



MARQUIS™



65 MARQUIS OWNER'S GUIDE

HIN: CDR _____



Carver Boat Corporation
790 Markham Drive
P.O. Box 1010
Pulaski, WI 54162-1010
USA
Phone (920) 822-3214
Fax (920) 822-3213
www.carveryachts.com

Robert VanGrunsven
President

Congratulations and Welcome Aboard!

This Owner's Guide was designed to acquaint you with the safe, proper operation and maintenance of your new boat and its systems. Your first duty as Captain of your new Marquis should be to read your Owner's Guide and all manufacturer-supplied operating and maintenance instructions found within your Owner's Information kit.

Be sure to mail in all manufacturer registrations and warranty cards to validate your Marquis and OEM warranties. These warranty cards have been assembled and are contained in the OEM information packets within your Owner's Information kit.

If you're new to boating, learn the proper rules of seamanship to ensure the safety of your passengers. Refer to *Chapman's Piloting, Seamanship and Small Boat Handling* and attend a safe boating class offered by the U.S. Coast Guard Auxiliary, United States Power Squadron, or any enterprise experienced in conducting safe boating courses.

Thank you for choosing Marquis. We're confident your new boat will provide you and your family with years of enjoyable cruising.

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Using Your Owner's Information Kit

Your Owner's Information kit contains this Owner's Guide and a set of manuals referred to as "OEM information." Please read the Owner's Guide and OEM information carefully and familiarize yourself with your boat before operating the boat or any of its components or systems.

IMPORTANT: *The Owner's Information kit must be onboard whenever your boat is operated. If you sell your boat, make sure the new owner receives the entire kit.*

Owner's Guide

This guide explains how to safely operate and maintain your boat and its various systems. The guide also contains safety precautions and operational tips, as described below.



DANGER

Describes a hazard that can cause death or severe injury if the instructions are ignored.



WARNING

Describes a hazard that can cause serious injury and/or property damage if the instructions are ignored.



CAUTION

Describes a hazard that can cause damage to your boat or its components if the instructions are ignored.

NOTE: *Provides important information that can help you avoid problems.*

If this is your first boat, or if you are changing to a type of boat you are not familiar with, for your own comfort and safety, please obtain handling and operation experience before operating the boat. Your dealer or national sailing federation or yacht club can advise you of local sea schools or competent instructors.

NOTE: *Drawings and illustrations contained within this guide are included as graphic aids to assist in the general operation and maintenance of your boat. These drawings and graphics do not include all details of each system and are not drawn to scale. Do not reference these drawings to order parts or to service your boat. Contact your authorized Marquis Dealer for any parts or service required for your boat.*

The information contained in this Owner's Guide was complete and accurate at the time the guide was printed. Carver reserves the right to change materials, part numbers, specifications, or system designs at any time without notice.

A TIP FROM CARVER!

There are many people within the Carver organization who are avid boaters. Some of the experience gained during our years of boating are presented in this Owner's Guide. This information is presented in the left margin and is entitled "A TIP FROM CARVER."

OEM Information

The OEM (Original Equipment Manufacturer) information is supplied by companies from whom Carver has purchased components to install in your boat. These components include, but are not limited to, standard items like the engines, sanitation system, various pumps, and 12-volt batteries, as well as optional items like the air conditioning system and navigation systems. The OEM information explains how to operate and maintain the components.

If you install an aftermarket accessory on your boat, add the OEM information that accompanies the accessory to the Owner's Information kit.

NOTE: If the OEM information conflicts with this Owner's Guide, follow the instructions in the OEM information.

Pre-Delivery Service Record

The Pre-Delivery Service Record that follows this page must be completed and signed by your Marquis Dealer before you take delivery of your new Marquis yacht. Your Marquis Dealer will prepare your boat for delivery in accordance with the procedures detailed within this document.

Be certain that the boat's Pre-Delivery Service Record and all OEM warranty cards have been completed and mailed to their respective companies. Be sure you retain a copy of the Pre-Delivery Service Record for your own reference.

Warranty Registration

Carver warrants every boat we manufacture as explained in the Marquis Limited Warranty. Your copy of the warranty is located in Section 9. Please review the warranty carefully.

The Warranty Registration that follows this page is the first step in activating your Marquis limited warranty. This document must be completed and signed by you and your Marquis Dealer before you take delivery of your new Marquis yacht. Failure to complete and register this Warranty Registration could void your Marquis limited warranty.

Your Marquis Dealer will review the terms of the Marquis warranty and make certain the warranty is registered with Carver.

To ensure that the warranty remains in effect during its lifetime, Carver Boat Corporation, your Marquis Dealer, and you must each uphold specific responsibilities. These responsibilities are described in Section 9.

At time of delivery, make a complete inspection of the boat and its systems. Document any work that needs to be completed by the Dealer in order to meet the terms of your agreement.

There are two cards located at the end of this Preface. These are Second and Third Owner Registration Cards. We strongly recommend that the purchaser of a previously-owned Marquis register ownership with Carver.



MARQUIS™

THIRD OWNER REGISTRATION

Owner's Name: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Telephone: (____) _____ Date of Purchase: _____

Purchased From: _____

Boat Hull Identification Number: CDR _____

Third Owner Registration does not extend, alter, or transfer the Carver Limited Warranty. Refer to the Carver Limited Warranty for details.



MARQUIS™

SECOND OWNER REGISTRATION

Owner's Name: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Telephone: (____) _____ Date of Purchase: _____

Purchased From: _____

Boat Hull Identification Number: CDR _____

Second Owner Registration does not extend, alter, or transfer the Carver Limited Warranty. Refer to the Carver Limited Warranty for details.

MARQUIS YACHTS OWNER REGISTRATION
CARVER BOAT CORPORATION
PO BOX 1010
PULASKI WI 54162-1010

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Boating Safety

Boating safety is your responsibility. You must fully understand the operating procedures and safety precautions in the Owner's Information kit and this owner's guide before you operate your new boat. Safe boating is no accident.

Safe Operation

Safe operation includes, but is not limited to, the following.

- Keep your boat and equipment in safe operating condition. Inspect the hull, engines, safety equipment, and all boating gear regularly.

NOTE: Federal law requires you to provide and maintain safety equipment on your boat. Consult U.S. Coast Guard, state, and local regulations to ensure your boat has all required safety equipment onboard. Additional equipment may be recommended for your safety and that of your passengers. Make yourself aware of its availability and use.

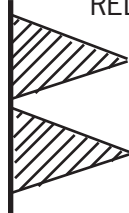
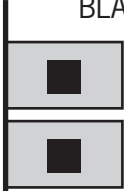
- Be very careful when fueling your boat. Be sure you know the capacity of your boat's fuel tank and the amount of fuel used when operating at frequently used engine speeds (RPMs). Refer to Section 9 Specifications for the fuel tank capacity. Refer to Section 5 Fueling for information on fueling your boat.
- Make sure you have enough fuel onboard for anticipated cruising requirements. In general, use $\frac{1}{3}$ of your supply to reach your destination and use $\frac{1}{3}$ to return. Keep $\frac{1}{3}$ in reserve for changes in your plans due to weather or other circumstances.
- Be sure fire extinguishing and lifesaving equipment is onboard. This equipment must meet regulatory standards, and it should be noticeable, accessible and in proper operating condition. Your passengers should know where this equipment is and how to use it.
- Keep an eye on the weather. Be aware of possible changing conditions by checking local weather reports before your departure. Monitor strong winds and electrical storms.
- Always keep accurate, updated charts of the area you are cruising. Back up charts if you use a chart plotter.
- Before you leave the port or harbor, file a Float Plan with a family member, relative, friend, or other responsible person ashore.
- Always operate your boat with care, courtesy and common sense.
- Instruct at least one passenger onboard in the basic operation of your boat. This person can take over if you unexpectedly become unable to do so.
- Do not allow passengers to ride on parts of your boat other than designated seating areas.
- Ask all passengers to remain seated while the boat is in motion.
- Do not use the boarding platform or boarding ladder while either or both of the engines are running.
- Understand and obey the "Rules of the Road." Always maintain complete control of your boat.
- Do not overload or improperly load your boat.
- Do not travel faster than conditions warrant or beyond your abilities.
- Do not operate your boat in weather or sea conditions beyond your skill and experience.
- Do not operate your boat while under the influence of drugs and/or alcohol.
- Do not operate your boat if your visibility is impaired.

Adverse Conditions

Weather

At all times, the boat operator should be aware of present weather conditions and the weather forecast. Check the forecast before you begin a day of boating. Be aware, however, that weather conditions can change rapidly. If you have a marine radio, listen to the weather reports issued by the U.S. Coast Guard and others. If you have a portable radio, keep it tuned to a station broadcasting frequent weather reports. Many boating clubs fly weather signals; learn to recognize these signals.

WEATHER SIGNALS

Day Flags	Small Craft Adv Winds to 38 mph RED 	Gale Warning Winds to 54 mph RED 	Day Flags	Storm Warning Winds to 72 mph BLACK on RED 	Hurricane Winds to 54 mph BLACK on RED 
	Night Lights  RED WHITE	Night Lights  WHITE RED		Night Lights  RED RED	Night Lights  RED WHITE RED

Storms rarely appear without advance notice. If storms are a possibility, keep a watch on the horizon, especially to the West, for their approach. Watch for changes in wind direction or cloud formations. There is no substitute for a good understanding of weather conditions and what to do when the weather takes a turn for the worse.

If a storm is approaching, the best course of action is to return to port. If you are unable to do so, then prepare to weather the storm:

- Close portlights, exterior doors and hatches and secure them. Stow all loose gear below deck and tie down any gear on deck.
- Reduce speed as the seas build. Make sure all persons onboard have put on their personal flotation devices.
- Drop a sea anchor over the stern to maintain the bow into the seas. If you do not have a sea anchor onboard, use a canvas bucket, tackle box, or other object that will work like an anchor.

Fog

Fog is a result of either warm-surface or cold-surface conditions. You can judge the likelihood of fog formation by periodically measuring the air temperature and dew point temperature. If the difference between these two temperatures is small, fog is likely to develop.

Remember the following guidelines:

- Unless your boat is well equipped with charts and navigational equipment, head for shore at the first sign of fog and wait until conditions improve. If you have charts on board, take bearings as fog sets in, mark your position, and continue to log your course and speed.
- Make sure all persons onboard put on their personal flotation devices.
- If your boat has sounding equipment, take soundings regularly and match them with depths shown on your charts.
- Station a person forward in the boat as a lookout.
- Reduce your speed. From time to time, stop engines and listen for other fog signals.
- Sound the horn or fog bell intermittently to warn others.
- If there is any doubt in continuing your excursion, anchor. Listen for other fog signals while continuing to sound your fog horn or bell.

Emergency Procedures

The following is not an exhaustive list of situations which may be encountered while boating. You should obtain training to handle any emergencies which may arise.

Fire

To help prevent a fire onboard your boat, keep your bilges clean and check for fuel vapors at regular intervals. Also, DO NOT fit free-hanging curtains or other fabrics in the vicinity of or above the stove top or other high-heat devices. Do not store any materials or equipment of any kind in the engine room.

**DANGER**

Any fire onboard your boat is serious. Explosion is possible. Develop a fire response plan. Respond immediately.

Every boater should develop a fire response plan to determine what kind of fire (fuel, electrical, etc.) might break out, where it might break out, and the best way to react. Have a plan and, if possible, assign responsibilities to others to allow quicker decisions and reactions.

**WARNING****Never:**

- **Obstruct passage ways to exits and hatches.**
- **Obstruct safety controls, such as fuel valves and electrical system switches.**
- **Obstruct portable fire extinguishers in lockers.**
- **Leave the boat unattended when cooking or heating appliances are in use.**
- **Use gas lights in the boat.**
- **Modify any of the boat's systems (especially electrical or fuel).**
- **Fill the fuel tanks when machinery is running or when cooking or heating appliances are in use.**
- **Smoke while handling fuel.**

NOTE: Everyone onboard should know where fire extinguishers are and how to operate them.

In case of fire:

- Stop the engines immediately.
- If the fire is in the engine room, shut off the bilge blowers immediately. Do not open the hatch to the engine room. The fire will flare up if the fresh air supply increases suddenly.
- Keep the fire downwind if possible. If the fire is aft, head into the wind.
- Have all persons onboard put on their personal flotation devices.
- If you can get at the fire, aim the fire extinguisher at the base of the flames and use a sweeping motion to put out the fire.
- If the fire gets out of control, make a distress signal and call for help on the radio.

Deciding whether to stay with the boat or abandon ship will be difficult. If the decision is to abandon ship, all persons onboard should jump overboard and swim a safe distance away from the burning boat.

**WARNING**

Smoking, poor maintenance or carelessness when refueling can cause hazardous conditions. Always follow proper refueling procedures for your boat.

Flooding

If your boat is taking on water from a leak in the hull, turn on your bilge pumps. Assign someone to bail out the bilge and investigate the cause of the flooding. When the source of the leak is found, attempt to repair it.

Almost anything can be stuffed into a hole to stop the leaking temporarily. Material used to stop a leak will work better if it is applied from the outside where water pressure can help hold it in. If necessary, station a crew member to hold the plug in place if the plug is applied from the inside. In all cases, station a crew member or passenger to watch the plugged area and alert others if it fails.

Swamped or Capsized Boat

If your boat becomes swamped or capsizes, put on a personal flotation device immediately and set off a distress signal. Chances are good a capsized boat will stay afloat. For this reason, stay with the boat. Do not leave the boat or try to swim to shore except under extreme conditions. A capsized boat is easier to see than a swimmer, and the shore may be further away than it appears.

If water is coming over the bow, reduce headway and turn the boat slightly so that the bow is slightly off from meeting the waves head on. Drop a sea anchor over the stern of the boat and adjust the length of the line to hold the bow at the most favorable angle.

Collision

If a serious collision occurs, check everyone onboard for injuries, then inspect the boat to determine the extent of the damage.

- Prepare to help the other craft unless your boat or its passengers are in danger.
- If the bow of the other craft penetrated your boat's hull, prepare to plug the fracture once the boats are separated.
- Shore up the hole inside your boat with a spare life jacket or bunk cushion.
- While plugging the hole, trim weight to get the hole above the water level during repairs, if possible.
- If your boat is in danger of sinking, have everyone onboard put on their personal flotation devices.
- If your boat has a radio, contact the U.S. Coast Guard or other rescue authorities immediately on VHF channel 16 or CB radio channel 22. (You may also be able to use VHF channels 9 or 13 or your cellular phone in some states).

Running Aground

Excessive weight in the fore or aft sections of the boat will cause a trim change and may yield greater draft than expected. Equip your boat with a good quality depth-measuring instrument and allow ample water below the hull while operating.

If your boat runs aground, check everyone onboard for injuries, then inspect the boat for damage. If lightly grounded, shift the weight of the passengers or gear to heel the boat while reversing engines. If towing becomes necessary, use a commercial towing service.

**WARNING**

Never attach a tow line to a deck cleat or anchor windlass. The cleats and windlass are not designed to take the full load of the boat and may pull free from the deck, causing serious injury or property damage.

Man Overboard

You should know what to do in case someone falls overboard. Emergency procedures are published in *Chapman's* and instruction is offered by the U.S. Coast Guard.

If a person falls overboard, hypothermia may be an immediate concern. Hypothermia occurs when a person's body loses heat faster than the body can replace it. If not rescued, the person will become exhausted or likely drown. In general, the colder the water, the faster body heat is lost. Personal flotation devices increase survival time because they provide insulation.

WATER SURVIVAL CHART

Water Temp. (°F)	Exhaustion Unconsciousness	Expected Time of Survival
32.5	Under 15 min.	Under 45 min.
32.5-40	15-30 min.	30-90 min.
40-50	30-60 min.	1-3 hr.
50-60	1-2 hr.	1-6 hr.
60-70	2-7 hr.	2-40 hr.
70-80	3-12 hr.	3 hr.- Indefinite
Over 80	Indefinite	Indefinite

Medical Emergency

No one should act as a doctor if they are not properly trained and educated. Someone onboard your boat should know first aid. First aid training is available through your local Red Cross. Keep a fully stocked first aid kit onboard your boat at all times.

Equipment Failure

Steering, propulsion or control failure can be prevented by having your boat maintained correctly and checked periodically. If systems onboard your boat do fail, radio for help or signal with flags and wait until help arrives.

Radio Communication

You are responsible for obtaining a radio operator's permit and knowing and following proper rules and procedures. Private boats are not required to have their radio on at all times; however, if your radio is on, it should be tuned to channel 16 unless it is being actively used. Channel 16 is the frequency for emergency calls or initial calls between boats. After establishing contact on channel 16, change your frequency to channel 22.

More information on radio communications can be found in *Chapman's Piloting*.

Distress Signals

The operator is required to lend assistance to a craft in distress as long as your life or boat is not put in harm's way in the process. Good Samaritan laws protect you from any liability incurred while giving aid.

Safety Equipment

NOTE: Federal law requires you to provide and maintain safety equipment onboard your boat. Consult U.S. Coast Guard, state and local regulations to ensure your boat has all required safety equipment onboard. You must learn about any additional recommended equipment before operating the boat.

Personal Flotation Devices (PFDs)

There must be one U.S. Coast Guard-approved wearable personal flotation device of Type I, II, or III for each person onboard your boat. The PFDs must be readily accessible and in serviceable condition. They must also be of a suitable size for each person onboard. Three PFDs (two wearable and one throwable) are required regardless of the number of persons onboard.

PFD Type I, Wearable: This offshore life jacket is most effective for all waters when rescue may be delayed. In the water, its design turns most unconscious people from a facedown position to a vertical or face-up position.

PFD Type II, Wearable: This near-shore buoyant vest is intended for calm inland waters where there is a chance of quick rescue. It turns its wearer to a face-up position, but the turning action is not as pronounced as the Type I, and it will not turn as many people under the same conditions as a Type I.

PFD Type III, Wearable: Classified as a flotation aid, this PFD will not turn a victim to a face-up position. This type of PFD is frequently used in water sports.

PFD Type IV, Throwable: You must also have onboard at least one throwable PFD Type IV device. The design of the Type IV device does not allow it to be worn. It must be thrown to a person in the water and held by the user until rescued. The most common Type IV PFDs are buoyant cushions or ring buoys. This PFD must be in serviceable condition and immediately available for use.

Visual Distress Signals

The U.S. Coast Guard requires that all boats operating on U.S. coastal waters have visual distress signal equipment. Boats owned in the United States and operating on the high seas must also carry this equipment.

Visual distress equipment must be readily accessible and in serviceable condition. Both pyrotechnic and non-pyrotechnic equipment must be U.S. Coast Guard approved. This equipment can become ineffective with age. If your equipment's usage date has expired, replace the equipment before taking your boat out.

Approved pyrotechnic equipment includes:

- Hand held or aerial red flares
- Hand held or floating orange smoke
- Launchers for aerial red meteors or parachute flares.

Approved non-pyrotechnic equipment includes:

- Orange distress flag
- Dye markers
- Electric distress light.

No one signaling device is ideal under all conditions. Consider carrying various types of equipment. Careful selection and proper stowage of visual distress equipment are very important. Select devices with packaging that children, but not adults, will find difficult to open, especially if young children are onboard.

Sound Signaling Device

Your boat must have an operable device that can produce a sound signal if conditions require. A horn is standard equipment on all Marquis models.

Boats longer than 39' 4", must have a bell and a whistle. These devices must meet the requirements of the Inland Navigational Rules Act of 1980. Refer to the U.S. Coast Guard's publication *Navigational Rules, International-Inland* for details on the appropriate signals.

Running and Navigation Lights

Your boat must have running and navigation lights for safe operation after dark. Observe all navigation rules for meeting and passing. Do not run at high speeds during night operation. Always use common sense and good judgment when operating your boat at night.

Radar Reflectors

Radar reflectors (if installed on your boat) should be 18", measured diagonally. They should be placed 12' above the waterline, otherwise, a boat with radar may have trouble "seeing" your boat.

Fire Extinguishers

Fire extinguishers must be approved by the U.S. Coast Guard. The U.S. Coast Guard classifies fire extinguishers by the type of fire they can extinguish. These classifications include foam, carbon dioxide, chemical, and Halon-type fire extinguishers. Below are the requirements for fire extinguishers at the time this guide was prepared.

Boats longer than 40' and shorter than 65': Because your boat has a fixed fire extinguishing system approved by the U.S. Coast Guard, Two Type B-I or one Type B-II extinguisher is required.

All fire extinguishers should be mounted in a readily accessible location away from the engine room. Everyone onboard should know where the fire extinguishers are and how to operate them.

If your fire extinguisher has a charge indicator gauge, cold or hot weather may affect the gauge reading. Consult the instruction manual supplied with the fire extinguisher to determine the accuracy of the gauge.

Check and maintain fire extinguishing equipment in accordance with its manufacturer's recommendations. Be sure to replace fire fighting equipment, if expired or discharged, by devices of identical or greater fire fighting capacity.

Recommended Equipment

In addition to required equipment, you may want to carry the following:

- Spare anchor
- Heaving line
- Fenders
- Flashlight
- Mirror
- Suntan lotion
- Spare propeller(s)
- Tool kit
- Ring buoy
- Navigational charts
- Mooring lines
- Binoculars
- Spare parts
- Spare pump

Owner's Responsibilities

There are several areas you must have knowledge of to operate your boat in a safe, responsible manner.

Safe Boating Courses

Your local U.S. Coast Guard Auxiliary and the U.S. Power Squadrons offer comprehensive safe boating classes several times a year. You may contact the Boat/U.S. Foundation at 1-800-336-BOAT (2628) or, in Virginia, at 1-800-245-BOAT (2628). For a course schedule in your area you may also contact your local U.S. Coast Guard Auxiliary or Power Squadron Flotilla for the time and place of their next scheduled class.

Marquis also recommends that you read *Chapman's Piloting, Seamanship and Small Boat Handling* for further information on how to handle your boat in various situations.

Rules of the Road

Navigating a boat responsibly requires you to comply with a set of rules intended to prevent accidents. Just as you assume other car drivers know what they are doing, other boaters assume you know what you are doing.

As a responsible boater, you must comply with the marine traffic rules enforced by the U.S. Coast Guard. There are two sets of rules: the United States Inland Navigational Rules and the International Rules. The United States Inland Rules apply to all vessels inside the demarcation lines separating inland and international waters. The U.S. Coast Guard lists the traffic regulations in its publication *Navigational Rules, International-Inland*. You can get a copy from your local U.S. Coast Guard Unit or the United States Coast Guard Headquarters, 1300 E. Street NW, Washington, D.C. 20226.

Other helpful publications available from the U.S. Coast Guard include *Aids to Navigation* (U.S. Coast Guard pamphlet #123), which explains the significance of various lights and buoys; the *Boating Safety Training Manual* and *Federal Requirements For Recreational Boats*. Check with your local U.S. Coast Guard station, your Marquis Dealer, or a local marina about navigational aids unique to your area.

Documentation

The owner of a boat registered with the U.S. Coast Guard is issued a Certificate of Number. This certificate must be onboard whenever the boat is in use. State registration is also required. If your boat has a VHF radio onboard, an FCC license must also be displayed. Check with the U.S. Coast Guard or your state regulatory agency to determine what other records are required on your boat.

In addition to required documents, it is strongly recommended that you maintain the following logs. Log books are available from maritime supply stores.

- A navigation log containing engine speeds, compass courses and time records, which are essential for both cruising and maintenance purposes.
- A radio log, which is mandatory on vessels required to have a radio. A radio log can be useful to record unusual events, especially for future litigation.
- A maintenance log to track the type and frequency of maintenance procedures performed on your boat and its systems. Refer to Section 7 for more information on maintaining your boat.

- An engine/fuel log, which is essential for calculating range and fuel requirements.
- A GPS/Loran log if your boat contains this equipment.

Drugs and Alcohol

Drugs and alcohol adversely affect a person's ability to make sound judgments, react quickly and, in general, safely operate a boat. As a responsible boater, you must refrain from using drugs or alcohol while operating your boat. Operating a motorized boat while under the influence of drugs or alcohol carries a significant penalty.

Distress Calls

If you have a ship-to-shore radio telephone, heed storm warnings and answer any distress calls from other boats. The word **"MAYDAY"** spoken three times is the international signal of distress. Monitor marine radio channel 16 which is reserved for emergency and safety messages. You can also use this channel to contact the U.S. Coast Guard or other boaters if you have trouble. **Never send a "MAYDAY" message unless there is a serious emergency and you are in need of immediate assistance.**

Voluntary Inspections

The U.S. Coast Guard Auxiliaries or state boating officials in many states offer courtesy inspections to check your boat for compliance with safety standards and required safety equipment. You may voluntarily consent to one of these inspections, after which you are allowed time to make corrections without prosecution. Check with the appropriate state agency or the U.S. Coast Guard Auxiliary for details.

Boating Accidents

The operator of a vessel used for recreational purposes is required to file a report whenever an accident results in loss of life or disappearance from a vessel, an injury requiring medical treatment beyond first aid, property damage in excess of \$200 or complete loss of the vessel.

In cases of death and injury, reports must be submitted within 48 hours. In other cases, reports must be submitted within 10 days. Reports must be submitted in the state where the accident occurred.

Boating Regulations

It is your responsibility to make sure that your boat is in compliance with all federal, state and local regulations. Check with your local U.S. Coast Guard office for relevant federal regulations. Your state's Department of Natural Resources may have some publications available which deal with relevant state laws.

Garbage

Dumping garbage into the sea is a worldwide problem. U.S. Coast Guard regulations prohibit dumping plastic refuse and garbage mixed with plastic into any waters, and restrict the dumping of other forms of garbage. It is essential that all boaters help to clean our waterways by properly disposing of all garbage.

Within three miles of the shore of U.S. lakes, rivers and bays it is illegal to dump plastic, dunnage, lining and packing materials that float, and any garbage except dishwater/greywater or fresh fish parts. From three to twelve miles from shore it is illegal to dump plastic, dunnage, lining and packing materials that float, and any garbage not ground to less than one square inch. From 12 to 25 miles from shore it is illegal to dump plastic, dunnage, lining and packing materials that float. Beyond 25 miles from shore it is illegal to dump plastics.

Oil

The Federal Water Pollution Control Act prohibits the discharge of oil or oily waste into or upon the navigable waters and contiguous zone of the United States if such discharge causes a film or sheen upon, or discoloration of, the surface of the water, or causes a sludge or emulsion beneath the surface of the water. Violators are subject to a significant fine.

Septic Waste

On U.S. inland and coastal waters, it is illegal to discharge septic waste directly overboard. If your boat is equipped with an overboard discharge option, check with your local U.S. Coast Guard office to be sure that you are in compliance with federal regulations.

State and Local Ordinances

Your state or locality may have laws limiting speed, noise, or your boat's wake. Check with your harbor master to find out whether your boat's operation is restricted in any way by local ordinances or state laws. Check with state and local authorities to make sure that you are in compliance with local regulations regarding marine sanitation, noise, speed and wake.

Pre-Departure Actions

- Check the weather. Make sure conditions and seas will not be hazardous during your voyage.
- Make sure all safety equipment is onboard, accessible and in good working condition.
- Check the bilge for fuel vapor or water. Ventilate or pump out the bilge as necessary.
- Be sure the horn, navigation equipment and lights are working properly.
- Instruct guests and crew in safety and operational matters.
- Check engine and transmission oil and coolant levels. After starting the engines, check the overboard flow of cooling water, engine temperatures and oil pressures.
- Fill fuel tanks as full as you need. Know your tank capacity and fuel consumption at various RPMs and the cruising radius this gives you. When estimating your range, it is best to count on using $\frac{1}{3}$ of your fuel to reach your destination and $\frac{1}{3}$ of your fuel to return, with the remaining $\frac{1}{3}$ of your fuel in reserve for emergencies.
- Have a second person onboard capable of taking over the boat's operation in case you are disabled.

- Before departing, inform a friend or relative where you intend to cruise and when you will return so they can tell the U.S. Coast Guard where to look and the type of boat in case you are delayed. Remember to tell them of your safe return to prevent false alarms. Do not file a float plan with the U.S. Coast Guard. They do not have the manpower to monitor all boats.
- Stow all loose gear securely. Fenders and docklines should be stowed immediately after getting underway.

Carbon Monoxide (CO) Warnings

Marquis has installed CO detectors on your boat. Have these detectors professionally calibrated at regular intervals.

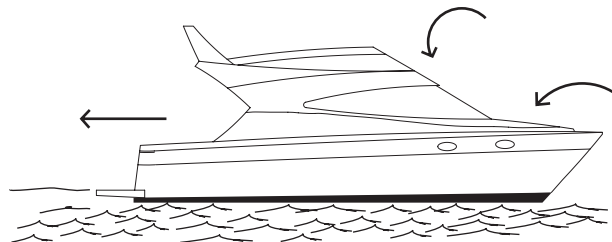


DANGER

Carbon monoxide (CO) is a colorless, odorless and tasteless gas which is emitted in all engine and generator exhaust. Prolonged exposure to CO can result in unconsciousness, brain damage and death.

Preventing CO Exposure

To help prevent the accumulation of CO in your boat's cabin and in enclosed exterior areas open a forward hatch, porthole or window to allow air to travel through the boat's interior.



Have a trained marine technician inspect the boat's exhaust systems whenever the boat is in for service or if you notice a change in the sound of an engine or the generator.

The following chart displays some possible situations where CO may accumulate. Become familiar with these examples and the suggested precautions to help prevent a dangerous accident.



DANGER

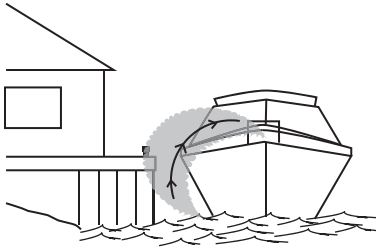


**CARBON MONOXIDE (CO)
WILL CAUSE SERIOUS
INJURY OR DEATH
STAY CLEAR FROM
EXHAUST PORT WHEN
ENGINE IS RUNNING**



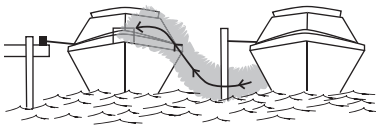
DANGER

These conditions may cause Carbon Monoxide to Accumulate.



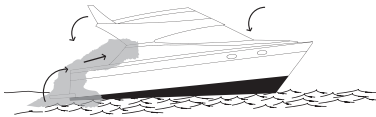
Blockage of exhaust outlets can cause carbon monoxide to accumulate in the cabin and cockpit area - even when the hatches, windows, portholes and doors are closed.

PRECAUTION: Never operate the generator while the boat is moored against any other boat, dock or wall structure that could block the exhaust outlet.



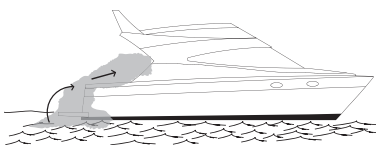
Exhaust from another vessel alongside your boat, while docked or anchored, can emit poisonous CO gas inside the cabin and cockpit areas of your boat.

PRECAUTION: Be alert for generator and engine exhaust from other vessels alongside your boat. Provide adequate ventilation.



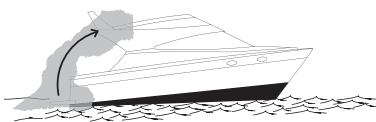
The *station wagon effect* or back drafting can cause CO gas to accumulate inside the cabin, cockpit and bridge areas when operating the boat at a high bow angle or with improper or heavy loading.

PRECAUTION: Provide adequate ventilation, redistribute the load or bring your boat out of high bow angle. Open forward hatch or window.



CO gas can accumulate in the cabin, cockpit and bridge areas when operating your boat at **slow speeds or when the boat is stopped in the water**. A tail wind can also increase accumulation (force of wind entering from aft section of yacht).

PRECAUTION: Provide adequate ventilation or slightly increase speed if possible. Open forward hatch or window.



The *station wagon effect* or back drafting can cause CO gas to accumulate inside the cabin, cockpit or bridge areas when the boat is underway using protective weather coverings.

PRECAUTION: Provide adequate ventilation when the canvas top, side or back curtains are in their closed, protective positions. Open forward hatch or window.

**DANGER**

People sleeping onboard can easily be overcome by carbon monoxide without realizing it. Do not sleep while the engines or generators are running.

