and alert marina management.



WARNING!



SHOCK & ELECTRICAL SYSTEM DAMAGE HAZARD!

- **Before** each use, check the shore power cord(s) for defects or damage.
- **NEVER** use damaged or faulty cords since the danger of fire and electrical shock exists.
- **DO NOT** pinch shore power cords in doors or hatches, or coil the shore power cord too tightly since these situations can generate enough heat to result in a fire.
- If a shore power cord is dropped into the water, **THOROUGHLY** dry the blades and contact slots before using.



CAUTION!



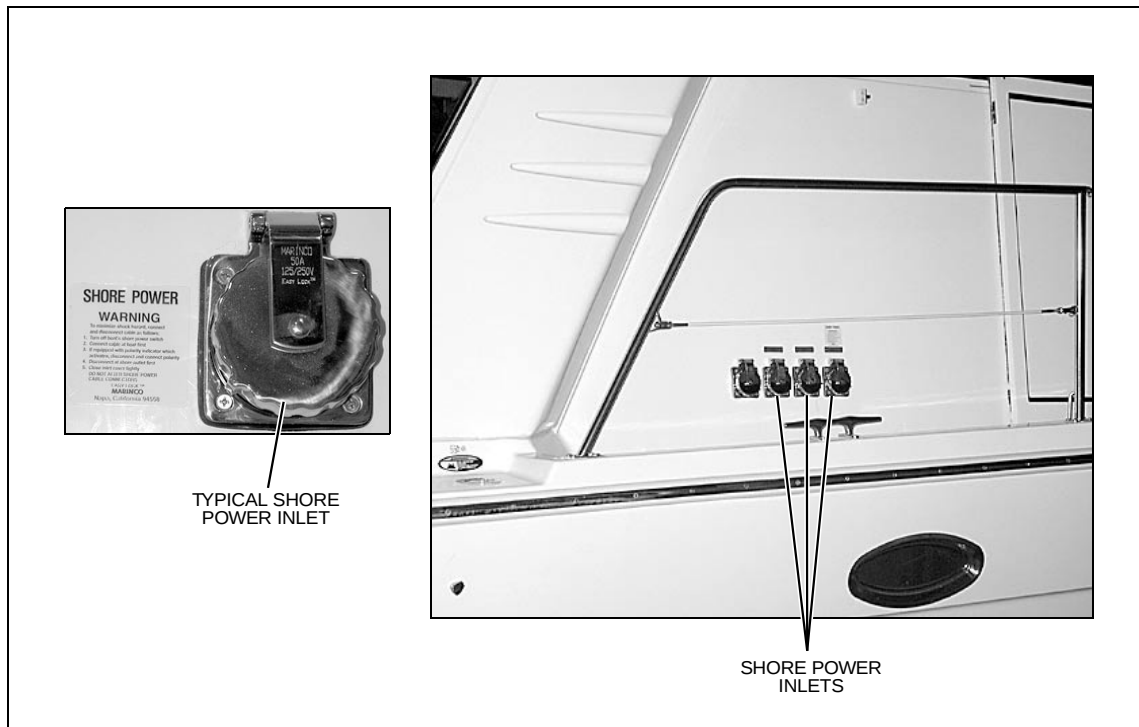
ELECTRICAL SYSTEM DAMAGE HAZARD!

- **NEVER** connect to dockside power outside of North America unless you have purchased an international electrical conversion adaptor.
- Using several AC components at the same time can result in an overloaded circuit. You may have to turn **Off** one or more appliances in order to use another appliance.
- Use double insulated or three-wire protected electrical appliances whenever possible.

NOTICE

- Some dockside outlets may be rated less than 30 amps, therefore, you may need to purchase lower amp adapters.
- Whenever a lower amp adapter is used, however, there *will* be a corresponding drop in supplied power from the dockside system.

Connecting To Shore Power



1. Review **all** hazard information at the beginning of this section, *Shore Power*.
2. Turn **Off** all breakers and switches on the AC master panel.
3. Attach the shore power cord to the yacht inlet first, then to the dockside outlet.

! WARNING!

⚡ SHOCK & ELECTRICAL SYSTEM DAMAGE HAZARD!

- Monitor the polarity indicator lights **EVERY TIME** you connect to shore power.
- If a reversed polarity light turns **On** when you are connecting to shore power, **DO NOT** turn **On** the main breaker switches.
- Instead, **IMMEDIATELY** unplug the shore power cord (**ALWAYS** from the dockside outlet first) and alert marina management.

4. Turn the main SHIP/SHORE breaker(s) to the "SHORE" position.
5. Turn **On** the master breaker(s) and individual component breakers as required.

Shore Power Cable Hoist (If Equipped)

- The shore power cable hoist allows you to easily feed out and reel in the shore power cable.
- **Before** using the shore power cable hoist, read the cable hoist manual, included in your owner's packet.

