

# Everglades™

*by Dougherty*

## 350 LX

2012

**OWNER'S MANUAL**

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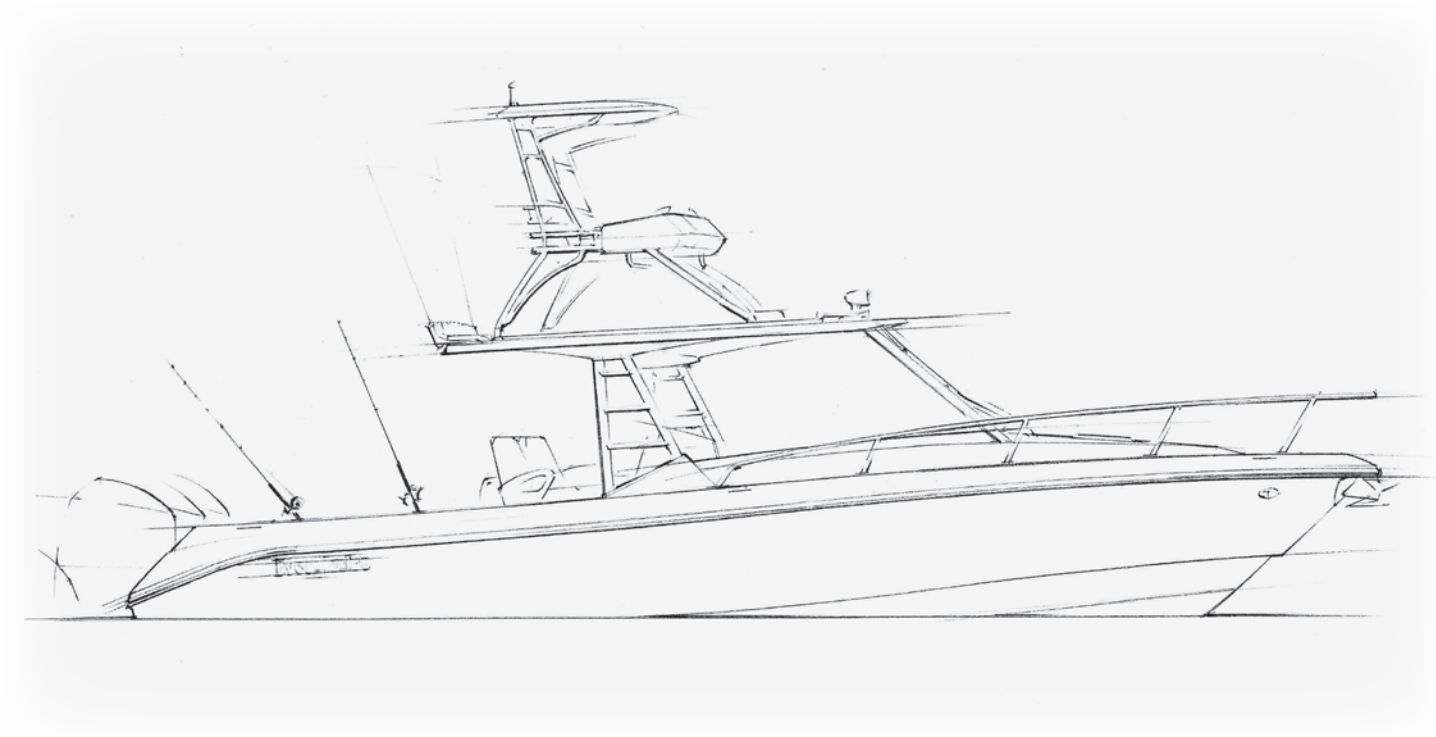




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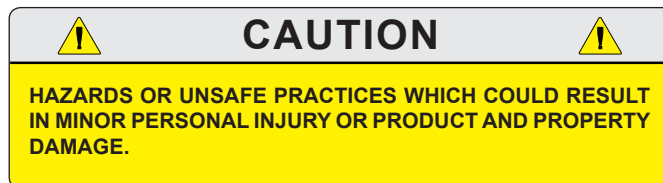
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Your Everglades owner's manual has been written to include a number of safety instructions to assure the safe operation and maintenance of your boat. These instructions are in the form of **DANGER**, **WARNING** and **CAUTION** statements. The following definitions apply:



All instructions given in this book are as seen from the stern looking toward the bow, with starboard being to your right and port to your left. A glossary of boating terms is included.

**IMPORTANT NOTE:** Your boat uses an internal combustion engine and flammable fuel. Every precaution has been taken by Everglades to reduce the risks associated with possible injury and damage from fire or explosion, but your own precaution and good maintenance procedures are necessary in order to enjoy safe operation of your boat.

Please fill out the following information section and leave it in your Everglades owner's manual. This information will be important for you, your dealer and/or Everglades service personnel to know, if you may need to call them for technical assistance or service.

BOAT			
MODEL:		HULL SERIAL #:	
PURCHASE DATE:		DELIVERY DATE:	
IGNITION KEYS #:		REGISTRATION #:	
WEIGHT:	DRAFT:	BEAM:	VERTICAL CLEARANCE:
DOOR KEYS #:			
ENGINES			
MAKE:	MODEL:	CENTER SERIAL #:	
PORT SERIAL #:		STBD SERIAL #:	
TRAILER			
MAKE:		MODEL:	
SERIAL #:		GVWR:	
TIRE SIZE:			
GENERATOR			
MAKE:		MODEL:	
SERIAL #:		KILOWATTS:	
PROPELLERS			
MAKE:		BLADES:	
DIAMETER/PITCH:		SHAFT:	
AIR CONDITIONER			
MAKE:		MODEL:	
SERIAL #:		BTU OUTPUT:	
DEALER		EVERGLADES	
NAME:		PHONE:	
DEALER/PHONE:		REPRESENTATIVE:	
SALESMAN:		ADDRESS:	
SERVICE MANAGER:			
ADDRESS:			
DEALER E-MAIL:		EVERGLADES E-MAIL:	

All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication. Everglades Boats reserves the right to make changes at anytime, without notice, in colors, materials, equipment, specifications and models.

## 350 LX Specifications

HULL LENGTH OVERALL W/ ENGINE	38' 0"
BEAM	10' 8"
WEIGHT DRY - NO ENGINES	10,800
DEAD RISE	25°
DRAFT WITH ENGINES UP	24"
DRAFT WITH ENGINES DOWN	41"
TRANSOM HEIGHT	30" / 25"
BRIDGE CLEARANCE TOP OF HARDTOP (with outriggers and/or spotlight)	9' 6"
BRIDGE CLEARANCE TOP UPPER STATION SUNSHADE	15' 6"
FUEL CAPACITY	356 gal
WATER TANK CAPACITY	35 gal
WASTE TANK CAPACITY	18 gal
MAXIMUM HORSEPOWER	1050 hp
MAXIMUM PERSONS CAPACITY	14
MAXIMUM PERSONS / GEAR WEIGHT	6,630 lbs
SLING LOCATIONS - AFT (inches from aft rubrail)	57"
SLING LOCATIONS - FORWARD (inches forward of aft sling location)	178"

**Notice:**

**Dry weight is the average weight of the base boat without engines, fuel, water, waste or gear.**

**Specifications and weights are approximate and may differ from boat to boat.**

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## 350 LX Export Documentation

**(For Export Only)**

To be in compliance with European directives for recreational boats as published by the International Organization for Standardization (ISO) in effect at the time this boat was manufactured, we are providing the following information.

### Manufacturer:

Name Everglades Boats  
544 Air Park Road  
Edgewater, FL Zip Code: 32132

### Identification Numbers:

Hull Identification Number \_\_\_\_\_  
Engine Serial Number \_\_\_\_\_

### Intended Design Category:

- Ocean (Cat A)       Inshore (Cat C)  
 Offshore (Cat B)       Sheltered Waters (Cat D)

### Weight and Maximum Capacities:

Unladen Weight - Kilograms (Pounds) \_\_\_\_\_  
Maximum Load - Weight- Kilograms (Pounds) \_\_\_\_\_  
Number of People \_\_\_\_\_  
Maximum Rated Engine Horsepower - Kilowatts (Horsepower) \_\_\_\_\_

### Certifications:

Certifications & Components Covered See Declaration of Conformity  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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All instructions given in this book are as seen from the stern looking toward the bow with starboard being to your right and port to your left. The information and precautions listed in this manual are not all inclusive. It may be general in nature in some cases and detailed in others and is designed to provide you with a basic understanding of your Everglades boat and some of the responsibilities that go along with owning/operating your boat.

The suppliers of some of the major components such as the engines, pumps and appliances, provide their own owner's manuals which have been included with your boat. You should read the information in this manual and the manuals of other suppliers completely and have a thorough understanding of all component systems and their proper operation before operating your boat.

**REMEMBER - IT IS YOUR RESPONSIBILITY TO ENSURE THAT YOUR BOAT IS SAFE FOR YOU AND YOUR PASSENGERS. ALWAYS EXERCISE GOOD COMMON SENSE WHEN INSTALLING EQUIPMENT AND OPERATING THE BOAT.**

## Warranty and Warranty Registration Cards

The Everglades Limited Warranty Statement is included with your boat. It has been written to be clearly stated and easily understood. If you have any questions after reading the warranty, please contact the Everglades Boats Customer Service Department.

Everglades, engine manufacturers and the suppliers of major components maintain their own manufacturer's warranty and service facilities. It is important that you properly complete the warranty registration cards included with your boat and engine and mail them back to the manufacturer to register your ownership. This should be done within 15 days of the date of purchase and before the boat is put into service. A form for recording this information for your records is provided at the beginning of this manual. This information will be important for you and service personnel to know, if and when you may need service or technical information.

The boat warranty registration requires the Hull Identification Number "HIN" which is located on the starboard side of the transom, just below the rubrail. The engine warranty registration requires the engine serial numbers. Please refer to the engine owner's manual for the location of the serial numbers.



Hull ID # On Starboard Side of Transom

## IMPORTANT:

The terms and conditions of the Everglades Boats Limited Warranty are outlined in the warranty statement included in this manual. The manufacturer will automatically honor the warranty to the original purchaser for 15 days from the date of purchase. However, during that 15 day period, owners must comply with the steps outlined in the warranty statement to validate their warranty.

All boat manufacturers are required by the Federal Boat Safety Act of 1971 to notify first time owners in the event any defect is discovered "which creates a substantial risk of personal injury to the public." It is essential that we have your warranty registration card complete with your name and mailing address in our files so that we can comply with the law if it should become necessary.

Your Everglades Boats Dealer will assist you in filling in the hull number and other data required on your Registration Card. Check to see that your card is complete and signed. Detach and mail. Your Warranty Registration Card will be added to our permanent files.

## **Transferring the Limited Structural Warranty**

For a transfer fee, Everglades Boats will offer to extend a Transferable Limited Structural Hull Warranty to subsequent owners of Everglades Boats. Please refer to the Everglades Limited Warranty Statement for the terms and conditions of the Transferable Limited Structural Hull Warranty and the procedure to transfer the warranty.

## **Product Changes**

Everglades is committed to the continuous improvement of our boats. As a result, some of the equipment described in this manual or pictured in the catalog may change or no longer be available. All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication. Everglades Boats reserves the right to make changes at anytime, without notice, in colors, materials, equipment, specifications and models. If you have questions about the equipment on your Everglades, please contact the Everglades Boats Customer Service Department.

## **Service**

All warranty repairs must be performed by an authorized Everglades Dealer. Should a problem develop that is related to faulty workmanship or materials, as stated in the Limited Warranty, you should contact your Everglades dealer to arrange for the necessary repair. If you are not near your dealer or another authorized Everglades dealer or the dealer fails to remedy the cause of the problem, then contact Everglades within 15 days.

Everglades will not reimburse boat owners for warranty repairs performed without prior authorization provided in writing.

It is the boat owner's responsibility to deliver the boat to the dealer for warranty service.

## Registration and Numbering

Federal law requires that all undocumented vessels equipped with propulsion machinery be registered in the state of principal use. A certificate of number will be issued upon registering the boat. These numbers must be displayed on your boat. The owner/operator of a boat must carry a valid certificate of number whenever the boat is in use. When moved to a new state of principal use, the certificate is valid for 60 days.

In order to be valid, the numbers must be installed to the proper specifications. Check with your dealer or state boating authority for numbering requirements. The Coast Guard issues the certificate of number in Alaska; all others are issued by the state.

## Insurance

In most states the boat owner is legally responsible for damages or injuries he or someone else operating the boat causes. Responsible boaters carry adequate liability and property damage insurance for their boat. You should also protect the boat against physical damage and theft. Some states have laws requiring minimum insurance coverage. Contact your dealer or state boating authority for information on the insurance requirements in your boating area.

## Reporting Boating accidents

All boating accidents must be reported by the operator or owner of the boat to the proper marine law enforcement authority for the state in which the accident occurred. Immediate notification is required if a person dies or disappears as a result of a recreational boating accident.

If a person dies or there are injuries requiring more than first aid, a formal report must be filed within 48 hours.

A formal report must be made within 10 days for accidents involving more than \$500.00 damage or the complete loss of a boat.

A Boating Accident Report form is located near the back of this manual to assist you in reporting

an accident. If you need additional information regarding accident reporting, please call the Boating Safety Hotline, 800-368-5647.