- Keep the engine room hatch closed when operating the engines and generator.
- Do not occupy aft lounging areas, including the boarding platform, or swim near the engine or generator exhaust outlets while the engines or generator are running.
- Because CO production is greater when the engines are cold, minimize the time spent getting underway.
- Maintain the propulsion and generator engines to optimize their efficiency; this in turn reduces CO emissions.

For additional information on carbon monoxide as it relates to boating, please contact marine organizations that produce safety publications.

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: www.cgaux.org
- U.S. Power Squadrons: 1-888-FOR-USPS (1-888-367-8777) or on the Internet at: www.usps.org

Identifying CO Exposure

In high concentrations, CO can be fatal in minutes; however, the effects of lower concentrations can also be lethal. Symptoms of exposure to CO are:

- Watery and itchy eyes
- Flushed appearance
- Throbbing temples
- Inattentiveness
- Inability to think coherently
- Loss of physical coordination
- Ringing in the ears
- Tightness across the chest
- Headache
- Drowsiness

- Incoherence / slurred speech
- Nausea
- Dizziness
- Fatigue
- Vomiting
- Collapse
- Convulsions

Treating CO Exposure

If you suspect that someone is suffering from exposure to CO, take the following actions immediately:

- Thoroughly ventilate the area if possible
- Evacuate the area and move the affected person(s) to a fresh air environment
- Administer oxygen, if available
- Get medical assistance
- Determine the probable source of the CO and correct the condition.

Other Health and Safety Information



CAUTION

Warning: Engine exhaust, some of its constituents, and a wide variety of components contain or emit chemicals known to the State of California to cause cancer and birth defects and other reproductive harm. In addition, oils, fuels and fluids contained in boats as well as waste produced by component wear contain or emit chemicals known to the State of California to cause cancer and birth defects or reproductive harm.

Battery posts, terminals and related accessories contain lead and lead compounds. Wash your hands after handling. Used engine oil contains chemical that have caused cancer in laboratory animals. Always protect your skin by washing thoroughly with soap and water.

Warning Labels

Warning labels are posted throughout your boat to protect you, your passengers, your boat and its equipment, and any personal property on the boat. It is important to read, understand and obey all warning labels. Failure to obey a warning label may result in serious injury or damage to the boat, its equipment, or any personal property on the boat.

DC Electrical System

Your boat is equipped with a 24-volt DC (Direct Current) electrical system. This is a comprehensive system that is designed to meet your present and future 24-volt electrical needs. Wire-runs and connections are positioned to prevent abrasion and exposure to moisture, as well as to remain accessible for inspection, repairs, and the addition of aftermarket electrical accessories.

Wires used throughout the DC electrical system are plastic coated and color-coded. Connections are made using crimped connector points. The electrical system is virtually maintenance free, with only the batteries requiring periodic inspection and maintenance.

Batteries

The DC electrical system is divided into three areas, each powered by one or more 12-volt batteries:

- Engines, bow and stern thrusters (four batteries - two for each engine; these also provide power to the thrusters)
- “House” Batteries (4)
- Generator Battery

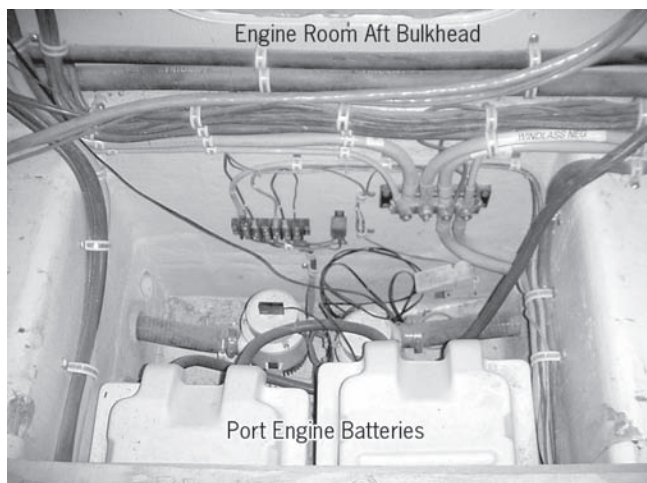
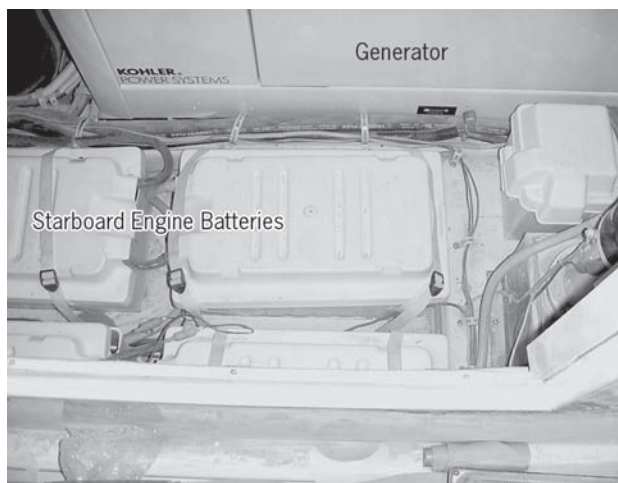
Engine Batteries

Each propulsion engine has its own pair of dedicated batteries, connected together to provide 24 volts DC. The starboard engine batteries are located in the starboard bilge compartment, which is outboard of the lazarette storage/ optional crew quarters.

The port engine batteries are located in the engine room beneath a hatch on the aft centerline.

Electricity from each battery pair to its engine is controlled by a master disconnect switch. These switches are located in the engine room on the aft bulkhead. To provide electricity to the engines, turn the master disconnect switches to the “ON” position.

The engine battery pairs can also “share” electricity with each other. A third master disconnect switch (labeled “ENGINE BATTERY PARALLEL”) controls the flow of electricity between the two battery pairs. This switch is located in the engine room on the port aft bulkhead. When you turn this master disconnect switch to the “ON” position, the engines use electricity from both engine



battery pairs. This is useful if one engine battery fails: you can still start its engine by using electricity from the other engine's battery pair.

The port engine batteries also supply power to the boat's optional DC davit system. Electricity from the batteries to the davit system is controlled by the Davit circuit breaker in the engine room on the port aft bulkhead. If your boat has the optional AC davit system, refer to Section 3 - Salon AC Distribution Panel for information on providing power to it.

The starboard engine batteries also supply power to the boat's optional stern capstans. Electricity from the batteries to the capstans is protected by two circuit breakers located in the engine room on the starboard aft bulkhead.

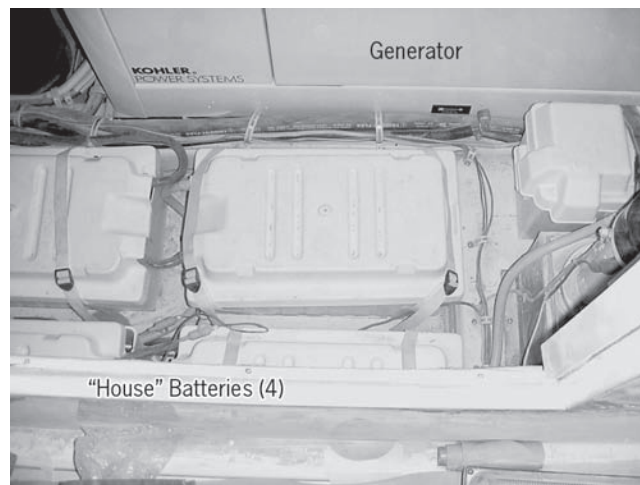
Bow and Stern Thruster Batteries

The thrusters use the same batteries as the engines. The bow thruster is powered by the port engine batteries; the stern thruster is powered by the starboard engine batteries.

Electricity from each battery pair to its thruster is controlled by a master disconnect switch. These switches are located in the engine room on the aft bulkhead. To provide electricity to a thruster, turn that thruster's master disconnect switch to the "ON" position.

"House" Batteries

The "house" equipment controlled by the three DC circuit breaker panels (DC Bus Distribution Panel, DC Control Center and Bridge Breaker Panel) is powered by a bank of four batteries, connected together to provide 24 volts DC. These batteries are located in the starboard bilge compartment and beneath the starboard side of the optional lazarette storage/crew quarters.



Electricity from the batteries to the DC Bus Distribution Panel is controlled by a master disconnect switch. This switch (labeled "ACCESSORY") is located in the engine room on the starboard aft bulkhead. To provide electricity to the DC Bus Distribution Panel, turn the master disconnect switch to the "ON" position. Circuit breakers on the DC Bus Distribution Panel control the flow of electricity to the other DC circuit breaker panels.

Generator Battery

The generator has its own dedicated battery. This battery is located in the starboard bilge compartment.

Electricity from the battery to the generator starter is controlled by a master disconnect switch. This switch is located in the engine room on the starboard aft bulkhead. To provide electricity to the generator starter, turn the master disconnect switch to the “ON” position.

**Monitoring Battery Voltage Levels**

A fully charged battery that has not been charged or discharged for at least two hours should indicate between 12.3 and 12.6 volts; a fully charged 24-volt battery pair that has not been charged or discharged for at least two hours should indicate between 26 and 28 volts. A reading below this level indicates a partially discharged battery.

Engine Batteries

You can determine the voltage level of each engine battery pair by activating the battery's dedicated voltmeter. The voltmeters are located at both helms. To activate each engine's voltmeter, turn the engine's ignition key one position to the right.



Carefully follow the procedures described in Section 5 before starting your boat's engines. Improper starting procedures can create hazardous situations.

NOTE: You do not need to start the engine to activate its voltmeter. Refer to the OEM information for details on operating the engines.

“House” Batteries

You can determine the voltage level of the “house” batteries using the voltmeter located on both the DC Bus Distribution Panel and DC Control Center. To operate the voltmeter, refer to the vendor literature.

Charging the Batteries

While the engines are running, their alternators generally supply enough power to replace the power used by the boat's DC equipment.

Without an engine running, however, the DC equipment will eventually drain the batteries they are using. If this occurs, either start the engines or use the appropriate onboard battery charger to recharge the batteries.



CAUTION

Never allow the boat's batteries to become completely discharged. Completely discharging a battery can damage it to the point that it can no longer be recharged. The battery chargers should always be operating when your boat is connected to shore power. If you leave your boat for an extended period of time and the boat is not connected to shore power, turn all battery master disconnect switches to the "OFF" position.

Your boat is equipped with five battery chargers. Each charger monitors and maintains the voltage level(s) in one or more batteries. When the chargers are on, they automatically charge their respective batteries when the battery voltage drops below a predetermined level.

Engine Battery Chargers

There are two engine battery chargers; one for each engine's battery pair.

To operate the battery chargers:

1. Supply AC power to your boat. Refer to Section 3 - Shore Power or Generator Power to do this.
2. On the AC Bus 1 Distribution Panel:
 - a. Switch the AC Main Breaker AC Bus 1 circuit breaker "ON."
 - b. Switch the Port Engine Battery Charger and Starboard Engine Battery Charger circuit breakers "ON."

Refer to Section 3 - AC Bus 1 and 2 Distribution Panels for more information on these circuit breakers.

The engine battery chargers are located in the starboard bilge compartment on the inboard bulkhead.

Generator Battery Charger

There is one generator battery charger. When the generator is operating, its alternator also maintains the voltage level of the generator battery.

To operate the battery charger:

1. Supply AC power to your boat. Refer to Section 3 - Shore Power or Generator Power to do this.
2. On the AC Bus 1 Distribution Panel:
 - a. Switch the AC Main Breaker AC Bus 1 circuit breaker "ON."
 - b. Switch the Generator Battery Charger circuit breaker "ON."

Refer to Section 3 - AC Bus 1 and 2 Distribution Panels for more information on these circuit breakers.

The generator battery charger is located in the starboard bilge compartment on the forward bulkhead.

“House” Battery Charger

There are two “house” battery chargers; one is a dedicated battery charger, the other is an inverter/battery charger. Refer to Section 2 - Inverter for details on operating the inverter.

To operate the dedicated battery charger:

1. Supply AC power to your boat. Refer to Section 3 - Shore Power or Generator Power to do this.
2. On the AC Bus 1 Distribution Panel:
 - a. Switch the AC Main Breaker AC Bus 1 circuit breaker “ON.”
 - b. Switch the Accessory Battery Charger circuit breaker “ON.”

Refer to Section 3 - AC Bus 1 and 2 Distribution Panels for more information on these circuit breakers.

The dedicated “house” battery charger is located in the starboard bilge compartment on the forward bulkhead.

Inverter

Besides being a battery charger for the “house” batteries, the inverter also converts DC electricity from the “house” batteries to AC electricity on a limited basis. Whenever AC power is not provided to your boat, the inverter allows you to operate specific equipment on the boat that requires AC electricity. This equipment includes the:

- pressure water pump
- galley refrigerator
- optional bridge wet bar refrigerator
- optional bridge wet bar icemaker
- salon entertainment center
- optional master stateroom entertainment center

To operate this equipment using the inverter:

1. Turn the inverter master disconnect switch to the “ON” position. This allows electricity to flow from the “house” batteries to the inverter. The switch is located in the engine room on the starboard aft bulkhead.
2. Place the ON/OFF switch, located on the side of the inverter, in the “ON” position.
3. Place the inverter bypass switch, located below the inverter, in the “INVERTER” position.
4. On the AC Bus 1 Distribution Panel:
 - a. Switch the AC Main Breaker AC Bus 1 circuit breaker “ON.”
 - b. Switch the Inverter circuit breaker “ON.”

Refer to Section 3 - AC Bus 1 and 2 Distribution Panels for more information on these circuit breakers.

5. On the AC Control Center, switch the Pressure Water Pump, Refrigerator, Exterior Refrigerator, Exterior Icemaker, Entertainment Center Salon, and/or Entertainment Center Master Stateroom circuit breaker(s) "ON." Refer to Section 3 - Salon AC Distribution Panel for more information on these circuit breakers. The activated equipment now operates as it normally would.

The inverter is located in the starboard bilge compartment on the forward bulkhead.

NOTE: Using the inverter to power AC equipment will eventually discharge the "house" batteries. If the batteries' voltage level decreases below 21 volts, the inverter automatically shuts off. At this point, any AC equipment operating from the inverter also shuts off. If this happens, charge the batteries as described earlier in this section.

**DANGER**

Before servicing the DC or AC electrical system, place the inverter ON/OFF switch in the "OFF" position and turn the inverter master disconnect switch to the "OFF" position. Failure to do this could lead to death or serious injury from electrical shock.

Battery Maintenance

While the batteries are relatively maintenance-free, there are a few things you can do to increase their effectiveness and life.

- Keep your batteries fully charged. Batteries that are kept fully or near fully charged last longer than batteries stored with a partial charge. The charge level of the batteries can be monitored using the voltmeters on the helm instrument panel.
- Inspect the batteries at least once every 30 days.

**DANGER**

The batteries contain electrolyte which is an acid. Wear gloves and protective eyewear when working on and around the batteries.

When servicing the batteries avoid spilling electrolyte into the engine room or bilge. Also, avoid getting any saltwater in or on the battery. Either of these conditions can create a poisonous gas that is harmful if inhaled.

If you spill electrolyte:

1. Ventilate the area of the spill.
2. Neutralize the acid in the electrolyte by pouring baking soda on the spill.
3. Remove the neutralized electrolyte using a disposable rag or paper towel.

**WARNING**

Disconnect the batteries before cleaning them.

- Periodically clean the battery terminals and cable connections. Remove any accumulation of dirt on the top of the battery case. Use a wire brush to clean the terminals. Coating the terminals with a terminal protecting product will help reduce corrosion that can form in these areas.
- Check that the battery cables are securely attached to the terminal posts. Tighten the terminal nuts $\frac{1}{4}$ turn beyond finger-tight using a wrench.
- Check the level of electrolyte in each cell of each battery. The correct level is just above the plates. If the fluid level is low, add DISTILLED water only until the electrolyte is at the correct level. DO NOT OVERFILL the cells.
- Remove the batteries from the boat during periods of extended storage. Store your batteries in a cool (above freezing temperature), dry area. All batteries lose some charge during storage, but the lower the temperature the less charge is lost. Avoid storing the batteries in a humid place. Humidity causes the terminals to corrode.
- Check the battery charge level every three months using a hydrometer or voltmeter. If the specific gravity of the battery is less than 1.225 or the voltage is less than 12.4 volts, charge the battery. Avoid overcharging the batteries.

Operating DC Equipment

Power to your boat's DC components is controlled by circuit breakers and, in most cases, individual controls for each component.

Your boat contains three DC circuit breaker panels:

- DC Bus Distribution Panel
- DC Control Center
- Bridge Breaker Panel

The circuit breakers on the DC Bus Distribution Panel and DC Control Center enable you to control the electricity to the DC components by switching the breakers "ON" or "OFF." All of the circuit breakers protect the electrical system by automatically disconnecting the circuit from the power source in the event of a short or overload. Power is supplied to these circuit breaker panels by the "house" batteries.

There are also thermal circuit breakers installed in many circuits to provide added protection for components in those circuits. These circuit breakers are located in the engine room on the aft bulkhead. Each is labeled with the component that it protects.

Additionally, there is a fuse block, located at the pilothouse helm, that protects the circuitry of various optional pilothouse equipment. If a fuse blows, identify and correct the cause of the problem, then install a new, properly rated fuse.

**WARNING**

Never reset a breaker or replace a fuse that has automatically tripped without first correcting the problem. Failure to follow this procedure may create a dangerous situation.

NOTE: Sometimes a circuit breaker location is labeled but no circuit breaker is present. In this case, the component named on the label is an option that is not installed on your boat.

DC Bus Distribution Panel

The DC Bus Distribution Panel manages most of the boat's DC power system, and controls the flow of electricity to the DC Control Center and various safety systems. This panel is located in the engine room on the forward bulkhead.

The safety systems include:

- Forward, mid and aft sump pumps
- High water alarm
- CO detectors
- Bilge pumps 1 - 5

Because of the importance of the safety systems, their circuit breakers should remain "ON" at all times. If a safety system circuit breaker trips, immediately identify and correct the cause of the problem, then reset the breaker.

The DC Bus Distribution Panel contains the circuit breakers described on the following pages. This panel also contains additional controls and meters which are described in the vendor literature.

Aft Sump Pump

This breaker controls the flow of electricity to the aft sump pump. Switch this breaker "ON" before using anything that drains into the aft sump. The sump pump is then activated automatically by a float switch whenever water within the sump rises above a predetermined level. Refer to Section 4 - Grey Water for a description of the aft sump system.

Amidships Sump Pump

This breaker controls the flow of electricity to the amidships sump pump. Switch this breaker "ON" before using anything that drains into the amidships sump. The sump pump is then activated automatically by a float switch whenever water within the sump rises above a predetermined level. Refer to Section 4 - Grey Water for a description of the amidships sump system.

Bilge Blower Port and Starboard

These two breakers control the flow of electricity to the Bilge Blower Relay circuit breaker on the DC Control Center. The relay breaker, in turn, controls the flow of electricity to the bilge blower switch at both helms. Switch all three of these breakers "ON" to activate the controls. Use the controls to manually operate the bilge blowers. The bilge blowers also operate automatically when the starboard engine ignition switch is turned on.

Bilge Pump 1 - 5

These breakers control the flow of electricity to the automatic bilge pumps. Each pump is activated automatically by a float switch whenever water within the bilge rises to a predetermined level. These breakers must be “ON” whenever the boat is in the water.

NOTE: Periodically test each bilge pump by lifting its float. The pump should turn on when the float is lifted.

Bow Head

This breaker controls the flow of electricity to the electric pump that flushes the toilet in the VIP head. Switch this breaker “ON” to enable the pump. Pressing the button on the bulkhead next to the toilet then flushes the toilet. Refer to Section 4 - Toilets and the OEM information for details on operating the toilet.

Bow Stateroom Converter

This breaker controls the flow of electricity to the converter that powers the optional DVD player and stereo in the VIP stateroom. The converter changes 24-volt DC electricity to the 12-volt DC electricity required by the DVD player. To supply power to the converter, switch this breaker “ON.”

Bow Stateroom Head Fan

This breaker controls the flow of electricity to the exhaust fan switches in the VIP head and guest head. To supply power to the switches, switch this breaker “ON.”

Cablemaster Shore 1

This breaker controls the flow of electricity to the Shore 1 Cablemaster’s motor and its transom-mounted controls. To supply power to the motor and controls, switch this breaker “ON.” Refer to the OEM information for details on operating the Cablemaster. Refer to the vendor literature for more information on the Shore 1 circuit.

Cablemaster Shore 2

This breaker controls the flow of electricity to the Shore 2 Cablemaster’s motor and its transom-mounted controls. To supply power to the motor and controls, switch this breaker “ON.” Refer to the OEM information for details on operating the Cablemaster. Refer to the vendor literature for more information on the Shore 2 circuit.

CO Detector

Marquis has installed several carbon monoxide (CO) detectors on your boat for your safety. The CO detectors continuously check the air in the boat’s cabin for the presence of carbon monoxide. These breakers must be “ON” for the CO detectors to operate.

**DANGER**

Always activate the CO detectors when the boat’s engines or generator are running. Carbon monoxide is dangerous. Refer to Section 1 - Carbon Monoxide (CO) Warnings for information on minimizing, detecting and controlling carbon monoxide accumulation.

When the CO detectors are operating, they alert you to the presence of carbon monoxide in the cabin by emitting a loud, high-pitched sound. If you hear this alarm, determine the cause of the CO accumulation and correct it immediately.

There is a test button on each CO detector. Test each unit on a weekly basis. If you suspect that a CO detector is faulty, have your dealer repair or replace it immediately. Refer to Section 1 - Carbon Monoxide (CO) Warnings for more information on CO.

Crew Head

This breaker controls the flow of electricity to the electric pump that flushes the toilet in the optional crew quarters head. Switch this breaker “ON” to enable the pump. Pressing the button on the bulkhead next to the toilet then flushes the toilet. Refer to Section 4 - Toilets and the OEM information for details on operating the toilet.

Crew Quarters Head Fan

This breaker controls the flow of electricity to the exhaust fan switch in the optional crew quarters head. To supply power to the switch, switch this breaker “ON.”

Crew Quarters Sump Pump

This breaker controls the flow of electricity to the sump pump for the optional lazarette storage/crew quarters. Switch this breaker “ON” before using anything that drains into this sump. The sump pump is then activated automatically by a float switch whenever water within the sump rises above a predetermined level. Refer to Section 4 - Grey Water for a description of the lazarette storage/crew quarters sump system.

DC Main Breaker DC Bus

Each of these three breakers controls the flow of electricity to groups of other circuit breakers on this panel. For a description of these group, refer to the vendor literature.

DC Main Breaker Salon Panel

This breaker controls the flow of electricity to the DC Control Center. Switch this breaker “ON” to supply power to that panel.

Forward Sump Pump

This breaker controls the flow of electricity to the forward sump pump. Switch this breaker “ON” before using anything that drains into the forward sump. The sump pump is then activated automatically by a float switch whenever water within the sump rises above a predetermined level. Refer to Section 4 - Grey Water for a description of the forward sump system.

Generator Compartment Fan

This breaker controls the flow of electricity to the fan system in the starboard bilge compartment. To supply power to the system, switch this breaker “ON.” The fan now operates whenever the generator runs, to remove excess heat from the starboard bilge compartment.

High Water Alarm

This breaker controls the flow of electricity to the high bilge water alarm. Refer to Section 4 - Bilge System for a description of the high bilge water alarm. This breaker must be “ON” whenever the boat is in the water.

Lights - Accent

This breaker controls the flow of electricity to the accent light switch in each stateroom. To supply power to the switches, switch this breaker "ON." The accent lights are recessed beneath the berths and some cabinets.

Lights - Bow Head

This breaker controls the flow of electricity to the light switches in the VIP head. To supply power to the switches, switch this breaker "ON."

Lights - Bow Stateroom

This breaker controls the flow of electricity to the light switches in the VIP stateroom. To supply power to the switches, switch this breaker "ON."

Lights - Companionway

This breaker controls the flow of electricity to the light switches in the foyer. To supply power to the switches, switch this breaker "ON." The companionway lights illuminate the stateroom deck's foyer and the stairway leading to the foyer.

Lights - Crew Quarters

This breaker controls the flow of electricity to the light switches in the optional crew quarters. To supply power to the switches, switch this breaker "ON."

Lights - Engine Room

This breaker controls the flow of electricity to the engine room's light switches. The switches are located in the cockpit next to the salon entrance door and in the optional lazarette storage or crew quarters. To supply power to the switches, switch this breaker "ON."

Lights - Master Head

This breaker controls the flow of electricity to the light switches in the master head. To supply power to the switches, switch this breaker "ON."

Lights - Master Stateroom

This breaker controls the flow of electricity to the light switches in the master stateroom. To supply power to the switches, switch this breaker "ON."

Lights - Side Head

This breaker controls the flow of electricity to the light switches in the guest head. To supply power to the switches, switch this breaker "ON."

Lights - Side Stateroom

This breaker controls the flow of electricity to the light switches in the guest stateroom. To supply power to the switches, switch this breaker "ON."

Master Head Port

This breaker controls the flow of electricity to the electric pump that flushes the toilet in the optional "his" compartment in the master head. Switch this breaker "ON" to enable the pump. Pressing the button on the bulkhead next to the toilet then flushes the toilet. Refer to Section 4 - Toilets and the OEM information for details on operating the toilet.

Master Head Starboard

This breaker controls the flow of electricity to the electric pump that flushes the toilet in either the standard master head or the optional "hers" compartment in the master head. Switch this breaker "ON" to enable the pump. Refer to Section 4 - Toilets and the OEM information for details on operating the toilet.

Master Stateroom Converter

This breaker controls the flow of electricity to the converter that powers the optional DVD player and stereo in the master stateroom. The converter changes 24-volt DC electricity to the 12-volt DC electricity required by the DVD player. To supply power to the converter, switch this breaker "ON."

Master Stateroom Head Fan Port

This breaker controls the flow of electricity to the exhaust fan switch in the optional "his" compartment in the master head. To supply power to the switch, switch this breaker "ON."

Master Stateroom Head Fan Starboard

This breaker controls the flow of electricity to the exhaust fan switch in either the standard master head or the optional "hers" compartment in the master head. To supply power to the switch, switch this breaker "ON."

Oil Change Pump

This breaker controls the flow of electricity to the oil change system. This system is designed to assist you in changing the propulsion engine, V-drive and generator engine oil. Switch this breaker "ON" to enable the system.

The oil change system is located in the engine room on the starboard aft bulkhead. Refer to the OEM information for details on operating the system.

Overboard Discharge Pump Crew Quarters

This breaker controls the flow of electricity to the waste pump switch for the optional overboard discharge system for the optional crew quarters head. Use the waste pump to empty the waste tank directly overboard. To supply power to the switch, switch this breaker "ON." Refer to Section 4 - Overboard Discharge for information on using the pump.

Overboard Discharge Pump Forward

This breaker controls the flow of electricity to the waste pump switch for the optional overboard discharge system for the master, VIP and guest heads. Use the waste pump to empty the waste tanks directly overboard. To supply power to the switch, switch this breaker "ON." Refer to Section 4 - Overboard Discharge for information on using the pump.

Power Door

This breaker controls the flow of electricity to the motor that opens and closes the optional side deck door. This door allows direct access between the pilothouse and the starboard side deck. This breaker must be "ON" for the motor to function. Controls for the motor are located next to the door both in the cabin and on the side deck.

Raw Water Washdown Pump

This breaker controls the flow of electricity to the optional bow and transom raw water washdown pump. To activate the washdown pump, switch this breaker "ON." When you are finished using the washdown, turn the washdown pump off by switching this breaker "OFF." Refer to Section 4 - Raw Water Washdowns for information on using the washdowns.

Side Head

This breaker controls the flow of electricity to the electric pump that flushes the toilet in the guest head. Switch this breaker “ON” to enable the pump. Pressing the button on the bulkhead next to the toilet then flushes the toilet. Refer to Section 4 - Toilets and the OEM information for details on operating the toilet.

Side Stateroom Converter

This breaker controls the flow of electricity to the converter that powers the optional DVD player and stereo in the guest stateroom. The converter changes 24-volt DC electricity to the 12-volt DC electricity required by the DVD player. To supply power to the converter, switch this breaker “ON.”

Steering Pump

This breaker controls the flow of electricity to the motor that operates the steering system’s hydraulic pump. This breaker must be “ON” for the motor to function and the steering system to work normally.

Waste Monitor Crew Quarters

This breaker controls the flow of electricity to the waste monitoring system for the optional crew quarters’ head. To supply power to the system, switch this breaker “ON.”

DC Control Center

The DC Control Center manages the power supply to the DC components listed on the panel. This panel is located in a cabinet in the aft port corner of the salon. The DC Control Center contains the circuit breakers described below. This panel also contains additional controls and meters which are described in the vendor literature.

Actuator

This breaker controls the flow of electricity to the coffeemaker’s actuator. The actuator slides the coffeemaker in and out of its cabinet. To supply power to the actuator, switch this breaker “ON.”

Auxiliary Fuel Tank Gauge and Switch

This gauge indicates the amount of fuel in the optional auxiliary fuel tank. To activate the gauge, place the switch in the “ON” position.

Bilge Blower Relay

This breaker controls the flow of electricity to the relay for the bilge blower. The bilge blower switch at the helm is connected to a relay, which operates the blowers. To manually turn the bilge blowers on and off, this breaker must be “ON.”

Bilge Pump Relay 1 - 5

These breakers control the flow of electricity to the relays for the automatic bilge pumps. Each bilge pump switch at the helm is connected to a relay, which operates that switch’s bilge pump. To manually turn the bilge pumps on and off, these breakers must be “ON.”

Converter 1 and 2 Bridge

These breakers control the flow of electricity to the converters that power various equipment at the bridge helm. The converters change 24-volt DC electricity to the 12-volt DC electricity required by the equipment. To supply power to the converters, switch these breakers “ON.”

Converter Lower Helm

This breaker controls the flow of electricity to the converter that powers various equipment at the pilothouse helm. The converter changes 24-volt DC electricity to the 12-volt DC electricity required by the equipment. To supply power to the converter, switch this breaker "ON."

Defroster

This breaker controls the flow of electricity to the switch for all of the pilothouse's windshield defoggers. To supply power to the switch, switch this breaker "ON."

Emergency Bilge Pump 1 - 4

These breakers control the flow of electricity to the emergency bilge pumps. The emergency bilge pumps operate continuously whenever these breakers are "ON."

Galley Fan

This breaker controls the flow of electricity to the exhaust fan switch in the galley. To supply power to the switch, switch this breaker "ON."

Generator

Use this switch to start and stop the generator. Refer to the OEM information for details on operating the generator.

Horn

This breaker controls the flow of electricity to the switch that operates the air horns.

Lights - Accent

This breaker controls the flow of electricity to the light switches for the bridge and salon/galley accent lights. The switch for the bridge lights is located in the cockpit next to the salon entrance door; the switch for the salon/galley lights is located in the galley. To supply power to the switches, switch this breaker "ON."

Light - Anchor

This breaker controls the flow of electricity to the helm switch that operates the anchor lights. To supply power to the switch, switch this breaker "ON."

Lights - Bridge Courtesy

This breaker controls the flow of electricity to the light switch for the bridge courtesy lights. The switch is located at the bridge helm. To supply power to the switch, switch this breaker "ON."

Lights - Cockpit

This breaker controls the flow of electricity to the light switch for the cockpit. The switch is located in the cockpit next to the salon entrance door. To supply power to the switch, switch this breaker "ON."

Lights - Docking

This breaker controls the flow of electricity to the light switch for the docking lights. The switch is located at the bridge helm. To supply power to the switch, switch this breaker "ON."

Lights - Galley

This breaker controls the flow of electricity to the light switches in the galley. To supply power to the switches, switch this breaker "ON."

Lights - Hardtop / Arch

This breaker controls the flow of electricity to the light switch for the lights in the electronics arch and optional bridge hardtop. The switch is located at the bridge helm. To supply power to the switch, switch this breaker "ON."

Lights - Navigation

This breaker controls the flow of electricity to the helm switch that operates the navigation lights. To supply power to the switch, switch this breaker "ON."

Lights - Panel

This breaker controls the flow of electricity to the switches that operate the backlights for the pilothouse and bridge helm control panels.