Inverter Power (If Equipped)

- The inverter allows the batteries to supply AC power to some accessories when your yacht is **not** connected to shore power.
- Primary control is from the Inverter Remote Control Panel and redundant controls are on the inverter itself.
- **Before** using the inverter, read **all** instructions and cautionary markings on (1) the inverter, (2) the batteries, and (3) **all** appropriate sections of the inverter manual.
- Energize the AC system under inverter power by switching **On** the inverter master breaker and pressing the **On/Off** switch on the inverter control panel.
- The inverter provides AC power **only** to the accessories that have white breakers on the AC panel.

Generator (If Equipped)

 DANGER!	
	CARBON MONOXIDE POISONING HAZARD! • Generators are a source of dangerous carbon monoxide gas (CO). Check the generator exhaust system for leaks <i>before</i> each use.

 WARNING!	
	FIRE/EXPLOSION HAZARD! • Use the bilge blowers for a minimum of four minutes <i>before</i> starting the generator. • Leave the blowers on while the generator is running unless the boat is running at cruising speed. • Use of the blower system is <i>not</i> a guarantee that explosive fumes have been removed. • If you smell any fuel, DO NOT start the generator. • If the generator is already running, IMMEDIATELY shut Off the generator and <i>all</i> electrical accessories and investigate. • DO NOT obstruct or modify the ventilation system.

 CAUTION!	
SYSTEM DAMAGE HAZARD! • Always make sure the generator's seawater pickup seacock is <i>Open before</i> and during the running of the generator. • NEVER use the generator starter for more than 30 seconds. • If the generator does <i>not</i> start, wait at least 30 seconds before another start attempt is made. • After starting the generator, wait for the generator to stabilize <i>before</i> turning on compo-	

- The generator can supply 120V/60Hz power to the yacht when it is **not** connected to shore power.
- **Before** using the generator, read the generator operation manual for pre-start checks and break-in procedures.

Note the following about the generator:

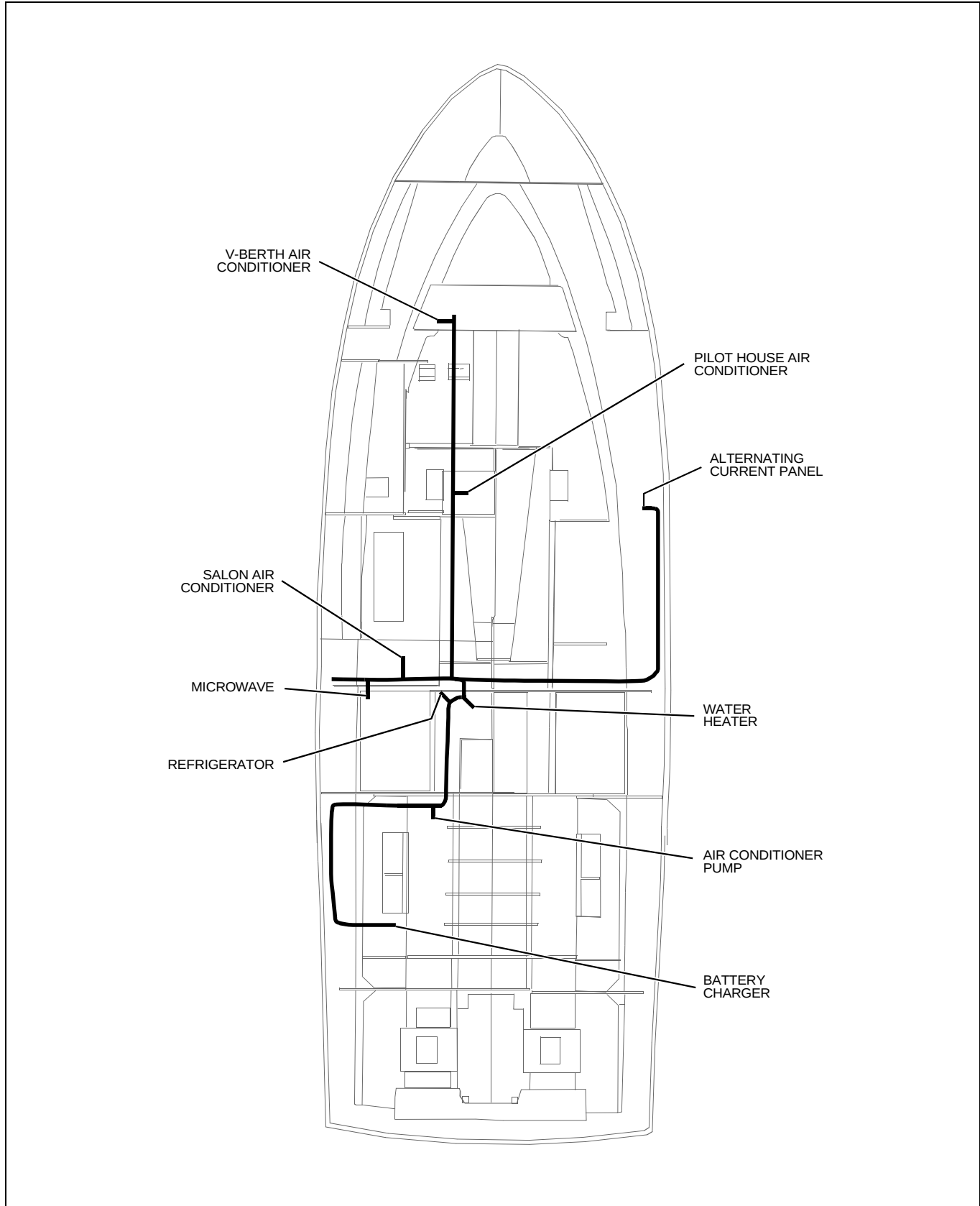
- Polarity has been established in the installation of the generator(s), therefore the polarity lights **will not** function in this mode.
- Fuel to run the main generator is supplied from the port fuel tank.
- In addition to servicing the filters attached to the generator(s), the filters/separators (located near the fuel line valves) should be serviced as described in the manufacturer's manual.
- The coolant mixture installed at the factory consists of equal parts of water and antifreeze (Ethylene Glycol).
- The coolant bottle for the generator is located inside the port generator compartment hatch.
- Check the generator's seawater strainer for leaks and/or debris before each use.
- Oil pressure, water temperature, and voltage gauges are provided on the generator control panel, inside the AC/DC cabinet on the port side of the salon. These gauges monitor the engine functions of your generator.