## Education

If you are not an experienced boater, we recommend that the boat operator and other people that normally accompany the operator, enroll in a boating safety course. Organizations such as the U.S. Power Squadrons, United States Coast Guard Auxiliary, State Boating Authorities and the American Red Cross offer excellent boating educational programs. These courses are worthwhile even for experienced boaters to sharpen your skills or bring you up to date on current rules and regulations. They can also help in providing local navigational information when moving to a new boating area. Contact your dealer, State Boating Authority or the Boating Safety Hotline, 800-368-5647 for further information on boating safety courses.

## Required Equipment

U.S. Coast Guard regulations require certain equipment on each boat. The Coast Guard also sets minimum safety standards for vessels and associated equipment. To meet these standards some of the equipment must be Coast Guard approved. "Coast Guard Approved Equipment" has been determined to be in compliance with USCG specifications and regulations relating to performance, construction or materials. The equipment requirements vary according to the length, type of boat and the propulsion system. Some of the Coast Guard equipment is described in the Safety Equipment chapter of this manual. For a more detailed description, obtain "Federal Requirements And Safety Tips For Recreational Boats" by contacting the Boating Safety Hotline 800-368-5647 or your local marine dealer or retailer.

Some state and local agencies impose similar equipment requirements on waters that do not fall under Coast Guard jurisdiction. These agencies may also require additional equipment that is not required by the Coast Guard. Your dealer or local boating authority can provide you with additional information for the equipment requirements for your boating area.

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## SAFETY EQUIPMENT

### 1.1 General

Your boat and outboard engines have been equipped with safety equipment designed to enhance the safe operation of the boat and to meet U.S. Coast Guard safety standards. The Coast Guard or state, county and municipal law enforcement agencies require certain additional accessory safety equipment on each boat. This equipment varies according to length and type of boat and type of propulsion. The accessory equipment typically required by the Coast Guard is described in this chapter. Some local laws require additional equipment. It is important to obtain "Federal Requirements And Safety Tips for Recreational Boats," published by the Coast Guard and copies of state and local laws, to make sure you have the required equipment for your boating area.

Your boat is equipped with engine alarms. The alarm systems are designed to increase your boating safety by alerting you to potentially serious problems in the primary power system. Alarm systems are not intended to lessen or replace good maintenance and pre-cruise procedures.

This chapter also describes safety related equipment that could be installed on your boat. This equipment will vary depending on the type of engines and other options installed by you or your dealer.

### 1.2 Engine Alarms

Most outboard engines are equipped with an audible alarm system mounted in the helm area that monitors selected critical engine systems. The alarm will sound if one of these systems begins to fail. Refer to the engine owner's manual for information on the alarms installed with your engines.

#### If the alarm sounds:

- Immediately throttle the engines back to idle.
- Shift the transmissions to neutral.
- Monitor the engine gauges to determine the cause of the problem.
- If necessary, shut off the engine and investigate until the cause of the problem is found.



Throwable Device and Personal PFD

### 1.3 Neutral Safety Switch

Every control system has a neutral safety switch incorporated into it. This device prohibits the engines from being started while the shift levers are in any position other than the neutral position. If an engine will not start, slight movement of the shift lever may be necessary to locate the neutral position and disengage the safety cutout switch. Control adjustments may be required to correct this condition should it persist. See your Everglades dealer for necessary control adjustments. Please refer to the Helm Control Systems chapter for more information on the neutral safety switch.

### 1.4 Engine Stop Switch

Your boat is equipped with a engine stop switch and lanyard. When the lanyard is pulled it will engage the switch and shut off the engines. We strongly recommend that the lanyard be attached to the driver and the stop switch whenever the engines are running. If the engines will not start, it could be because the lanyard is not properly inserted into the engine stop switch. Always make sure the lanyard is properly attached to the engine stop switch before attempting to start the engine.

#### Notice:

**In some states, a lanyard attached to the driver at all times is required by law.**

**Notice:**

**You should carry an extra stop switch lanyard and instruct at least one other crew member on the operation of the stop switch and location of the extra lanyard.**

## 1.5 Required Safety Equipment

Besides the equipment installed on your boat by Everglades, certain other equipment is required by the U.S. Coast Guard to help ensure passenger safety. Items like a sea anchor, working anchor, extra dock lines, flare pistol, life vests, a line permanently secured to your ring buoy, etc., could at some time save your passengers' lives or save your boat from damage. Refer to the "Federal Requirements And Safety Tips For Recreational Boats" pamphlet for a more detailed description of required equipment. You also can contact the U.S. Coast Guard Boating Safety Hotline, 800-368-5647, for information on boat safety courses and brochures listing the Federal equipment requirements. Also, check your local and state regulations.

The Coast Guard Auxiliary offers a "Courtesy Examination." This inspection will help ensure that your boat is equipped with all of the necessary safety equipment. The following is a list of the accessory equipment required on your boat by the U.S. Coast Guard:

### Personal Flotation Devices (PFDs)

PFDs must be Coast Guard approved, in good and serviceable condition and of appropriate size for the intended user. Wearable PFDs must be readily accessible, meaning you must be able to put them on in a reasonable amount of time in an emergency. Though not required, the Coast Guard emphasizes that PFDs should be worn at all times when the vessel is underway. Throwable devices must be immediately available for use. All Everglades boats must be equipped with at least one Type I, II or III PFD for each person on board, plus one throwable device (Type IV).

**Notice:**

**Many state laws now require that children 13 years old and under must wear a PFD at all times.**

**Anyone being towed on skis, wakeboards and other water sports equipment is considered a passenger on the boat and must wear a Coast Guard approved life jacket at all times.**



## Visual Distress Signals

All boats used on coastal waters, the Great Lakes, territorial seas and those waters connected directly to them, must be equipped with Coast Guard approved visual distress signals. These signals are either Pyrotechnic or Non-Pyrotechnic devices.

### Pyrotechnic Visual Distress Signals:

Pyrotechnic visual distress signals must be Coast Guard approved, in serviceable condition and readily accessible. They are marked with a date showing the service life, which must not have expired. A minimum of three are required. Some pyrotechnic signals meet both day and night use requirements. They should be stored in a cool, dry location. They include:

- Pyrotechnic red flares, hand held or aerial.
- Pyrotechnic orange smoke, hand-held or floating.
- Launchers for aerial red meteors or parachute flares.

	<b>WARNING</b>	
<p><b>PYROTECHNICS ARE UNIVERSALLY RECOGNIZED AS EXCELLENT DISTRESS SIGNALS. HOWEVER, THERE IS POTENTIAL FOR INJURY AND PROPERTY DAMAGE IF NOT PROPERLY HANDLED. THESE DEVICES PRODUCE A VERY HOT FLAME AND THE RESIDUE CAN CAUSE BURNS AND IGNITE FLAMMABLE MATERIAL. PISTOL LAUNCHED AND HAND-HELD PARACHUTE FLARES AND METEORS HAVE MANY CHARACTERISTICS OF A FIREARM AND MUST BE HANDLED WITH CAUTION. IN SOME STATES THEY ARE CONSIDERED A FIREARM AND PROHIBITED FROM USE. ALWAYS BE EXTREMELY CAREFUL AND FOLLOW THE MANUFACTURER'S INSTRUCTIONS EXACTLY WHEN USING PYROTECHNIC DISTRESS SIGNALS.</b></p>		

### Non-Pyrotechnic Devices

Non-Pyrotechnic visual distress signals must be in serviceable condition, readily accessible and certified by the manufacturer as complying with U.S. Coast Guard requirements. They include:

- Orange Distress Flag (Day use only)

The distress flag is a day signal only. It must be at least 3 x 3 feet with a black square and ball on an orange background. It is most distinctive when attached and waved from a paddle or boat hook.



- Electric Distress Light (Night use only)

The electric distress light is accepted for night use only and must automatically flash the international SOS distress signal. Under "Inland Navigation Rules," a high intensity white light flashing at regular intervals from 50-70 times per minute is considered a distress signal.

## Sound Signaling Devices

The navigation rules require sound signals to be made under certain circumstances. Recreational vessels also are required to sound fog signals during periods of reduced visibility. Therefore, you must have some means of making an efficient sound signal.

## Navigation Lights

Recreational boats are required to display navigation lights between sunset and sunrise and other periods of reduced visibility (fog, rain, haze, etc.) Navigation lights are intended to keep other vessels informed of your presence and course. Your boat is equipped with navigation lights required by the U.S. Coast Guard at the time of manufacture. It is up to you to make sure they are operational and turned on when required.

## Fire Extinguishers

Your boat is required to have two Marine Type USCG approved fire extinguishers. Coast Guard approved fire extinguishers are hand-portable, either B-I or B-II classification and have a specific marine type mounting bracket. It is recommended that the extinguishers be mounted in a readily accessible position.





Fire extinguishers require regular inspections to ensure that:

- Seals & tamper indicators are not broken or missing.
- Pressure gauges or indicators read in the operable range.
- There is no obvious physical damage, corrosion, leakage or clogged nozzles.



Refer to the "Federal Requirements And Safety Tips For Recreational Boats" pamphlet or Contact the U.S. Coast Guard Boating Safety Hotline, 1-800-368-5647, for information on the type and size fire extinguisher required for your boat.

Please refer to the information provided by the fire extinguisher manufacturer for instructions on the proper maintenance and use of your fire extinguisher.



	<b>CAUTION</b>	
<p>INFORMATION FOR HALON, AGENT FE-241 AND AGENT FM 200 FIRE EXTINGUISHERS IS PROVIDED BY THE MANUFACTURER. IT IS ESSENTIAL THAT YOU READ THE INFORMATION CAREFULLY AND COMPLETELY UNDERSTAND THE SYSTEM, IN THEORY AND OPERATION, BEFORE USING YOUR BOAT.</p>		

## 1.6 Bilge and Fuel Fires

Fuel compartment and bilge fires are very dangerous because of the presence of gasoline in the various components of the fuel system and the possibility for explosion. You must make the decision to fight the fire or abandon the boat. If the fire cannot be extinguished quickly or it is too intense to fight, abandoning the boat may be your only option. If you find yourself in this situation, make sure all passengers have a life preserver on and go over the side and swim well upwind of the boat. This will keep you and your passengers well clear of any burning fuel that could be released and spread on the water as the boat burns or in the event of an explosion. When clear of the danger, check about and account for all those who were aboard with you. Give whatever assistance you can to anyone in need or in the water without a buoyant device. Keep everyone together in a group for morale and to aid rescue operations.

	<b>WARNING</b>	
<p>GASOLINE CAN EXPLODE. IN THE EVENT OF A FUEL COMPARTMENT OR BILGE FIRE, YOU MUST MAKE THE DIFFICULT DECISION TO FIGHT THE FIRE OR ABANDON THE BOAT. YOU MUST CONSIDER YOUR SAFETY, THE SAFETY OF YOUR PASSENGERS, THE INTENSITY OF THE FIRE AND THE POSSIBILITY OF AN EXPLOSION IN YOUR DECISION.</p>		

## 1.7 Carbon Monoxide Monitoring System

 **DANGER** 

**CARBON MONOXIDE IS COLORLESS, ODORLESS AND DANGEROUS. ALL ENGINES, GENERATORS AND FUEL BURNING APPLIANCES EXHAUST CARBON MONOXIDE (CO). DIRECT AND PROLONGED EXPOSURE TO CO WILL CAUSE BRAIN DAMAGE OR DEATH. SIGNS OF EXPOSURE TO CO INCLUDE NAUSEA, DIZZINESS AND DROWSINESS.**

The carbon monoxide (CO) detector is installed in the cabin as standard equipment and warns the occupants of dangerous accumulations of carbon monoxide gas. If excess carbon monoxide fumes are detected, the detector will sound an alarm indicating the presence of the toxic gas.

Should a very high level of carbon monoxide exist, the alarm will sound in a few minutes. However, if small quantities of CO are present or high levels are short-lived, the alarm will accumulate the information and determine when an alarm level has been reached.

The carbon monoxide detector is automatically activated whenever the House battery is connected. The power light on the carbon monoxide detector should be lit to indicate that the carbon monoxide detector is activated.

***Always make sure the power light on the carbon monoxide detector is lit whenever the cabin is occupied.***

A by-product of combustion, carbon monoxide (CO) is invisible, tasteless, odorless and is produced by all engines, heating and cooking appliances. The most common sources of CO on boats are the engines, auxiliary generators and propane or butane stoves. These produce large amounts of CO and should never be operated while sleeping.

A slight buildup of carbon monoxide over several hours causes headache, nausea and other symptoms that are similar to food poisoning, motion sickness or flu. High concentrations can be fatal within minutes. Many cases of carbon monoxide poisoning indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the area or calling for help. Also, young children, elderly persons and pets may be the first affected.

Drug or alcohol use increases the effect of CO exposure. Individuals with cardiac or respiratory conditions are very susceptible to the dangers of carbon monoxide. CO poisoning is especially dangerous during sleep when victims are unaware of any side effects. The following are symptoms which may signal exposure to CO: (1) Headache (2) Tightness of chest or hyperventilation (3) Flushed face (4) Nausea (5) Drowsiness (6) Fatigue or Weakness (7) Inattention or confusion (8) Lack of normal coordination.

Persons who have been exposed to carbon monoxide should be moved into fresh air immediately. Have the victim breath deeply and seek immediate medical attention. To learn more about CO poisoning, contact your local health authorities.

Low levels of carbon monoxide over an extended period of time can be just as lethal as high doses over a short period. Therefore, low levels of carbon monoxide can cause the alarm to sound before the occupants of the boat notice any symptoms of carbon monoxide poisoning. CO detectors are very reliable and rarely sound false alarms. If the alarm sounds, always assume the hazard is real and move persons who have been exposed to carbon monoxide into fresh air immediately. Never disable the CO detector because you think the alarm may be false. Always contact the detector manufacturer or your local fire department for assistance in finding and correcting the situation.