Lights - Pilothouse / Dinette

This breaker controls the flow of electricity to the light switches in the pilothouse and dining area. To supply power to the switches, switch this breaker "ON."

Lights - Salon

This breaker controls the flow of electricity to the light switches in the salon. To supply power to the switches, switch this breaker "ON." Because the salon light switches are microprocessor-controlled dimmers, if power to the lights is lost, you must switch this circuit breaker "OFF" then back "ON" to reset the dimmers.

Light - Spotlight

This breaker controls the flow of electricity to the controls for the spotlight. A set of controls is located at each helm. To supply power to the controls, switch this breaker "ON." Refer to the OEM information for details on operating the spotlight.

Panel Main

This breaker controls the flow of electricity to the other circuit breakers on this panel. To supply power to these circuit breakers, switch the Panel Main breaker "ON."

Phone System

This breaker controls the flow of electricity to the boat's telephone system. To use a telephone on your boat:

1. Connect a shore telephone line to the phone connector located in the shore connectors locker either in the port transom or on the fore deck.
2. Connect a telephone to each of the phone jacks you wish to use in the boat. There is a jack each in the salon, pilothouse and VIP stateroom, one at the bridge helm, and two in the master stateroom.
3. Switch the Phone System breaker "ON." The phones then operate in the same manner as the phone in your home.

Trim Tabs

This breaker controls the flow of electricity to the trim tab controls at both helms. Trim tabs are used to improve the running angle of your boat while underway. Switch this breaker "ON" to activate the trim tab controls. Refer to Section 6 - Trim Tabs for more information on using the trim tabs.

Water Monitor

This breaker controls the flow of electricity to the fresh water monitoring system, including the water level display. To supply power to the system, switch this breaker "ON." The water level display is located on the starboard side of the pilothouse helm.

Waste Monitor

This breaker controls the flow of electricity to the waste monitoring system for the heads, including the waste level display and "Do Not Flush" panels. To supply power to the system, switch this breaker "ON." The waste level display is located on the starboard side of the pilothouse helm. The "Do Not Flush" panels are located near each toilet.

Wiper - Center

This breaker controls the flow of electricity to the switch that operates the center windshield wiper.

Wiper - Starboard

This breaker controls the flow of electricity to the switch that operates the starboard windshield wiper.

Wiper - Port

This breaker controls the flow of electricity to the switch that operates the port windshield wiper.

Bridge Breaker Panel

The Bridge Breaker Panel, located at the bridge helm, protects the circuitry of various optional bridge equipment. If a circuit breaker trips, identify and correct the cause of the problem, then press the breaker's reset button on this panel. To provide power to this breaker panel:

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.
2. On that panel, switch the DC Main Breaker Salon Panel circuit breaker "ON."
3. On the DC Control Center:
 - a. Switch the Panel Main circuit breaker "ON."
 - b. Switch the Converter 1 and 2 Bridge circuit breakers "ON."

The Bridge Breaker Panel contains the circuit breakers described on the below.

Bridge Satellite Stereo

This breaker protects the circuitry of the optional stereo at the bridge helm. Refer to the OEM information for details on using the stereo.

Bridge VHF Radio

This breaker protects the circuitry of the optional VHF radio. Refer to the OEM information for details on operating the radio.

Bridge Video Monitor System

This breaker protects the circuitry of the optional video surveillance system. This system uses closed-circuit television cameras to monitor the engine room and the area immediately aft of the boat. Both cameras are connected to a video display. Refer to the OEM information for details on operating the video surveillance system.

DC Outlet

This breaker protects the circuitry of the 12-volt outlet located at the bridge helm. You can operate various types of 12-volt equipment from the outlet, such as a cellular phone, hand-held spotlight, and laptop computer.

Depth Sounder

This breaker protects the circuitry of the optional depth sounder. Refer to the OEM information for details on operating the depth sounder.

Troubleshooting the DC Electrical System

Problem	Possible Cause	Possible Solution
DC equipment does not function.	Battery master disconnect switch is in the "OFF" position.	Turn the switch to the "ON" position.
	Appropriate circuit breaker(s) on one or more DC breaker panels is not "ON."	Switch the circuit breaker(s) "ON."
	Battery is weak or dead.	Apply power to and activate the appropriate battery charger(s).
	A wire within the DC system is loose or disconnected.	Locate and repair the wire.
Cabin lights do not come on or are dim.	The appropriate circuit breaker(s) on the DC Control Center is "OFF."	Switch circuit breaker(s) "ON."
	Battery is weak or dead.	Apply power to and activate the appropriate battery charger(s).
	One or more light bulbs are burned out.	Replace light bulb(s).
Battery does not hold a charge.	Battery failed.	Replace with a new battery.
Engine is running and voltmeter does not indicate adequate voltage.	Engine alternator belt is loose.	Refer to engine OEM information to tighten the belt.

DC Schematics

For detailed DC schematics, refer to the OEM literature.

AC Electrical System

The AC electrical system supplies power to all of your boat's AC equipment. For details on the AC electrical system, refer to the vendor literature.

AC Power Sources

You can supply power to your boat's AC electrical system by using either a shore power source or the onboard generator.



CAUTION

Do not supply power to the water heaters when they are empty. Doing so may damage the units' heating elements.

Shore Power

To connect to shore power, refer to the vendor literature.



DANGER

Make sure the shore power cord(s) you use is in excellent condition with no cuts, nicks or abrasions in the exterior plastic cover. Also make sure that the cord(s) is specifically designed to connect your boat to a shore power source. Using a damaged cord or a cord that is not designed for this purpose can cause electrical shock resulting in death or serious injury.



DANGER

Do not allow the end of the shore power cord(s) to hang in the water. This can cause an electrical field to form which can kill or seriously injure nearby swimmers or passengers.

NOTE: If you leave your boat for more than 48 hours while your boat is connected to shore power, remove all perishables from your refrigerator(s). If the shore power supply to your boat is interrupted, your food may spoil.

The stern shore power connectors are located on the transom. The optional forward shore power connectors are located on the foredeck in the forepeak locker.

The AC Main circuit breaker groups for the stern shore power connectors are located inside the lazarette storage/crew quarters, next to the transom entrance door. The AC Main circuit breaker groups for the optional forward shore power connectors are located in the same locker as the connectors.



DANGER

Only people who are trained and experienced in working with electricity should service your boat's AC electrical system. Inexperienced or untrained people may be killed or seriously injured by incorrectly servicing the AC electrical system.



DANGER

Always disconnect the boat from the shore power source, shut off the generator and disable the inverter before attempting to service the AC electrical system.

Generator Power

You can use the onboard generator to power the boat's AC electrical system when a shore power source is not available. The generator is installed in the starboard bilge compartment. Fuel for the generator is drawn from the starboard fuel tank only.

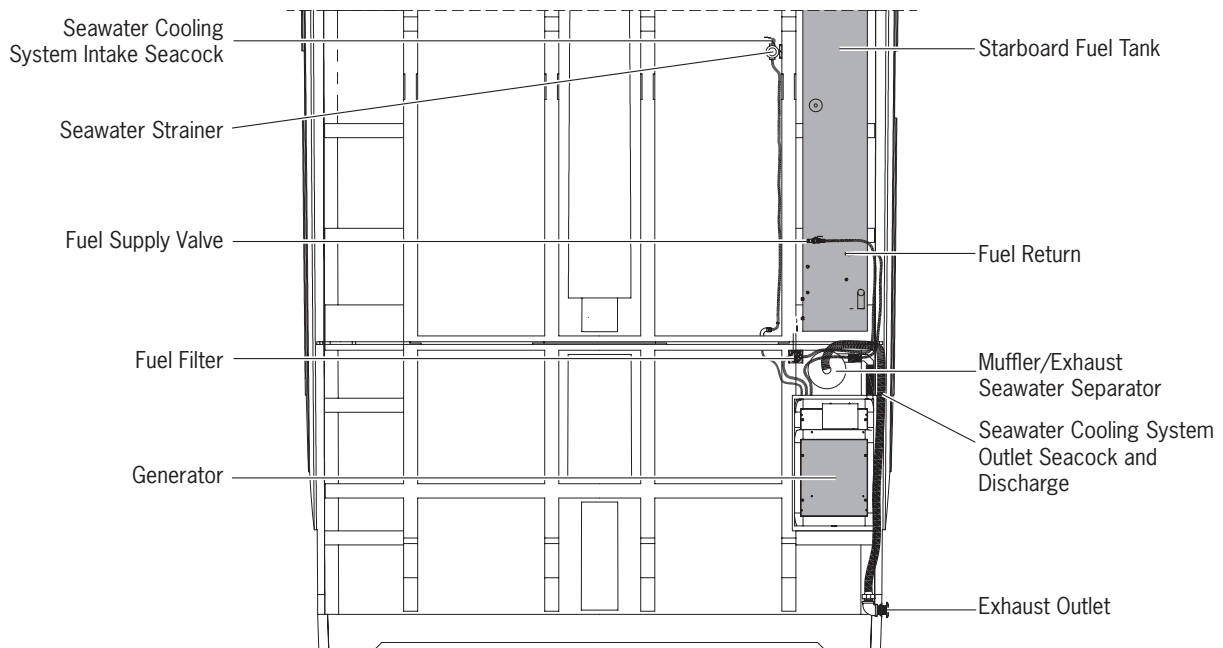
To start the generator:

1. Read, understand and follow the OEM information that describes the generator.
2. The generator starter is powered by its own 12-volt battery. Turn the generator battery master disconnect switch to the "ON" position.

A TIP FROM CARVER!

Dedicating a 12-volt battery to the generator provides an important safety feature. A dedicated battery enables you to start the generator regardless of the condition of the propulsion engine batteries. If the batteries become discharged to the point where they are unable to start an engine, start the generator, then turn on the engine battery chargers. When the engine batteries are recharged to an adequate level, you can then start the propulsion engines.

GENERATOR



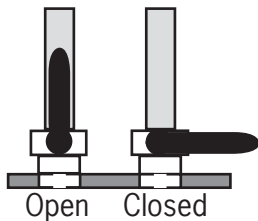
**CAUTION**

Never turn the generator battery master disconnect switch to the “OFF” position while the generator is operating. Doing this can damage the generator or its alternator wiring.

3. The generator engine uses a seawater cooling system. This system includes a strainer that prevents debris in the seawater from entering the cooling system’s water pump. Make sure the cooling system’s intake seacock is closed. Remove and clean the strainer. The seacock and strainer are located in the engine room near the forward outboard corner of the starboard engine.
4. Reinstall the strainer. If the strainer leaks when the seacock is opened, close the seacock, then check the strainer for correct installation.

**CAUTION**

Do not operate the generator when its cooling system seacock is closed. Operating the generator in this manner can damage it.



5. Open the cooling system’s intake and outlet seacocks.
6. Provide power to the circuit breakers on the DC Bus Distribution Panel.
7. On that panel, switch the Generator Compartment Fan circuit breaker “ON.”
8. The generator compartment fan goes on whenever the generator is started and continues operating as long as the generator is running. The fan removes excess heat from the starboard bilge compartment.

Make sure the generator compartment fan is operating properly by feeling for air being blown from the fan vent. This vent is located on the starboard transom above the boarding platform.

**CAUTION**

The generator STOP/START switch is spring activated. Release the switch from its “START” position as soon as the generator starts. If you continue to hold the switch in its “START” position after the generator starts, you may damage the starter.

While you are attempting to start the generator, never hold the STOP/START switch in the “START” position for more than 10 seconds.

9. A spring-loaded generator STOP/START switch is located at the top of the DC Control Center. Push the switch to the “START” position and hold it there until the generator starts. Release the switch when the generator starts. If the generator does not start within 10 seconds, release the STOP/START switch, wait 1 minute, then try to start the generator again.
10. To connect the generator’s output to the AC electrical system, refer to the vendor literature.

11. To turn the generator “OFF,” push the STOP/START switch to the “STOP” position. If you do not intend to use the generator again for at least a few days, turn the generator battery master disconnect switch to the “OFF” position.



DANGER

Do not inhale generator exhaust. Generator exhaust contains carbon monoxide, a poisonous gas. Refer to Section 1 - Carbon Monoxide Warnings for more information on engine exhaust and carbon monoxide.

Operating AC Equipment

Power to your boat’s AC components is controlled by circuit breakers and, in most cases, individual controls for each component.

Your boat contains three AC circuit breaker panels:

- AC Bus 1 Distribution Panel
- AC Bus 2 Distribution Panel
- Salon AC Distribution Panel

In addition, there are also AC Main circuit breaker groups located near the shore power connectors.

The circuit breakers on the AC panels enable you to control the electricity to either the AC component itself or to the component’s controls by switching the breakers “ON” or “OFF.” They also protect the electrical system by automatically disconnecting the circuit from the power source in the event of a short or overload.



WARNING

Never reset a breaker that has automatically tripped without first correcting the problem. Failure to follow this procedure may create a dangerous situation.

NOTE: Sometimes a circuit breaker location is labeled but no circuit breaker is present. In this case, the component named on the label is an option that is not installed on your boat.

AC Main Circuit Breaker Groups

When using a shore power source to supply AC power to your boat, the power is routed through an AC Main circuit breaker group before it enters the boat. Each Cablemaster or shore power cord has its own AC Main circuit breaker group. When the AC Main circuit breaker group is “ON,” the power then flows to the AC Bus 1 or 2 Distribution Panel.

The circuit breaker groups for the stern shore power connectors are located inside the lazarette storage/crew quarters, near the transom entrance door. The circuit breaker groups for the optional forward shore power connectors are located on the foredeck in the forepeak locker.

AC Bus 1 and 2 Distribution Panels

The AC Bus 1 and 2 Distribution Panels manage most of the boat's AC power system, and control the flow of electricity to the salon AC Distribution Panel. These panels are located in the engine room on the forward bulkhead.

The AC Bus 1 and 2 Distribution Panels contain the circuit breakers described below. These panels also contain additional controls and meters which are described in the vendor literature entitled "Marine Switchgear Systems Installation and Operating Manual."

AC Main Breaker AC Bus 1 and 2

These breakers control the flow of electricity to the other circuit breakers on the AC Bus 1 and 2 Distribution Panels, respectively. Switch these breakers "ON" to supply power to the other circuit breakers.

AC Main Breaker Salon Panel

This breaker controls the flow of electricity to the salon AC Distribution Panel. Switch this breaker "ON" to supply power to that panel.

Accessory Battery Charger

This breaker controls the flow of electricity to the battery charger that maintains the voltage levels in the "house" batteries. Switch this breaker "ON" to supply power to the battery charger. Refer to the OEM information for details on operating the battery charger.

Air Conditioner System Compressor 1

This breaker controls the flow of electricity to the compressor and evaporator/blower components of the salon and pilothouse portion of the air conditioning system. Switch this breaker "ON" to supply power to these components.

**CAUTION**

Do not switch the A/C System Compressor 1 breaker "ON" until after you have opened the seacock that supplies the air conditioning system with seawater. Refer to Section 4 - Air Conditioning System for more information.

Air Conditioner System Compressor 2

This breaker controls the flow of electricity to the compressor and evaporator/blower components of the master stateroom and VIP stateroom portion of the air conditioning system. Switch this breaker "ON" to supply power to these components.

**CAUTION**

Do not switch the A/C System Compressor 2 breaker "ON" until after you have opened the seacock that supplies the air conditioning system with seawater. Refer to Section 4 - Air Conditioning System for more information.

Air Conditioner System Water Pump

This breaker controls the flow of electricity to the water pump that supplies the air conditioning system with seawater. Switch this breaker "ON" to supply power to the water pump.

**CAUTION**

Do not switch the A/C System Water Pump breaker “ON” until after you have opened the seacock that supplies the air conditioning system with seawater. Refer to Section 4- Air Conditioning System for more information.

Air Conditioning Unit - Crew Quarters

This breaker controls the flow of electricity to the air conditioning unit in the optional crew quarters. Before switching this breaker “ON” to supply power to the unit, switch the A/C System Water Pump circuit breaker “ON.”

**CAUTION**

Do not switch this A/C Unit breaker “ON” until after you have opened the seacock that supplies the air conditioning system with seawater. Refer to Section 4 - Air Conditioning System for more information.

Air Conditioning Unit - Master Stateroom

This breaker controls the flow of electricity to the heater strip in the master stateroom’s evaporator/blower. Before switching this breaker “ON” to supply power to the heater strip, switch the A/C System Water Pump circuit breaker “ON,” then switch the A/C System Compressor 2 circuit breaker “ON.”

**CAUTION**

Do not switch this A/C Unit breaker “ON” until after you have opened the seacock that supplies the air conditioning system with seawater. Refer to Section 4 - Air Conditioning System for more information.

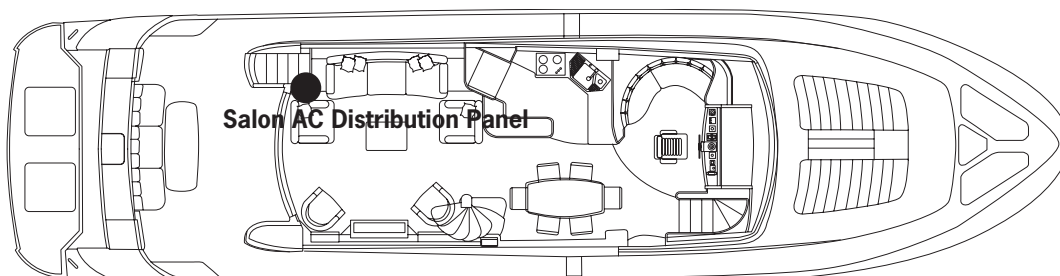
Master Stateroom Receptacles

This breaker controls the flow of electricity to the receptacles in the master stateroom and its head. Switch this breaker “ON” to supply power to these receptacles. Use the receptacles as you would the outlets in your home.

NOTE: If this circuit breaker is “ON” but power is not available at any of the receptacles in this circuit, the circuit’s GFCI may have tripped. Refer to Section 3 - Ground Fault Circuit Interrupters for more information.

Air Conditioning Unit - VIP Stateroom

This breaker controls the flow of electricity to the heater strip in the VIP stateroom’s evaporator/blower. Before switching this breaker “ON” to supply power to the heater strip, switch the A/C System Water Pump circuit breaker “ON,” then switch the A/C System Compressor 2 circuit breaker “ON.”



**CAUTION**

Do not switch this A/C Unit breaker “ON” until after you have opened the seacock that supplies the air conditioning system with seawater. Refer to Section 4- Air Conditioning System for more information.

Battery Charger - Generator

This breaker controls the flow of electricity to the battery charger that maintains the voltage level in the generator battery. Switch this breaker “ON” to supply power to the battery charger. Refer to the OEM information for details on operating the battery charger.

Battery Charger - Starboard Engine

This breaker controls the flow of electricity to the battery charger that maintains the voltage levels in the starboard engine batteries. Switch this breaker “ON” to supply power to the battery charger. Refer to the OEM information for details on operating the battery charger.

Battery Charger - Port Engine

This breaker controls the flow of electricity to the battery charger that maintains the voltage levels in the port engine batteries. Switch this breaker “ON” to supply power to the battery charger. Refer to the OEM information for details on operating the battery charger.

Central Vacuum

This breaker controls the flow of electricity to the optional central vacuum system. Switch this breaker “ON” to supply power to the system. Refer to the OEM information for details on operating the central vacuum system.

Dryer

This breaker controls the flow of electricity to the optional clothes dryer. Switch this breaker “ON” to supply power to the dryer. Refer to the OEM information for details on operating the dryer.

Engine Heater - Starboard

This breaker controls the flow of electricity to the starboard engine’s heater. Switch this breaker “ON” to supply power to the engine heater. Refer to the OEM information for details on operating the engine heater.

Engine Heater - Port

This breaker controls the flow of electricity to the port engine’s heater. Switch this breaker “ON” to supply power to the engine heater. Refer to the OEM information for details on operating the engine heater.

Inverter

This breaker controls the flow of electricity to the inverter. Switch this breaker “ON” to supply power to the inverter. Refer to Section 2 - Inverter and the OEM information for details on operating the inverter.

Receptacles - Crew Quarters

This breaker controls the flow of electricity to the receptacles in the optional crew quarters. Switch this breaker “ON” to supply power to these receptacles. Use the receptacles as you would the outlets in your home.

NOTE: If this circuit breaker is “ON” but power is not available at any of the receptacles in this group, the circuit’s GFCI may have tripped. Refer to Section 3 - Ground Fault Circuit Interrupters for more information.

Receptacles - Side Stateroom

This breaker controls the flow of electricity to the receptacles in the guest stateroom and guest head. Switch this breaker “ON” to supply power to these receptacles. Use the receptacles as you would the outlets in your home.

Receptacles - VIP Stateroom

This breaker controls the flow of electricity to the receptacles in the VIP stateroom and VIP head. Switch this breaker “ON” to supply power to these receptacles. Use the receptacles as you would the outlets in your home.

NOTE: If this circuit breaker is “ON” but power is not available at any of the receptacles in this group, the circuit’s GFCI may have tripped. Refer to Section 3 - Ground Fault Circuit Interrupters for more information.

Water Heater 1 and 2

These breakers control the flow of electricity to the water heaters. The water heaters supply hot water to your fresh water system. Switch these breakers “ON” to supply power to the water heaters. Refer to the OEM information for details on operating the water heaters.

**WARNING**

Do not supply power to the water heaters when they are empty. Doing so may damage the units’ heating elements. Refer to Section 4 - Fresh Water System to fill, pressurize and prime the fresh water system before turning on the water heaters.

Washer

This breaker controls the flow of electricity to the optional clothes washer. Switch this breaker “ON” to supply power to the washer. Refer to the OEM information for details on operating the washer.

Salon AC Distribution Panel

The salon AC Distribution Panel manages the power supply to the AC components listed on the panel. This panel is located in a cabinet in the aft port corner of the salon. The AC Distribution Panel contains the circuit breakers described below. This panel also contains additional controls and meters which are described in the vendor literature entitled “Marine Switchgear Systems Installation and Operating Manual.”

NOTE: If this circuit breaker is “ON” but power is not available at any of the receptacles in this group, the circuit’s GFCI may have tripped. Refer to Section 3 - Ground Fault Circuit Interrupters for more information.

AC Main Breaker

This breaker group controls the flow of electricity to the other circuit breakers on the salon AC Distribution Panel. Switch this breaker group “ON” to supply power to the other circuit breakers.

Bridge Cooling

This breaker group controls the flow of electricity to the optional air conditioning unit in the bridge helm. Before switching this breaker group “ON” to supply power to the unit, switch the A/C System Water Pump circuit breaker “ON.”

**CAUTION**

Do not switch this breaker group “ON” until after you have opened the seacock that supplies the air conditioning system with seawater. Refer to Section 4 - Air Conditioning System for more information.

Coffeemaker

This breaker controls the flow of electricity to the coffeemaker in the galley. Switch this breaker “ON” to supply power to the coffeemaker. Refer to the OEM information for details on operating the coffeemaker.

Davit

This breaker controls the flow of electricity to the optional AC-powered davit system. Switch this breaker “ON” to supply power to the davit. Refer to the OEM information for details on operating the davit.

Dishwasher

This breaker controls the flow of electricity to the optional dishwasher in the galley. Switch this breaker “ON” to supply power to the dishwasher. Refer to the OEM information for details on operating the dishwasher.

Entertainment Center Master Stateroom

This breaker controls the flow of electricity to the optional TV in the master stateroom. Switch this breaker “ON” to supply power to the TV. Refer to the OEM information for details on operating the TV.

NOTE: The master stateroom entertainment center can be operated from the DC electrical system when an AC power source is not available. Refer to Section 2 - Inverter for more information.

Entertainment Center Salon

This breaker controls the flow of electricity to the entertainment center (TV, DVD and stereo) in the salon. Switch this breaker “ON” to supply power to the entertainment center. Refer to the OEM information for details on operating the TV, DVD and stereo.

NOTE: The salon entertainment center can be operated from the DC electrical system when an AC power source is not available. Refer to Section 2 - Inverter for more information.

Exterior Lights

This breaker controls the flow of electricity to the AC-powered exterior lights. To illuminate the lights, switch this breaker “ON.” The AC-powered exterior lights illuminate the side decks.

Grill

This breaker group controls the flow of electricity to the optional cooking grill on the bridge. Switch this breaker group “ON” to supply power to the grill. Refer to the OEM information for details on operating the grill.

Icemaker - Exterior

This breaker controls the flow of electricity to the optional icemaker located beneath the bridge wet bar. Switch this breaker “ON” to supply power to the icemaker. Refer to the OEM information for details on operating the icemaker.

NOTE: The icemaker can be operated from the DC electrical system when an AC power source is not available. Refer to Section 2 - Inverter for more information.

Microwave

This breaker group controls the flow of electricity to the convection microwave in the galley. Switch this breaker group “ON” to supply power to the microwave. Refer to the OEM information for details on operating the microwave.

**DANGER**

Microwave ovens operate a very high voltages (up to 5000V) at potentially very high currents (AMPs); are present when operating - creating a deadly combination. These dangers do not go away even when unplugged, as there is an energy storage device, a high voltage capacitor, that can retain a dangerous charge for a long time.

**WARNING**

Limit the amount of microwave energy exposure by:

- **Not operating the microwave oven with the door open.**
- **Do not tamper with or default the safety interlocks.**
- **Do not place objects between the microwave oven front face and door.**
- **Do not allow soil or cleaner residue to accumulate on the sealing surface of the microwave oven door.**
- **Do not operate the microwave oven if damaged, the door is bent, hinges and latches are broken/loose, door seals, sealing surfaces or glass is broken.**
- **The microwave oven door must close properly to provide safe operation.**
- **Have a qualified repair person adjust, repair and check microwave oven for leakage after a repair is made.**

Pressure Water Pump

This breaker controls the flow of electricity to the fresh water system's pressure water pump. After the fresh water tank is filled, switch this breaker “ON” to activate the pressure water pump. Refer to Section 4 - Pressurizing and Priming the Water System for information on using the pressure water pump to fill and prime the water system.

NOTE: The pressure water pump can be operated from the DC electrical system when an AC power source is not available. Refer to Section 2 - Inverter for more information.

Range

This breaker group controls the flow of electricity to the stove top in the galley. Switch this breaker group “ON” to supply power to the range. Refer to the OEM information for details on operating the range.

Receptacles - Exterior

This breaker controls the flow of electricity to the receptacles in the cockpit and on the bridge. Switch this breaker “ON” to supply power to these receptacles. Use the receptacles as you would the outlets in your home.

NOTE: If this circuit breaker is “ON” but power is not available at any of the receptacles in this circuit, the circuit’s GFCI may have tripped. Refer to Section 3 - Ground Fault Circuit Interrupters for more information.

Receptacles - Galley

This breaker controls the flow of electricity to the receptacles in the galley. Switch this breaker “ON” to supply power to these receptacles. Use the receptacles as you would the outlets in your home.

NOTE: If this circuit breaker is “ON” but power is not available at any of the receptacles in this group, the circuit’s GFCI may have tripped. Refer to Section 3 - Ground Fault Circuit Interrupters for more information.

Receptacles - Pilothouse

This breaker controls the flow of electricity to the receptacles in the pilothouse. Switch this breaker “ON” to supply power to these receptacles. Use the receptacles as you would the outlets in your home.

NOTE: If this circuit breaker is “ON” but power is not available at any of the receptacles in this circuit, the circuit’s GFCI may have tripped. Refer to Section 3 - Ground Fault Circuit Interrupters for more information.

Receptacles - Salon

This breaker controls the flow of electricity to the receptacles in the salon and to the sconce light on the port forward salon bulkhead. Switch this breaker “ON” to supply power to these receptacles and the light. Use the receptacles as you would the outlets in your home.

NOTE: If this circuit breaker is “ON” but power is not available at any of the receptacles in this circuit, the circuit’s GFCI may have tripped. Refer to Section 3 - Ground Fault Circuit Interrupters for more information.

Refrigerator

This breaker controls the flow of electricity to the refrigerator in the galley. Switch this breaker “ON” to supply power to the refrigerator. Refer to the OEM information for details on operating the refrigerator.

NOTE: The refrigerator can be operated from the DC electrical system when an AC power source is not available. Refer to Section 2 - Inverter for more information.

Refrigerator - Exterior

This breaker controls the flow of electricity to the optional refrigerator located beneath the bridge wet bar. Switch this breaker “ON” to supply power to the refrigerator. Refer to the OEM information for details on operating the refrigerator.

NOTE: The refrigerator can be operated from the DC electrical system when an AC power source is not available. Refer to Section 2 - Inverter for more information.

Trash Compactor

This breaker controls the flow of electricity to the optional trash compactor in the galley. Switch this breaker “ON” to supply power to the trash compactor. Refer to the OEM information for details on operating the trash compactor.

Ground Fault Circuit Interrupters

Each receptacle circuit on your boat contains a Ground Fault Circuit Interrupter (GFCI). The GFCI measures both the amount of current flowing to the circuit's receptacles and the amount of current returning from the receptacles, then compares the two values. If the values are not the same, the GFCI instantly trips, shutting off power to the receptacles.

When someone receives an electrical shock through a receptacle, the current flowing to the receptacle continues flowing through the person's body and into any grounded object the person is touching or standing on. Thus, the current does not return from the receptacle through the appropriate wire. The GFCI “sees” this difference in current and shuts off power to the receptacle. This limits the amount of time the person is being shocked to a brief moment, which can reduce the amount of injury to the person.

**DANGER**

Any electrical shock from the AC electrical system, even through a GFCI receptacle, can cause death or serious injury. Always seek immediate medical attention after receiving such a shock.

GFCI Locations

Nine GFCIs are installed on your boat, one for each receptacle circuit, and a standalone outlet in the engine room. Each circuit can include both open outlets and those that are already in use for built-in equipment. A GFCI is located:

- In the engine room on the forward centerline, recessed in the air conditioning condenser/compressor housing.
- In the port forward corner of the cockpit, to protect the exterior receptacles circuit.
- In the port aft corner of the salon, to protect the salon receptacles circuit.
- Outboard of the refrigerator in the galley, to protect the galley receptacles circuit.
- Outboard of the pilothouse lounge, to protect the pilothouse receptacles circuit.
- Above the vanity in the master head, to protect the master stateroom and master head receptacles circuit.
- Above the vanity in the VIP head, to protect the VIP stateroom and VIP head receptacles circuit.

- Above the berth nightstand in the guest stateroom, to protect the guest stateroom and guest head receptacles circuit.
- Above the vanity in the optional crew quarters, to protect the crew quarters receptacles circuit.

Resetting and Testing GFCIs

Each GFCI in the boat's cabin has a Test button and ON/OFF switch mounted on it. To reset a GFCI that has tripped, switch its ON/OFF switch "ON."