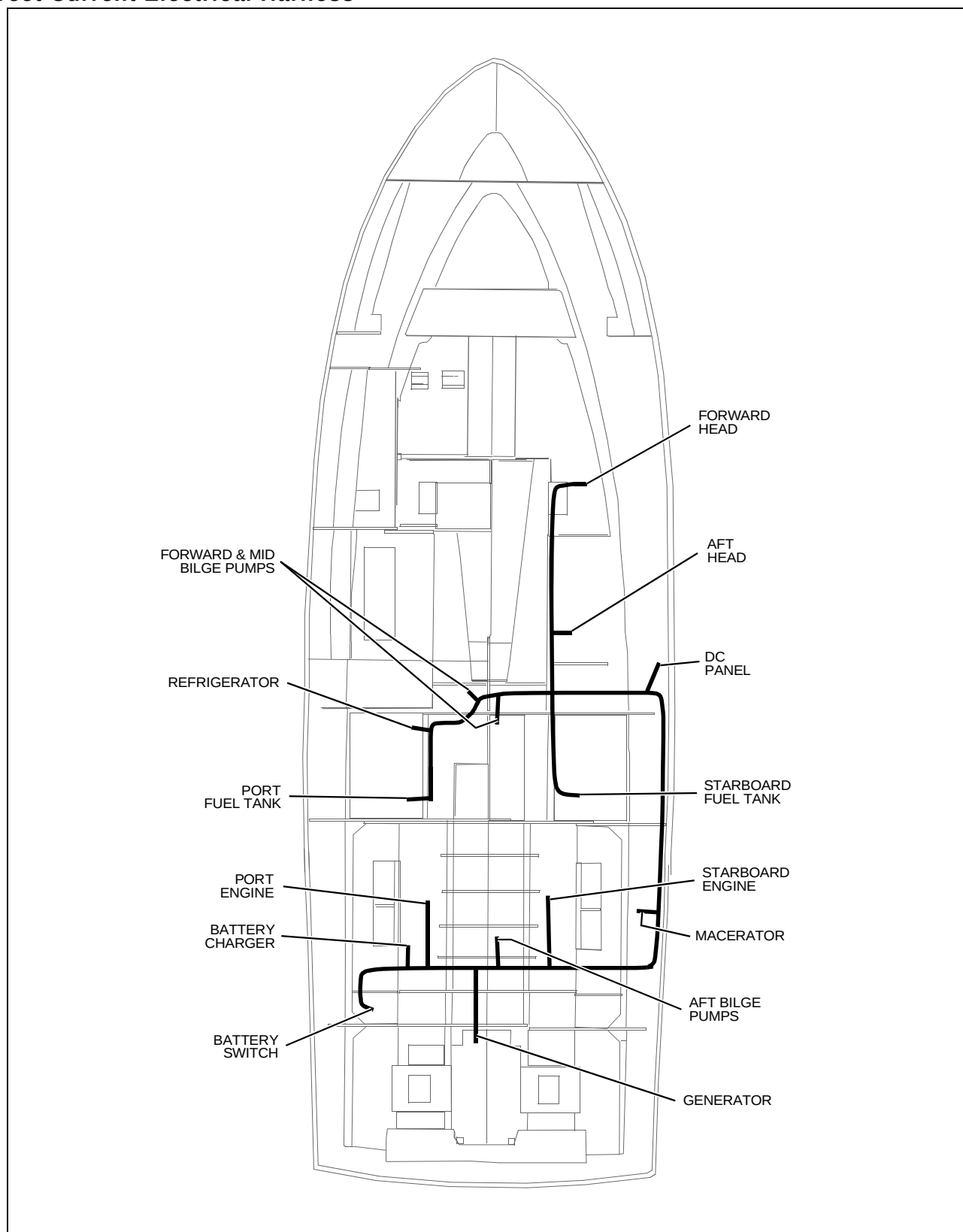
Generator Starting & Stopping

1. Run the bilge blowers for a minimum of four minutes **before** starting the generator.
 - If your yacht is running below cruising speed, leave the blowers on while the generator is running.
2. Make sure the generator's seawater pickup seacock is **Open before** starting and during running of the generator.
3. Make sure that the port engine battery switch is turned to the **On** position.
4. On the panel, press the toggle switch to the "START/PREHEAT" position until the generator starts.
5. Turn on each individual component breaker as required.
6. **To shut Off the generator**, press the toggle switch to the "STOP/PRIME" position until the generator completely shuts down.