Remember, carbon monoxide detectors do not guarantee that CO poisoning will not occur. Do not use the CO detector as a replacement for ordinary precautions or periodic inspections of equipment. Never rely on alarm systems to save your life, common sense is still prudent and necessary.

You should read the owner's manual supplied by the CO detector manufacturer and included with this manual for operation instructions and additional information regarding the hazards of carbon monoxide gas. Refer to the Ventilation System chapter for information on ventilating your boat properly while underway and other precautions while at anchor or in a slip. This is especially essential if your boat is equipped with the optional generator.

Many manufacturers of carbon monoxide detectors offer a testing and recertification program. We recommend that you contact the manufacturer of your carbon monoxide detector and have it tested and recertified periodically.



**1.8 First Aid**

It is the operator’s responsibility to be familiar with the proper first-aid procedures and be able to care for minor injuries or illnesses of your passengers. In an emergency, you could be far from professional medical assistance. We strongly recommend that you be prepared by receiving training in basic first aid and CPR. This can be done through classes given by the Red Cross or your local hospital.



Your boat should also be equipped with at least a simple marine first-aid kit and a first-aid manual. The marine first-aid kit should be designed for the marine environment and be well supplied. It should be accessible and each person on board should be aware of its location. As supplies are used, replace them promptly. Some common drugs and antiseptics may lose their strength or become unstable as they age. Ask a medical professional about the supplies you should carry and the safe shelf life of prescription drugs or other medical supplies that may be in your first-aid kit. Replace questionably old supplies whether they have been used or not.

In many emergency situations, the Coast Guard can provide assistance in obtaining medical advice for treatment of serious injuries or illness. If you are within VHF range of a Coast Guard Station, make the initial contact on channel 16 and follow their instructions.

**1.9 Additional Safety Equipment**

Besides meeting the legal requirements, prudent boaters carry additional safety equipment. This is particularly important if you operate your boat offshore. You should consider the following items, depending on how you use your boat.

**Satellite EPIRBs**

EPIRBs (Emergency Position Indicating Radio Beacon) operate as part of a worldwide distress system. When activated, EPIRBs will send distress code homing beacons that allow Coast Guard aircraft to identify and find them quickly. The satellites that receive and relay EPIRB signals are operated by the National Oceanic and Atmospheric Administration (NOAA) in the United States. The EPIRB should be mounted and registered according to the instructions provided with the beacon, so that the beacon’s unique distress code can be used to quickly identify the boat and owner.

**Marine Radio**

A marine radio is the most effective method of receiving information and requesting assistance. VHF marine radios are used near shore and single sideband radios are used for long range communication.

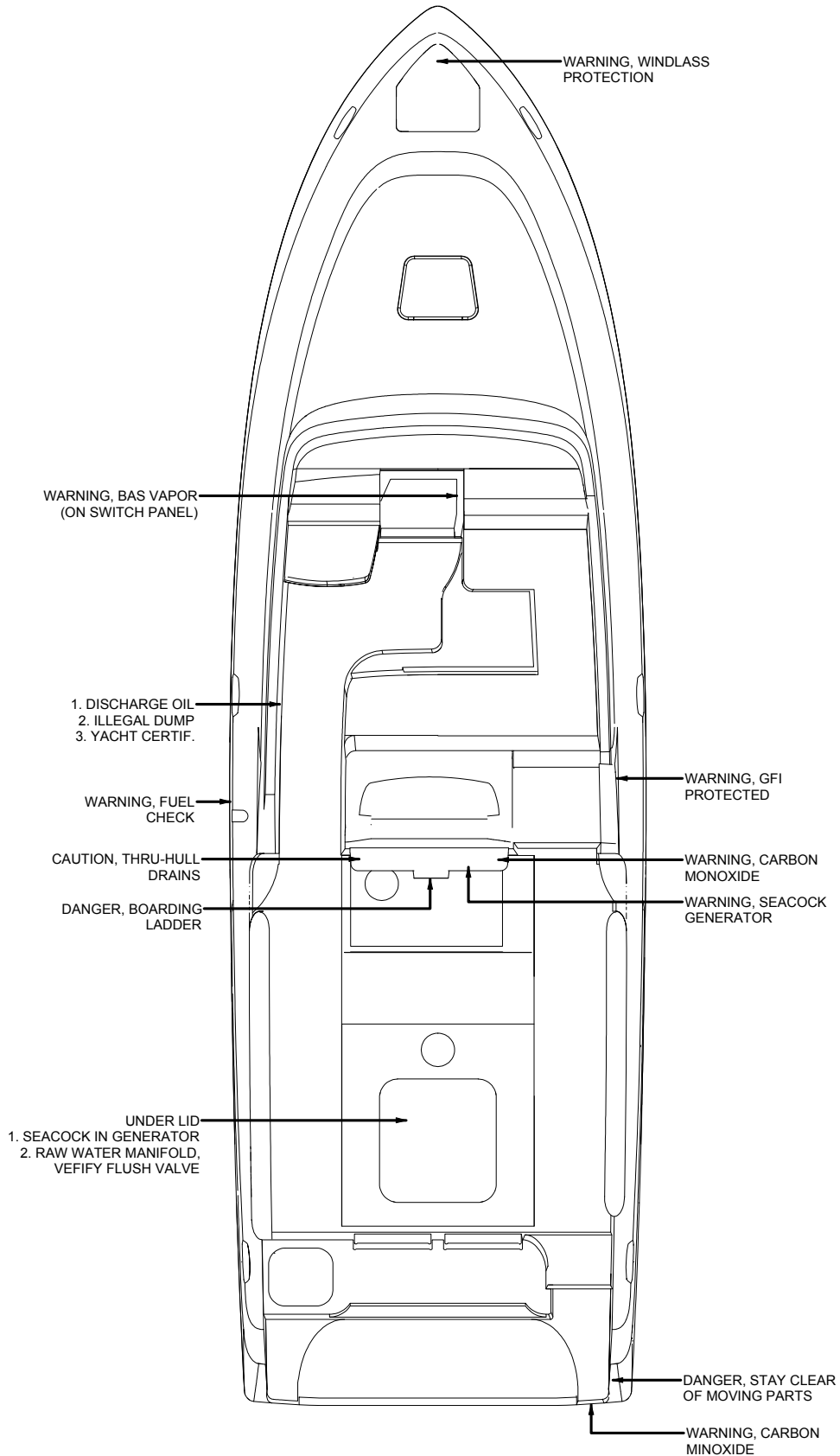
There are specific frequencies to use in an emergency. The VHF emergency channel is 16 in the United States. You should read the owners manual for your radio and know how to use it in an emergency or for normal operation. If you hear a distress call you should assist or monitor the situation until help is provided.

**Additional Equipment to Consider:**

- |                   |                           |
|-------------------|---------------------------|
| Cell Phone        | Spare Anchor              |
| Fenders           | Heaving Line              |
| Mirror            | First Aid Kit             |
| Tool Kit          | Flashlight & Batteries    |
| Anchor            | Search light              |
| Boat Hook         | Sunburn Lotion            |
| Mooring Lines     | Ring Buoy or Boat Cushion |
| Binoculars        | Whistle or Horn           |
| Extra Clothing    | Portable Radio            |
| Chart and Compass | Marine Hardware           |
| Food & Water      | Spare Keys                |
| Sunglasses        | Spare Parts               |
| Spare Propellers  | Spare Propeller Hub Kits  |

## 1.10 Caution and Warning Labels

The caution and warning labels shown are examples of the labels that could be on your boat. The actual labels and their location could vary on your boat.



## OPERATION

### 2.1 General

Before you start the engines on your Everglades, you should have become familiar with the various component systems and their operation and have performed a "Pre-Cruise System Check." A thorough understanding of the component systems and their operation is essential to the proper operation of the boat. This manual and the associated manufacturers' information is provided to enhance your knowledge of your boat. Please read them carefully.

Your boat must have the necessary safety equipment on board and be in compliance with the U.S. Coast Guard, local and state safety regulations. There should be one Personal Flotation Device (PFD) for each person. Non-swimmers and small children should wear PFDs at all times. You should know and understand the "Rules of the Road" and have had an experienced operator brief you on the general operation of your new boat. At least one other person should be instructed on the proper operation of the boat in case the operator is suddenly incapacitated.

The operator is responsible for his safety and the safety of his passengers. When boarding or loading the boat, always step onto the boat, never jump. All passengers should be properly seated whenever the boat is operated above idle speed. Your passengers should not be allowed to sit on the seat backs, gunnels, bows or transoms whenever the boat is underway. The passengers should also be seated to properly balance the load and must not obstruct the operator's view, particularly to the front.

Overloading and improper distribution of weight can cause the boat to become unstable and are significant causes of accidents. Know the weight capacity and horsepower rating of your boat. Do not overload or overpower your boat.

You should be aware of your limitations and the limitations of your boat in different situations or sea conditions. No boat is indestructible, no matter how well it is constructed. Any boat can be severely damaged if it is operated in a manner that exceeds its design limitations. If the ride is hard on you and your passengers, it is hard on

the boat as well. Always modify the boat speed in accordance with the sea conditions, boat traffic and weather conditions.

Remember, it is the operator's responsibility to use good common sense and sound judgement in loading and operating the boat.

### 2.2 Rules of the Road

As in driving an automobile, there are a few rules you must know for safe boating operation. The following information describes the basic navigation rules and action to be taken by vessels in crossing, meeting or overtaking situations while operating in inland waters. These are basic examples and not intended to teach all the rules of navigation. For further information consult the "Navigation Rules" or contact the Coast Guard, Coast Guard Auxiliary, Department of Natural Resources or your local boat club. These organizations sponsor courses in boat handling, including rules of the road. We strongly recommend such courses. Books or videos on this subject also are available from your local library.

#### Notice:

**Sailboats not under power, paddle boats, vessels unable to maneuver, vessels engaged in commercial fishing and other vessels without power have the right-of-way over motor powered boats. You must stay clear or pass to the stern of these vessels. Sailboats under power are considered motor boats.**

#### Crossing Situations

When two motor boats are crossing, the boat on the right has the right-of-way. The boat with the right-of-way should maintain its course and speed. The other vessel should slow down and permit it to pass. The boats should sound the appropriate signals.

#### Meeting Head-On or Nearly-So Situations

When two motor boats are approaching each other head-on or nearly head-on, neither boat has the right-of-way. Both boats should reduce their speed and turn to the right so as to pass port side to port side, providing enough clearance for safe passage. The boats should sound the appropriate signals.

## Overtaking Situations

When one motor boat is overtaking another motor boat, the boat that is being passed has the right-of-way. The overtaking boat must make the adjustments necessary to provide clearance for a safe passage of the other vessel. The boats should sound the appropriate signals.

## The General Prudential Rule

In obeying the Rules of the Road, due regard must be given to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels, which may justify a departure from the rules that is necessary to avoid immediate danger or a collision.

## Night Operation

Recreational boats are required to display navigation lights between sunset and sunrise and other periods of reduced visibility such as fog, rain, haze, etc. When operating your boat at night you should:

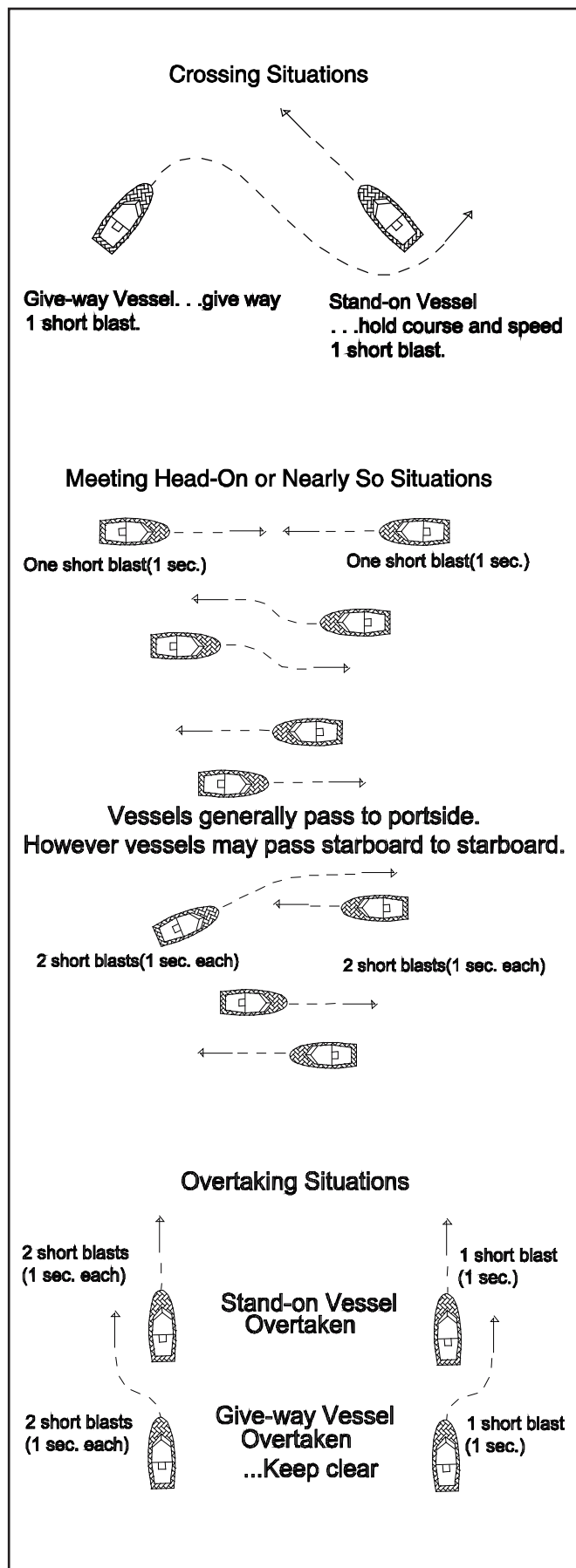
- Make sure your navigation lights are on and working properly. Navigation lights warn others of your position and course and the position and course of other vessels.
- All navigation rules apply. If the bow light of another vessel shows red, you should give way to that vessel, if it shows green, you have the right-of-way.
- Slow down and never operate at high speeds when operating at night, stay clear of all boats and use good common sense. Always be ready to slow down or steer clear of other vessels, even if you have the right-of-way.
- Avoid bright lights that can destroy night vision, making it difficult to see navigation lights and the lights of other boats. You and your passengers should keep a sharp lookout for hazards, other boats and navigational aids.