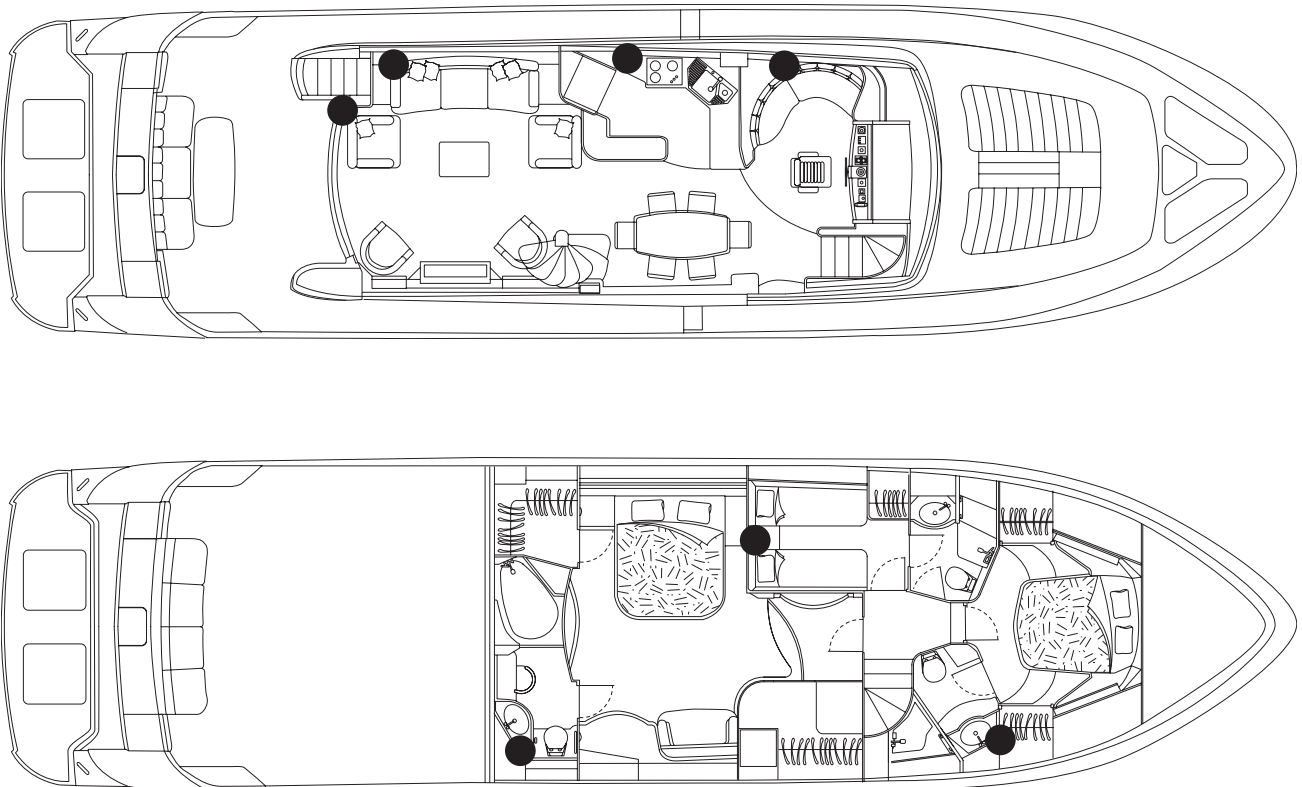
The cockpit and crew quarter's GFCI have Test and Reset buttons located between the receptacles' two outlets. To reset either of these GFCI after they've tripped, press the Reset button.

Resetting a GFCI allows electricity to flow again to the receptacles on that GFCI's circuit.

Test each GFCI circuit once every week:

1. Press the Test button. If the GFCI is operating normally, this cuts the electricity to all of the receptacles on the GFCI's circuit.

If any receptacle on the circuit still has power after the Test button is pressed, do not use any of that circuit's receptacles. Contact a qualified electrician to make the appropriate repairs.



2. Plug a lamp or other AC powered device into each receptacle on the circuit, then turn on the device. The device should not operate.
3. Reset the GFCI to restore power to the receptacles on the circuit.

Electrical Loads

When operating AC powered devices through your boat's AC electrical system, be aware that each device exerts a "load" on the system. This load is equal to the amount of current (amps) that the device draws from the AC electrical system. The AC electrical system, like your house's electrical system, has a maximum total load that it can handle. Each Line circuit has an electrical load capacity of 50 amps.

If the total load on the circuit exceeds the circuit's capacity, the breaker for that circuit trips. This means that the devices operating from the circuit are drawing too much current.



WARNING

Do not overload the electrical circuits. If an excessive load trips a circuit breaker, turn off all devices connected to the circuit, then switch the breaker back "ON."

A list of common AC powered devices and the approximate maximum current that they draw when operating is shown on the following page. If you use an AC powered device that has an electric motor, such as a vacuum cleaner or electric drill, the device should have a "motor load plate" mounted on it. This plate lists the current that the device draws while operating.

ELECTRICAL LOADS

AC Device	Approximate Maximum Current Used (Amps)
Fan	0.7
Electric blanket	2.0
Television	2.7
Coffee maker	6.3
Battery charger	7.3
Toaster	10.5
Frying pan	12.3
Space heater	13.7
Refrigerator	1.5

As the chart indicates, appliances that use a motor or a heating element draw relatively large amounts of current. Therefore, be especially careful when using curling irons, toasters, coffee makers, hair dryers, food mixers or similar types of AC powered devices. Do not use too many of these types of devices at the same time.

Bonding System

Your boat is equipped with a comprehensive metallic bonding system that interconnects all underwater equipment and thru-hull fittings. The bonding system ensures that the “cases” of all metallic equipment onboard your boat, including the fittings, are at the same electrical potential. This minimizes corrosion of the underwater fittings caused by stray electrical currents.

Included within this bonding system are sacrificial zinc anodes that have been installed on each of the boat’s propeller shafts and onto the underwater portion of the boat’s transom. These anodes corrode and deteriorate before the boat’s underwater fittings and provide a visual reference to the level of stray current to which your boat is being exposed.

Your boat’s DC electrical system, AC electrical system and the batteries’ negative leads are all connected to the bonding system through buss bars. The buss bars are located in the engine room and aft bilge area and are connected to the transom-mounted zinc plate.



WARNING

Do not tamper with or modify the boat’s bonding system. Doing so could threaten the integrity of the system.



WARNING

Monitor the condition of your boat’s zinc anodes. Replace the zinc anodes when they have deteriorated to 50% of their original size. Do not allow the zinc anodes to completely deteriorate. Refer to Section 7 - Maintenance Schedule for recommended inspection intervals.

NOTE: Damage resulting from stray current or galvanic corrosion is NOT covered under the Marquis limited warranty.

Troubleshooting the AC Electrical System

Problem	Possible Cause	Possible Solution
The AC voltmeter reads zero volts.	Shore power cord is not connected.	Connect the shore power cord.
	There is no power at the shore power source box.	Contact marina management.
	The circuit breaker installed in the shore power source box is "OFF."	Switch the circuit breaker "ON."
	The AC Main circuit breaker group is "OFF."	Switch the AC Main "ON."
	The AC Bus 1 or 2 Source Selection Switch is in the wrong position.	Position the switch to select the appropriate power source.
	The shore power cord failed.	Replace the cord.
	The generator ran out of fuel.	Check the fuel level in the port fuel tank; refuel if necessary.
	The safety circuit breaker on the generator control panel is "OFF."	Switch the circuit breaker "ON." Refer to the OEM information.
	The generator failed.	Contact a qualified electrician to make the appropriate repairs.
	The voltmeter failed.	Contact a qualified electrician to make the appropriate repairs.
	A wire within the AC electrical system is loose or disconnected.	Contact a qualified electrician to make the appropriate repairs.
No power at the receptacles, but the voltmeter on the AC Control Center indicates an adequate voltage level.	The Receptacles breakers on the AC Control Center are "OFF."	Switch the circuit breakers "ON."
	A GFCI tripped.	Locate the tripped GFCI and press the Reset button.

AC Schematics

For detailed AC schematics, refer to the OEM literature.

Air Conditioning System

For the air conditioning system to operate it needs a source of AC power (supplied by either a shore power source or the generator) and a supply of seawater (either salt or fresh).

The cabin air conditioning system is arranged in a “split” configuration. Two condenser/compressor components are located in the engine room at the base of the forward bulkhead. They support four evaporator/blower components. The evaporator/blowers are located throughout the boat:

- Behind the bridge lounge to cool the salon.
- Beneath and forward of the pilothouse helm to cool the pilothouse, dining area, galley and optional “his” master head compartment.
- Behind the dresser in the master stateroom to cool the master stateroom and master head (or optional “hers” master head compartment).
- Beneath the VIP stateroom berth to cool the VIP stateroom, VIP head, guest stateroom and guest head.

Your boat may also have two optional air conditioning units:

- Beneath the head sole in the crew quarters to cool the crew quarters.
- Beneath the port side of the bridge helm to cool the helm seating area.

Producing Heat

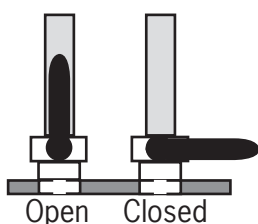
The air conditioning system can also be used to heat the boat’s interior.

The evaporator/blower in the master stateroom and VIP stateroom each contain a heater strip which, when turned ON, allow the evaporator/blower to blow warm air. Refer to Section 3 - VIP Stateroom A/C Unit and Master Stateroom A/C Unit for more information.

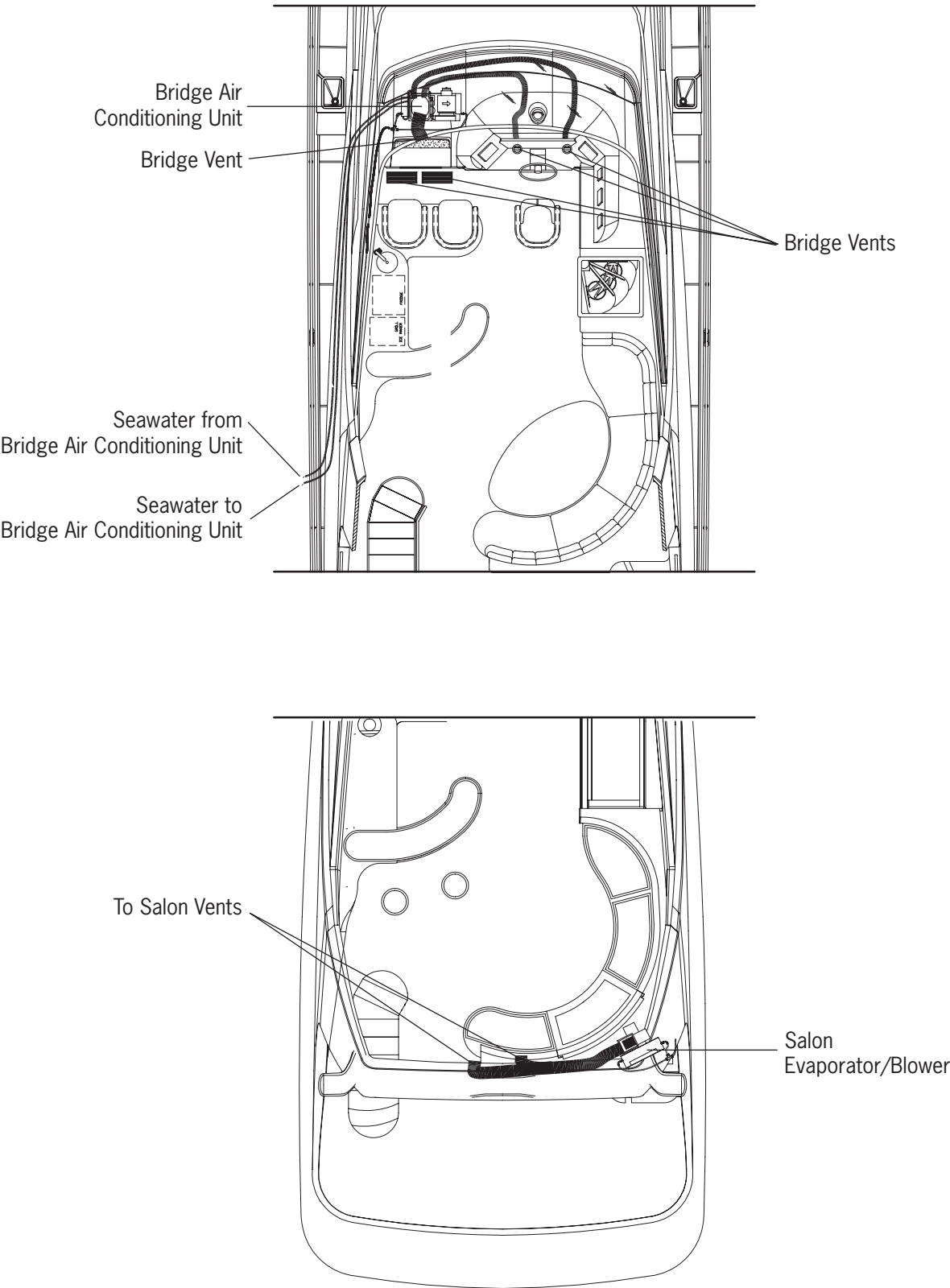
The evaporator/blowers in the salon and pilothouse, as well as the air conditioning units in the crew quarters and bridge helm, can each produce heat when operated in reverse cycle mode. Reverse cycle operation, however, is affected by the temperature of the seawater. As seawater temperature decreases so does the units’ ability to produce warm air. Marquis recommends that the A/C units not be operated in reverse cycle mode when the seawater temperature is below 40°F.

Powering the Air Conditioning

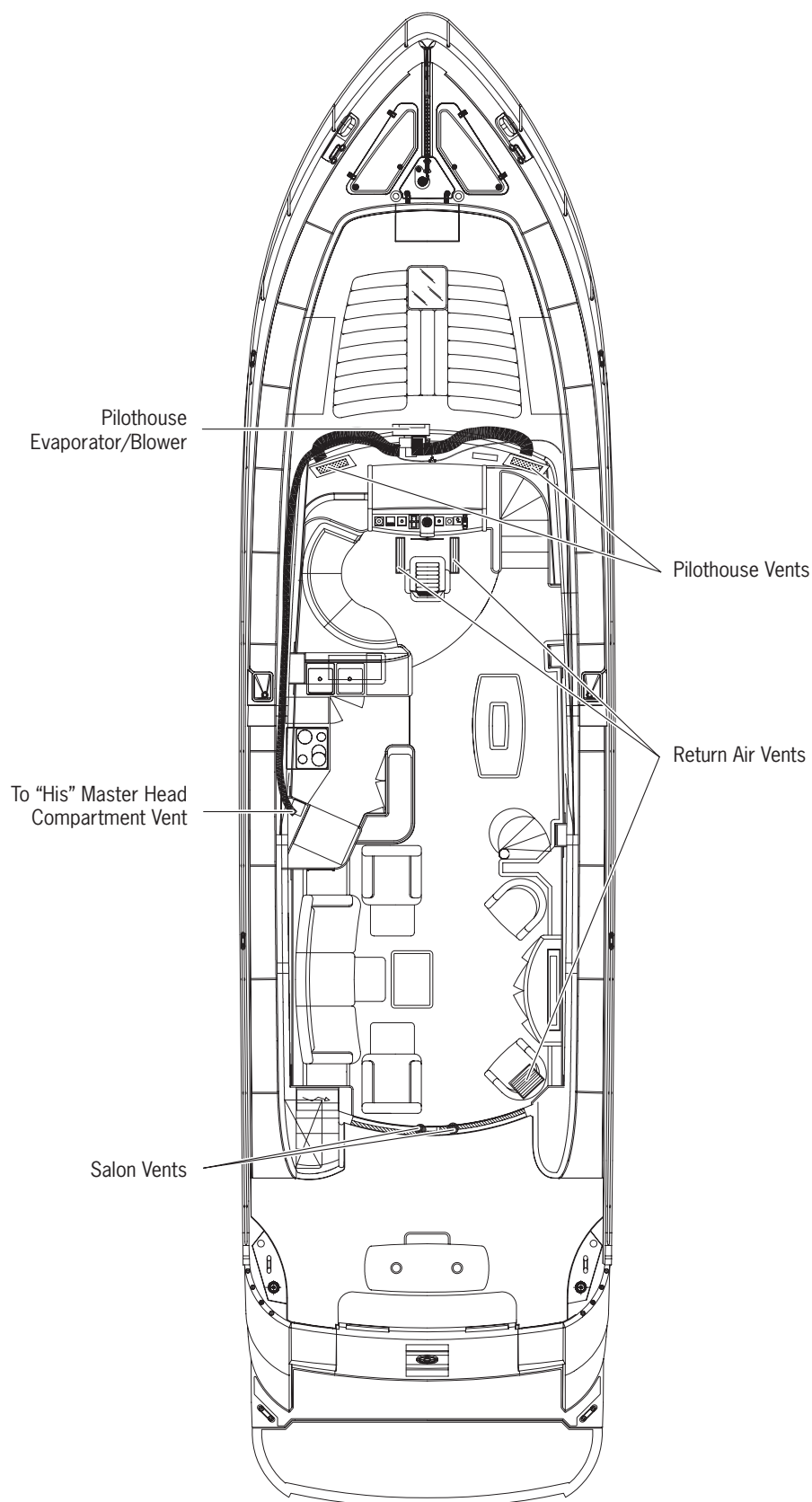
1. Make sure the air conditioning seacock is closed. Remove and clean the air conditioning system’s seawater strainer. The strainer prevents debris in the seawater from entering the air conditioning pump. The seacock, strainer and pump are located in the aft bilge area beneath the lazarette storage/optional crew quarters entrance stairs.
2. Reinstall the seawater strainer. If the strainer leaks when the air conditioning seacock is opened, close the seacock, then check the strainer for correct installation.
3. Open the A/C seacock to supply seawater to the A/C pump.
4. Supply AC power to your boat. Refer to Section 3 - Shore Power or Generator Power to do this.
5. Provide power to the circuit breakers on the DC Bus Distribution Panel.



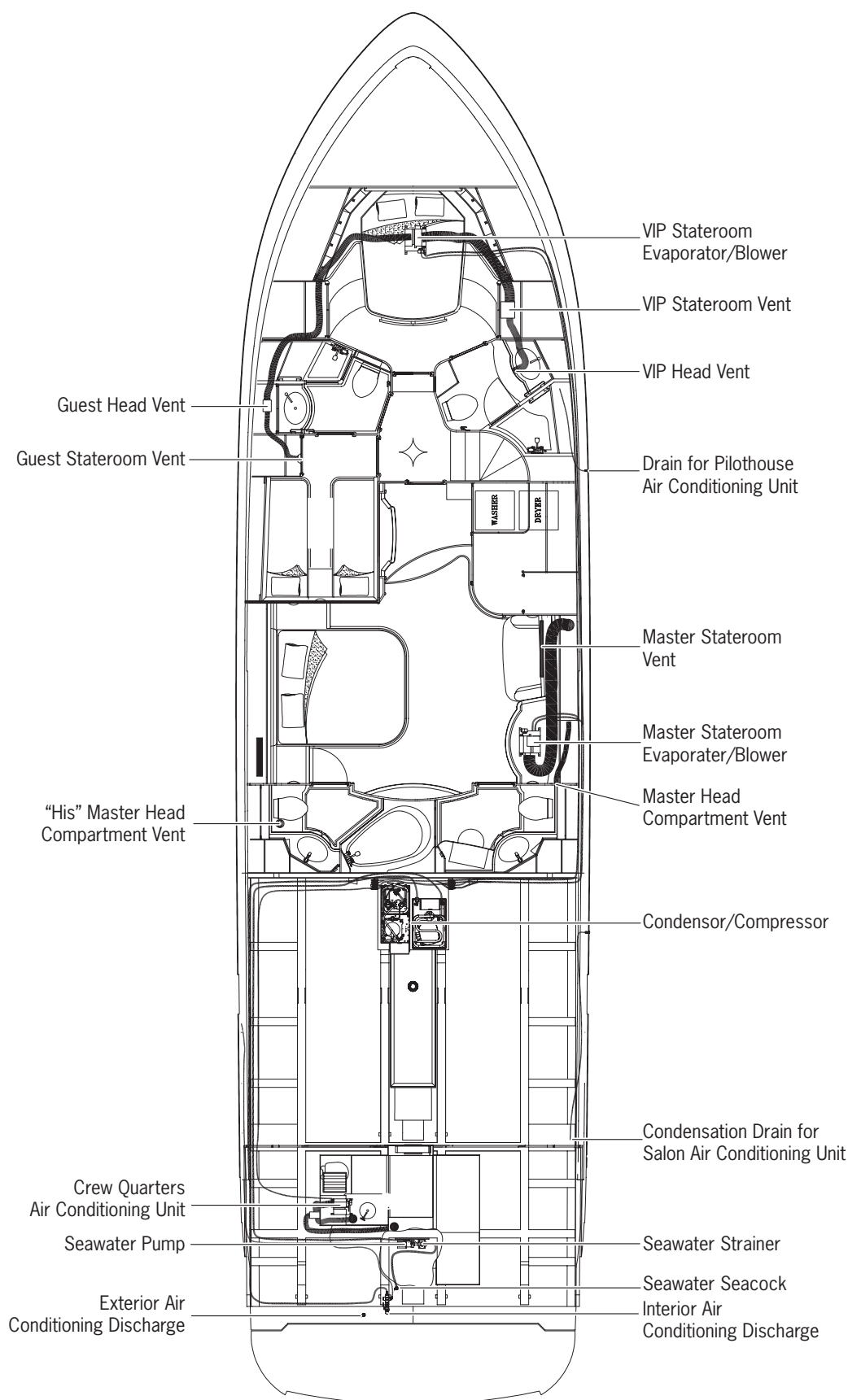
AIR CONDITIONING - BRIDGE LEVEL



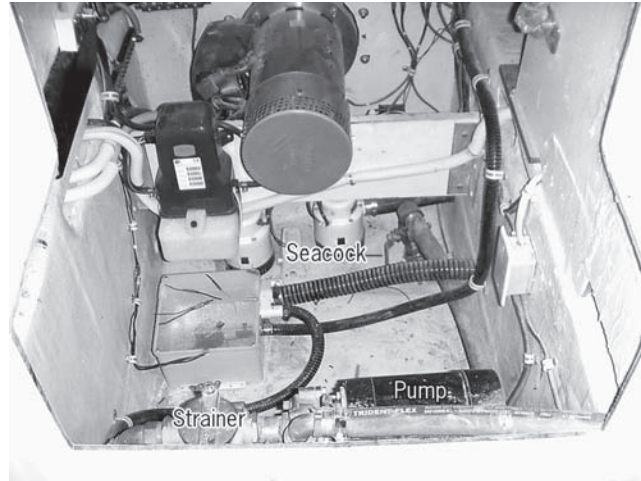
AIR CONDITIONING - SALON LEVEL



AIR CONDITIONING - STATEROOM LEVEL



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CAUTION

Because some of the air conditioning condensation drains into the sumps, the Forward, Amidships, Aft and Crew Quarters Sump Pump circuit breakers on the DC Bus Distribution Panel must be “ON” when the air conditioning system is operating.

6. On that panel, switch the Forward, Amidships, Aft and Crew Quarters Sump Pump circuit breakers “ON.”



CAUTION

Do not operate the air conditioning system’s water pump when the seacock that supplies seawater to the system is closed. Operating the pump with no seawater can damage it.

7. On the AC Bus 2 Distribution Panel:
 - a. Switch the AC Main Breaker AC Bus 2 circuit breaker “ON.”
 - b. Switch the A/C System Water Pump circuit breaker “ON.”
 - c. Switch the A/C System Compressor 1, A/C System Compressor 2 and, if present, Crew Quarters A/C Unit circuit breakers “ON.”
8. Verify that seawater is being pumped through the air conditioning units. As the seawater exits the units, it flows out of a single discharge thru-hull fitting. Refer to Section 9 - Thru-Hull Fittings for the exact location of this thru-hull fitting.
9. Use the air conditioning controls located throughout the boat to set the desired temperature(s). Refer to the OEM information for details on operating the air conditioning controls.

Fresh Water System

The total capacity of your boat's fresh water system is approximately 232 gallons. The water is divided between a 200-gallon fresh water tank and two 16-gallon water heaters. The water tank is located in the engine room beneath the centerline catwalk. The water heaters are located inside the master stateroom berth, beneath a hatch under the mattress.

Filling The Water Tank

The fresh water tank is filled through a deck fitting with a plate labeled "WATER." The plate is located on the starboard side deck amidships.

NOTE: Thoroughly flush and sanitize the water system before initial use and at least once each season.



CAUTION

Do not overfill the water tank or leave the fill hose unattended while the tank is being filled. Overfilling the tank could cause it to rupture.

Put only clean, fresh water into the water tank. The tank is full when water is discharged from the water tank vent. The vent is located in the hull outboard of the "WATER" deck fitting. Refer to Section 9 - Thru-Hull Fittings for the exact location of the water tank vent.

Pressurizing and Priming the Water System

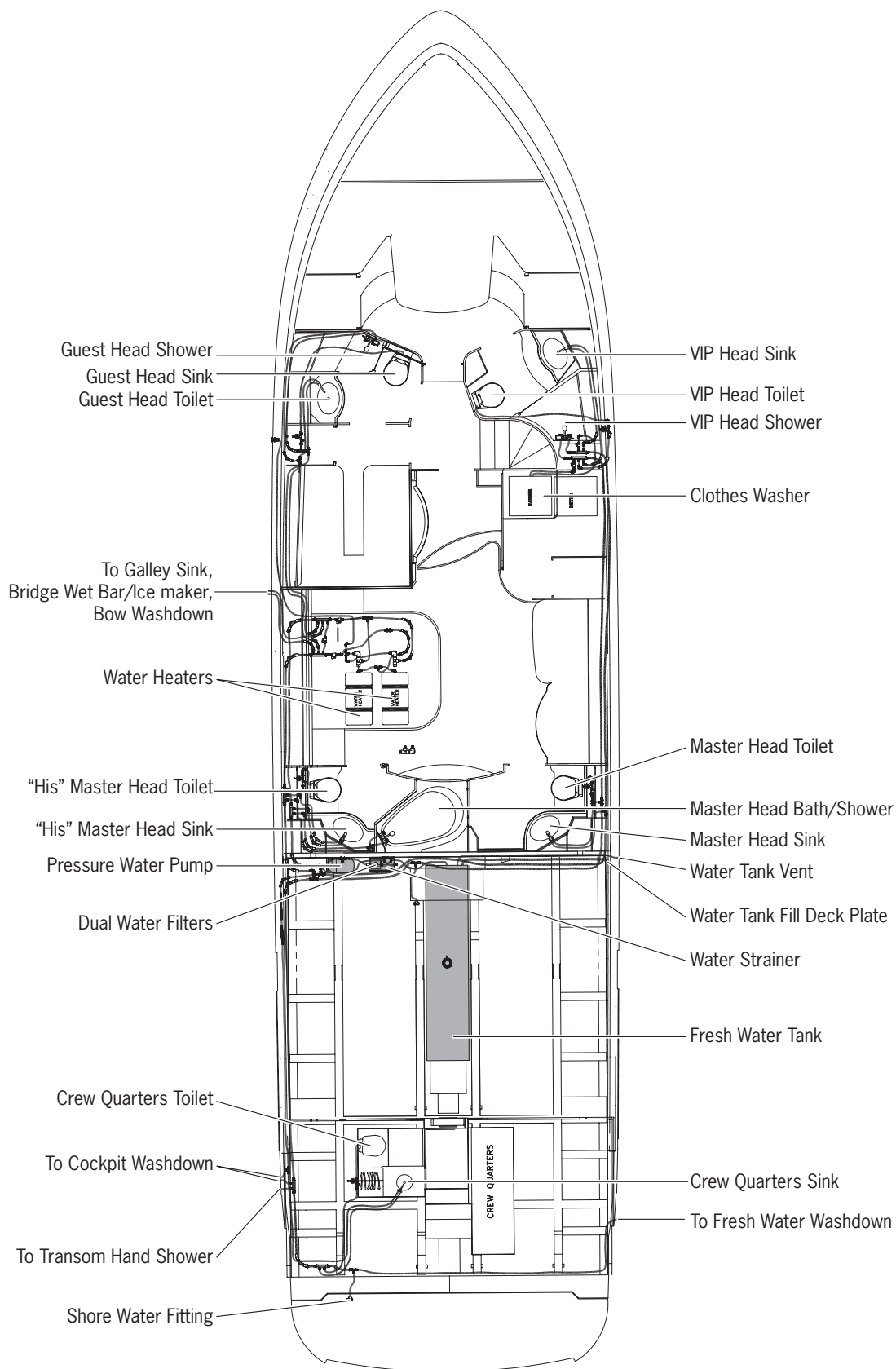
Perform the following ONLY after the fresh water tank is full.

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.
2. On that panel, switch the Forward, Amidships and Aft Sump Pump circuit breakers "ON."
3. Close the water heater bypass valves, located near the heaters, so that the fresh water will be able to flow into the heaters.
4. Partially open all cold water faucets, including the faucets for the transom hand shower and bow and transom fresh water washdowns.
5. Supply AC power to your boat. Refer to Section 3 - Shore Power or Generator Power to do this.
6. On the AC Bus 1 Distribution Panel:
 - a. Switch the AC Main Breaker AC Bus 1 circuit breaker "ON."
 - b. Switch the A/C Main Breaker Salon Panel circuit breaker "ON."
7. On the salon AC Distribution Panel:
 - a. Switch the AC Main Breaker "ON."
 - b. Switch the Pressure Water Pump circuit breaker "ON." This activates the boat's pressure water pump, which pressurizes the water system.

A TIP FROM CARVER!

If your boat will be left unattended for at least a few days, switch the Pressure Water Pump circuit breaker "OFF." If this breaker is left on, pressure in the fresh water system may fall and cause the water pressure pump to engage. If this happens frequently, it could discharge your batteries.

FRESH WATER SYSTEM



8. The fresh water system is primed when all air is purged from the system's pipes and hoses. Monitor each sink tap and shower head. When a steady stream of water flows from the tap or shower head, close the cold water faucet for that tap or shower head, then open its hot water faucet (the washdowns supply only cold water). When a steady stream of water again flows from the tap or shower head, close the hot water faucet for that tap or shower head. When you have done this for each sink tap and shower head, the water system is primed.
9. Add water to the fresh water tank to replace that which was used in the previous step. Refer to Section 4 - Filling the Water Tank.

When water pressure within the system increases to a predetermined point, the pressure water pump automatically shuts off. Priming the system also fills and maintains the water level within the water heater.

Using the Water System

The fresh water system is designed to operate in the same manner as the water system in your home. After filling, pressurizing and priming the fresh water system, simply open a faucet to receive fresh water. As you draw water from the system, the pressure in the system decreases. When the pressure decreases to a predetermined point, the pressure water pump automatically turns on and increases the pressure. This ensures a steady flow of water any time you open a faucet.

Sometimes a recently filled system or one that has not been used for some time may need re-priming. This is normal and is caused by an accumulation of air bubbles at the pressure water pump. To re-prime the fresh water system, repeat the steps in Section 4 - Pressurizing and Priming the Water System.

A TIP FROM CARVER!

To obtain the most consistent shower temperature, turn on the cold water faucet fully, then slowly turn on the hot water faucet until the water flowing from the shower head is at the desired temperature. This method keeps the pressure water pump running, eliminating widely fluctuating water temperatures.

Water Heaters

To operate the water heaters:

1. Fill, pressurize and prime the fresh water system. This automatically fills the water heater.
2. Supply AC power to your boat. Refer to Section 3 - Shore Power or Generator Power to do this.
3. On the AC Bus 1 Distribution Panel:
 - a. Switch the AC Main Breaker AC Bus 1 circuit breaker "ON."
 - b. Switch the Water Heater 1 and 2 circuit breakers "ON."
4. Refer to the OEM information for details on operating the water heaters.

**CAUTION**

Do not supply power to the water heaters when they are empty. Doing so may damage each unit's heating element. Fill, pressurize and prime the fresh water system as described in Section 4 - Filling the Water Tank and Pressurizing and Priming the Water System before turning on the water heaters.

Grey Water System

Once fresh water passes into the shower and sink drains, it is referred to as grey water. Condensation from the air conditioning system is also considered grey water. Grey water drains into three standard sumps for the cabin and an additional sump when the crew quarters are present.

The forward sump is located beneath the hatch in the VIP stateroom sole. The mid sump is located beneath the hatch in the forward master stateroom sole. The aft sump is located beneath the hatch in the aft master stateroom sole. The crew quarters sump is located in the aft bilge area beneath the crew quarters entrance stairs.

Because the sumps are located below the boat's waterline, a pump is needed to drain each sump and discharge its water overboard or into the optional grey water holding system. When the Forward, Amidships, Aft and Crew Quarters Sump Pump circuit breakers on the DC Bus Distribution Panel are "ON," the sump pumps operate automatically when water in the sumps rises above a predetermined level.