Electrical Routings

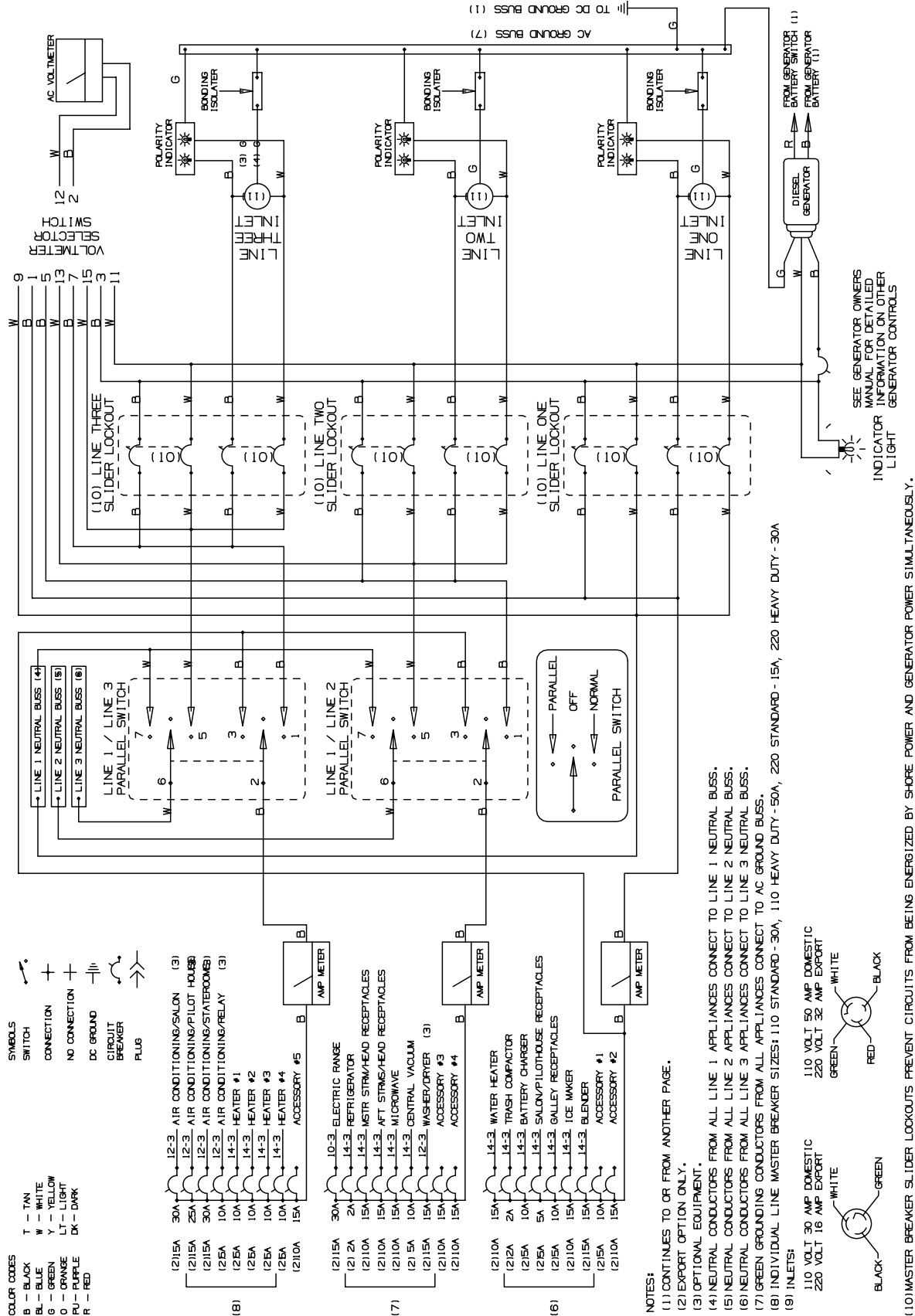
Alternating Current Electrical Harness



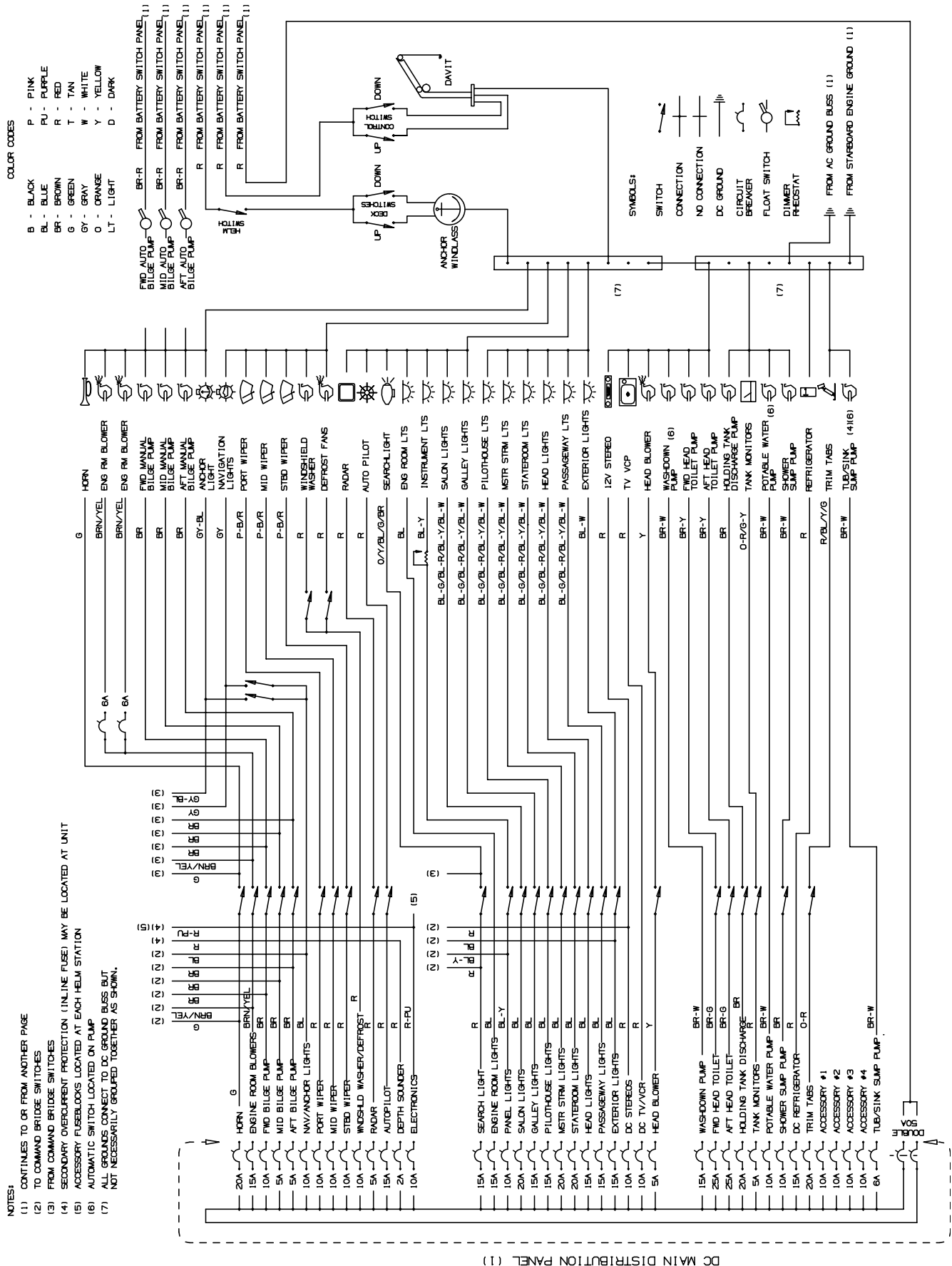
Direct Current Electrical Harness

Wiring Diagrams

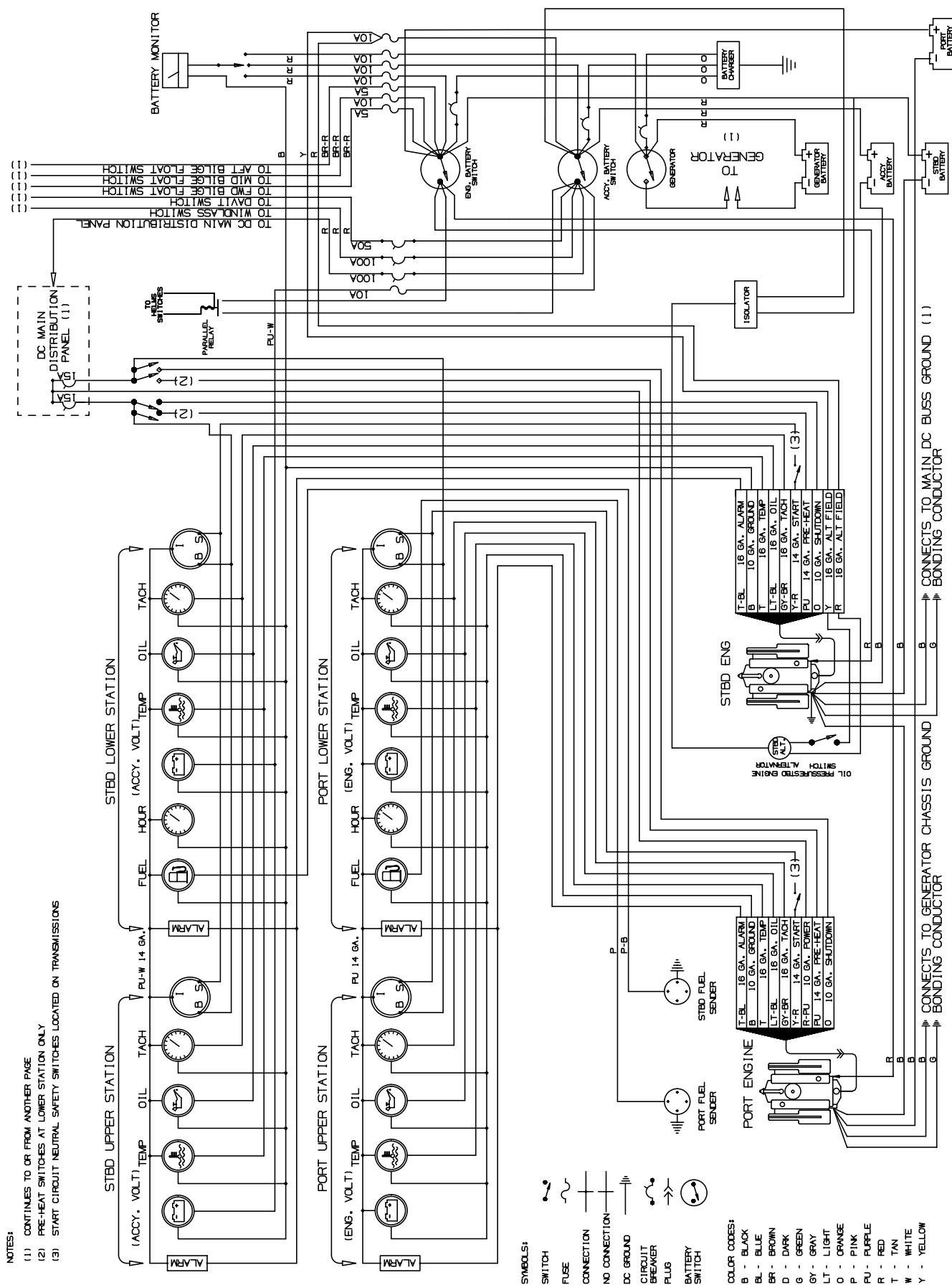
120/240-Volt AC Electrical System (If Equipped)



12-Volt Auxiliary DC Electrical System



Engine Electrical System



Important Records

Selling Dealer

Name Of Dealership
Address
Phone/FAX/E-mail
Sales Manager
Service Manager

Engines

Manufacturer	Model Name/Number	
Port Engine Serial Number	Starboard Engine Serial Number	
Oil Type/SAE	Quarts per Engine	Filter Type

Propeller

Manufacturer	Pitch
Model Number	

Generator

Manufacturer	Model Name/Number	
Serial Number		
Oil Type/SAE	Quarts	Filter Type

Fuel System

Fuel Capacity	Filter Type
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Plumbing

Fresh Water Tank Capacity	Waste Holding Tank Capacity
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Key Numbers

Cabin	Ignition
Other	Other

Electronics

Manufacturer	Model Name/Number
Serial Number	

Manufacturer	Model Name/Number
Serial Number	

Manufacturer	Model Name/Number
Serial Number	

Manufacturer	Model Name/Number
Serial Number	

Manufacturer	Model Name/Number
Serial Number	

Manufacturer	Model Name/Number
Serial Number	

Float Plan

Before going boating, fill out a copy of this float plan (or similar) and leave it with a **reliable** person whom you can depend on to contact the Coast Guard or other rescue organization, if you do not return as scheduled.