## Navigation Aids

Aids to navigation are placed along coasts and navigable waters as guides to mark safe water and to assist mariners in determining their position in relation to land and hidden dangers. Each aid to navigation is used to provide specific information. You should be familiar with these and any other markers used in your boating area.

### Notice:

**Storms and wave action can cause buoys to move. You should not rely on buoys alone to determine your position.**





# Navigational Aids Chart

**REMEMBER THESE RULES**

1. OVERTAKING - PASSING: Boat being passed has the right-of-way. KEEP CLEAR.
2. MEETING HEAD ON: Keep to the right.
3. CROSSING: Boat on right has the right-of-way. Slow down and permit boat to pass.

<p><b>← PORT</b></p> <p>Yield right-of-way to boats in your DANGER ZONE!</p> <p><b>STARBOARD →</b></p> <p>DANGER ZONE (Dead ahead to 2 points abaft your starboard beam)</p>	<p><b>STORM WARNINGS</b></p> <p>RED FLAG Small craft (winds up to 33 knots)</p> <p>2 RED FLAGS Gale (winds up to 47 knots)</p> <p>SQUARE RED FLAG BLACK BOX (Storm)</p> <p>2 SQUARE RED FLAGS BLACK BOX (Hurricane)</p>																								
<p><b>WHISTLE SIGNALS</b></p> <p>ONE LONG BLAST: Warning signal (Coming out of slip)</p> <p>ONE SHORT BLAST: Pass on my port side</p> <p>TWO SHORT BLASTS: Pass on my starboard side</p> <p>THREE SHORT BLASTS: Engine(s) in reverse</p> <p>FOUR OR MORE BLASTS: Danger signal</p>	<p><b>BRIDGE SIGNALS</b></p> <table border="0"> <tr> <td><b>SOUND</b></td> <td><b>VISUAL</b></td> <td>DAY (Flag)</td> <td>NIGHT (Lights)</td> </tr> <tr> <td>VESSEL: Open — ●</td> <td>VESSEL: Open</td> <td>□</td> <td>○</td> </tr> <tr> <td>BRIDGE: OK — ●</td> <td>BRIDGE: OK</td> <td>□</td> <td>○</td> </tr> <tr> <td>No — ●●●●●</td> <td>No</td> <td>□</td> <td>○</td> </tr> <tr> <td>VESSEL: Replies: ●●●●●</td> <td></td> <td></td> <td></td> </tr> <tr> <td><b>RADIO: VHF CH. 13</b></td> <td></td> <td></td> <td></td> </tr> </table>	<b>SOUND</b>	<b>VISUAL</b>	DAY (Flag)	NIGHT (Lights)	VESSEL: Open — ●	VESSEL: Open	□	○	BRIDGE: OK — ●	BRIDGE: OK	□	○	No — ●●●●●	No	□	○	VESSEL: Replies: ●●●●●				<b>RADIO: VHF CH. 13</b>			
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<b>RADIO: VHF CH. 13</b>																									

**LATERAL AIDS AS SEEN ENTERING FROM SEAWARD**

<p><b>PORT SIDE</b> ODD NUMBERED AIDS</p> <p>GREEN LIGHT ONLY</p> <p>FLASHING: [diagram]</p> <p>OCCULTING: [diagram]</p> <p>QUICK FLASHING: [diagram]</p> <p>ISOPHASE: [diagram]</p> <p>LIGHTED BUOY: G "9" FI G 4sec</p> <p>CAN: G "7" C "7"</p> <p>DAYMARK: SG 1 G "1"</p>	<p><b>SAFE WATER MID-CHANNELS OR FAIRWAYS</b> NO NUMBERS — MAY BE LETTERED</p> <p>WHITE LIGHT ONLY MORSE CODE</p> <p>Mo (A) [diagram]</p> <p>SPHERICAL: RW SP "G"</p> <p>MR: RW "A"</p> <p>LIGHTED AND OR SOUND: RW "N" Mo (A)</p> <p><b>PREFERRED CHANNEL</b> NO NUMBERS — MAY BE LETTERED</p> <p>COMPOSITE GROUP FLASHING (2 + 1)</p> <p>GREEN LIGHT ONLY</p> <p>RED LIGHT ONLY</p> <p>LIGHTED</p> <p>PREFERRED CHANNEL TO STARBOARD TOPMOST BAND GREEN: GR "C" FI (2 + 1)</p> <p>PREFERRED CHANNEL TO PORT TOPMOST BAND RED: RG "B" FI (2 + 1)</p> <p>CAN: GR "C" L "L"</p> <p>NUN: RG "N" W "W"</p> <p>DAYMARK: JG A GR "A"</p> <p>DAYMARK: JR B RG "B"</p>	<p><b>STARBOARD SIDE</b> EVEN NUMBERED AIDS</p> <p>RED LIGHT ONLY</p> <p>FLASHING: [diagram]</p> <p>OCCULTING: [diagram]</p> <p>QUICK FLASHING: [diagram]</p> <p>ISOPHASE: [diagram]</p> <p>LIGHTED BUOY: R "8" FI R 4sec</p> <p>NUN: R "6" N "6"</p> <p>DAYMARK: TR 2 R "2"</p>
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## 2.3 Pre-Cruise Check

### Before Starting the Engines:

- Check the weather forecast and sea conditions before leaving the dock. Decide if the planned cruise can be made safely.
- Be sure all required documents are on board.
- Be sure all necessary safety equipment is on board and operative. This should include items like the running lights, spotlight, life saving devices, etc. Please refer to the Safety Equipment chapter for additional information on safety equipment.
- Make sure you have signal kits and flare guns aboard and they are current and in good operating condition.
- Be sure you have sufficient water and other provisions for the planned cruise.
- Leave a written message listing details of your planned cruise with a close friend ashore (Float Plan). The float plan should include a description of your boat, where you intend to cruise and a schedule of when you expect to arrive in the cruising area and when you expect to return. Keep the person informed of any changes in your plan to prevent false alarms. This information will tell authorities where to look and the type of boat to look for in the event you fail to arrive.
- Check the amount of fuel on board. Observe the "Rule of Thirds": one third of the fuel for the trip out, one third to return and one third in reserve. An additional 15% may be consumed in rough seas.
- Check the water separating fuel filters for leaks or corrosion.
- Check the crankcase oil level in each engine.
- Turn the battery switches on.
- Check the bilge water level. Look for other signs of potential problems. Monitor for the scent of fuel fumes.
- Test the automatic and manual bilge pump switches to make sure the systems are working properly. This is particularly important before running offshore.

- Have a tool kit aboard. The kit should include the following basic tools:

Hammer	Electrician's tape
Screwdrivers	Offset screwdrivers
Lubricating oil	Pliers
Jackknife	Adjustable wrench
Basic 3/8" ratchet set	Vise grip pliers
Hex key set	Needle nose pliers
Wire crimping tool	Wire connector Set
End wrench set	Medium slip-joint pliers
Diagonal cutting pliers	DC electrical test light

WARNING

**THERE MUST BE AT LEAST ONE PERSONAL FLOTATION DEVICE ON BOARD FOR EVERY PERSON ON BOARD AND ONE THROW-OUT FLOTATION DEVICE. CHECK THE U.S. COAST GUARD STANDARDS FOR THE CORRECT TYPE OF DEVICE FOR YOUR BOAT.**

- Have the following spare parts on board:
 

Extra light bulbs	Spark plugs
Fuses and circuit breakers	Main 12 volt fuses
Assorted stainless screws	Assorted stainless bolts
Flashlight and batteries	Drain plugs
Engine oil	Propellers
Fuel filters	Propeller hub kits
Fuel hose and clamps	Wire ties
Assorted hose clamps	Hydraulic steering fluid
Spare bilge pump	Rags
- Make sure all fire extinguishers are in position and in good operating condition.
- Check the engine and steering controls for smooth and proper operation. Be sure the shift controls are in the neutral position.
- Be sure the emergency stop lanyard is attached to the operator and the stop switch.
- Refer to the engine owner's manual for pre-operation checks specific to your engines.

## 2.4 Operating Your Boat



### After Starting the Engines:

- Visibly check the engines to be sure there are no apparent water, fuel or oil leaks.
- Check the operation of the engine cooling systems by monitoring the water flowing from the bypass ports.
- Check the engine gauges. Make sure they are reading normally.
- Check the controls and steering for smooth and proper operation.
- Make sure all lines, cables, anchors, etc. for securing a boat are on board and in good condition. All lines should be coiled, secured and off the decks when underway.
- Have a safe cruise and enjoy yourself.

#### Remember:

When you operate a boat, you accept the responsibility for the boat, for the safety of passengers and for others out enjoying the water.

- Alcohol and any drugs can severely reduce your reaction time and affect your better judgement.
- Alcohol severely reduces the ability to react to several different signals at once.
- Alcohol makes it difficult to correctly judge speed and distance or track moving objects.
- Alcohol reduces night vision and the ability to distinguish red from green.



 **WARNING** 

**YOU SHOULD NEVER OPERATE YOUR BOAT WHILE UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.**

- Make sure one other person on the boat is instructed in the operation of the boat.
- Make sure the boat is operated in compliance with all state and local laws governing the use of a boat.

 **WARNING** 

**DO NOT OPERATE THE BOAT UNLESS IT IS COMPLETELY ASSEMBLED. KEEP ALL FASTENERS TIGHT. KEEP ADJUSTMENTS ACCORDING TO SPECIFICATIONS.**

 **WARNING** 

**FAILURE TO FOLLOW THE BREAK-IN PROCEDURE MAY RESULT IN REDUCED ENGINE LIFE OR EVEN SEVERE ENGINE DAMAGE IN YOUR OUTBOARD ENGINES. MAKE SURE YOU FOLLOW THE BREAK-IN PROCEDURE EXACTLY.**

- Always operate the blower whenever the generator is running to remove fumes and help cool the equipment compartment.
- Avoid sea conditions that are beyond the skill and experience of you and your crew. Learn to understand weather patterns and indications for change. You should monitor NOAA weather broadcasts before leaving port and periodically while boating. If the weather deteriorates or a storm approaches, seek shelter in a safe harbor.
- Use caution during periods of reduced visibility due to weather or operation conditions. Reduce speed and designate a passenger to be a lookout for other boats, obstacles and navigational markers until you reach port or conditions improve.
- Your Everglades is a heavy boat that will produce a large wake at certain speeds. You are responsible for damage and injury caused by your boat's wake. Always observe no wake zones and be aware that your wake can endanger small vessels and their passengers. Always be courteous and slow down to reduce your wake when passing smaller boats.
- Before operating the boat for the first time, read the engine break-in procedures. The break-in procedures are found in the owner's manual for the engines. The manual is in the literature packet.

- As different types of engines are used to power the boat, have the dealer describe the operating procedures for your boat. For more instructions on "How To Operate The Boat," make sure you read the instructions given to you in the owner's manual for the engines you have selected.

**Notice:**

**For more instructions on safety, equipment and boat handling, enroll in one of the several free boating courses offered. For information on the courses offered in your area, call the "Boating Course Hotline," 1-800-368-5647 or on the WEB at [www.uscgboating.org](http://www.uscgboating.org).**

**Notice:**

**If the running gear hits an underwater object, stop the engines. Inspect the propulsion system for damage. If the system is damaged, contact your dealer for a complete inspection and repair of the unit.**

**To stop the boat, follow this procedure:**

- Allow the engines to drop to the idle speed.
- Make sure the shifting levers are in the neutral position.

**Notice:**

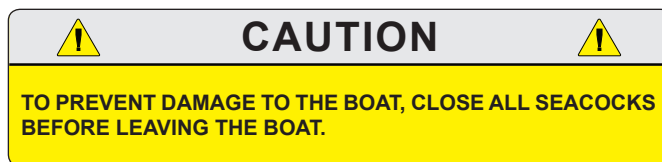
**If the engines have been run at high speed for a long period of time, allow the engines to cool down by running the engines in the idle position for 3 to 5 minutes.**

- Turn the ignitions to the "OFF" position.
- Raise the trim tabs to the full up position.

**After Operation:**

- If operating in saltwater, wash the boat and all equipment with soap and water. Flush the engines using freshwater. Refer to the engine owner's manual for instructions on flushing your outboard engines.
- Check the bilge area for debris and excess water.

- Fill the fuel tank to near full to reduce condensation. Allow enough room in the tank for the fuel to expand without being forced out through the vent.
- Turn off all electrical equipment except the automatic bilge pumps.
- If you are going to leave the boat for a long period of time, put the battery main switches in the "Off" position and close all seacocks.
- Make sure the boat is securely moored.