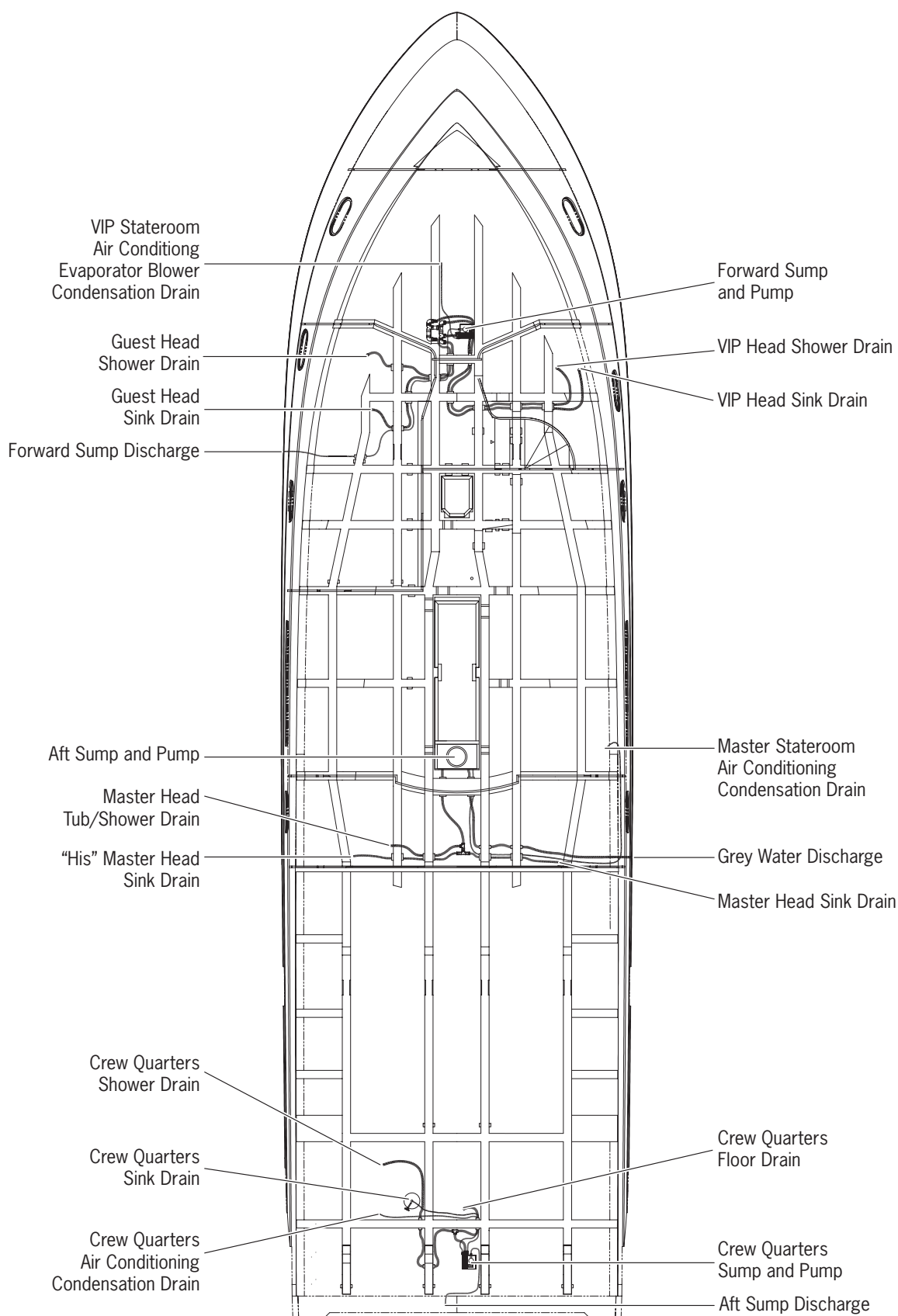
NOTE: The sump pumps can not operate if the Forward, Amidships, Aft and Crew Quarters Sump Pump circuit breakers are "OFF." Make sure the circuit breakers are "ON" before using the showers or sinks.

Transom Hand Shower

The transom hand shower enables you and your guests to rinse off with warm, fresh water after swimming without having to enter the cabin. The hand shower is especially useful if you operate your boat in salt water.

The hand shower is an integral part of your boat's fresh water system. Simply turn on the faucets and adjust them for the desired water temperature. The hand shower and its faucets are located in a locker in the cockpit's port weatherboard.

GREY WATER SYSTEM



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Fresh Water Washdowns

The bow and transom fresh water washdowns enable you to use water from the fresh water tank to washdown and clean your boat. Fresh water washdown is especially useful if you operate your boat in salt water.

A TIP FROM CARVER!

Remember that the fresh water washdown system draws its water from the boat's fresh water tank. Prolonged use of the washdown system quickly reduces the amount of fresh water in the water tank.

To use the fresh water washdowns:

1. Locate the bow- and transom-mounted hose fittings. The bow-mounted fitting is located on the fore deck in the forepeak locker. Two transom-mounted fittings are located in the cockpit, one each in lockers in the port and starboard weatherboards.
2. Attach one end of an appropriately sized nylon water hose to the hose fitting you wish to use.
3. Attach a nozzle to the other end of the hose. The best type of nozzle to use is the "pistol grip" type that can be opened and closed by squeezing your hand.
4. Open the faucet at the base of the hose fitting to supply water to the hose. Use the washdown as you would a garden hose at your home.

Shore Water

Your boat has a shore water fitting that enables your fresh water system to draw water from a land water source while your boat is docked. When you use shore water you are not drawing water from the onboard water tank.

NOTE: Connecting your boat to shore water bypasses the boat's fresh water tank and pressure water pump, therefore the water tank does not get filled. The only way to fill the fresh water tank is through the deck plate labeled "WATER."

When you connect your boat to shore water, switch the Pressure Water Pump circuit breaker on the salon AC Distribution Panel "OFF."



CAUTION

Do not leave your boat unattended when it is connected to shore water. Should one of the water lines in your boat develop a leak, an unlimited amount of water could enter your boat. Disconnect the shore water hose whenever you leave your boat unattended.

To connect to shore water:

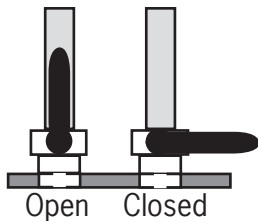
1. Locate the shore water fitting, labeled "SHORE WATER," on the boarding platform's port transom, between the shore power cables.
2. Attach one end of a water hose to the shore water fitting.
3. Attach the other end of the hose to the dockside water tap.
4. Close all sink and shower faucets.
5. Provide power to the circuit breakers on the DC Bus Distribution Panel.
6. On that panel, turn the Forward, Amidships, Aft and Crew Quarters Sump Pump circuit breakers "ON."
7. Turn the dockside water tap ON.

Raw Water Washdowns

The optional bow and transom raw water washdowns enable you to use seawater to washdown and clean your boat.

To use the raw water washdowns:

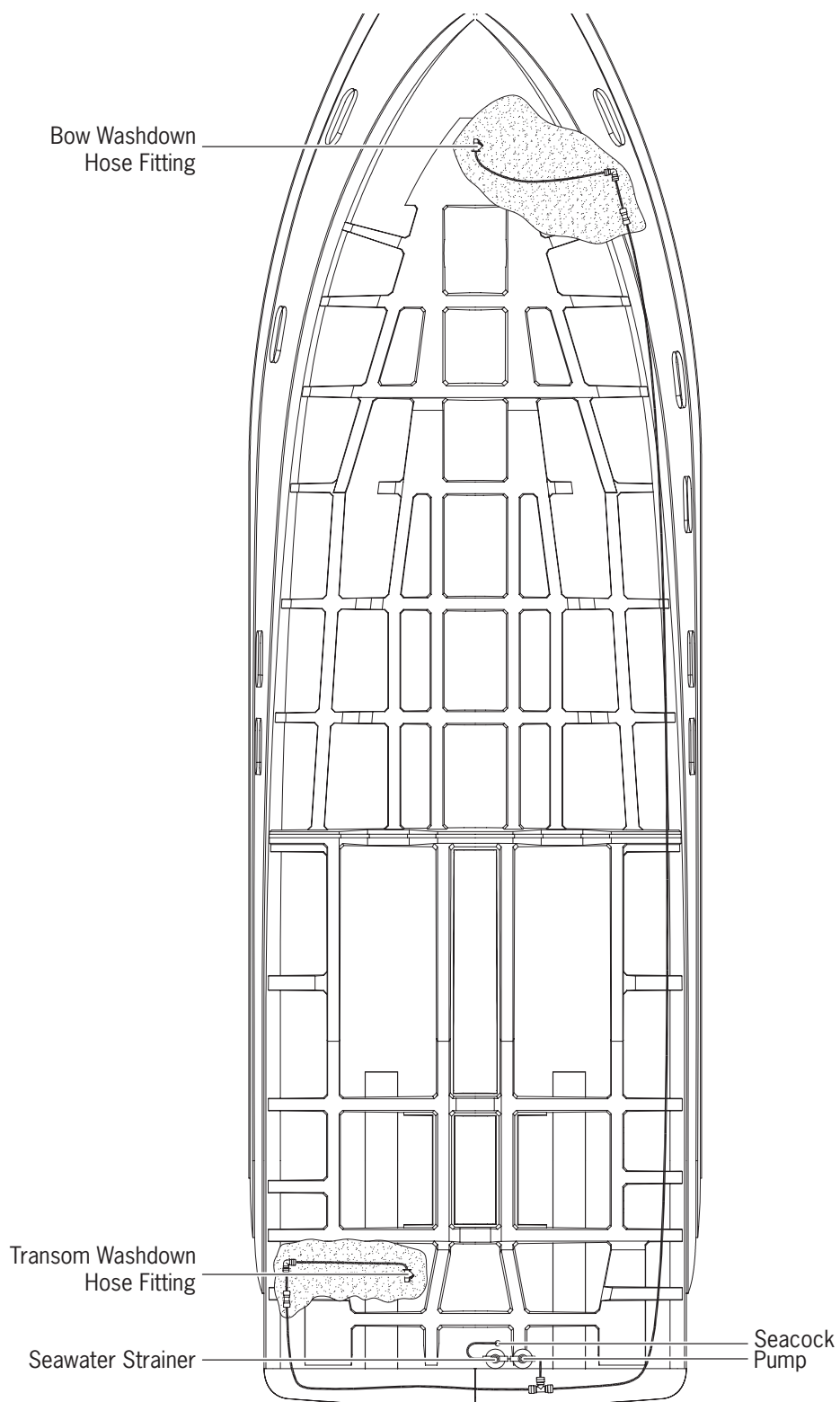
1. Locate the bow- and transom-mounted hose fittings. The bow-mounted fitting is located on the fore deck in the forepeak locker. The transom-mounted fitting is located in a locker in the cockpit's port weatherboard.
2. Attach one end of an appropriately sized nylon water hose to the hose fitting you wish to use.
3. Attach a nozzle to the other end of the hose. The best type of nozzle to use is the "pistol grip" type that can be opened and closed by squeezing your hand.
4. Make sure the raw water washdown seacock is closed. Remove and clean the raw water washdown's seawater strainer. The strainer prevents debris in the seawater from entering the washdown pump. The seacock, strainer and pump are located in the bilge stern. Refer to Section 9 - Bilge Compartments for the exact location of the seacock, strainer and pump.
5. Reinstall the seawater strainer. If the strainer leaks when the washdown seacock is opened, close the seacock, then check the strainer for correct installation.
6. Open the washdown seacock to supply seawater to the washdown pump.
7. Provide power to the circuit breakers on the DC Bus Distribution Panel.
8. On that panel, switch the Raw Water Washdown Pump circuit breaker "ON."



CAUTION

Do not operate the washdown pump when the seacock that supplies seawater to the washdown system is closed. Operating the pump with no seawater can damage it.

9. The raw water washdown pump, when activated, creates pressure in the raw water washdown system. When the hose nozzle is closed, water pressure within the system increases to a predetermined point at which the pump automatically shuts off. When the hose nozzle is open, releasing water from the system, the pressure in the system decreases. When the pressure decreases to a predetermined point, the pump automatically turns on and increases the pressure. This ensures a steady flow of water any time you use the raw water washdown.

RAW WATER SYSTEM

Bilge System

Your boat contains five bilges with five automatic bilge pumps and four emergency bilge pumps. Except for the forward bilge, each bilge contains a pair of bilge pumps, one automatic and one emergency. The bilge is the lowest point in the interior of the boat's hull where any water that finds its way into the hull will accumulate. Each bilge pump can remove up to 3700 gallons of water per hour. The bilges include:

- A forward bilge that runs from the bow to the aft VIP stateroom bulkhead. The single forward bilge pump is located beneath the hatch in the VIP stateroom sole.
- A forward amidships bilge that runs from the aft VIP stateroom bulkhead to the aft master stateroom bulkhead. The pair of forward amidships bilge pumps is located beneath the hatch in the forward master stateroom sole.
- An amidships bilge that runs from the aft master stateroom bulkhead to the forward engine room bulkhead. The pair of amidships bilge pumps is located behind an access panel below the starboard door of the master head tub enclosure.
- An aft amidships bilge that runs from the forward engine room bulkhead to the aft engine room bulkhead. The pair of aft amidships bilge pumps is located beneath a hatch at the base of the aft engine room bulkhead. If your boat was built for use in Europe, there is also a hand bilge pump in the engine room.
- An aft bilge that runs from the aft engine room bulkhead to the stern. The pair of aft bilge pumps is located in the aft bilge area beneath the lazarette storage/optional crew quarters entrance stairs.



CAUTION

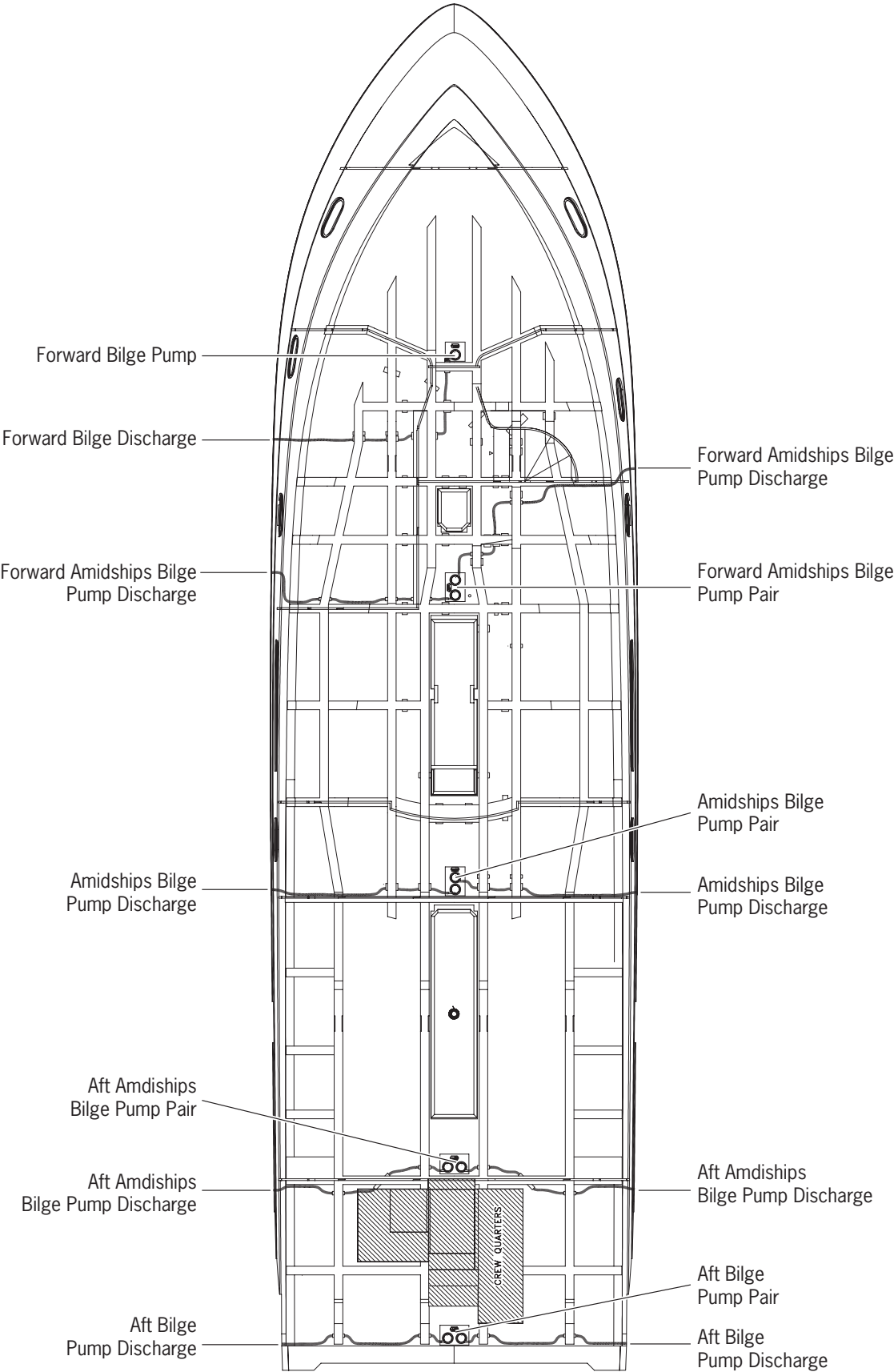
Never store anything in the bilges. Storing loose items in the bilges could damage pumps, pipes or other components that are essential for the proper operation of your boat.



CAUTION

If you keep your boat in a climate where temperatures can drop below freezing, make sure that all water within the bilges is drained before you store the boat for the winter. Water that freezes in the bilges could cause severe damage to your boat and its components. Refer to Section 8 - Bilges for more information on winterizing the bilges.

BILGE SYSTEM



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Bilge Pump Operation

For safety and convenience, each automatic bilge pump can be operated either automatically or manually. The emergency bilge pumps can only be operated manually.

The bilge pumps remove almost, but not quite, all of the water that collects within the bilges. If you want your bilges to be completely dry, use a sponge and bucket to remove the small amount of water that remains.

NOTE: Before operating your boat's bilge pumps, wipe up any oil that may have accumulated in the bilges. Pumping oil overboard contributes to water pollution and is in violation of the Federal Water Pollution Control Act. Violators are subject to a substantial penalty.

Your boat is equipped with four high bilge water sensors, located above the forward amidships, amidships, aft amidships and aft bilge pumps. If one of more of the sensors detects high bilge water, an alarm sounds. The most likely causes of high bilge water are: a hull breach, faulty bilge pump or faulty seacock/hose. Immediately identify and correct the cause of the high water, and remove the water. Silence the alarm by turning its circuit switch "OFF." The switch is located on the center of the pilothouse helm.

NOTE: The High Water Alarm circuit breaker on the DC Bus Distribution Panel must be "ON" at all times so that the alarm will sound if there is high water in the bilges.

Automatic Operation

Incorporated into each automatic bilge pump is a float switch. The float switch automatically turns on the pump when bilge water rises to a predetermined level. To operate the bilge pumps in automatic mode:

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.
2. On that panel, switch the Bilge Pump 1 - 5 circuit breakers "ON."

Periodically test each float switch by lifting the float, which should turn the bilge pump or pump pair on.

NOTE: The Bilge Pump 1 - 5 circuit breakers should be "ON" at all times so that the pumps can operate in automatic mode when necessary.

A TIP FROM CARVER!

A small amount of water always collects in your boat's bilges. This water is usually not enough to activate an automatic float switch. While underway and on plane, use the helm switches to manually turn the bilge pumps on and let them run for 30 seconds to a minute. When your boat is on plane, water in the bilges flows to the aft of the bilge where the pump(s) is located.

Manual Operation

To operate the automatic bilge pumps manually:

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.
2. On that panel:
 - a. Switch the Bilge Pump 1 - 5 circuit breakers "ON."
 - b. Switch the DC Main Breaker Salon Panel circuit breaker "ON."
3. On the DC Control Center:
 - a. Switch the Panel Main circuit breaker "ON."
 - b. Switch the Bilge Pump 1 - 5 Relay circuit breakers "ON."
4. Press the 1, 2, 3, 4 and 5 Bilge Pump switches, located at each helm, to their "UP" position. This activates all of the bilge pumps.



CAUTION

When operating a bilge pump in manual mode, turn the pump "OFF" when the bilge water level is so low that the pump can not drain it. Allowing the pump to operate when it is not pumping water can damage it.

To operate the emergency bilge pumps:

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.
2. On that panel, switch the DC Main Breaker Salon Panel circuit breaker "ON."
3. On the DC Control Center:
 - a. Switch the Panel Main circuit breaker "ON."
 - b. Switch the Emergency Bilge Pump 1 - 4 circuit breakers "ON."
The emergency bilge pumps now operate continuously until the circuit breakers are switched "OFF."

Hull Drain

Your boat is equipped with one hull drain. The drain allows water to drain from the bilges while the boat is in dry storage. The boat and cradle should be positioned to allow water to flow toward the hull drain. The drain is located in the transom in the deepest portion of the hull's "V."



CAUTION

Make sure the hull drain plug is securely screwed into the hull drain before launching the boat.

A TIP FROM CARVER!

Coat the threads of the hull drain plug with waterproof grease before you install the plug into the hull drain fitting. This makes it easier to remove the plug at a later date.

Sanitation System

Your boat's sanitation system includes a 38-gallon forward waste tank, 76-gallon aft waste tank and optional 33-gallon crew quarters waste tank.

Toilets

The toilets use fresh water and an electric pump to flush. If you have guests who are unfamiliar with marine sanitation systems, instruct them on how to properly use the toilets. Refer to the OEM information for details on operating the toilets.

To operate the electric flushing pump:

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.
2. On that panel, switch the Master Head Port (if present), Master Head Starboard, Bow Head, Side Head, and Crew Head (if present) circuit breakers "ON."
3. Check the Do Not Flush panel located near each toilet. If the red indicator is lit, that toilet's waste tank is at least three-quarters full and should be emptied. If the red indicator is not lit, proceed to step 4.
4. Push the electronic flush button on the bulkhead next to the toilet. This flushes the toilet.

Emptying the Waste Tanks

The two methods of disposing of waste are described below.

Dockside Discharge

With the dockside discharge method, waste is flushed from the heads to the waste tanks where it is stored until it can be transferred to a dockside pumpout station.

To empty the tanks:

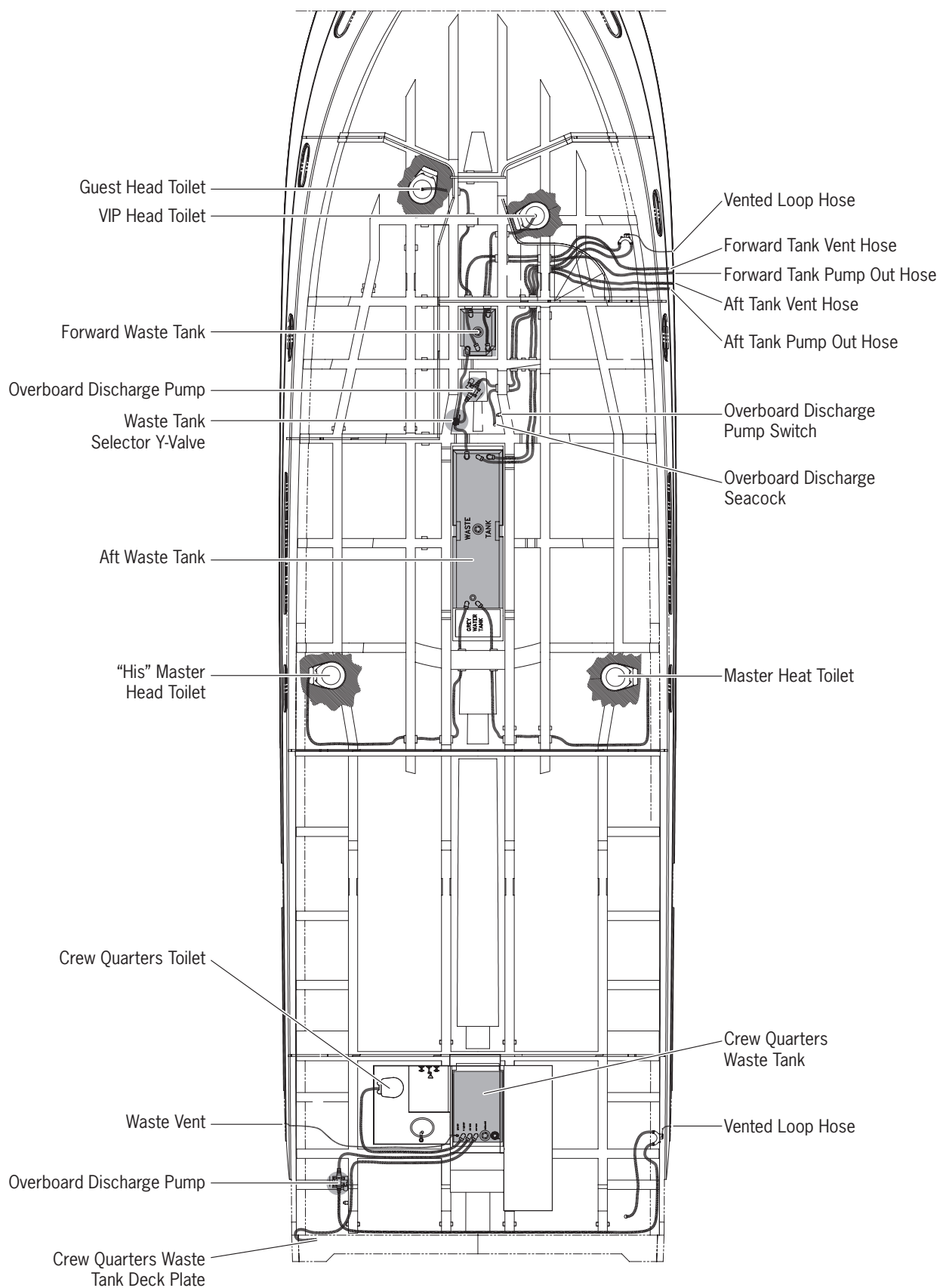
1. Locate a dockside pumpout station.
2. Remove the appropriate waste tank deck plate labeled "WASTE" using the removal tool supplied with your boat. The forward and aft waste tank deck plates are located on the forward starboard side deck (the forward deck plate is the more forward of the two). The crew quarters waste tank deck plate is located on the port transom.

A TIP FROM CARVER!

The "WASTE" deck plate is not connected to the fitting and does not float. Be careful that you don't drop the plate in the water when you remove it. If you do lose the plate, you can order a replacement from your Marquis Dealer. "WASTE" deck plates are dropped overboard frequently enough that we suggest you carry an extra in your onboard spare parts kit.

3. Attach the pumpout vacuum hose to the "WASTE" deck fitting. Because the transfer process uses a vacuum action, there must be a secure connection between the transfer hose and the deck fitting.
4. Activate the pumpout vacuum. The pumpout vacuum transfers onboard waste to the dockside holding station.

SANITATION SYSTEM



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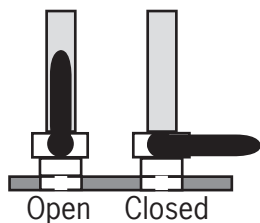
5. After all waste is removed, flush the waste tank by pouring a few gallons of fresh water through the “WASTE” deck fitting. Reattach the vacuum hose to the deck fitting and activate the pumpout vacuum again to remove the fresh water and any remaining waste.
6. Replace the “WASTE” deck plate.
7. Repeat steps 2 - 6 (if necessary) for the remaining waste tank(s).

Overboard Discharge

NOTE: It is against the law to discharge waste overboard in many areas of the United States. It is your responsibility to make sure that you are in compliance with all applicable federal, state and local laws when using your boat's overboard discharge system. People who discharge waste overboard in restricted areas are subject to significant penalties.

In certain coastal areas of the world it is legal to discharge the waste from your boat's waste tanks into the sea. To accommodate this procedure Marquis offers an optional overboard discharge system for your boat. This system is available only on boats that are exported or used in the coastal areas of the United States.

With the overboard discharge system, waste is flushed from the toilets to the waste tanks where it is stored. Where it is legal, you can then empty the waste tanks directly overboard. If overboard discharge is not legal where you are, you can either wait until you reach an area where it is legal or use a dockside pumpout station to empty the waste tanks.



To empty the tanks:

1. Open the appropriate overboard discharge seacock. The seacock for the forward and aft waste tanks is located beneath the hatch in the forward master stateroom sole. The seacock for the crew quarters waste tank is located in the starboard bilge compartment.
2. For the forward or aft waste tank, turn the waste tank selector Y-valve to select the tank you wish to empty. The Y-valve is located near the overboard discharge seacock.
3. Provide power to the circuit breakers on the DC Bus Distribution Panel.
4. On that panel, switch the Overboard Pump Forward and/or Overboard Pump Crew Quarters circuit breakers “ON.”
5. Turn the appropriate overboard discharge pump switch “ON.” Each switch is located near its overboard discharge seacock. This activates the overboard discharge pump, which pumps the waste overboard.



CAUTION

When the waste tank is empty, turn the overboard discharge pump “OFF.” Operating the pump when the waste tank is empty can damage the pump.

6. After all waste is pumped overboard, turn the overboard discharge pump switch “OFF.”

7. Remove the appropriate waste tank deck plate labeled “WASTE” using the removal tool supplied with your boat. The forward and aft waste tank deck plates are located on the forward starboard side deck (the forward deck plate is the more forward of the two). The crew quarters waste tank deck plate is located on the port transom.
8. Flush the waste tank by pouring a few gallons of fresh water through the “WASTE” deck fitting. Reactivate the overboard discharge pump and remove the fresh water and any remaining waste, then turn the pump “OFF.”
9. Replace the “WASTE” deck plate.
10. Repeat steps 2 - 9 (if necessary) for the other cabin waste tank; repeat steps 1 - 9 (if necessary) for the crew quarters waste tank.
11. On the DC Distribution Panel, switch the Overboard Pump Forward and/or Overboard Pump Crew Quarters circuit breakers “OFF.”

Propulsion

Your boat can be equipped with several types of inboard engine packages. This section gives a general overview of your propulsion system and how it works. For a detailed explanation of the engines installed in your boat, including how to operate and maintain them, refer to the OEM information.

Fuel System

Each diesel propulsion engine in your boat is plumbed to the fuel tank located on the same side of the boat as the engine. The diesel propulsion system uses fuel supply and return lines. The supply lines feed fuel to the engine; the return lines transfer fuel not burned by the engine back to the fuel tank. The generator draws fuel from the starboard fuel tank. When the optional auxiliary fuel tank is present, the generator draws fuel from that tank.

Fuel Tanks

Your boat has two standard fuel tanks that hold a combined maximum 1200 gallons of fuel. These fuel tanks are located on the starboard and port sides of the engine room, outboard of the engines. There is also an optional auxiliary fuel tank, located in the port bilge compartment, that holds an additional 200 gallons of fuel.

The fuel system meets or exceeds the standards set by the U.S. Coast Guard, the Boating Industry Association, and the American Boat and Yacht Council that were in effect when your boat was constructed. Each fuel tank has passed a rigorous test conducted by the tank manufacturer. Additionally, the entire fuel system passed Marquis's own pressure testing and inspection.

Before your boat is delivered, your Marquis Dealer also makes a full inspection of the fuel system. An entry on the Marquis Pre-Delivery Service Record verifies the dealer's completion of this inspection.