Description of Boat

Registration/Documentation Number		
Length	Make	Type
Hull Color	Trim Color	
Fuel Capacity	Engine Type	Number of Engines
Distinguishing Features		
Distinguishing Features		

Operator of Boat

Full Name		
Male or Female	Age	Health
Address		
Address		
Phone/FAX/E-mail		
Operator's Experience		

Persons Onboard

Full Name		
Age	Health	Phone Number
Full Name		
Age	Health	Phone Number
Full Name		
Age	Health	Phone Number
Full Name		
Age	Health	Phone Number
Full Name		
Age	Health	Phone Number
Full Name		
Age	Health	Phone Number
Full Name		
Age	Health	Phone Number
Full Name		
Age	Health	Phone Number

Survival Equipment

Number of PFDs	Flares (Yes/No)	Mirror (yes or no)
Smoke Signals (Yes/No)	Flashlight (Yes/No)	Food (Yes/No)
Water (Yes/No)	Anchor (Yes/No)	Raft/Dinghy (Yes/No)
Paddles (Yes/No)	EPIRB (Yes/No)	Other
Other	Other	Other
Marine Radio (Yes/No)	Type	Frequencies

Vehicle Description

Make	Model
Color	License Number
Where is the Vehicle Parked?	

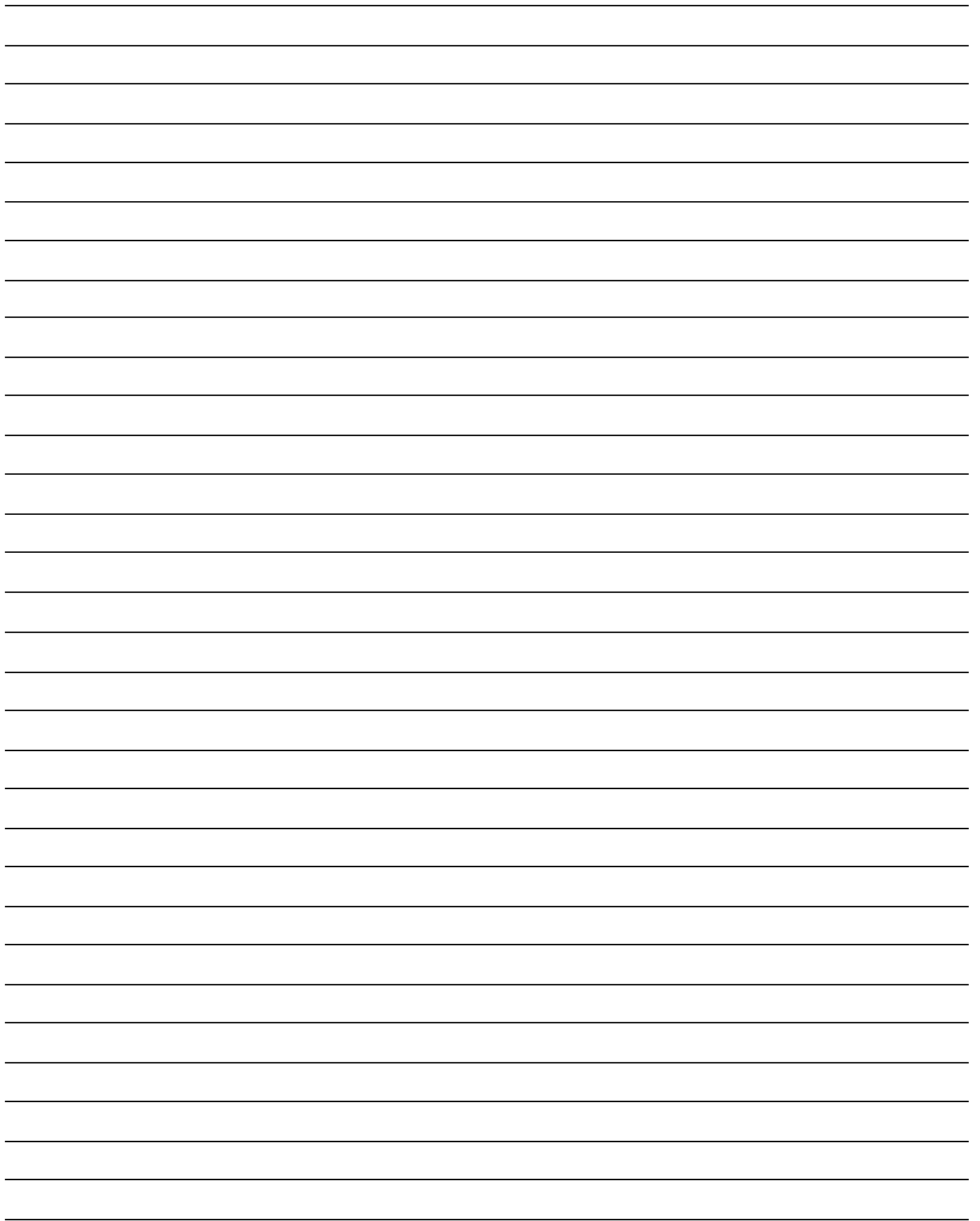
Trip Expectations

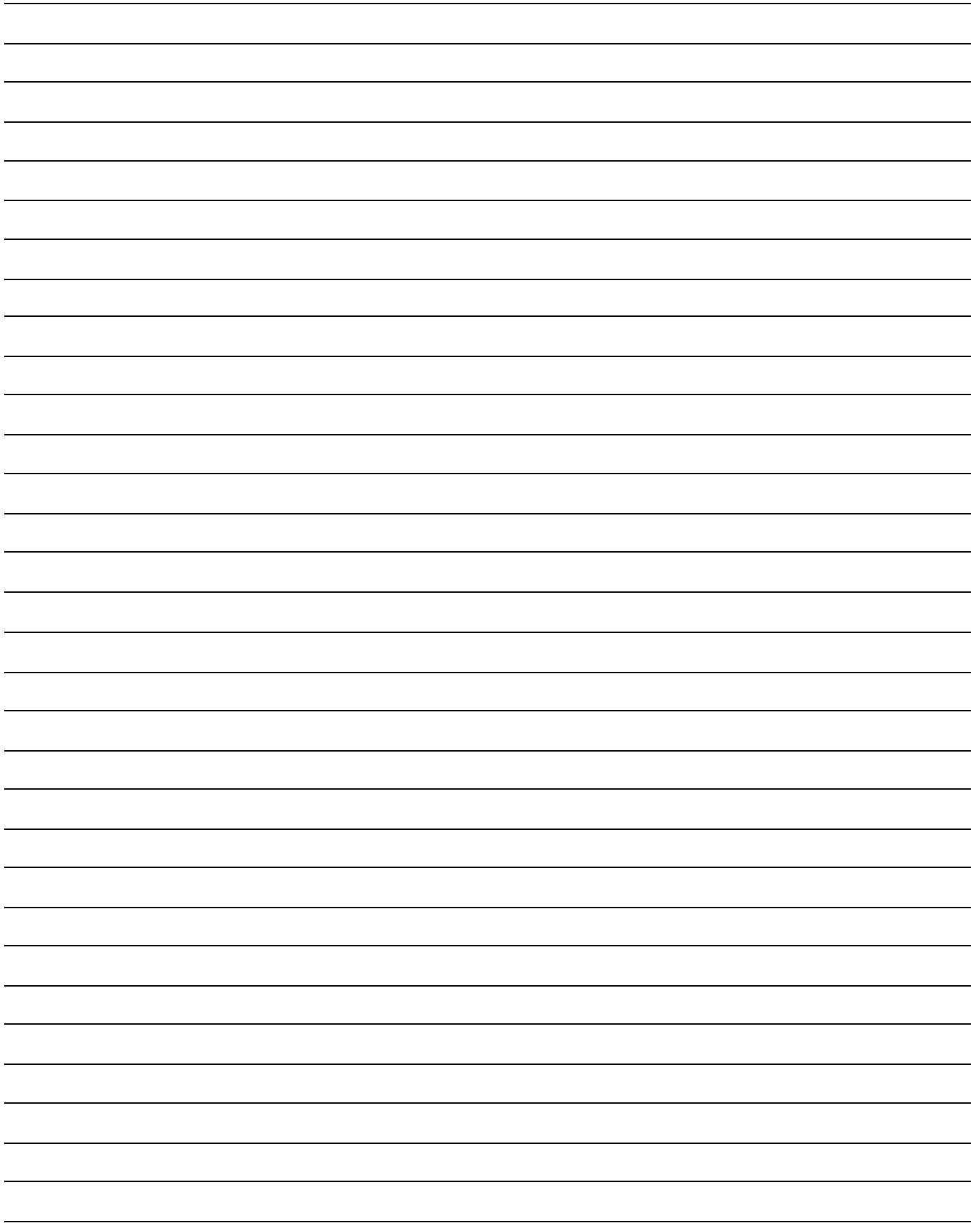
Departing From	
Departure Date	Departure Time
Stopover 1	
Arrive No Later Than: Date	Arrive No Later Than: Time
Stopover 2	
Arrive No Later Than: Date	Arrive No Later Than: Time
Stopover 3	
Arrive No Later Than: Date	Arrive No Later Than: Time
Stopover 4	
Arrive No Later Than: Date	Arrive No Later Than: Time
Stopover 5	
Arrive No Later Than: Date	Arrive No Later Than: Time
Stopover 6	
Arrive No Later Than: Date	Arrive No Later Than: Time
Final Destination Port (If Different Than Home Port)	
Arrive No Later Than: Date	Arrive No Later Than: Time

If not returned by the date and time listed above, call the Coast Guard or other local authority.

Coast Guard Phone Number
Local Authority Phone Number

[illegible]





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