## 2.5 Docking, Anchoring and Mooring

### Docking and Dock Lines

Maneuvering the boat near the dock and securing the boat require skill and techniques that are unique to the water and wind conditions and the layout of the dock. If possible, position a crew member at the bow and stern to man the lines and assist in docking operations. While maneuvering close to the dock consideration must be given to the wind and current. You should anticipate the effect these forces will have on the boat and use them to help put the boat where you want it. It is important to practice in open water using an imaginary dock enough to develop a sense for the way your boat handles in a variety of docking scenarios. You must be able to foresee the possibilities and have solutions in mind before problems occur.

Approaching a dock or backing into a slip in high winds or strong currents requires a considerable amount of skill. If you are new to boat handling, you should take lessons from an experienced pilot to learn how to maneuver your boat in tight quarters in less than ideal conditions. You should also practice away from the dock during windy conditions.

Dock lines are generally twisted or braided nylon. Nylon is strong and stretches to absorb shock. It also has a long life and is soft and easy on the hands. The line's size will vary with the size of the boat. Typically a 30 to 40 foot boat will use 5/8-inch line and a 20 to 30 foot boat will use 1/2-inch



line. The number of lines and their configuration will vary depending on the dock, the range of the tide and many other factors. Usually a combination of bow, stern and spring lines is used to secure the boat.

## Maneuvering to the Dock

### Notice:

**If your boat is equipped with triple engines, we recommend turning the center engine off and using the port and starboard engines to maneuver the boat to the dock or back it into a slip.**

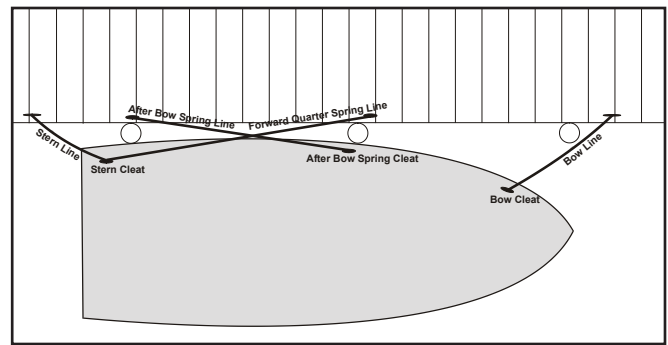
Approach the dock slowly at a 30 to 40 degree angle. Whenever possible, approach against the wind or current. Turn the engines straight & shift to neutral when you feel you have enough momentum to reach the dock. Use reverse on the outboard engine while turning the steering wheel towards the dock to slow the boat and pull the stern toward the dock as the boat approaches. Straighten the engines and use both engines to stop the boat if it is still moving forward against the pilings. If you executed your approach properly, the boat will lightly touch the pilings at the same time the forward momentum is stopped. Have the dock lines ready and secure the boat as soon as it stops. Use fenders to protect the boat while it is docked. Keep the engines running until the lines are secured.

## Backing into a Slip

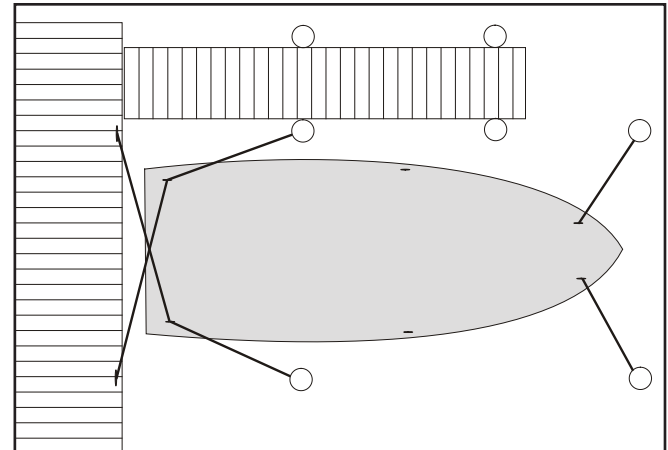
Approach the slip with the stern against the wind or current and the engines straight ahead. Use the engines and turn the steering wheel to maneuver the boat into alignment with the slip. Reverse the engines and slowly back into the slip. Shift from reverse to neutral frequently to prevent the boat from gaining too much speed. Move the stern right and left by shifting the engines in and out of gear or turning the wheel. When nearly in the slip all the way, straighten the engines and shift to forward to stop. Keep the engines running until the lines are secured.

## Securing Dock Lines

Securing a boat that is tied along side the dock typically requires a bow and stern line and two spring lines. The bow and stern lines are usually secured to the dock at a 40° angle aft of the stern cleat and forward of the bow cleat. The after bow spring line is secured to the dock at a 40° angle aft of the after bow spring cleat. The forward quarter spring is secured to the dock at a 40° angle



Securing The Boat Along Side A Dock (Typical)



Securing The Boat In A Slip (Typical)

forward of the stern cleat. The spring lines keep the boat square to the dock and reduce fore and aft movement while allowing the boat to move up and down with the tide.

Securing a boat in a slip is somewhat different. It typically requires two bow lines secured to pilings on each side of the bow, two stern lines secured to the dock and two spring lines that prevent the boat from hitting the dock. The bow lines are typically secured with enough slack to allow the boat to ride the tide. The stern lines are crossed. One line runs from the port aft boat cleat to the starboard dock cleat and the other line runs from the starboard aft boat cleat to the port cleat on the dock. The stern lines center the boat, control the forward motion and allow the boat to ride the tide. Two forward quarter spring lines typically are secured to the stern cleats and to mid ship pilings or cleats. The spring lines keep the boat from backing into the dock while allowing it to ride the tide.

## Leaving the Dock

Always start the engines and let them warm up for several minutes before releasing the lines.

Boats steer from the stern and it is important that you achieve enough clearance at the stern to maneuver the boat as quickly as possible. Push the stern off and maneuver such that you get stern clearance quickly. Proceed slowly until well clear of the dock and other boats.

## Mooring

Approach the mooring heading into the wind or current. Shift to neutral when you have just enough headway to reach the buoy. Position a crew member on the bow to retrieve the mooring line with a boat hook and secure the line. Keep the engines running until the line is secured.

## Leaving a Mooring

Start the engines and let them warm up for several minutes before releasing the mooring line. The boat will already be headed into the wind, so move it forward enough to loosen the line and untie it. Back the boat away from the mooring until you can see the buoy. Move the boat slowly away from the mooring.

## Anchoring

Make sure the bitter end of the anchor line is attached to boat before dropping the anchor. Bring the bow into the wind or current and put the engine in neutral. When the vessel comes to a stop, lower the anchor over the bow. Pay out anchor line so that it is at least 5 to 7 times the depth of the water and secure the line to a cleat. Use caution to avoid getting your feet or hands tangled in the line. Additional scope of 10 times the depth may be required for storm conditions. Check landmarks on shore or your GPS position to make sure the anchor is not dragging. If it is dragging, you will have to start all over. It is prudent to use two anchors at the bow if you are anchoring overnight or in rough weather.



After the anchor is set, the windlass must not be left to take the entire force from the anchor line. Boats lying to their anchor in a high swell or heavy weather conditions will snub on the line. This can cause slippage or apply excessive loads to the windlass. The line should always be made fast to a bow cleat to relieve the load on the windlass.

Do not set a bow and stern anchor when mooring, only anchor from the bow. The stern anchor will not allow the boat to swing with the current and wind. If you are anchored in a mooring with other boats, your boat will not swing with the other boats in the mooring, creating a potential for contact with another boat when the tide or

wind changes. Additionally, having the stern to the wind or tide creates a potentially hazardous situation for the boat and crew.

## Releasing the Anchor

Release the anchor by driving the boat slowly to the point where the anchor line becomes vertical. It should release when you pass that point. If the anchor doesn't release right away, stop the boat directly above the anchor and tie the line to the cleat as tight as possible. The up and down movement of the boat will usually loosen the anchor within a minute. Make sure you secure the anchor and properly stow the line before operating the boat.

	<b>WARNING</b>	
<b>NEVER ANCHOR THE BOAT BY THE STERN. THE STERN OF THE BOAT IS VULNERABLE TO SWAMPING FROM WAVE ACTION AND WIND AND CURRENT WILL PUT MORE STRESS ON THE ANCHOR WHEN IT IS ATTACHED TO THE STERN. ONLY ANCHOR THE BOAT BY THE BOW</b>		

## 2.6 Controls, Steering or Propulsion System Failure

If the propulsion, control or steering system fails while you are operating the boat, bring the throttles to idle and shift to neutral. Decide whether you need to put out the anchor to prevent the boat from drifting or to hold the bow into the seas. Investigate and correct the problem if you can. Turn the engine off before opening the engine cowling to make repairs. If you are unable to correct the problem, call for help.

If only one engine has failed, you can usually run home on the other engine(s). Be careful not to apply too much power to the engine that is running. When only one engine is used to power a twin engine boat or one or two engines to power a triple engine boat, the engine or engines are over propped and can be overloaded if too much throttle is applied. You should contact your dealer or the engine manufacturer for the maximum power settings when running without one engine.

## 2.7 Collision

If your boat is involved in a collision with another boat, dock, piling or a sandbar, your first priority is

to check your passengers for injuries and administer first aid if necessary. Once your passengers situations are stabilized, thoroughly inspect the boat for damage. Check below decks for leaks and the control systems for proper operation. Plug all leaks or make the necessary repairs to the control systems before proceeding slowly and carefully to port. Request assistance if necessary. Haul the boat and make a thorough inspection of the hull and running gear for damage.

**WARNING**

**RUNNING AGROUND CAN CAUSE SERIOUS INJURY TO PASSENGERS AND DAMAGE TO A BOAT AND ITS UNDERWATER GEAR. IF YOUR BOAT SHOULD BECOME GROUNDED, DISTRIBUTE PERSONAL FLOTATION DEVICES AND INSPECT THE BOAT FOR POSSIBLE DAMAGE. THOROUGHLY INSPECT THE BILGE AREA FOR SIGNS OF LEAKAGE. AN EXPERIENCED SERVICE FACILITY SHOULD CHECK YOUR UNDERWATER GEAR AT THE FIRST OPPORTUNITY. DO NOT CONTINUE TO USE YOUR BOAT IF THE CONDITION OF THE UNDERWATER EQUIPMENT IS QUESTIONABLE.**

## 2.8 Grounding, Towing and Rendering Assistance

The law requires the owner or operator of a vessel to render assistance to any individual or vessel in distress, as long as his vessel is not endangered in the process.

If the boat should become disabled or if another craft that is disabled requires assistance, great care must be taken. The stress applied to a boat during towing may become excessive. Excessive stress can damage the structure of the boat and create a safety hazard for those aboard.

Freeing a grounded vessel or towing a boat that is disabled, requires specialized equipment and knowledge. Line failure and structural damage caused by improper towing have resulted in fatal injuries. Because of this, we strongly suggest that these activities be left to those who have the equipment and knowledge, e.g., the U.S. Coast Guard or a commercial towing company, to safely accomplish the towing task.

**DANGER**

**THE MOORING CLEATS ON EVERGLADES BOATS ARE NOT DESIGNED OR INTENDED TO BE USED FOR TOWING PURPOSES. THESE CLEATS ARE SPECIFICALLY DESIGNED AS MOORING CLEATS FOR SECURING THE BOAT TO A DOCK, PIER, ETC. DO NOT USE THESE FITTINGS FOR TOWING OR ATTEMPTING TO FREE A GROUNDED VESSEL.**

**WARNING**

**WHEN TOWING OPERATIONS ARE UNDERWAY, HAVE EVERYONE ABOARD BOTH VESSELS STAY CLEAR OF THE TOW LINE AND SURROUNDING AREA. A TOW LINE THAT SHOULD BREAK WHILE UNDER STRESS CAN BE VERY DANGEROUS AND COULD CAUSE SERIOUS INJURY OR DEATH.**

## 2.9 Flooding or Capsizing

Boats can become unstable if they become flooded or completely swamped. You must always be aware of the position of the boat to the seas and the amount of water in the bilge. Water entering the boat through the transom door or over the stern gunnels can usually be corrected by closing the door and turning the boat into the waves. If the bilge is flooding because of a hole in the hull or a defective hose, you may be able to plug it with rags, close the thru-hull valve or assist the pumps by bailing with buckets. Put a mayday call in to the Coast Guard or nearby boats and distribute life jackets as soon as you discover your boat is in trouble.

If the boat becomes swamped and capsizes, you and your passengers should stay with the boat as long as you can. It is much easier for the Coast Guard, aircraft or other boats to spot, than people in the water. If your boat is equipped with an EPIRB, make sure it is activated. When activated, EPIRBs will send distress code homing beacons that allow Coast Guard aircraft to identify your boat and find you quickly.

## 2.10 Fishing

Fishing can be very exciting and distracting for the operator when the action gets intense. You must always be conscious of the fact that your primary responsibility is the safe operation of your boat and the safety of your passengers and other boats in the area.

You must always make sure the helm is properly manned and is never left unattended while trolling. If your boat is equipped with a tower, caution and good common sense must be exercised whenever someone is in the tower. Remember, weight in the tower raises the boat's center of gravity and

the boat's motion is greatly exaggerated for the person in a tower.

If you are fishing in an area that is crowded with other fishing boats, it may be difficult to follow the rules of the road. This situation can become especially difficult when most boats are trolling. Being courteous and exercising good common sense is essential. Avoid trying to assert your right-of-way and concentrate on staying clear and preventing tangled or cut lines and other unpleasant encounters with other boats. Also keep in mind that fishing line wrapped around a propeller shaft can damage seals in the engine lower unit.