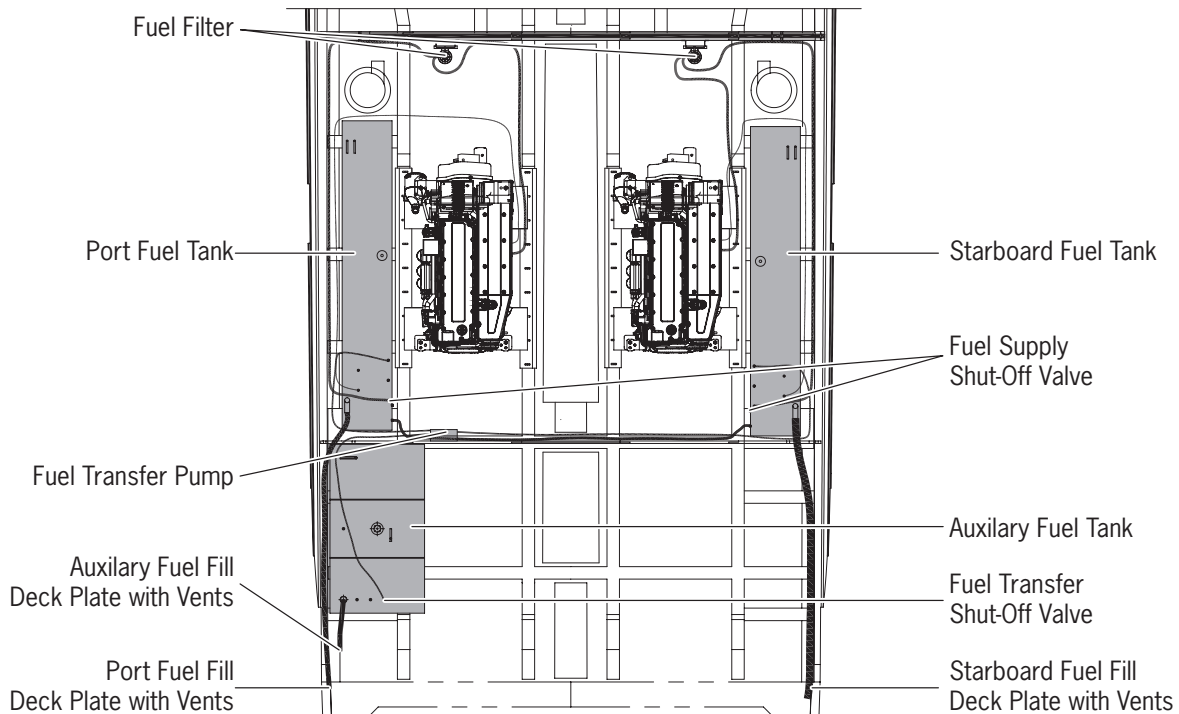
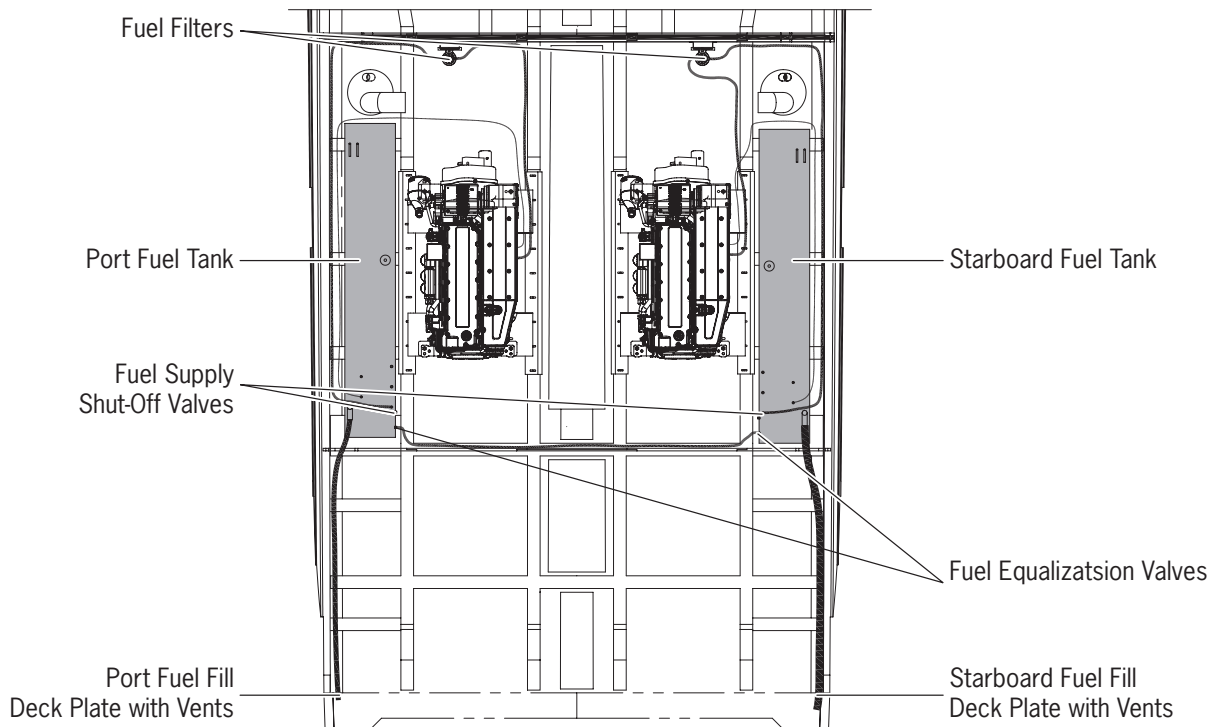
CAUTION

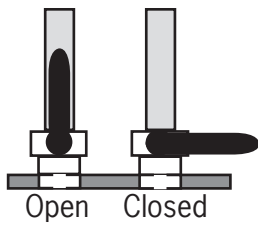
Over time, water can condense inside the fuel tanks, especially in areas with high humidity. This water can then react with the fuel in the tanks to create a mixture that can corrode the tanks from the inside.

To avoid this:

- **Use the fuel in the fuel tanks as often and as completely as possible.**
- **Keep the tanks full of fuel when the boat is stored and when it is used infrequently.**
- **Do not put alcohol-based fuels in the tanks.**
- **Check the fuel tanks for water accumulation at least once a year.**

FUEL SYSTEM - STANDARD AND WITH AUXILIARY TANK





Fuel Equalization Valves

Because the generator draws fuel only from the starboard fuel tank (when the auxiliary fuel tank is not present), the fuel levels in the tanks may become unequal. If this occurs, open the fuel equalization valves, located on the bottom near the aft inboard corner of each tank. When the fuel levels are equal, close the valves.



WARNING

Always close both fuel equalization valves when you are not equalizing the fuel levels in the fuel tanks. If one of the valves developed a leak while open and unattended, fuel could spill into the engine room undetected, creating a hazardous condition.

Fuel Supply Shut-Off Valves

Fuel supply shut-off valves are located on the top of the fuel tanks near the aft inboard corner. These valves must be open when operating the engines.

Sight Gauge Valves

In addition to the fuel gauges located at the helms, there is a visual fuel sight gauge mounted on each standard fuel tank. Each sight gauge has two valves, located at the top and bottom of the gauge. To visually check the fuel level in a tank, open both of that tank's sight gauge valves. When you are not using the sight gauge, close its valves.

Fuel Tank Vents

Each fuel tank is vented overboard. As the fuel tanks are filled during fueling, air is displaced from inside the tanks and escapes through the vents. Conversely, when the engines are running, air enters the fuel tanks through the vents to displace the fuel being used. Each fuel tank has two vents, one of which is combined with its respective fuel fill fitting.

Auxiliary Fuel Tank

The optional auxiliary fuel tank comes with a fuel transfer pump, located in the engine room on the port aft bulkhead. Use the pump to transfer fuel from the auxiliary tank to either of the main fuel tanks.

To transfer fuel:

1. Open the fuel transfer shut-off valve on both the auxiliary fuel tank and the main fuel tank(s) that you wish to transfer fuel to. The shut-off valve on the auxiliary tank is located on the top of the tank near the aft edge; the shut-off valves on the main tanks are located just forward of the fuel supply shut-off valves.
2. On the fuel transfer pump, select either the port or starboard main tank to transfer fuel to. Refer to the OEM information for details on operating the transfer pump.
3. Activate the transfer pump. When the desired amount of fuel has been transferred, turn the pump OFF. If you wish, you can then transfer fuel to the other main tank.
4. When you are done transferring fuel, close all of the fuel transfer shut-off valves.

To monitor the fuel level in the auxiliary fuel tank, use the fuel level gauge located on the DC Control Center.

Engine Room Ventilation

Your boat's engine room is equipped with a ventilation system consisting of intake ducts, exhaust ducts and bilge blowers. This system is designed to remove excess heat from the engine room. To operate the bilge blowers:

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.

2. On that panel:

a. Switch the DC Main Breaker Salon Panel circuit breaker "ON."

b. Switch the Bilge Blower Port and Starboard circuit breakers "ON."

The bilge blowers now operate automatically whenever the engines are running. To operate the bilge blowers manually, complete steps 3 and 4.

3. On the DC Control Center, switch the Bilge Blower Relay circuit breaker "ON."

4. Turn the bilge blowers "ON" using the Bilge Blower switch at either helm.

You must keep the engine room ventilation system in proper operating condition. Inspect the intake and exhaust ducts regularly to make sure they are free of obstructions and have not collapsed or torn. Inspect the blowers to make sure they are operating properly. Replace any worn components with new components of the same type.

Cooling System

Each propulsion engine has a closed cooling system which removes excess heat from the engine and its exhaust system. Closed systems use a freshwater/antifreeze mixture to cool the engine. This coolant mixture runs through a heat exchanger where the excess heat is transferred to seawater taken in through a seacock for each engine.

Before each cruise, make sure the cooling system seacocks are closed, then make sure the strainers are free of seaweed and other debris. Open the cooling system seacocks before you start the engines. The seacock for each engine is located in the engine room near the forward inboard corner of the engine; the strainers are located near the aft inboard corner of each engine. Make sure that you have a sufficient level of coolant mixture in each system.



CAUTION

If you intend to operate the boat with only one engine running, you must first close the cooling system seacock for the engine that will not be running. Failure to do so can flood the non-running engine with seawater, damaging it. Before you restart the non-running engine, open its seacock again.



CAUTION

Running an engine with an inadequate supply of antifreeze, or with obstructed or restricted seawater pickups or strainers can cause serious damage to the engine and its related systems.

If an engine temperature gauge registers a higher than normal temperature, the respective cooling system may need to be repaired. If the gauge needle moves quickly toward a high temperature, immediately shut off the affected engine and have its cooling system inspected and repaired.

Exhaust System

The exhaust system for each engine consists of an exhaust manifold, exhaust piping, a muffler, and the exhaust hoses used to vent the exhaust to the atmosphere. If the exhaust system contains leaks or obstructions, or has any other problem that prevents it from venting exhaust properly, carbon monoxide may escape and endanger you and your passengers. Check the exhaust system regularly for proper operation. Any change in engine noise could indicate an exhaust system problem and should be immediately investigated.

Fire Suppression System

A fire suppression system is installed in the engine room, and in the starboard and port bilge compartments. This system provides extra security in the event of an engine room or bilge compartment fire. Refer to the OEM information for details on operating the fire suppression system. The system can be activated either automatically or manually. The manual release controls are located in an outboard locker in the starboard cockpit.



WARNING

If the fire suppression system is activated, anyone in the engine room and bilge compartments must immediately evacuate those areas. The chemical used in the fire suppression system can cause asphyxiation. Once the fire is extinguished and the system is deactivated, ventilate the engine room and bilge compartments with fresh air before reentering them.

There are three fire suppression chemical tanks: one each in the engine room, and in the starboard and port bilge compartments

A fire suppression system monitor, installed at each helm, is wired to an ignition switch. The monitor's light should be "ON" when the ignition switch is turned "ON."

The system contains an engine shut-off circuit. When the system is activated, the engines, bilge blowers and generator automatically shut off for safety reasons. Do not attempt to restart the engines until the fire is out and any damage to the engines and fuel system has been repaired. An override switch, located on the system monitor, resets the engine shut-off circuit after the system has been activated, allowing you to restart the engines.

When replacing components while servicing the fire suppression system, you must use new components that have the same designation or that are equivalent in their technical and fire-resistance capabilities.

Helm Displays and Gauges

Each helm is equipped with a complete set of digital engine displays and analog fuel and rudder gauges on the instrument panel. These allow you to monitor the operation and condition of your boat's propulsion systems while underway. The side of the instrument panel that the displays and gauges are on (port or starboard) determines the respective engine that the displays and gauges are for. Familiarize yourself with the displays and gauges before starting the engines for the first time. Refer to the engine OEM information for details on the displays.



CAUTION

Do not start the engines until you have read and understood the engine OEM information.

NOTE: The fuel gauges are not calibrated and should not be regarded as an accurate method of measuring the amount of fuel in the tanks. Both fuel gauges are "OFF" until the ignition switch for the port engine is turned "ON."

Gauge Maintenance

The analog gauges on the helm instrument panel should be protected from the sun and weather when not in use. The gauges are not waterproof. Protecting them from the elements prolongs their life.

NOTE: Small beads of moisture (condensation) can form behind the glass bezel on some gauges. This does not mean the gauge is defective. The Marquis Limited Warranty does not cover the replacement of gauges that are cosmetically affected by condensation.

The gauges can be affected by static electricity that may build up on their glass bezels. To help reduce the static electricity and thus improve the gauges' accuracy, periodically wash the bezels with warm water and a mild liquid detergent.

Helm Controls

The helm controls allow you to engage the boat's engines, control the boat's speed and engine RPMs, and control the direction in which the boat is traveling.

Shift/Throttle Levers

The shift/throttle levers are located on the starboard side of the steering wheel. The outboard lever controls the starboard engine and the inboard lever controls the port engine. The engines can be shifted/throttled independently to improve maneuverability in tight quarters. Refer to the engine OEM information for details on using the shift/throttle levers.

Engine Synchronizer

Because your boat has dual engines, it is recommended that you operate the engines at the same speed while cruising. This reduces engine noise and vibration, and improves engine efficiency.

The engine synchronizer allows you to electronically and mechanically interconnect both engine shift/throttle levers. This allows you to increase and decrease engine speed using one lever, and keeps the engines precisely synchronized. Refer to the engine OEM information for details on operating the engine synchronizer.

NOTE: Aligning the shift/throttle levers with each other does not necessarily mean the engines are synchronized. To accurately synchronize the engines, use the synchronizer.

Steering

Your boat uses a power-assisted hydraulic steering system. This system is superior to a mechanical steering system because it provides better response for large boats.

To activate the hydraulic steering system:

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.
2. On that panel, switch the Steering Pump circuit breaker “ON.”

For the hydraulic steering system to operate properly, it must have an adequate source of hydraulic fluid and sufficient pressure within the hydraulic pump and lines. Refer to the OEM information for details on operating and maintaining the steering system.

Preparing for Cruising

Follow the steps described below to safely fuel your boat and operate its engines.

Fueling

1. Make sure that your boat is securely moored.



WARNING

Although your engines use diesel fuel, gasoline is usually present at marine fuel filling stations. As a result, steps 2 - 6 below are important to observe.

2. Close all portlights, windows, hatches and doors.
3. Turn OFF all devices that use electricity to operate or create electricity.
4. Extinguish all open flames and smoking material on the boat and in the area around the fuel dock.
5. Turn all battery master disconnect switches to the “OFF” position.
6. Have all guests and passengers leave the boat. Only the fuel handlers should be in the area.
7. Estimate the amount of fuel you wish to take on.
8. Select the fuel tank you wish to fuel first.

9. Remove the appropriate DIESEL fill deck plate using the cap removal tool supplied with your boat. The deck plates are located on either side of the cockpit transom.



CAUTION

Avoid spilling fuel on the gelcoat surface of your boat. Fuel can stain the gelcoat and damage the hull accent stripes.

10. Your boat's fuel tanks are designed to take on fuel at a maximum rate of 9 gallons per minute (GPM) when the tank is between 25% and 75% full. During this time the pressure inside the tank must not exceed 4 psi. Be aware that many marine fuel pumps can deliver fuel at rates up to 35 GPM. This high fueling rate should never be used with your boat as it could damage your fuel system.

When fueling a tank that is either nearly empty or nearly full, decrease the fueling rate. This helps prevent fuel surge when the tank is empty, and back up and spillage when the tank is full.

Begin pumping fuel into the fuel tank at a rate of no more than 9 GPM. When the tank is close to full, reduce the fueling rate to less than 9 GPM.
11. Monitor the fuel tank's visual sight gauges. When the fuel tank is almost full, reduce the fueling rate and monitor the fuel backing up into the fill tube.
12. Replace the DIESEL fill deck plate.
13. Repeat steps 9 - 12 for the other fuel tank, and for the optional auxiliary fuel tank.
14. Wipe up all spilled fuel.

Pre-Start Checklist

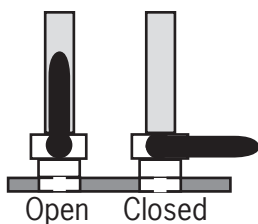
1. Read and understand this Owner's Guide and all OEM information.
2. Check the fuel gauges to verify that you have sufficient fuel for your trip.
3. Inspect the engine room:
 - a. Sniff for fuel vapor.
 - b. Check the bilge water level.
 - c. Check for oil in the bilge.
 - d. Check the crank case oil level in each engine.
 - e. Make an overall inspection of the engine room to look for signs of potential problems.
 - f. Follow all maintenance instructions as detailed in Section 7 - Maintenance.
4. Turn the master disconnect switches for both engine battery pairs to the "ON" position.

NOTE: If your boat has MTU engines, there is an additional master disconnect switch for each engine battery pair. These additional switches are located in the engine room on the aft bulkhead, on the MTU control panels.

If needed, also turn the master disconnect switches for the Bow Thruster, Stern Thruster and Windlass to the “ON” position.

5. Provide power to the circuit breakers on the DC Bus Distribution Panel.
6. On that panel:
 - a. Verify that all of the safety circuit breakers are “ON.”
 - b. Switch the DC Main Breaker Salon Panel “ON.”
 - c. Switch the Bilge Blower Port and Starboard circuit breakers “ON.”
7. On the DC Control Center:
 - a. Switch the Panel Main circuit breaker “ON.”
 - b. Switch the Bilge Pump Relay 1 - 5 circuit breakers “ON.”
 - c. If you have navigation equipment installed at the helm and are going to use it, switch the Converter Lower Helm, Converter Bridge 1 and Converter Bridge 2 circuit breakers “ON.”
 - d. Switch “ON” any other circuit breakers for equipment or lights that you may need.
8. Verify that all safety gear is onboard and in proper operating condition. Make sure your boat carries all safety equipment required by Federal, State and local regulations.
9. Verify that you have an adequate supply of fresh water.
10. Check the level of waste in the waste tanks. Empty them if necessary. Refer to Section 4 - Emptying the Waste Tanks.
11. Disconnect and retract the Cablemaster cords and/or disconnect and store the shore power cord(s) and shore water hose.

Starting the Engines



Refer to the engine OEM information for details on starting the engines.

1. Open the cooling system seacocks for both engines.
2. Move both shift/throttle levers to neutral.
3. Select the engine you wish to start first. NEVER start both engines at the same time.
4. Place one hand on the shift/throttle lever of the engine you are starting. With the other hand, turn the ignition key.
5. When the engine is idling smoothly, start the other engine in the same manner as the first engine.

After the Engines Have Started

1. Check the engine display. Make sure all readings are within the normal range.

**DANGER**

The engine room contains moving, hot machinery. Keep your hands, feet and body out of the engine room while one or both engines are operating.

2. Look into the engine room and visually inspect the fuel system hoses and exhaust hoses. If you see a leak or suspect that anything is out of order, shut off the engines and investigate. Identify and correct the cause of any problem before restarting the engines.
3. Let the engines warm up until the temperature display readings begin moving up.
4. Make sure all navigation systems are operating properly.
5. Periodically perform a visual inspection of the engine room while underway.

Launching the Boat

Have a professional launch your boat. Your dealer can either provide experienced people to do this or recommend someone.

Navigation

Understanding navigation is very important when operating your boat on the open seas. Instructions on how to navigate your boat are beyond the scope of this guide. Marquis encourages you to read *Chapman's Piloting and Seamanship* and obtain instruction regarding how to navigate your boat.

Charts

You can obtain charts of the waters in which you intend to navigate from the National Ocean Survey, a branch of the National Oceanic and Atmospheric Administration in Washington D.C. The NOS offers a publication listing the charts you will need for your area; however, this listing may not include inland rivers. Charts of inland rivers are also available from the appropriate district office of the U.S. Army Corps of Engineers. Your dealer may also have charts of the waters in which you intend to cruise.

Keeping your charts up-to-date is a very important part of navigation. The Weekly Notice to Mariners available from the Defense Mapping Agency or the U.S. Coast Guard is an excellent resource for updating charts.

Compass

The compass is the most important piece of navigation equipment onboard your boat. To operate properly, the compass must be free from interference by local magnetic influences and electrical components. Refer to the OEM information for details on using and maintaining the compass. When it is time to compensate your compass, Marquis recommends having it done professionally.

Horn

If you are navigating in fog or at night, use your boat's horn to alert other boaters of your presence. The horn meets U.S. Coast Guard standards.

Depth Sounder

An optional depth sounder can help you avoid entering waters that are too shallow for your boat and can aid in navigation.

Shallow Water Operation

Always pay attention to the depth of the waters in which you are cruising. Do not venture into waters which are too shallow for your boat's draft. Shallow water navigation can be very hazardous. If you do find yourself in shallow waters, reduce speed immediately. Consult nautical charts to determine your position. Try to plot a course out of the shallows through waters deep enough for your boat's draft. If your boat runs aground, radio for help and wait until it arrives. Do not attempt to relaunch your boat. You may do serious damage to your hull or underwater gear.

Controlling the Boat

Every boat owner should know how to perform the following procedures competently. Do not attempt any of these procedures without first receiving appropriate training.

Loading

When you load items onto the boat, have someone on the pier hand them to you after you have boarded the boat. Stow all items securely to prevent them from shifting when the boat is in motion. If your boat is loaded near capacity or if seas get rough, distribute the weight evenly and keep the load low. Don't make any abrupt changes in its distribution. Shift the load or move about only after stopping or slowing the boat.

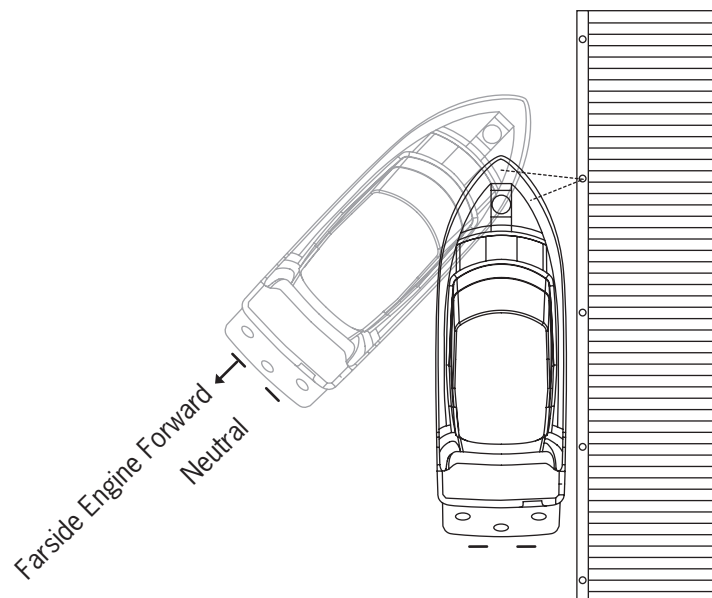
Casting Off and Docking

Docking and casting off can be hampered by wind and current. It is important to use the current by approaching or leaving with the current instead of fighting against it. Also, the operator should adequately fender his boat against collisions with docks or other boats.

Leaving a Pier or Mooring

Getting underway from a pier is normally accomplished by taking in all lines except the bow spring. With a neutral rudder, power the boat forward using only the engine farthest from the pier. The boat will pivot around the bow spring line, moving the stern out and away from the pier. A fender should be placed between the bow and the pier to prevent scraping as the boat pivots about the bow spring. Once the stern is clear of boats and other obstructions, take the bow spring in and back the boat away.

At marina anchorages, boats are often secured to a mooring buoy. Fouling your propeller with a mooring line is the principal hazard when leaving a mooring. If you use a dinghy to reach your boat, make sure the dinghy line does not foul the propeller.



After getting onboard, start the engines and send someone forward to slacken the line. Release the line. In a river with current, the boat will gain headway with the current. After you are clear of the buoy, power the boat forward. In a calm bay, if there is neither wind nor current, back the boat away a few boat lengths. As you power forward, keep the buoy in sight and give it ample room until you are clear. Run slowly until you clear the anchorage to avoid creating a nuisance with your wake.

Landing at a Pier

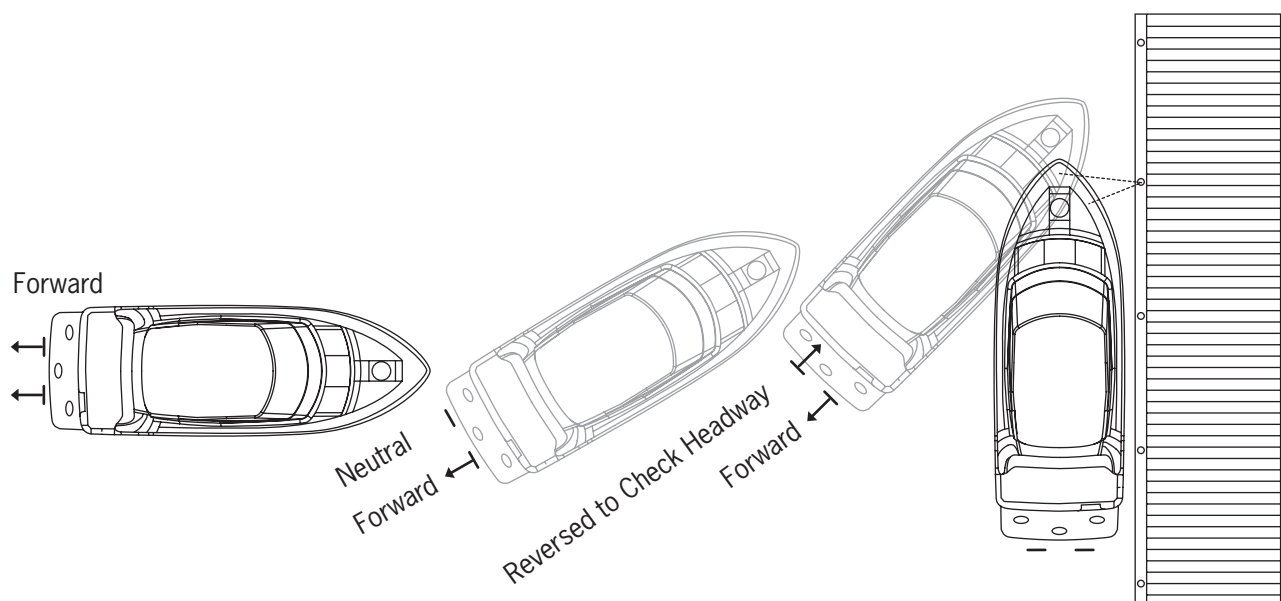
To land at a pier, approach the pier at a right angle. If you desire a starboard side landing, place the rudders to port and reverse the port engine to check headway. Leave the starboard engine in forward gear to swing the boat parallel to the pier. For landings on the port side, turn the rudders to starboard and put the starboard engine into reverse as the boat comes in. You may have to shift into and out of gear to control the boat's speed.

Picking Up a Mooring

As you return to the anchorage, approach your mooring at slow speed. Take note of how other boats are lying at their buoys. They are heading into the wind or current and your approach course should be roughly parallel to their heading. Stay clear of other moorings to avoid fouling them. If you tow your dinghy, station a crew member at the helm to keep the dinghy line from fouling the propeller.

Shift the engines into neutral when you estimate that the boat's forward momentum will carry you to the buoy. Station someone at the bow with a boat hook to pick up the pennant float. If you are about to overshoot your mark, check headway as the bow comes up to the buoy. If you fall short, a few turns of the propeller should get you to the buoy. Keep the engine running until the pennant eye has been secured on the bitt or bow cleat.

If your crewman can not reach the pennant or if you overshoot, get clear and calmly try again.



Maneuvering

The propellers on your boat rotate in opposite directions. With only the port propeller rotating, your boat tracks forward and to starboard in forward gear and to port in reverse gear. With only the starboard propeller rotating, your boat tracks forward and to port in forward gear and to starboard in reverse gear.

With both propellers rotating at the same speed, the rudders amidships and the engines in forward gear, your boat tracks straight forward.

When the boat is moving backward, its rudders are not as effective and the side force from the propellers is used to steer the boat.

Maneuvering Astern

Backing a boat may be necessary in a crowded marina. Your boat's twin engines allow the boat to track straight astern or to either side. When backing, be sure to keep your trim tabs up. To make a turn to port, shift the port engine to neutral. A starboard turn astern is made by shifting the starboard engine to neutral.

Check sternway (stop reverse motion) by shifting your engines to forward gear and throttling forward.

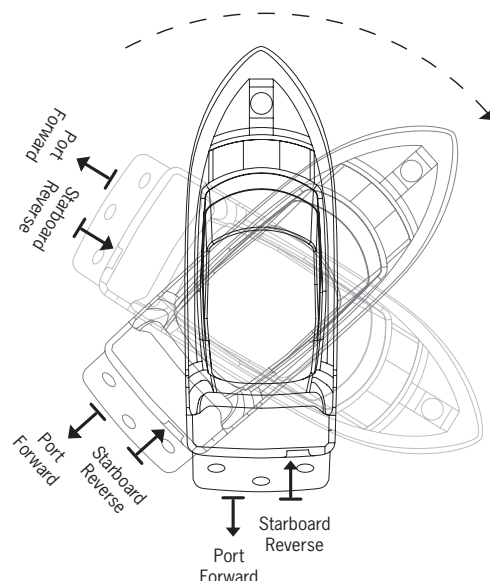
Full stern turns can be executed, but watch the bow. The bow cuts a much wider arc than the stern and collisions could occur in crowded areas.

Checking Headway

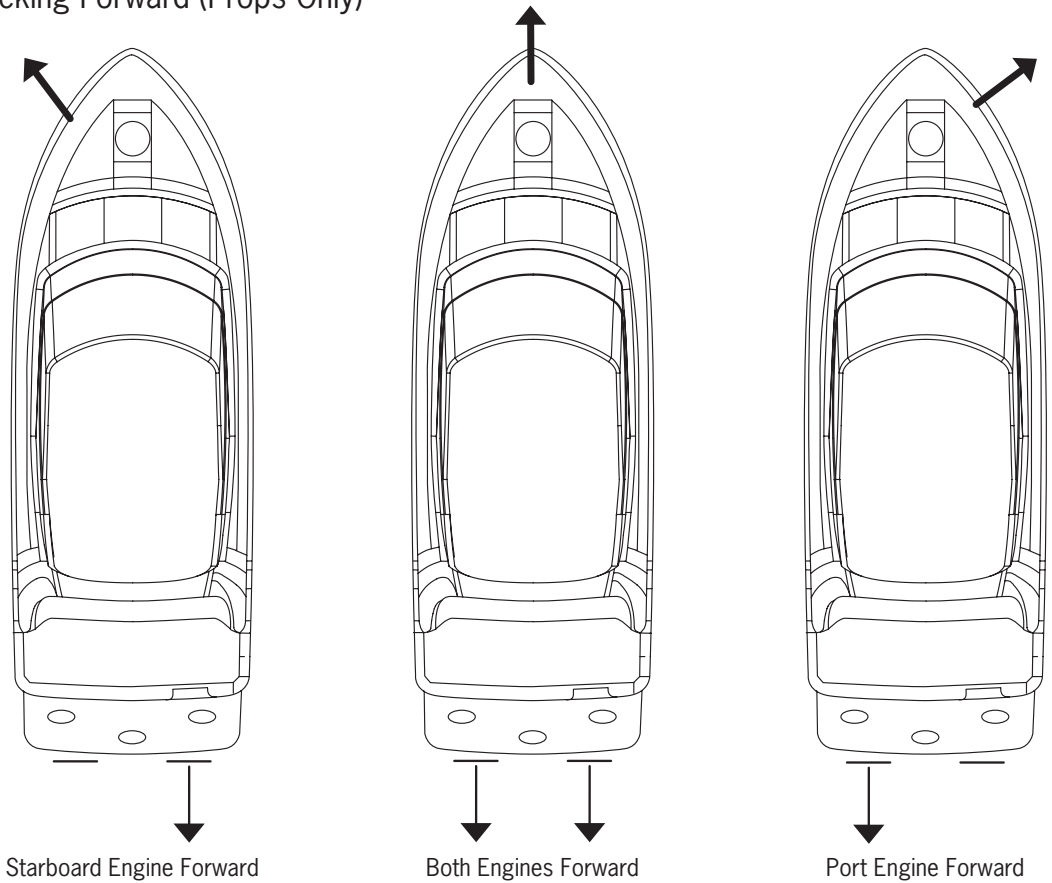
Stopping the boat's forward motion is referred to as "checking headway." You should learn how to confidently stop your boat within any required distance. You can check headway by shifting engines to neutral and coming to a complete stop over a long distance, or by reversing engines and stopping within a shorter distance.

Close Quarters Turns

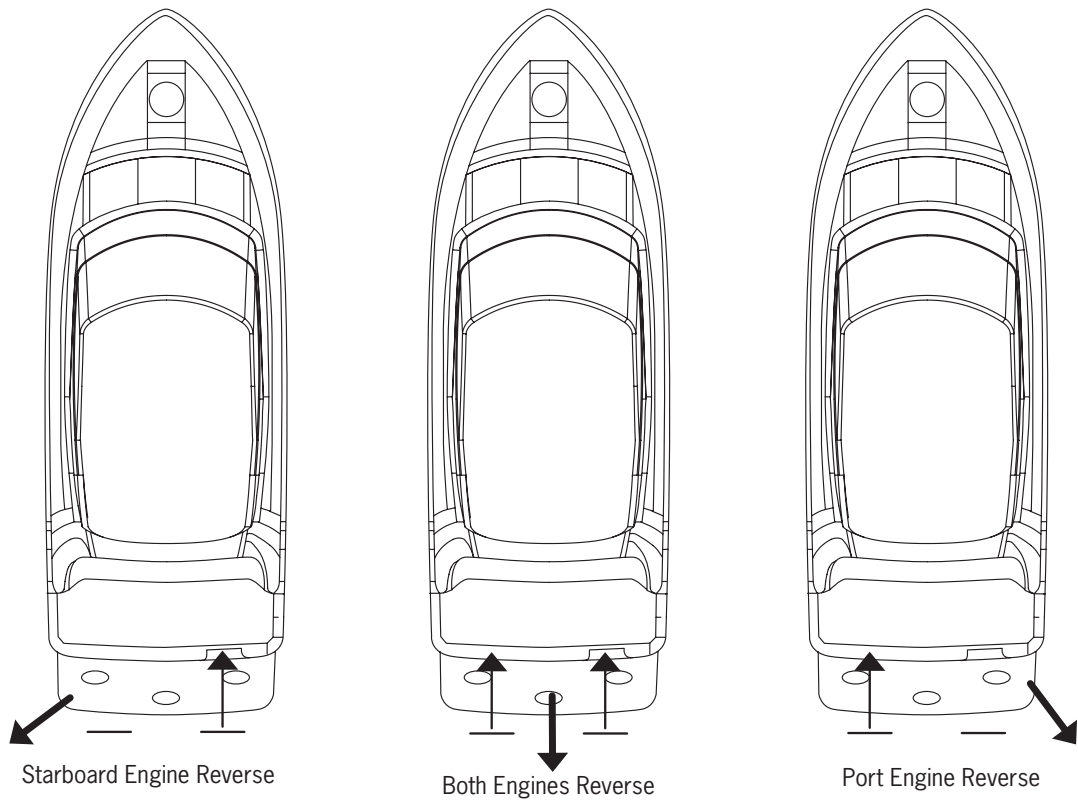
To execute a close quarters turn, check your headway, then shift one engine into reverse while shifting the other into forward gear. As you advance the throttles, the opposing forces cause the boat to pivot about a point centered between the propellers. You can assist the rate of turn by turning the rudders in the direction of the turn.



Tracking Forward (Props Only)



Tracking Astern (Props Only)



Towing

Always offer assistance to a vessel in distress. However, towing a capsized boat or a boat with a damaged hull is not recommended. In these situations, lend aid to the occupants and call the proper authorities. Remember, you are obligated to lend aid to any person in distress, but not to the vessel. If you believe your vessel can not tow the vehicle in distress, do not attempt it. One disabled boat is better than two.

Anchoring

An anchor's holding power depends on its weight and the length of the anchor line. The most effective length is six to seven times the depth of the water you intend to anchor in. For example, if the water is 10 feet deep, you should have 60-70 feet of anchor line.

Approach your selected anchor site from downwind. Come to a dead stop over the spot where you want to drop anchor. Have a crew member lower the anchor. When the anchor hits bottom, reverse engines and slowly move the boat backward to pay out more anchor line as the crew member keeps a slight tension on the line. When the proper length is out, the crew member can snub the line by winding it around the bow cleat. This should cause the anchor flukes to dig in and hold effectively.

Check for anchor drag. Immediately after anchoring, observe shoreline landmarks. After thirty minutes, observe the landmarks again. If the points of reference have changed, reset your anchor.

When weighing (pulling in) your anchor, pull the line in until it is vertical. When the line is taut, a hard tug will pull the anchor's shank up. If the anchor is stuck, wrap some of the line around a bow cleat and keep tension on the line. The boat's momentum may free the anchor. If there is a swell, wind the line around a bow cleat when the bow drops into a wave trough. As the bow lifts, it may free the anchor. If neither of these methods works, pay out a few feet of line, secure it around the bow cleat, and maneuver around the anchor. Keep the line tight until you find the angle that pulls the anchor loose.

A TIP FROM CARVER!

To avoid potentially damaging stress on the windlass, always tie off the anchor rope to the anchoring cleat.

An electric windlass simplifies the above procedures. Follow the above procedures and use the windlass control at the helm to drop anchor. To relieve strain on the windlass, hooks called *devil's claws* engage the chain when the anchor is down.

If you intend to stay at anchor overnight or if you anchor your boat close to another structure, consider dropping another anchor from the stern. This prevents your boat from swinging around if the wind or current shifts.



DANGER

Be aware of Carbon monoxide (CO) poisoning while anchoring. Refer to Section 1 - Boating Safety for detailed safety precautions.

You may also need to anchor in a strong wind. If you drop your spare anchor, make sure the two anchors are laid out at an angle. If both anchors are set in-line and one of them drags, it may cut a trough for the other anchor to follow.

Stern Anchors

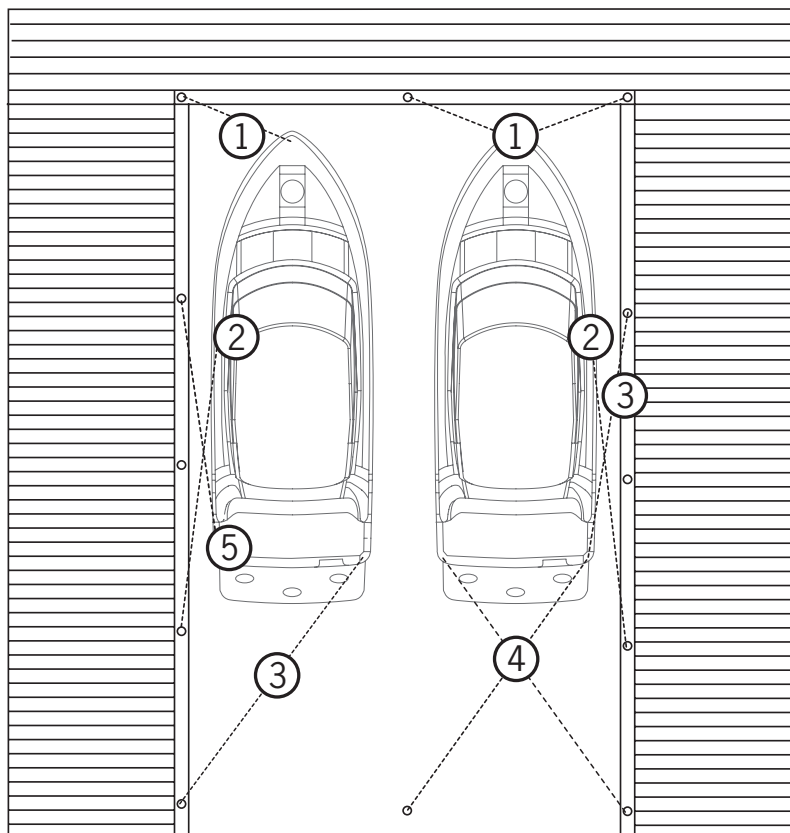
In some anchorages, boats use bow and stern anchors at the same time. To get these anchors down, drop the bow anchor first, then pay out extra anchor line (15-18 times the depth). Drop the stern anchor and adjust the length of line payed out on both anchors as necessary.

Mooring Lines

It's a good idea to familiarize yourself with mooring line terminology and using mooring lines. If necessary, obtain training on mooring your boat. Learn how and when to tie the various knots used in seamanship. Boats that are not moored correctly can suffer and cause serious damage. The following information serves only as a guide to mooring your boat.

The mooring illustration above demonstrates possible mooring lines for a small vessel. These lines include the (1) bow line, (2) after bow spring, (3) after quarter spring, (4) stern lines and (5) forward quarter spring. Of the two dockings shown, the left one shows how to tie up when docking your boat in an alongside berth. The docking shown on the right is used when tying up at four corners of the boat.

The two spring lines are crossed and running to separate deck cleats. If possible, the stern line should be run to the offshore quarter cleat. Spring lines are useful in preventing undesired movement ahead or astern in a berth; they also keep a moored vessel in position when there is a significant rise or fall in tide.



Getting Underway

It takes training and experience to become an “expert yachtsman.” Reading and understanding this Owner’s Guide gives you only part of the knowledge you’ll need to operate a boat safely and skillfully.

Marquis owners have a wide range of abilities, from seasoned yachtsmen with years of experience to absolute beginners with a new-found love for the water. Be honest with yourself in appraising your level of skill.

Shakedown Cruise

Before taking your boat on its first outing, be sure that the following tasks have been completed.

1. Your Marquis Dealer has completed Pre-Delivery commissioning. This inspection is documented on the Pre-Delivery Service Document and is signed by the dealer.
2. All warranty registration cards have been completed and mailed.
3. You have read and understand this Owner’s Guide and all OEM information.
4. The safety equipment onboard your boat is in compliance with federal, state and local regulations.
5. Your boat has been documented or registered and displays the appropriate identification on the hull.
6. A representative of your Marquis Dealer has reviewed the operation of the boat and its systems with you and answered all of your questions to your satisfaction.

If possible, pick a calm day for your first outing. The shakedown cruise with a new boat is not the best time to bring friends or guests along. Entertaining guests can distract you from the real purpose of the cruise, which is to familiarize yourself with your new boat. Bring only those people (spouse and children) who will make up your regular crew. Invite the sales person who sold you the boat or a member of your Marquis Dealer’s service staff along for the ride.

Carry a pad and pencil with you during this first outing. Write down any questions that come to mind during the cruise so you can discuss them with your dealer.

Follow the procedures outlined at the beginning of this section for fueling and starting the boat’s engines.

This may be the first time you have been in total command of your new boat. Proceed slowly. Have fun but remember that the objective of the cruise is to learn more about how your boat operates and handles. Operate the engines at different RPMs. Try different trim angles. Monitor the gauges. Practice backing down and turning slow speed tight corners that simulate docking maneuvers.

Operating at Planing Speed

Your boat has a “planing” hull. A planing hull skims “over” the water rather than “through” it. To do this, however, your boat first has to reach a certain speed, called “planing speed.”

When you first accelerate from a dead stop, the trim angle of the boat increases, causing the bow to rise and the stern to drop. If you continue to accelerate, the boat eventually achieves plane, which means the bow slowly drops to a more level attitude.



CAUTION

It is important to get on plane as soon as possible and avoid speeds that cause the boat to plow through the water with the boat in a bow-high attitude. A bow-high attitude obstructs your vision and limits the boat's handling and performance capabilities.

Once the boat is on plane, you can back the throttles off to a point where the hull is still planing but the engines are operating at a fuel-efficient speed.

Trim Tabs

Your boat is equipped with a set of electrohydraulic trim tabs. Trim tabs help the boat get on plane by allowing you to adjust the attitude of the boat for variables such as load, passengers, seas or wind. Under normal conditions your boat does not need adjustments to the trim tabs to achieve plane. Use the tabs at planing speeds to make minor adjustments in the fore-to-aft and beam-to-beam angle of the boat.

To use the trim tabs:

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.
2. On the panel switch the DC Main Breaker Salon circuit breaker “ON.”
3. On the DC Control Center:
 - a. Switch the Panel Main circuit breaker “ON.”
 - b. Switch the Trim Tabs circuit breaker “ON.”
4. A set of trim tabs controls are located at the helm. The controls consist of two switches. The port switch controls the port tab; the starboard switch controls the starboard tab. Each switch is labeled “BOW UP” and “BOW DOWN.” Before advancing the throttles, press both switches on the “BOW UP” side for 5 seconds. This lifts the trim tabs to the full “up” position.
5. Advance the throttles to bring the boat on plane. Adjust the engine RPMs for cruising speed.

**CAUTION**

Do not overtrim your boat. When adjusting the trim tabs, press their control switches for only one-half second at a time, then allow the boat to respond. Continue to adjust the trim tabs in this manner until the boat is at the desired trim angle. Over-trimming can cause the bow to veer and may lead to loss of control. Always reset the trim tabs to the “BOW UP” position before advancing throttles to achieve plane. Accelerating the boat to planing speed while the trim tabs are lowered can cause a loss of control.

**CAUTION**

When the seas are at any angle to the boat's stern, put the trim tabs in the full “BOW UP” position. Do not change the trim tabs' position until the seas are no longer at the stern.

6. Use the trim tabs individually to make beam-to-beam adjustments. If the majority of your passengers are sitting on the port side, you may find that the starboard side of your boat is riding higher than the port side. Use the “BOW DOWN” side of the starboard trim tab switch to adjust the trim.

If your passengers decide to shift to the other side of the boat, level the boat by pressing the “BOW UP” side of the starboard trim tab switch for a few seconds. This undoes your previous adjustment. Then, use the “BOW DOWN” side of the port trim tab switch to adjust the trim.

7. The trim tab switches can be used together to bring the bow of the boat to a lower attitude. This adjustment is often used when running into choppy seas. Bringing the bow down uses the sharper part of the boat's “V” hull to break through waves. Use the “BOW DOWN” side of both trim tab switches simultaneously to adjust the trim. Be careful when making bow down adjustments. Excessive bow down trim can cause considerable bow spray which hampers visibility and reduces control of your boat.

Maintenance Schedule

The maintenance activities and their intervals listed on the following pages are provided as guidelines only. The ideal maintenance activities and maintenance schedule depend on the components installed in your boat and the manner and environment in which you use your boat. The more frequently you use your boat, the more often maintenance needs to be performed. If you use your boat in salt water, it requires more maintenance, especially on its exterior.

For instructions on when and how to maintain many of your boat's components, refer to the OEM information.

Maintenance activities are divided into four types:

Type A Maintenance

Perform Type A maintenance 48 hours after the first launching of your boat, and 48 hours after launching your boat following a period of onshore storage.

Type B Maintenance

Perform Type B maintenance after the engines have operated for 25 hours following launching, whether your boat is new or coming out of onshore storage.

Type C Maintenance

Perform Type C maintenance semiannually or after the engines have operated for 100 hours, whichever comes first.

Type D Maintenance

Perform Type D maintenance annually or after the engines have operated for 200 hours, whichever comes first.

Maintenance Log

Use a maintenance log to keep a record of the maintenance activities you perform on your boat. The log should list both the activities described in the following charts and the maintenance activities for the OEM equipment as recommended in the OEM information. Make copies of the log and keep the copy in a safe place.

	Type A	Type B	Type C	Type D
ENGINES AND DRIVE SYSTEM				
Perform maintenance as outlined in the engine OEM information.	Refer to OEM Information	Refer to OEM Information	Refer to OEM Information	Refer to OEM Information
Inspect water intake hoses and connections.		X	X	X
Inspect exhaust system hoses and connections.	X	X	X	X
Inspect exhaust guard covers.				X
Check prop for balance and nicks.				X
Check strut bearings.				X
Check rudder alignment.				X
Check all thru-hull fittings.				X
Inspect shaft seals.	X	X	X	X
Check engine and shaft alignment.	X	X	X	X
Spray ignition switch with contact cleaner.				X
Tighten engine mounts.		X		X
Weigh fire suppression chemical tank.			X	X
CONTROL SYSTEM				
Make any necessary throttle and shift adjustments.		X		X
STEERING SYSTEM				
Inspect linkage and connections.		X		X
Inspect hydraulic fluid level.	X	X	X	X
Inspect rudder seals.	X	X	X	X
Inspect tiller tie bar linkage.		X	X	X
Inspect trim tab reservoir.		X	X	X

	Type A	Type B	Type C	Type D
ELECTRICAL SYSTEM				
Inspect and clean batteries.			X	X
Check battery fluid levels.		X	X	X
Check operation of all 12- and 24-volt equipment.	X	X	X	X
Check operation of all AC equipment.		X	X	X
Inspect shore power cords.			X	X
Inspect generator water intake and discharge.		X	X	X
Inspect zincs anodes.	*	*	*	*
Perform generator maintenance.	Refer to OEM Information	Refer to OEM Information	Refer to OEM Information	Refer to OEM Information
FUEL SYSTEM				
Clean engine fuel filters.		X	X	X
Inspect for fuel leaks.	X	X	X	X
Inspect fuel lines for signs of chafe.		X	X	X
FRESH WATER SYSTEM				
Flush water tank(s) and system.			X	X
Clean in-line water filter.			X	X
FIBERGLASS / WOODWORK				
Clean fiberglass.	X	X	X	X
Wax hull and all non-tread areas.		X	X	X
Repair chipped fiberglass.				X
Clean interior woodwork.				X
Refinish optional teak cockpit table.	**	**	**	**

* Inspect the zinc anodes at least once every two weeks. Check with your marina or consult other local boat owners to determine the average life expectancy of your boat's zinc anodes. If you notice a rapid deterioration of the zinc anodes, have a professional yacht corrosion specialist check your boat, local seawater and dock.

**Carver recommends that you refinish the optional teak cockpit table every two years. Refer to Section 7 - Woodwork for details.

	Type A	Type B	Type C	Type D
INTERIOR				
Perform maintenance on the heads.	Refer to OEM Information	Refer to OEM Information	Refer to OEM Information	Refer to OEM Information
Inspect thru-hull fittings.	X	X	X	X
Clean refrigerator/freezer.			X	X
Clean range and microwave oven.			X	X
Lubricate door hinges and locks.			X	X
Clean vinyl fabrics and wall coverings.			X	X
Spot clean woven fabrics.				X
Spot clean carpet.				X
EXTERIOR				
Check compass for magnetic deviation.				X
Check trim tab system for leaks.		X		X
Check tightness and caulking of deck hardware.				X
Clean upholstery.			X	X
Clean plexiglass surfaces.				X
Lubricate hinges, latches, and locks.			X	X
Wash weather covers.				X
BILGE SYSTEM				
Check hull drain plug.	X	X		X
Check and test bilge pumps.	X	X	X	X
Inspect sump pump(s).			X	X
Check and test bilge blowers.	Each time before starting engine	Each time before starting engine	Each time before starting engine	Each time before starting engine

Exterior Maintenance

The following paragraphs explain how to maintain the various materials present outside your boat's cabin to help keep the boat looking new.

Fiberglass Surfaces

The exterior fiberglass surfaces of your boat are coated with a protective layer of gelcoat. Gelcoat forms a hard, smooth and durable surface. It does, however, contain microscopic pores that, over time, can collect dirt and discolor if the gelcoat is not kept clean.



CAUTION

Do not use abrasive cleaners when washing your boat. Abrasive cleaners scratch and dull the gelcoat.

Wash the boat with fresh water after each outing to help keep the gelcoat clean. If you operate your boat in salt water, wash it at least once every week, even if it hasn't been used since the last washing. Periodically wash the boat with a solution of fresh water and mild soap. Use a sponge to wash smooth surfaces and a stiff nylon or natural bristle brush to wash nonskid surfaces.



WARNING

Do not wax the nonskid surfaces. Waxing them makes them slippery and dangerous to walk on.

Wax all non-tread areas at least once a season. Use a high quality, non-yellowing, marine wax. Waxing your boat provides a shiny surface and seals the pores in the gelcoat, making it easier to keep clean.



CAUTION

The continued and frequent use of abrasive polishing compounds eventually erodes the gelcoat.

Gelcoat eventually dulls with age, much like the paint on your car. When it does this, you can restore the gelcoat's luster using an electric buffer and a very fine grade polishing compound. Ask your Marquis Dealer what brand and grade of polish to use.

Stress cracks are common on all fiberglass boats. In the majority of instances these cracks are cosmetic and limited to the gelcoat surface only. Gelcoat stress cracks are rarely an indication of structural problems. If you discover stress cracks in your boat contact your Marquis Dealer.

NOTE: The repair of cosmetic (non-structural) gelcoat stress cracks is not included under the terms of the Marquis Limited Warranty.

Gelcoat Repair

Cosmetic repair of minor gelcoat nicks and scratches is not difficult nor does it require the use of special or unique tools. Any boat owner with a little practice can make visually satisfying repairs. Repairs to fiberglass laminates or structural fiberglass components are best left to the experienced technicians at your Marquis Dealer.

A gelcoat repair kit is available from your Marquis Dealer (Carver part number 82036-03). This kit includes color matched gel, gel hardener and detailed instructions on making gelcoat repairs.

Gelcoat Blisters

While fiberglass is a durable and economical material, it is not indestructible. The most commonly known problem associated with fiberglass is blistering. These blisters generally form in the gelcoat or in the outer most layer of laminate. They can range in size from microscopic to two inches or larger in diameter.

The appearance of fiberglass blisters does not indicate structural problems or faulty hull lamination. Gelcoat blisters form through a natural process and are quite common. If you discover blisters on the underwater portion of your boat's hull, contact your Marquis Dealer.

Hull Bottom

The underwater portion of your boat's hull is coated with a high-quality, factory-applied coat of anti-fouling bottom paint, applied after the hull has been carefully prepared. The paint has a high copper content and anti-fouling elements that retard the growth of marine life on the bottom of your boat's hull. The anti-fouling elements in this paint have a limited life span, usually from one to three years, depending on how and where you use your boat.

Inspect the hull bottom once a year. If you see gelcoat showing through the bottom paint, repaint the hull. Be sure to use a paint that is compatible with the factory-applied paint. Failure to do so can void your bottom paint warranty. Also make sure the paint is formulated for the type of water you operate the boat in. See your Marquis Dealer for assistance in selecting an appropriate bottom paint.

To prepare the hull bottom for painting, lightly sand the existing paint with 80 grit or 100 grit sandpaper. Remove all dirt and sanding residue from the hull. Apply the new paint using a brush, roller or sprayer. If you wish to apply a second coat, allow the first coat to dry before proceeding.

Underwater Metal Components

The underwater portion of your boat's hull has been carefully prepared, primed and coated with a high-quality, antifouling bottom paint at the factory. However, the underwater metal components, including the shafts, struts, propellers, trim tabs and thru-hull fittings, were NOT primed or painted at the factory. You are responsible for priming and painting all of the underwater metal components. Use a high-quality primer and anti-fouling paint. Reprime and repaint these components whenever bare metal is visible.

If you need additional information on priming and painting the underwater metal components, please contact your Marquis Dealer's Service Department.

Caulking and Sealants

Deck fittings, rail bases, window and all underwater fittings have been sealed with the finest quality sealants. These sealants, however, do not last indefinitely. The working action of the boat and the expansion and contraction caused by variations in outside temperature eventually break down the sealant.

Fittings that have begun to leak must be resealed. Remove the fitting and clean the old sealant from both mating surfaces. Reseal the fitting using the sealant recommended by your Marquis Dealer.

Stainless Steel Rails and Hardware

Stainless steel is not rust-resistant nor is it stain-resistant. When left in contact with the marine environment it does rust and corrode. Proper care helps keep the stainless fittings on your boat looking bright and shiny.

Clean the stainless steel rails and fittings after each outing with either soap and water or glass cleaner. If you operate your boat in salt water, clean the rails and fittings at least once every week, even if the boat hasn't been used since the last cleaning.

If you discover any rust, remove it immediately. Failure to do so leads to irreversible pitting. Use brass, silver or chrome polish to remove rust on stainless steel. Wax the stainless fittings and rails to help protect them from the elements and keep them looking their best. Use the same wax you use on the fiberglass surfaces of the boat.



CAUTION

Never use abrasives like sandpaper or steel wool to clean stainless steel fittings or rails. Never use mineral acids or bleach to clean stainless steel. Never let stainless steel come into prolonged contact with iron, steel or other metals which cause contamination leading to rust or corrosion.

Decorative Striping Tape

A variety of decorative stripes are used on the exterior of your boat. Striping tapes are custom-made to Marquis's color and size specifications. Replacement striping tape is only available through Marquis Dealers. To remove a damaged section of tape, heat the area with a hair dryer. This softens the adhesive and makes the tape easier to remove. To remove any adhesive residue, use acetone.



CAUTION

When fueling your boat, avoid spilling fuel on any of the striping tape. Fuel damages the striping tape.

Hatches and Windows

The hatch frames on your boat are fabricated from aluminum. Some of these frames are painted with enamel. To clean both the painted and unpainted frames, use a sponge dipped in a solution of fresh water and mild soap. Do not use a brush or abrasive cleaner as these can scratch the painted frame surfaces, damaging their appearance.

The cabin windows are made from tempered glass. Clean them with a soft cloth and glass cleaner. The bridge wind screen is made from formed plexiglass. Clean it with a solution of fresh water and mild soap.

Exterior Upholstery

The exterior seating and sunpads on your boat are upholstered in Ultraleather and vinyl. For details on cleaning the upholstery, refer to the OEM information. Avoid saturating the exterior cushions with water. To enhance the appearance of the exterior cushions and upholstery, occasionally treat them with an approved protectant.



CAUTION

If you have used Dr. Vinyl to repair damaged upholstery, do not use the following cleaners on the repaired area as they will damage it.

- Denatured alcohol
- 3M Citrus Cleaner
- Ammonia and hydrogen peroxide

Exterior Carpet

Rinse the bridge and deck carpet with fresh water when cleaning the other portions of the boat's exterior. When the exterior carpet becomes soiled, remove the carpet from the boat and wash it with hot water and any brand of carpet detergent suitable for hot water extraction. To remove stains from the carpet, refer to the carpet OEM information.

Exterior Enclosures

Exterior enclosures are made from a high-quality, marine-grade, vinyl-coated fabric. Clean this fabric at regular intervals (at least twice per year).



CAUTION

Do not clean the exterior enclosure fabric using abrasive detergents or substrates containing solvents or gasoline. These products will damage the vinyl coating and/or the fabric. Be careful if using high-pressure or steam-cleaning devices as improper use could damage the vinyl coating and/or fabric.

To do this:

1. Apply a mild, lukewarm soap solution, such as liquid dishwashing soap, to the fabric using a soft brush or sponge.
2. Let the soap stand for a short period of time but do not allow the soap to dry.
3. Carefully rinse the fabric with fresh, clear water until all of the soap is removed.

**CAUTION**

Although the exterior enclosure fabric was treated by the manufacturer with anti-mildew agents. This protection does not offer absolute safety against fungal attack. To further prevent mildew build-up, do not fold the fabric when it is wet or damp.

4. Allow the fabric to dry thoroughly, then reuse or fold and store it.

**CAUTION**

While the exterior enclosure fabric is optimal for its intended purpose, it is sensitive to excessive mechanical strain. Avoid pulling the fabric over sharp edges or rough surfaces. Do not walk on the fabric. When the fabric is folded, the folding corners are overstretched and therefore particularly sensitive to friction and abrasion.

Teak Decking

Refer to the OEM information for instructions on maintaining your boat's optional teak decking.

Interior Maintenance

One of the best things you can do to maintain the interior of your boat is to ventilate the cabin as often as possible. Do not allow moisture to accumulate in the boat's interior. Moisture leads to a damp, musty environment, which encourages the growth of mildew.

Woodwork

Solid hardwood and hardwood veneer are used throughout the interior of your boat. Treat this woodwork like you treat your finest furniture. Dust it on a regular basis using 3M Clean and Shine and a soft rag. Do not use wax-based furniture polish or cleaner containing abrasives.

Do not lay wet or damp towels or clothing on or against the finished hardwood surfaces.

The interior woodwork was finished at the factory with a special industrial/commercial grade finish. If you need to refinish any woodwork, contact your Marquis Dealer to order the appropriate product. Follow the manufacturer's instructions on the product package when applying the finish.

Granite and Marble

Granite is used for the countertops and floors in your boat's galley. Marble is used for the countertops and floors in the heads and foyer, and as highlights in the master stateroom. To properly care for the granite and marble, refer to the OEM information.

Fabrics

The fabrics used in your boat's interior include window treatments, pillow shams, bed spreads, woven headliners, and some sofa and chair coverings. Some of these fabrics have been treated with a stain protector. All of the fabrics require periodic cleaning. For best results, have the fabrics dry cleaned.

For furniture upholstered in Ultraleather, refer to the OEM information for details on cleaning this material.

Carpet

The carpet used on the interior of the boat has been treated with a stain protector. Even so, the carpet still needs periodic cleaning. Care for the carpet as you would care for the carpet in your home. Vacuum it often and shampoo it as needed using a carpet shampoo.

When your boat is new, the carpet sheds and needs to be vacuumed frequently. This is normal. The shedding stops after a few weeks.

Interior Fiberglass

Some of your boat's interior components, such as the shower stalls and pilothouse helm, are made of gelcoated fiberglass. Interior fiberglass can be cleaned with any household cleaner that has been made for cleaning fiberglass. Many of these types of cleaners are marketed as "tub and tile" cleaners. Do not use abrasive cleaners on the interior fiberglass surfaces. Abrasive cleaners scratch and dull the shiny gelcoat surface.

Plexiglass

The guest head shower door, mirrored face of the head medicine cabinets, and other areas of your boat are made of plexiglass. Clean plexiglass with a solution of fresh water and mild liquid detergent. Remove any fine scratches with a fine automotive acrylic rubbing and polishing compound.

**CAUTION**

Do not use glass cleaners, abrasive cleaners, or aromatic solvents on plexiglass. Doing so etches the plexiglass.

Mechanical Systems

The following paragraphs explain how to maintain your boat's propulsion, electrical, fresh water, bilge and sanitation systems.

Engines/Generator

Refer to the engine and generator OEM information for instructions on maintaining your boat's engines and generator. There may be a seawater strainer installed in the water intake lines for each engine and the generator. At least once every 30 days, close the seawater seacocks, then open and clean the strainers. Refer to Section 9 - Hatches and/or Engine Room for the exact location of the strainers. If you are operating the boat in dirty waters or areas with a high degree of aquatic vegetation, inspect the strainers more frequently. A clogged strainer restricts the intake of seawater which can cause the affected engine or the generator to overheat.

Thru-Hull Valves

Inspect the thru-hull valves on a monthly basis. Make sure the connections between the hose and the valve are tight. Look for water leaks around the area where the valve and hull meet. Every 30 days open and close each valve two or three times. This guards against the valve seizing in the open or closed position. While doing this make sure the valve handle is securely fastened. Tighten any loose handles. Refer to Section 9 - Thru-Hull Fittings for the location of the thru-hull valves.

Propeller Shaft Seals

The propeller shaft extends through a watertight fitting called a shaft seal. Check the shaft seal every month; if the seal is leaking, contact your Marquis Dealer.



DANGER

Make sure the engines are OFF before inspecting the propeller shaft seals. The engine room contains moving, hot machinery. Keep your hands, feet and body out of the engine room while one or both engines are operating.

Props

Inspect your props often. Carry a swim mask in your boat so you can inspect the props while swimming. Props that are out-of-balance or damaged can diminish the boat's performance by reducing the boat's speed, causing steering problems, and creating vibrations. Vibrations can lead to drive train damage.

Have the propellers balanced by an established propeller repair shop at least once a year. Repair or replace damaged props.



WARNING

Wear gloves when handling a propeller. Its blades are sharp.

A TIP FROM CARVER!

Consider purchasing and carrying a spare set of props onboard your boat. Many marine dealers do not carry a full inventory of replacement propellers. A spare set allows your vacation or cruise to continue in the event that your boat's primary set of props is damaged.

Struts

Propeller shaft struts require very little maintenance. Within each strut is a strut or cutlass bearing that provides a smooth surface for the shaft to rotate. These bearings occasionally need to be replaced. They need replacement more often if you use your boat in water that has a lot of sand or other abrasive material suspended in it. Have a marine technician inspect the strut bearings whenever the boat is pulled. Replace the bearings when the technician recommends it.

DC Electrical System

The majority of difficulties that occur with the DC electrical system are caused by poor battery maintenance. The factory-installed batteries on your boat should function normally for several years if properly maintained. These heavy-duty batteries can be discharged and recharged repeatedly without damaging them; however, completely discharging or overcharging a battery can shorten its life span.