## 2.11 Tower Operation (Optional)

Your boat could be equipped with an optional fabricated aluminum tower or upper helm station. Towers are normally equipped with full engine controls, trim tab controls, compass, engine alarms, stop and start buttons, emergency stop switch and tachometers. This allows for complete operation of the boat from the tower.

### Operation of the Upper Station Controls

The engines should be started at the lower helm. Monitor the gauges to make sure all systems are normal and the engines have been allowed to warm up slightly before proceeding to the tower helm. The ignition or restart switches on the tower are only used to restart an engine in the event it should stall. The shift controls must be in neutral for the start switches to be functional.

Electronic engine controls are equipped with a station transfer button that allows the operator to transfer control from one station to another with the push of a button. Always make sure that you activate the controls as soon as you reach the upper helm station.

Refer to the Control Systems chapter and the electronic engine control owner's manual for more information on the control system operation and selecting the controls on boats with dual stations.

### The following is a list of safety precautions for tower operation:

- Do not operate the boat from the tower in rough sea conditions. The boat's motions are exaggerated in the tower and this motion may become excessive in rough seas.

- Be careful when using the trim tabs from the tower. The reaction of the trim tabs will be exaggerated in the tower. Use small tab corrections and wait ten (10) seconds for the tabs to react. Keep making small corrections until the hull is at the desired attitude.
- Do not overload the tower. Most towers are designed to hold the weight of only two average-sized people. Weight in the tower raises the boat's center of gravity. Too much weight in the tower could make the boat unstable.
- Do not operate the boat in tight quarters, such as marinas, from the tower. The operator is isolated from the boat while in the tower and will not be able to assist in docking procedures.
- Always pay close attention to your grip and footing on tower ladders. Your ability to achieve a good grip and proper footing is reduced in wet or rough weather. Therefore, the tower should be avoided in these conditions.
- Only operate the boat from the tower in familiar waters or where running aground is not a possibility. Running aground while operating the boat from the tower could result in severe injury.
- Always be alert for waves and boat wakes when operating the boat from the tower. Remember that the boat's motions are exaggerated in the tower.
- Good common sense and judgment must be exercised at all times when operating a boat from the tower.
- If an engine alarm sounds, immediately put the boat in NEUTRAL and shut OFF the engine(s), if safe to do so, until the problem is found and corrected.
- Always put the boat in NEUTRAL before moving to and from the tower helm and cockpit.



	<b>WARNING</b>	
<p>GOOD COMMON SENSE, JUDGMENT AND EXTREME CAUTION MUST BE EXERCISED WHEN OPERATING A BOAT WITH SOMEONE IN THE TOWER. DO NOT ALLOW ANYONE IN THE TOWER WHEN THE WATER IS ROUGH OR WHEN OPERATING IN UNFAMILIAR WATERS WHERE RUNNING AGROUND IS A POSSIBILITY. REMEMBER, WEIGHT IN THE TOWER RAISES THE BOAT'S CENTER OF GRAVITY AND THE BOAT'S MOTION IS GREATLY EXAGGERATED FOR THE PEOPLE IN THE TOWER.</p>		



## 2.12 Man Overboard

If someone falls overboard, you must be prepared to react quickly, particularly when you are offshore. The following procedures will help you in recovering a person that has fallen overboard.

- Immediately stop the boat and sound a man overboard alarm and have all passengers point to the person in the water.
- Circle around quickly and throw a cushion or life jacket to the person, if possible and another to use as a marker.
- Keep the person on the driver side of the boat so you can keep him in sight at all times.
- Make sure to approach the person from the downwind side and maneuver the boat so the propellers are well clear of the person in the water.
- Turn off the engines when the person is alongside and use a ring buoy with a line attached, a paddle or boat hook to assist him to the boat. Make sure you don't hit him with the ring buoy or the boat.
- Pull the person to the boat and assist him on board.
- Check the person for injuries and administer first aid if necessary. If the injuries are serious, call for help. Refer to the Safety chapter for more information on first aid and requesting emergency medical assistance.

	<b>WARNING</b>	
<p><b>MOVING PROPELLERS ARE DANGEROUS. THEY CAN CAUSE DEATH, LOSS OF LIMBS OR OTHER SEVERE INJURY. DO NOT USE THE SWIM PLATFORM OR SWIM LADDER WHILE THE ENGINES ARE RUNNING. STOP THE ENGINES IF DIVERS OR SWIMMERS ARE ATTEMPTING TO BOARD. ALWAYS PROPERLY STORE THE LADDER BEFORE STARTING THE ENGINES.</b></p>		

## 2.13 Water Skiing and Wakeboarding

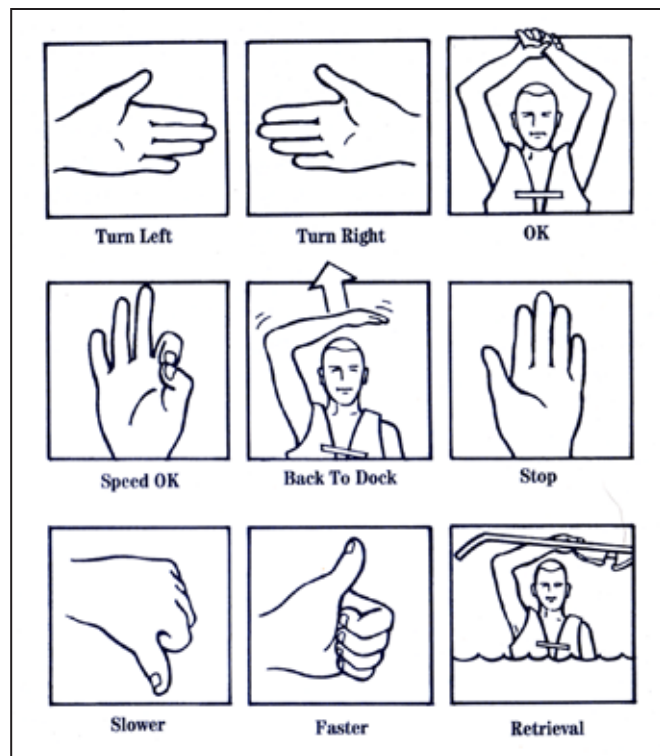
Your boat could be equipped for water skiing and wakeboarding. If you have never driven skiers before, you should spend some hours as an observer and learning from an experienced driver. If you are an experienced driver, you should take

some time to become familiar with the boat and the way it handles before pulling a skier. The driver should also know the skier's ability and drive accordingly.

**The following safety precautions should be observed while towing water skiers.**

- Water ski only in safe areas, away from other boats and swimmers, out of channels and in water free of underwater obstructions. The area should be at least 5 feet deep, 3000 feet long and have at least 100 feet between each side of the boat and any obstructions.
- Make sure that anyone who skis can swim. Do not allow people who cannot swim to water ski.
- Be sure that the skier is wearing a proper life jacket. A water skier is considered onboard the boat and a Coast Guard approved life jacket is required. It is advisable and recommended for a skier to wear a flotation device designed to withstand the impact of hitting the water at high speed.
- Make sure to inspect the ski equipment and tow rope before each ski session. Never use equipment that is damaged or with loose screws, torn boots, severe corrosion or tears in the fabric. You should also inspect the ski tow rope and replace if it is frayed, has unnecessary knots or is damaged. Never use a ski tow line that is questionable.
- Secure the ski tow rope to an appropriate device intended for ski tow ropes.
- Always carry a second person on board to observe the skier or wakeboarder so that your full attention can be given to the safe operation of the boat. The operator should pay attention to driving the boat and have the observer keep him updated on the skier. Never ski after dark. It is hazardous and illegal. Neither the boat operator or skier can see well enough to navigate at skiing or wakeboarding speeds safely at night.
- Never spray swimmers, boats, rafts or other skiers. The risk for a collision makes this dangerous for the skier and people being sprayed.

- Never follow directly behind another boat while pulling skiers. Always stay a safe distance behind or off the side of other boat traffic. If the boat you are following stops unexpectedly, you may not be able to respond quick enough endangering your skier and occupants of both boats.
- Never follow behind another boat pulling a skier for any reason, even if you are not pulling a skier. If the skier you are following falls, you may not be able to respond quick enough and could run over the skier.
- When pulling multiple skiers, make sure the ropes are the same length. Never pull multiple skiers with tow ropes of different lengths.
- Always make sure to slowly pull the slack out of the ski rope and wait for the OK from the skier before advancing the throttle to ensure the rope is not wrapped around the skier and that the skier is ready. Never advance the throttle until the skier provides the ready signal.
- When turning around to pick up a fallen skier, make sure to look for other boat traffic in the direction of the turn before you turn the boat.
- Approach a skier in the water from the down-wind side and be certain to stop the motion of the boat and your motor before coming in close proximity to the skier.
- Give immediate attention to a fallen skier. A fallen skier is very hard to see by other boats and is extremely vulnerable. When a skier falls, be prepared to immediately turn the boat and return to the skier.
- Never leave a fallen skier alone in the water for any reason and have an observer display a skier down flag to alert other boaters that your skier has fallen.
- Agree on hand signals to be used between the observer and skier to communicate. This is important to eliminate confusion and ensure the safety of your skiers, wakeboarders or tubers. Refer the Hand Signals drawing in this section for signals that are commonly used during water sports activities.
- Make sure the observer watches for the skier's signal to indicate he or she is OK. If the signal is not seen immediately, assume the skier is injured and in need of immediate assistance. Be prepared to respond quickly.



Common Hand Signals for Water Sports Activities

For additional information on water skiing, including hand signals and water skiing manuals, contact the American Water Skiing Association in Winter Haven, Florida, 813-324-4341.

⚠ **WARNING** ⚠

**MOVING PROPELLERS ARE DANGEROUS. THEY CAN CAUSE DEATH, LOSS OF LIMBS OR OTHER SEVERE INJURY. DO NOT USE THE SWIM PLATFORM OR SWIM LADDER WHILE THE ENGINE IS RUNNING. STOP THE ENGINE IF DIVERS, SWIMMERS OR SKIERS ARE ATTEMPTING TO BOARD. ALWAYS PROPERLY STORE THE LADDER BEFORE STARTING THE ENGINE.**

## 2.14 Teak Surfing

Teak Surfing is a new and dangerous boating fad that involves an individual holding on to the swim platform of a vessel while a wake builds up then lets go to body surf the wave created by the boat; hence the term "Teak Surfing." This activity puts that individual directly in the path of the boat's exhaust and poisonous carbon monoxide. Because of the multiple dangers associated with teak surfing and the carbon monoxide problem in particular, the Coast Guard has issued a safety alert that strongly advises the public not to en-

gage in teak surfing and warns that teak surfing may cause carbon monoxide poisoning and even fatalities.

Teak surfing not only exposes an individual to potentially fatal concentrations of carbon monoxide from the engine exhaust, it exposes them unnecessarily and dangerously to the boat's propeller. The danger is compounded by the fact that individuals do not usually wear a life jacket when teak surfing.

Teak surfing is an extremely dangerous activity and you should never allow anyone to "Teak Surf" behind your boat or be in the water near the ladder or swim platform while the engine is operating.

### 2.15 Trash Disposal

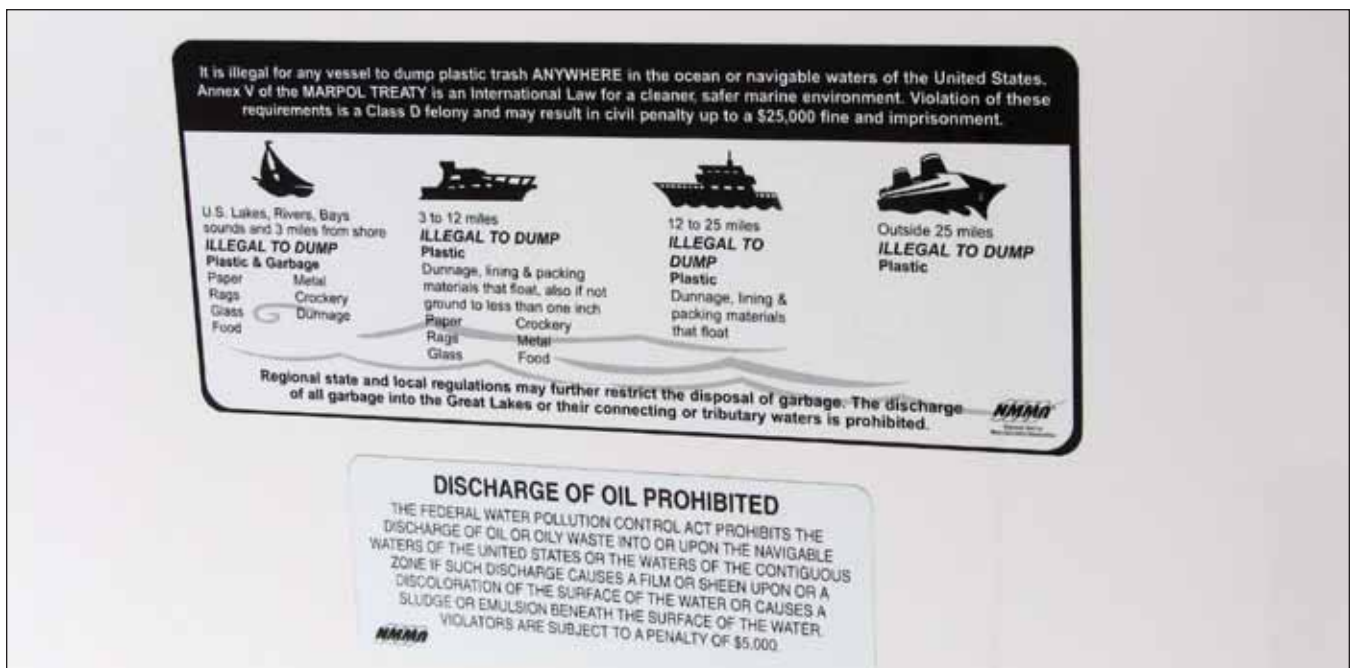
The discharge of plastic trash or trash mixed with plastic is illegal anywhere in the marine environment. U.S. Coast Guard regulations also restrict the dumping of other forms of garbage. Regional, state and local restrictions on garbage discharges also may apply.