To maximize the useful life of the batteries:

- While using the boat, use the voltmeters to frequently monitor the voltage level of each battery pair. Monitor the charge level with the engines turned off (static condition). Use the onboard battery chargers or the engine alternators to recharge the batteries when they are not fully charged. Refer to Section 2 - Charging the Batteries and/or Monitoring Battery Voltage Levels for more information.
- Do not store batteries that are only partially charged. Recharge each battery, if necessary. Check the voltage level every 30 days while the battery is in storage and recharge it if the voltage reads below 12.3 volts.
- Do not charge the batteries if they are already fully charged. The engine alternators can not overcharge the batteries. The onboard battery charger can overcharge the batteries because, when it determines the batteries are fully charged, it does not shut off but rather switches to trickle charge mode. Trickle charging a fully charged battery reduces its useful life.



WARNING

Disconnect the batteries when performing maintenance tasks on the DC electrical system. Failure to do so can lead to electrical shock.

Inspect the batteries once every month. Clean any corrosion that has developed on the battery terminals. Spray a terminal protector on the terminals and battery cable eye connectors. Make sure the battery cables are securely fastened to the terminals. Tighten the nuts only slightly beyond finger tight with a wrench.

Check the level of fluid in each battery cell. Fill any low cells with distilled water only. The fill level is marked on the side of the battery case.

Spray the connections for the bridge instruments and switches with an electrical connection protector every six months.

Fresh Water System

Flush and sanitize the fresh water system at least once every season. Flushing involves draining all water from the system. Sanitizing involves using a commercially-made fresh water tank sanitizing liquid that is available at many marine supply stores.

Shower

If the water flow from a shower head becomes restricted, it may be due to the accumulation of sediment in the shower head. If this happens, remove the head and rinse it with clean water. If necessary, clean the discharge holes with a narrow wire.

Water Taps

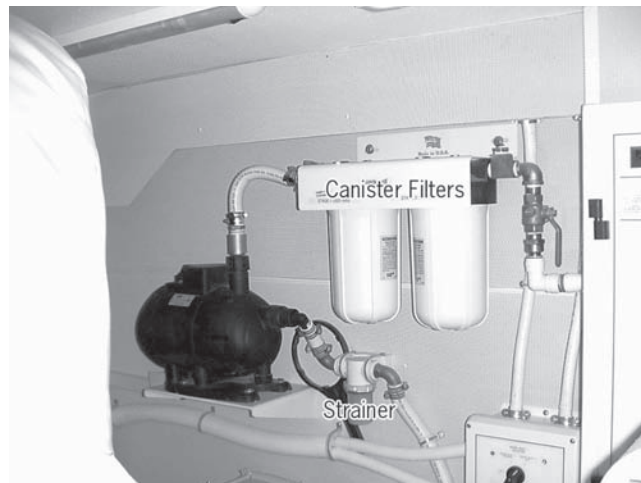
Periodically remove and clean the filter screens from the sinks' water taps. Rinse the screens with clean water. If necessary, clean the screens with a narrow wire. A buildup of debris in the filter screens can block the water flow enough to cause the pressure water pump to repeatedly cycle on and off.

Sump

Clean the sump and sump filter frequently. Hair, dirt and soap scum collect in the sump and, if not removed, eventually clog the sump pump or sump hoses.

Pressure Water Pump Strainer and Filters

There is an in-line strainer and dual canister filter installed near the pressure water pump. Clean the strainer and filters once a month.

**Water Tank Vent Screen**

A vent for the fresh water tank is installed through the boat's hull above the fresh water tank fill plate. The vent has a screen over its opening to prevent dirt and insects from entering the fresh water tank. Clean the vent screen once every six months or twice a season. Refer to Section 9 - Thru-Hull Fittings for the exact location of the fresh water tank vent.

Bilge System

Keeping the bilges clean is important. A dirty bilge leads to clogged bilge pumps and unpleasant odors in the cabin. Keeping the bilges dry helps reduce moisture in the cabin.

- Periodically inspect and clean each bilge pump's strainer. The strainers prevent dirt and debris from clogging the bilge pump intakes.
- Frequently check the operation of each bilge pump float switch to ensure that it is operating properly. Clean the float switch so that it can move freely.
- Clean the bilge pumps twice a season by wiping any dirt or oil from their exterior surfaces.
- Remove any oil, dirt or debris from the bilges. Treat the bilges with a commercial bilge cleaner, available from your Marquis Dealer, twice a season.

Sanitation System

Unlike the other systems in your boat, the sanitation system requires ongoing maintenance to avoid problems.

- Always use sanitation system deodorizer. Use the brand recommended by your Marquis Dealer.
- Your boat's sanitation system is not like the toilet and sewer in a home. Do not flush any items down the toilet that the toilet was not designed to accommodate. Refer to the OEM information for details on maintaining the toilet.
- Empty the waste tank often and when you know the boat will not be used for an extended period. Each time you empty the waste tank, flush it with fresh water. This helps remove any remaining waste from the tank.

Winterization - Storage

Before you store your boat for an extended period of time during which temperatures could fall below freezing (such as during winter), you must properly winterize it. Winterizing your boat removes all water from its various systems. If this water froze, it could cause extensive damage to the boat and its systems.

Marquis recommends that you hire a professional to winterize your boat and its systems. Marquis also recommends that you place your boat in dry (out-of-water), as opposed to wet, storage. Some of the winterizing procedures can only be completed when the boat is out of the water. Dry storage also gives you the opportunity to thoroughly inspect your boat's hull and underwater components for any maintenance needs.

Lifting

To lift your boat from the water, hire an experienced professional who has the proper equipment and is trained in lifting yachts. The boat's hull must be properly supported during the lifting operation to avoid serious and permanent hull deformation.



CAUTION

Do not place a lifting strap around the boat's shaft or any other underwater component.

Use approved lifting straps. "SLING" tags are located on the sidedeck of the boat. These are the only places where lifting straps should be positioned for lifting.



WARNING

Never go under the boat when it is suspended in a lift.

Blocking

When your boat is placed in dry storage its hull must be properly blocked to avoid damaging it. You can either use a cradle or blocking supports.

If you are using a cradle, the forward end of the cradle should be slightly elevated to position the boat in a bow-high attitude. This allows any water in the bilges to flow to the back of the aft bilge and drain through the hull drain.

All of the blocking supports should be setup to prevent the boat from shifting while it is in storage.

Winterization - Systems

The following paragraphs explain how to winterize the systems that require it.



CAUTION

Your boat must be properly winterized before storage. Failure to winterize the boat could result in damaged pipes, valves, faucets, tanks, hot water heater, and other components.

Engines

Refer to the OEM information for details on winterizing the engines.

Generator

Refer to the OEM information for details on winterizing the generator.

Genmar First Mate Plus - Marine Satcom Unit (MSU) Storage

If your boat is equipped with a MSU, during off-season storage the unit should be deactivated. During winter storage the unit should be turned "OFF."



CAUTION

If the boat is not stored in a heated facility you will need to remove the internal battery to prevent freeze damage. Refer to the OEM information for details on removal of the unit.

Air Conditioning System

Refer to the OEM information for details on winterizing the air conditioning system. Marquis recommends that you have a qualified marina winterize your air conditioning system for you.

Fresh Water System

Refer to Section 4 - Fresh Water System for a diagram of your boat's fresh water system, including optional equipment.

Draining the System

1. Provide power to the circuit breakers on the DC Bus Distribution Panel.



CAUTION

Do not supply power to the water heater when it is empty. Doing so may damage the unit's heating element.

2. On that panel, switch the Forward, Amidships, Aft and Crew Quarters Sump Pump circuit breakers "ON."
3. Supply AC power to your boat. Refer to Section 3 - Shore Power and/or Generator Power to do this.
4. On the AC Bus 1 Distribution Panel:
 - a. Switch the Water Heater 1 and 2 circuit breakers "OFF." Marquis recommends taping the breakers in the "OFF" position until the water system is filled and primed after spring recommissioning.
 - b. Switch the AC Main Breaker AC Bus 1 circuit breaker "ON."
 - c. Switch the A/C Main Breaker Salon Panel circuit breaker "ON."

5. On the salon AC Distribution Panel:
 - a. Switch the AC Main Breaker “ON.”
 - b. Switch the Pressure Water Pump circuit breaker “ON.”
6. Open all sink and shower faucets on the boat, including the faucets for the transom hand shower and bow and transom fresh water washdowns.
7. When there is no more water coming from any of the sink taps, shower heads, or fresh water washdowns, switch the Pressure Water Pump circuit breaker “OFF.”
6. Drain the water heaters. Refer to the OEM information for details on draining the water heaters.

Winterizing the System

1. Pour 30 gallons of nontoxic recreational vehicle antifreeze into your boat’s fresh water tank.

NOTE: If the fresh water system loses pressure during this procedure, you will have to add more antifreeze into the water tank.



You must use a nontoxic, non-alcohol, RV-type (pink) antifreeze in your boat’s fresh water system. Using the wrong type of antifreeze can damage the fresh water system. The repair of such damage is not included under the terms of the Marquis Limited Warranty.

2. Close all faucets.
3. On the Salon AC Distribution Panel, switch the Pressure Water Pump circuit breaker “ON.”
4. Place a large bucket under the grey water discharge fittings. This catches the antifreeze pumped out in the next step. Refer to Section 9 - Thru-Hull Fittings for the exact location of these fittings.
5. Open the galley sink cold water faucet. When a steady stream of antifreeze flows from the tap, close the faucet. Repeat this step for the galley hot water faucet, then for each cold and hot water faucet on the boat, except for the transom hand shower and bow and transom fresh water washdowns.

For the transom hand shower, place the shower head in a bucket before turning on the shower faucet. This catches the antifreeze, which can be reused. Proceed as described earlier in this step.

For the bow and transom fresh water washdowns:

- a. Remove the hose(s) from the fresh water washdown fittings.
 - b. Place a bucket under the washdown fittings to catch the antifreeze, which can be reused.
 - c. Open the washdown faucets. When a steady stream of antifreeze flows from the fittings, close the faucets.
6. Pour one quart of antifreeze into the shower and each sink drain.

Preparing the System for Use Again

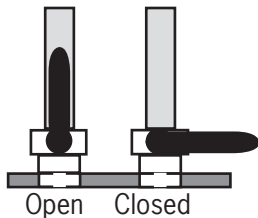
When you remove your boat from storage and prepare to use it again, flush the entire fresh water system with fresh water. Nontoxic antifreeze is colored, so the water system is adequately flushed when uncolored water flows from all of the faucets and shower heads. You may need to fill the water tank more than once to flush the system.

Raw Water Washdown

Before performing this procedure on the optional bow and transom raw water washdowns, your boat should be pulled from the water.

Refer to Section 4 - Raw Water Washdown for a description of your boat's raw water washdown system.

1. Close the seacock that supplies the raw water washdown pump with seawater.
2. Disconnect the end of the hose that is attached to the washdown side of the seacock.

**WARNING**

You must use a nontoxic, non-alcohol, RV-type (pink) antifreeze in your boat's raw water washdown system. Using the wrong type of antifreeze can damage the raw water washdown system. The repair of such damage is not included under the terms of the Marquis Limited Warranty.

3. Place the disconnected hose end into a bucket that contains about a gallon of nontoxic recreational vehicle antifreeze.
4. Remove the hose(s) from the bow and transom raw water washdown fittings.
5. Place a bucket under the washdown fittings to catch the antifreeze, which can be reused.
6. Provide power to the circuit breakers on the DC Bus Distribution Panel.
7. On that panel, switch the Raw Water Washdown Pump circuit breaker "ON."
8. When a steady stream of antifreeze flows from the washdown fittings, switch the Washdown Pump circuit breaker "OFF."
9. Reconnect the hose(s) to the washdown fitting(s).
10. Reconnect the hose that was disconnected in Step 2.

Bilge

Refer to Section 4 - Bilge System for a description of your boat's bilge system.

1. Open the hull drain. Leave the drain open while your boat is in storage.
2. Remove all water from the bilge.
3. Clean the bilge as described in Section 7 - Bilge System.

Sanitation System

Before performing this procedure on the sanitation system, your boat should be pulled from the water. Refer to the OEM information for more information on winterizing the sanitation system.

Refer to Section 4 - Sanitation System for a description of your boat's sanitation system.

There are two types of sanitation systems: the standard system and the overboard discharge system.

Standard Sanitation System

1. Empty the waste tank as described in Section 4 - Emptying the Waste Tank. Remove as much of the fresh water used in flushing the tank as possible.
2. Flush 4 gallons of nontoxic recreational vehicle antifreeze through each toilet and allow it to remain in the waste tanks while the boat is in storage.



WARNING

You must use a nontoxic, non-alcohol, RV-type (pink) antifreeze in your boat's sanitation system. Using the wrong type of antifreeze can damage the sanitation system. The repair of such damage is not included under the terms of the Marquis Limited Warranty.

3. When you remove your boat from storage and prepare to use it again:
 - a. Flush 5 gallons of fresh water through each toilet.
 - b. Empty the waste tank as described in Section 4 - Emptying the Waste Tank.
 - c. Charge the waste tank by adding deodorizer. Use the brand of deodorizer recommended by your Marquis Dealer.

Overboard Discharge System

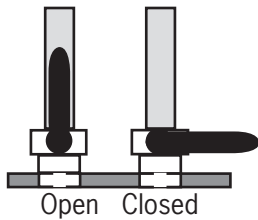
1. Empty the waste tank as described in Section 4 - Emptying the Waste Tank. Remove as much of the fresh water used in flushing the tank as possible.



WARNING

You must use a nontoxic, non-alcohol, RV-type (pink) antifreeze in your boat's sanitation system. Using the wrong type of antifreeze can damage the sanitation system. The repair of such damage is not included under the terms of the Marquis Limited Warranty.

2. Flush 4 gallons of nontoxic recreational vehicle antifreeze through each toilet.
3. Under the boat, place a large bucket under the overboard discharge fitting to collect antifreeze pumped out later in this procedure. Refer to Section 9 - Thru-Hull Fittings for the exact location of the overboard discharge fitting.
4. Provide power to the circuit breakers on the DC Bus Distribution Panel.
5. On that panel, switch the Overboard Pump Forward and/or Overboard Pump Crew Quarters circuit breakers "ON."



6. Open the overboard discharge seacock(s).
7. For the forward and aft waste tanks, turn the waste tank selector Y-valve to select the tank you wish to winterize first.
8. Turn the appropriate overboard discharge pump switch "ON."
9. When a steady stream of antifreeze flows from the overboard discharge fitting, turn the overboard discharge pump switch "OFF."
10. Turn the waste tank selector Y-valve to select the tank remaining to be winterized. Repeat steps 8 and 9.
11. For the crew quarters waste tank, repeat steps 8 and 9.
12. Close the overboard discharge seacock(s).
13. On the DC Distribution Panel, switch the Overboard Pump Forward and/or Overboard Pump Crew Quarters circuit breakers "OFF."
14. When you remove your boat from storage and prepare to use it again:
 - a. Flush 5 gallons of fresh water through each toilet.
 - b. Empty the waste tank as described in Section 4 - Emptying the Waste Tank.
 - c. Charge the waste tank by adding deodorizer. Use the brand of deodorizer recommended by your Marquis Dealer.

Exterior

Wash the exterior of the boat, particularly the underwater portions. Remove as much aquatic growth as possible while it is still wet. Once the growth has dried it is more difficult to remove.

Check the zinc sacrificial anodes for deterioration. If the zincs show signs of deterioration have them replaced before spring launch. Check stainless steel rails and fittings for signs of rust. Remove rust prior to winter lay-up. Inspect the underwater portions of the hull. Review anything that looks out of the ordinary with your Marquis Dealer.

Interior

Air out the cushions and make sure they are dry. Storing damp cushions leads to mildew. Position the cushions so air can circulate around them. Purchase and position moisture accumulators throughout the boat. These help reduce the amount of moisture that accumulates during storage. Remove everything from the boat that could spoil or freeze while the boat is stored. Also remove all dried food. Food attracts mice and insects.

Storage

To give your boat the maximum protection while it is in storage, Marquis recommends that you place your boat in dry, as opposed to wet, storage.

Dry Storage

Protecting the boat from the elements during winter storage is advised. Have your marina shrink wrap the boat or have a winter storage cover made. Occasionally check on the boat while it is in storage to make sure that it is in good condition.

If your boat will be in outside storage, properly support a storage cover and secure it over the boat. Do not secure the cover to the boat too tightly. Allow adequate ventilation to protect against dry rot. Do not store the boat in a damp storage enclosure. Purchase and position moisture accumulators between the shrink-wrap and your boat's enclosures to help prevent moisture from accumulating. Excessive dampness can lead to mildew, electrical problems, corrosion and dry rot.

NOTE: Do not use the bridge enclosure canvas in place of a winter storage cover. This canvas is not designed for long-term storage purposes. The life of the enclosure canvas may be significantly shortened if it is exposed to harsh weather for prolonged periods.

Wet Storage

Wet storage procedures vary from region to region. Consult your Marquis Dealer before preparing to leave your boat in the water over the winter.

Spring Recommissioning Checklist

Before launching your boat, complete the following.

Hull

- ☐ Fill gelcoat nicks and gouges
- ☐ Inspect props, struts, rudders
- ☐ Inspect thru-hull fittings
- ☐ Apply new antifouling bottom paint or touch up failing areas
- ☐ Buff out minor hull scratches
- ☐ Remove dirt, stains
- ☐ Apply wax

Deck and Cabin

- ☐ Inspect hatches and windows for leaks
- ☐ Wax non-walk surfaces

Engines

- ☐ Follow manufacturer's recommissioning guidelines
- ☐ Inspect belts, hoses
- ☐ Tune-up engines
- ☐ Replace fuel filters

Electrical System

- ☐ Check battery water level
- ☐ Charge batteries
- ☐ Inspect connections for corrosion

Plumbing

- ☐ Purge fresh water system of antifreeze
- ☐ Replace Sealand vent filters.
- ☐ Inspect seacocks
- ☐ Inspect heads
- ☐ Chemically charge waste and grey water tanks
- ☐ Fill fresh water tank

Safety Equipment

- ☐ Inspect PFDs
- ☐ Replace old distress signals
- ☐ Inspect fire extinguishers
- ☐ Inspect, test bilge pumps
- ☐ Inspect mooring lines, fenders
- ☐ Test, recalibrate and/or replace CO detectors

After Launch

- ☐ Check for engine cooling water flow
- ☐ Check propeller shaft alignment
- ☐ Check propeller shaft seals
- ☐ Check crankcase (boat must be in-water). Check transmission oil levels
- ☐ Have compass professionally calibrated
- ☐ Inspect thru-hulls, exhaust, etc.

Warranty Information

Carver warrants every boat we manufacture as explained in the Marquis Limited Warranty. Your copy of the warranty is located at the end of this section. Please review the warranty carefully.

To ensure that the warranty remains in effect during its lifetime, Carver Boat Corporation, your Marquis Dealer, and you must each uphold specific responsibilities. Carver's responsibilities are described in the Marquis Limited Warranty.

Marquis Dealer's Responsibilities

Warranty Information

Your Marquis Dealer will review the terms of the warranty and make certain the warranty is registered with Marquis. Your Dealer will also instruct you on how to obtain warranty service.

Pre-Delivery Service Procedure

Your Marquis Dealer will prepare your boat for delivery in accordance with the procedures detailed on the Pre-Delivery Service Record. Your dealer will sign the Pre-Delivery Service Record and provide you with a copy.

Registration of your boat and its engines is required by the Federal Safe Boating Act of 1971. Your Marquis Dealer will complete and mail your engine warranty cards as part of the Pre-Delivery Service procedure.

Boat and Systems Review

A representative from your Marquis Dealer will review the operation of your boat and its systems with you.

Owner's Responsibilities

Pre-Delivery Service Record

Verify that the boat's pre-delivery service record has been completed and mailed to Carver. The pre-delivery service record is located in the Preface of this guide. Review the Pre-Delivery Service procedure with your dealer. Read the Pre-Delivery Service Record. Be certain you sign a copy of the Pre-Delivery Service Record and retain a copy for your records.

OEM Components

Many of the OEM components installed in your boat are warranted by their respective manufacturers. To activate these warranties, complete and mail all OEM warranty cards. The warranty card for each component that is warranted is located with its respective OEM information. Many of these OEMs also have programs designed to resolve any problems you may experience with their products. Your Marquis Dealer can assist you when necessary in gaining access to these programs.

NOTE: All warranty cards must be completed and forwarded to the appropriate company within 5 days of taking delivery of your boat.

Delivery

At the time of delivery, make a complete inspection of the boat and its systems. Document any work that needs to be completed by the dealer in order to meet the terms of your agreement.

Owner's Information Kit

Read, understand and follow the instructions in this Owner's Guide and all other guides and manuals supplied with your boat, including all OEM information.

Contact your Marquis Dealer if you have any questions regarding warranty responsibilities.

Obtaining Warranty Service

The following requirements must be met before warranty work can be performed on your boat.

1. Your boat must be registered with the Carver Boat Corporation. Registration is accomplished by completing, then submitting the Pre-Delivery Service Record to the Carver Boat Corporation, P.O. Box 1010, Pulaski, WI 54162-1010.
2. Pre-Delivery Service must be completed by your Marquis Dealer. Information concerning Pre-Delivery Service can be found in the preface of this manual. The Pre-Delivery Service Record must be signed by both the dealer and the owner.

NOTE: Your Marquis Dealer is the ONLY person authorized to approve warranty work. If warranty service is needed you MUST contact your Marquis Dealer first. There are no exceptions to this policy.

Your Marquis Dealer has knowledgeable professionals who are familiar with your boat and are capable of providing the highest level of service. The Marquis Dealer's service personnel will communicate with the Carver Boat Corporation to ensure that you receive fast and satisfactory solutions to any problem that may arise.

Second and Third Owner Registration

A "Second Owner Registration" card and "Third Owner Registration" card are located in the Preface of this Owner's Guide. The purchaser of a previously-owned Marquis boat should complete the appropriate card and mail it as soon as taking title to the boat.

Registration of a previously-owned Marquis boat does not extend or in any way modify the boat's original limited warranty. However, purchasers of a previously-owned Marquis boat should register the boat so that, if it is ever necessary, Carver can contact you.

Hull Identification Number

The U.S. Coast Guard has established an identification system which assigns a unique hull identification number (HIN) to each boat. The HIN consists of 12 alphanumeric characters which provide coded information about the boat.

When contacting your Marquis Dealer for parts or service, provide them with your boat's HIN.

OEMs

Whenever you need information about a system or component on your boat, contact your Marquis Dealer first. If your Dealer is unable to provide the information, contact the manufacturer (OEM) of the system or component. Refer to the OEM information for telephone numbers and addresses.

When contacting an OEM for information, be ready to provide the component's serial number. A Serial Number Record Sheet is provided on the following pages. Use this sheet as a convenient location to record the serial numbers of your boat's OEM components.

Specifications

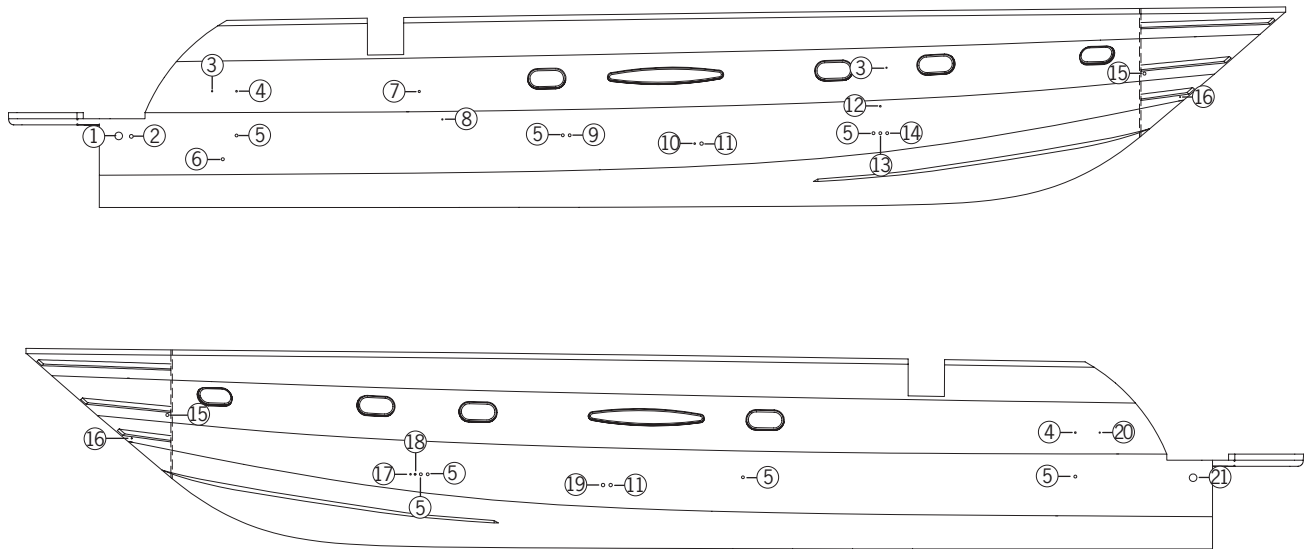
The specifications listed here are based on a standard model with no options installed.
Certain options may change some of these specifications.

Length Overall (LOA) with swim platform	69'11" (21,3 m)
Beam	17'11" (5,5 m)
Bridge Clearance (waterline to arch)	24'5" (7,4 m)
Draft	4'10" (1,5 m)
Weight (estimated, with fuel and water)	47 tons (43 tonnes)
Fresh Water	200 U.S. gals. (757 liters)
Hot Water	32 U.S. gals. (121 liters)
Waste (standard)	114 U.S. gals. (431 liters)
Waste (with crew quarters)	147 U.S. gals. (556 liters)
Fuel	1200 U.S. gals. (4542 liters)
Fuel (with crew quarters)	1400 U.S. gals. (5300 liters)
Cabin Headroom (salon)	6'8" (2 m)
Sleeps	6 (+1 optional crew quarters)

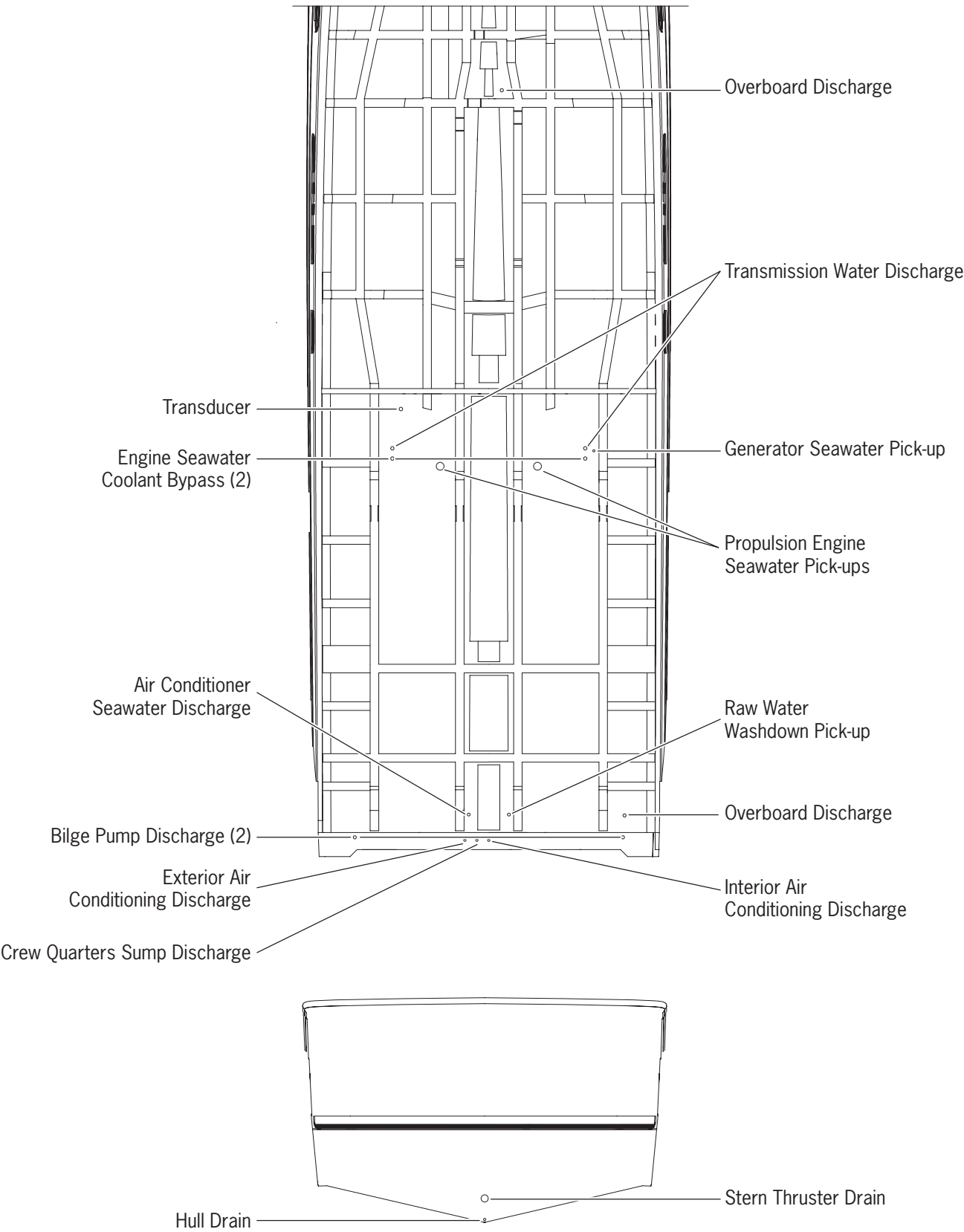
Component Locations

The illustrations on the following pages show the locations of various components, deck plates, and thru-hull fittings discussed throughout this guide.

Thru-Hull Fittings



1. Starboard Proplulsion Engine Exhaust
2. Generator Exhaust Outlet
3. Overboard Discharge Vented Loop
4. Capstain Drain
5. Bilge Pump Discharge
6. Generator Water Discharge
7. Fresh Water Tank Vent
8. Salon Air Conditioning Condensation Outlet
9. Grey Water Discharge
10. Clothes Waser Discharge
11. Stepwell Drain
12. Pilothouse Air Conditioning Condensation Outlet
13. Aft Waste Tank Vent
14. Forward Waste Tank Vent
15. Forward Drain Outlet
16. Rope Locker Vent
17. Forward Sump Discharge
18. Water Heater Drain
19. Galley Sink/Bridge Wet Bar Drain
20. Crew Quarter Waste Tank Vent
21. Port Propulsion Engine Exhaust Outlet



Bill of Material

Any component that begins with a letter or has a category number lower than 50 is a manufactured component and therefore may not have all of its subcomponents listed.

Category Number	Part Description
50	Engines and V-Drives
51	Inboard Engine Equipment
52	Propellers
53	Steering Cables
54	Steering Helms and Kits
55	Control Cables
56	Controls and Kits
57	Instruments and Instrument Accessories
58	Fresh Water Cooling
59	Engine Equipment; Batteries
60	Fuel System and Tanks
61, 62	Galley, Head and Shower Equipment, and Tanks
63	Pressure Water System
64	Navigation and Interior Lighting
65	Bilge Pumps, Blowers, and Ventilators
66	Deck Hardware; Arch
67	Rails, Taffrail Kits, and Ladders
68	Wire Harnesses, Dockside Kits, and Panels
69	Electrical Equipment, Generator, Windlass
70	Windows, Doors, Windshield Sets, Hatches, and Screens
71	Hardware, Logo
72	Pilot Seat Hardware, Table Legs and Footrests
73	Accessories; Hatch, Horn, Screens, Stereo, TV, Vacuum
74	Fittings, Pipe and Tube
75	Clamps, Hoses, and Tubing
77	Wood Screws and Sheet Metal Screws
78	Lag and Machine Screws, Bolts, Nuts, and Washers
79	Nails, Staples, and Rivets
80	Blinds, Canvas, Carpet, Curtains, and Upholstery Material
81	Finishing Material and Adhesives; Logos, Paint, Plaques, Stripe
82	Fiberglass Materials, Gel and Putty
83	Extrusions
84	Lumber, Plywood, Hardboard, and Balsa
85	Plastics, Plastic Laminates, Doors, Lids, and Covers
89	Electrical
90	Air Conditioning and Accessories
91	Foam
94	Woodset

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