Responsible boaters store refuse in bags and dispose of it properly on shore. You should make sure your passengers are aware of the local waste laws and the trash management procedure on your boat. Refer to the placard mounted on your boat for more specific information regarding solid waste disposal.

Federal law requires that vessels of 26 feet or longer must display in a prominent location, a durable placard at least 4 by 9 inches notifying the crew and passengers of the discharge restrictions (Marpol Treaty). A label for this purpose has been shipped with the boat and is attached to the port side of the cockpit. It is the boat owner's responsibility to make sure this placard remains mounted and legible in accordance with the law.

!
WARNING
!

**TEAK SURFING (HOLDING ONTO THE SWIM PLATFORM WHILE BOAT IS UNDERWAY) IS EXTREMELY DANGEROUS AND CAN CAUSE SEVERE INJURY OR DEATH. TEAK SURFING PUTS AN INDIVIDUAL DIRECTLY THE PATH OF THE BOAT'S EXHAUST AND EXPOSES THEM TO POISONOUS LEVELS OF CARBON MONOXIDE. IT ALSO EXPOSES AN INDIVIDUAL TO THE POSSIBILITY OF BEING THROWN INTO THE PROPELLERS. YOU SHOULD NEVER ALLOW ANYONE TO TEAK SURF BEHIND YOUR BOAT OR TO BE IN THE WATER NEAR THE LADDER OR SWIM PLATFORM WHILE THE ENGINE IS RUNNING.**



Trash Disposal and Discharge of Placards on Starboard Side of Cockpit

## 2.16 Trailering Your Boat

If you trailer your boat, make sure that your tow vehicle is capable of towing the weight of the trailer, boat and equipment and the weight of the passengers and equipment inside the vehicle. This may require that the tow vehicle be specially equipped with a larger engine, transmission, brakes and trailer tow package. Additionally, the laws in your state may require special permits to tow a boat this large on some or all highways.

The boat trailer is an important part of your boating package. The trailer should be matched to your boat's weight and hull. Using a trailer with a capacity too low will be unsafe on the road and cause abnormal wear. A trailer with a capacity too high, can damage the boat. Contact your trailer dealer to evaluate your towing vehicle and hitch and to make sure you have the correct trailer for your boat.

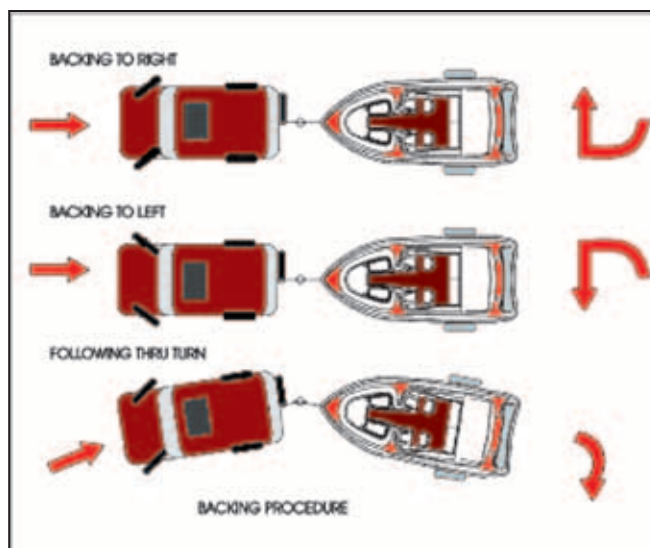
### Important Note:

**Your Everglades is a heavy boat and care must be taken when selecting the trailer. We recommend that you use a bunk style trailer that incorporates a combination of heavy duty rollers or bunks, to support the keel and long bunks running under and parallel to the stringers to support the hull. Avoid using a full roller trailer that does not have bunks. Roller trailers have a tendency to put extreme pressure points on the hull, especially on the lifting strakes and have damaged boats. The situation is worse during launching and haul out. Damage resulting from improper trailer support or the use of a full roller trailer will not be covered by the Everglades Warranty.**

### Notice:

**Contact your trailer dealer to evaluate your towing vehicle and hitch and to make sure you have the correct trailer for your boat.**

- Make sure the trailer is a match for your boat's weight and hull design. More damage can be done to a boat by the stresses of road travel than by normal water operation. A boat hull is designed to be supported evenly by water. So, when it is transported on a trailer it should be supported structurally as evenly across the hull as possible allowing for even distribution of the weight of the hull, engines and equipment.





Backing Procedure for Boat Trailers

- Make sure the trailer bunks and/or rollers properly support the hull and do not put pressure on the lifting strakes. The rollers and bunks must be kept in good condition to prevent scratching and gouging of the hull.
- The capacity rating of the trailer should be greater than the combined weight of the boat, motor and equipment. The gross vehicle weight rating must be shown on the trailer. Make sure the weight of the boat, engine, gear and trailer is not more than the gross vehicle weight rating.
- Make sure the boat is securely fastened on the trailer to prevent movement between the boat and trailer. The bow eye on the boat should be secured with a rope, chain or turnbuckle in addition to the winch cable. Additional straps may be required across the beam of the boat or from the transom eyes to the trailer.

### Notice:

**Your trailer dealer will give instructions on how to load, fasten and launch your boat.**




CAUTION


**BOATS HAVE BEEN DAMAGED BY TRAILERS THAT DO NOT PROPERLY SUPPORT THE HULL. ALWAYS MAKE SURE THE TRAILER BUNKS AND ROLLERS ARE ADJUSTED SO THEY ARE NOT PUTTING EXCESSIVE PRESSURE ON THE LIFTING STRAKES AND ARE PROVIDING ENOUGH SUPPORT FOR THE HULL. HULL DAMAGE RESULTING FROM IMPROPER TRAILER SUPPORT IS NOT COVERED BY THE EVERGLADES WARRANTY.**

**Before Going Out On The Highway:**

- Side curtains, clear connector, backdrop and aft curtain must be removed when trailering. Canvas enclosures are not designed to withstand the extreme wind pressure encountered while trailering and will be damaged. Always remove and properly store the enclosure before trailering your boat.
- Make sure the tow BALL and TRAILER COUPLER are the same size and bolts and nuts are tightly secured.
- The COUPLER MUST BE COMPLETELY OVER THE BALL and the LATCHING MECHANISM LOCKED DOWN.
- Make sure the TRAILER IS LOADED EVENLY from front to rear as well as side to side and has the correct weight on the hitch. Too much weight on the hitch will cause the rear of the tow vehicle to drag and may make steering more difficult. Too little weight on the hitch will cause the rig to fishtail and will make controlling the tow vehicle difficult. Contact your trailer manufacturer or dealer for the correct weight on the hitch for your trailer.

- The SAFETY CHAINS must be attached crisscrossing under the coupler to the frame of the tow vehicle. If the ball was to break, the trailer would follow in a straight line and prevent the coupler from dragging on the road. Make sure the trailer emergency brake cable or chain is also installed to the tow vehicle frame.
- Make sure the LIGHTS on the trailer function properly.
- CHECK THE BRAKES. On a level parking area roll forward and apply the brakes several times at increasing speeds to determine if the brakes on the tow vehicle and trailer are working properly.
- Make sure the tow vehicle has SIDE VIEW MIRRORS that are large enough to provide an unobstructed rear view on both sides of the vehicle.
- CHECK THE TIRES and WHEEL BEARINGS.

**Notice:**

**Make sure your towing vehicle and trailer are in compliance with all state and local laws. Contact your state motor vehicle bureau for laws governing the towing of trailers.**

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## PROPULSION SYSTEM



### 3.1 General



Your Everglades is designed to be powered with 4-cycle outboard motors. 4-cycle outboard engines do not use an oil injection system and are not equipped with remote oil tanks. They have an oil sump in the crankcase that must be kept full of the type of oil recommended by the engine manufacturer. The oil must be checked before each use and changed regularly.

Each manufacturer of the various outboard motors provides an owner's information manual with its product. It is important that you read the manual(s) very carefully and become familiar with the proper care and operation of the engines and drive systems. A warranty registration card has been furnished with each new engine and can be located in the engine owner's manual. All information requested on this card should be filled out completely by the dealer and purchaser and then returned to the respective engine manufacturer as soon as possible.



Triple Outboard Engines

	<b>WARNING</b>	
<p>DO NOT ATTEMPT TO SERVICE ANY ENGINE OR DRIVE COMPONENT WITHOUT BEING TOTALLY FAMILIAR WITH THE SAFE AND PROPER SERVICE PROCEDURES. CERTAIN MOVING PARTS ARE EXPOSED AND CAN BE DANGEROUS TO SOMEONE UNFAMILIAR WITH THE OPERATION AND FUNCTION OF THE EQUIPMENT.</p>		

	<b>WARNING</b>	
<p>DO NOT INHALE EXHAUST FUMES! EXHAUST CONTAINS CARBON MONOXIDE THAT IS COLORLESS AND ODORLESS. CARBON MONOXIDE IS A DANGEROUS GAS THAT IS POTENTIALLY LETHAL.</p>		

owner's manual. Routine maintenance is normally the primary concern unless the boat is to be kept in saltwater for extended periods of time. Then the main concerns are marine growth and galvanic corrosion.

Marine growth occurs when components are left in the water for extended periods and can cause poor performance or permanent damage to the exposed components. The type of growth and how quickly it occurs is relative to the water conditions in your boating area. Water temperature, pollution, current, etc. can have an effect on marine growth.

Galvanic corrosion is the corrosion process occurring when different metals are submerged in an electrolyte. Seawater is an electrolyte and submerged engine components must be properly protected. Outboard motors are equipped with sacrificial anodes to prevent galvanic corrosion problems. The anodes must be monitored and replaced as necessary. For locations and maintenance, please refer to the engine owner's manual.

### 3.2 Drive System Corrosion

Each outboard motor is a complete drive system with the gear case being just forward of the propeller and connected to the power head with a vertical drive shaft. All engines require some maintenance. Routine maintenance recommended for your engine is outlined in the engine

When leaving the boat in the water, tilt the motors as high as possible. This will decrease the risk of marine growth around the cooling inlets, propeller and exhaust ports and damage from galvanic corrosion.

**CAUTION**

DO NOT PAINT THE OUTBOARD MOTOR WITH ANTI-FOULING PAINTS DESIGNED FOR BOAT HULLS. MANY OF THESE PAINTS CAN CAUSE SEVERE DAMAGE TO THE ENGINE. CONTACT YOUR EVERGLADES DEALER OR ENGINE MANUFACTURER FOR INFORMATION ON THE PROPER PAINTING PROCEDURES.

**CAUTION**

NEVER RUN AN OUTBOARD MOTOR WITHOUT WATER FLOWING TO THE WATER PUMP. SERIOUS DAMAGE TO THE WATER IMPELLER OR ENGINE COULD RESULT.

### 3.3 Engine Lubrication

4-cycle outboard engines incorporate a pressure-type lubrication system with an oil sump in the crankcase that must be kept full of the type and grade of oil recommended by the engine manufacturer. It is normal for 4-cycle engines to consume a small amount of oil. Therefore, the oil must be checked before each use and changed at regular intervals as instructed by the engine owner's manual.

**Notice:**

**Always monitor the oil level in the crankcase and only use the type of oil specified by the engine manufacturer. Yamaha engines specify Yamalube engine oil.**

### 3.4 Engine Cooling System

Outboard engines are raw water (seawater) cooled. Water is pumped through the water inlets, circulated through the engine block and relinquished with the exhaust gases through the propeller hub. The water pump uses a small impeller made of synthetic rubber. The impeller and water pump cannot run dry for more than a few seconds. In most outboard motors, some cooling water is diverted through ports below the engine cowling. This allows the operator to visually check the operation of the cooling system. When the engine is started, always check for a steady stream of water coming out of those ports.

**Notice:**

**If the boat is used in salt or badly polluted water, the engines should be flushed after each use. Refer to the engine owner's manual for the proper engine flushing procedure.**

### 3.5 Propellers

The propellers convert the engine's power into thrust. They come in a variety of styles, diameters and pitches. All boats powered by Yamaha engines are equipped with Yamaha propellers. The propellers that will best suit the needs of your boat will depend somewhat on your application and expected average load. Propeller sizes are identified by two numbers stamped on the prop in sequence. The 1st number in the sequence (example 14" x 21") is the diameter of the propeller and the 2nd number is the pitch. Pitch is the theoretical distance traveled by the propeller in each revolution.

Always repair or replace a propeller immediately if it has been damaged. A damaged and therefore out of balance propeller can cause vibration that can be felt in the boat and could damage the engine gear assembly. Refer to the engine owner's manual for information on propeller removal and installation.

### 3.6 Performance Issues and Propellers

It is extremely important that the boat is propped to run at or very near the recommended top RPM with an average load. If the top RPM is above or below the recommend range, the propellers must be changed to prevent loss of performance and possible engine damage.

Your boat is equipped from the factory with counter rotating engines that are mounted to achieve quicker planning and optimum performance. Therefore, the left rotation engine is mounted on the port side of the transom and the right rotation engine is mounted on the starboard side. If your boat is equipped with three engines, the center engine is a right rotation engine. You should make sure that each propeller matches the rotation of the engine.

**Notice:**

**Before changing propellers to correct boat performance problems, be sure other factors such as engine tuning, bottom and running gear growth, etc. are not the source of performance changes. Always be sure the load conditions are those normally experienced, before changing propellers.**

Your boat was shipped with propellers that typically provide optimum performance for your boat. However there are factors that can affect performance and propeller requirements.

**Some are as follows:**

- You should be sure the load conditions are those normally experienced. If the boat ran in the required RPM range when it was new and you have not added any additional gear or heavy equipment and have not damaged the propellers, there is a good chance the propellers are not the problem.
- The addition of heavy equipment like a tower, life rafts, additional coolers, etc., will cause additional load on the engines. Consequently, different propellers may be required.
- Boats operated at high altitudes (above 2000 feet). Engines operated at high altitudes will not be able to develop as much horsepower as they do at or near sea level. Consequently, different propellers may be required.

**Notice:**

**Outboard engines can be damaged and the warranty void if the boat is not propped correctly. Always consult your Everglades dealer or authorized engine service dealer when making changes to the propellers or if the boat does not run near the top recommended RPM.**



Yamaha Propeller



Yamaha Command Link Plus® Display

### 3.7 Engine Instrumentation

The helm station is ©equipped with a set of engine instruments and/or alarms. These instruments allow the operator to monitor the operational condition of the engines. Close observation of these instruments allows the operator to operate the engines at the most efficient level and could save them from serious costly damage.

Most Everglades boats are equipped with Yamaha engines and Command Link Plus® LCD multifunction display. This system can be integrated with the optional electronic navigation equipment installed on your boat. A brief description of the Command Link Plus® system integrated gauges and their basic functions are listed in this section. Other functions that are dependent on the electronics installed on your boat may be available. Please refer to the Yamaha engine and Command Link Plus® owner’s manuals and the manuals for the electronics installed on your boat for detailed information on the operation of the instruments and additional functions available.

The instrumentation is unique to the type of outboard motors installed on your Everglades.

**Some or all of the following gauges may be present.**

#### Tachometers

The tachometers display the speed of the engines in revolutions per minute (RPM). This speed is not the boat speed or necessarily the speed of the propeller.

The tachometer display also contains the engine trim meters, oil pressure indicator, water pressure, water temperature, volt meters and the overheat warning indicator.

	<b>CAUTION</b>	
<p><b>NEVER EXCEED THE MAXIMUM RECOMMENDED OPERATION RPM OF THE ENGINES. MAINTAINING MAXIMUM OR CLOSE TO MAXIMUM RPM FOR EXTENDED PERIODS CAN REDUCE THE LIFE OF THE ENGINES.</b></p>		

#### Speedometer

Yamaha Command Link Plus® speedometers can indicate boat speed via the engine pickup or an optional GPS or depth sounder triducer, if these



options are installed in your boat. Refer to the engine gauge and electronics operating manuals for more information on the speedometer options available for your boat.

### Overheat Warning Indicator

The temperature warning indicates that the temperature of the engine is too high. A sudden increase in the temperature could indicate an obstructed water inlet or an impeller failure. On Yamaha engines the overheat warning indicator is built into the LCD display. It will start to blink and sound an alarm if the engine temperature is too high.



Typical Command Link Plus®  
Tachometer and Engine Monitoring Display

**CAUTION**

CONTINUED OPERATION OF AN OVERHEATED ENGINE CAN RESULT IN ENGINE SEIZURE. IF AN UNUSUALLY HIGH TEMPERATURE READING OCCURS, SHUT THE ENGINE OFF IMMEDIATELY. THEN INVESTIGATE AND CORRECT THE PROBLEM

### Fuel Gauge

The fuel gauge indicates the amount of fuel in the fuel tanks. On boats equipped with Yamaha Command Link Plus®, the fuel gauge is built into the LCD Display. The fuel indicator on the display will begin to blink if the fuel in the tank drops too low. The system can monitor up to 4 fuel or water tanks.

### Voltmeters

The voltmeters display the voltage for the battery and the charging system for each engine. The normal voltage is 11 to 12 volts with the engines off and 13 to 14.5 volts with the engines running. The Yamaha engine voltmeter is built into the LCD display. It will begin to blink if the voltage in the battery drops too low.

### Hour Meters

The hour meters keep a record of the operating time for each engine.

### Engine Tilt/Trim Gauges

The tilt/trim gauges monitor the position of each outboard engine. The upper range of the gauge indicates the tilt, which is used for trailering and shallow water operation. The lower range indicates the trim position. This is the range used to adjust the hull angle while operating your boat on

plane. The Yamaha engine trim indicator is built into the LCD display. Please refer to the engine and Command Link Plus® owner's manuals for more information on the operation of the outboard power tilt and trim.

### Engine Alarms

All outboards are equipped with an audible alarm system mounted in the helm area that monitors selected critical engine systems. The alarm will sound if one of these systems begins to fail. Refer to the engine owner's manual for information on the alarms installed with your engines.

**CAUTION**

IF THE ENGINE ALARM SOUNDS, IMMEDIATELY SHUT OFF THE ENGINE UNTIL THE PROBLEM IS FOUND AND CORRECTED.

### Fuel Management

Fuel management systems are standard equipment with some outboard engines. On Yamaha engines, the fuel management gauge is built into the Command Link Plus® display and can monitor miles per gallon, total gallons used and total gallons remaining.

If you have a fuel management system installed on your boat, please refer to the engine or fuel management manual for detailed information on that system.



## Generator Run Status Panel

The lights in this panel allow the boat operator to monitor the run status of the generator.

## Compass

All boats are equipped with a compass on the top of the instrument panel. The compass cannot be adjusted accurately at the factory as it must be compensated for the influence of the electrical equipment and electronics unique to your boat. Therefore, the compass should be adjusted by a professional after the electronics and additional electrical accessories are installed and before operating the boat. To adjust the compass for your area, read the instructions on "Compass Compensation" given to you in the literature packet.

## Instrument Maintenance

Electrical protection for instruments and ignition circuitry is provided by a set of fuses or circuit breakers located on each engine. The ignition switches should be sprayed periodically with a contact cleaner/lubricant. The ignition switches and all instruments, controls, etc. should be protected from the weather when not in use. Excessive exposure can lead to gauge and ignition switch difficulties.



Generator Run Status Panel at the Helm



Compass

## HELM CONTROL SYSTEMS

### 4.1 General

The helm controls consist of three systems: the engine throttle and shift controls, the steering system and the trim tab control switches. These systems provide the operator with the ability to control the direction and attitude of the boat from the helm station.

In addition to the primary helm controls, your boat could be equipped with an optional bow thruster that provides the operator additional control of the bow while docking or anchoring the boat in tight quarters or high winds and strong currents.

Each manufacturer of the control components provides an owner's manual with its product. It is important that you read the manuals and become familiar with the proper care and operation of the control systems.

### 4.2 Engine Throttle and Shift Controls

The shift and throttle controls on your boat may vary depending on the engines used. Refer to the engine or control manuals for specific information on the controls installed on your boat.

Electronic engine controls are standard on large outboard engines. The following control description is typical of most twin and triple engine electronic control installations.

#### Electronic Engine Controls

The helm is designed for a binnacle style control with a single lever for each engine on twin engine installations. The port throttle lever controls both the port and center engine on most triple engine installations.

The electronic control system consists of three major components: the electronic control head, display screens and keypad, control processors and applicable harnesses. The controls are completely electronic and there are no cables.

#### Twin Engine Controls

The controls have a single lever for each engine that operates as a gearshift and a throttle. General operation will include a position for neutral (straight up and down or slightly aft of vertical),



Typical Yamaha Twin Engine Electronic Controls

a forward position (the 1st detent forward of neutral) and a reverse position (the 1st detent aft of neutral). Advancing the control lever beyond the shift range advances the throttle in forward or reverse. Each control is equipped with a means of permitting the engine to be operated at a higher than idle RPM while in neutral for cold starting and warm-up purposes. The control levers are equipped with adjustable control head detent and friction settings.

#### Triple Engine Controls

Yamaha triple engine installations utilize a two handle control that operates very similar to the twin engine control. A selector switch allows the operator to select which engines provide forward and reverse thrust, for optimum boat control and handling. Individual engine trim switches are

provided directly on the control and a master trim switch is located on the port handle.

The port throttle lever controls both the port and center engine when all three engines are selected by the engine selector switch.

General control operation is very similar to the twin engine control. The main difference is that each engine can be engaged or disengaged by the operator. Led lights on the control indicate which engines are selected.

Typically, the center engine is disengaged during docking and while maneuvering in tight quarters to improve handling. It can also be disengaged while operating at slow or trolling speeds to save fuel. If an engine fails, the selector switch can be used to operate the boat on the two remaining engines or just the center engine, if it is available.

When all three engines are selected during normal operations, the center and port engine are controlled by the port control handle. The computer automatically synchronizes the rpm of the center and port engines whenever all three engines are selected. An engine synchronizer feature in the Command Link Plus® system can be selected to synchronize all three engines.



Typical Yamaha Triple Engine Electronic Control

## Control Functions and Features

The engine controls and Command Link® key pad have integrated switches and indicator lights which allow the operator to control all aspects of the boat's propulsion system. LED lights on the control pad indicate that the control is activated and the engines can be started.

### The most common features activated or monitored by the keypad are:

- Starter lockout, which prevents the engine from being started in gear.
- Gear lockout, which allows the engine RPM to be advanced in neutral safely.
- Battery voltage warning indicator that warns the operator of high or low voltage supplied to the system (audible alarm).
- An engine synchronization feature that automatically keeps both or all three engines at the same RPM while cruising. Refer to Engine Synchronizing in this section and the control systems owner's manual for more information regarding engine synchronization.





Typical Yamaha Station Transfer Button

- Trolling feature that allows the operator to increase the engine speed in 50 RPM increments while operating at trolling speeds.

- Station selection (a separate button on Yamaha controls) that allows the operator to transfer control from one station to another with the push of a button on boats with two helm stations. Each station must be selected by the operator before the controls will operate from that station.

These features and others not mentioned require specific procedures to activate and operate them properly. Some of the procedures and features are unique to the engines and other options installed on your boat. It is essential that you read the owner's manual for the controls and be completely familiar with their operation before using your boat.

 **CAUTION** 

**ALWAYS RETURN THE ENGINE THROTTLE LEVER TO THE EXTREME LOW SPEED POSITION AND ALLOW THE ENGINE TO DROP TO IDLE RPM BEFORE SHIFTING. NEVER SHIFT THE UNIT WHILE ENGINE SPEED IS ABOVE IDLE RPM.**

## Engine Synchronizer

During most operations of twin and triple engine powered boats, it is advantageous for both engines to be operated at the same RPM. This reduces noise and vibration and can increase engine efficiency. Setting the throttles so that the engines are running the same RPM (synchronized) can be done by listening to the engine sounds at low RPM and with the automatic synchronizer feature built into the electronic engine controls when the engines are operating above 1000 RPM. Attempting to synchronize the engines solely by using the tachometer readings or control lever placement generally will not work. When the engines are in proper synchronization, the throttle levers may not necessarily be even.

Please refer to the engine or control owner's manuals for more information on the engine synchronizer and other features for the electronic controls installed on your boat.



## 4.3 Neutral Safety Switch

Every control system has a neutral safety switch incorporated into it. This device prohibits an engine from being started while the shift lever is in any position other than the neutral position. If the engine will not start, slight movement of the shift lever may be necessary to locate the neutral position and disengage the safety cutout switch.

Control adjustments may be required to correct this condition should it persist. See your Everglades dealer for necessary control adjustments.

The neutral safety switches should be tested periodically to ensure that they are operating properly. To test the neutral safety switches, make sure the engines are tilted down and move the shift levers to the forward position.

Make sure the throttle control levers are not advanced past the idle position. Press the Start Button just long enough to briefly engage the starter for the engine. The starter should not engage for either engine. Repeat this test with the shift levers in reverse and the engine throttles at idle. Again, the starter should not engage for either engine. If the starter for any engine engages with the shift controls in any position other than the neutral position, then the neutral safety switch is not functioning properly and you should contact your dealer to have the neutral safety switch repaired by a qualified marine mechanic before using the boat. If an engine starts in gear during this test, immediately move the control lever to the neutral position and turn the engine off.

 **WARNING** 

**IN SOME SITUATIONS, IT MAY BE POSSIBLE TO ACCIDENTALLY START THE ENGINES IN GEAR WITH THE THROTTLES ABOVE IDLE IF THE NEUTRAL SAFETY SWITCH IS NOT OPERATING PROPERLY. THIS WOULD CAUSE THE BOAT TO ACCELERATE UNEXPECTEDLY IN FORWARD OR REVERSE AND COULD RESULT IN LOSS OF CONTROL, DAMAGE TO THE BOAT OR INJURY TO PASSENGERS. ALWAYS TEST THE NEUTRAL SAFETY SWITCH PERIODICALLY AND CORRECT ANY PROBLEMS BEFORE USING THE BOAT.**

## 4.4 Engine Power Tilt and Trim

All outboard engines have a tilt and trim feature. Most outboard engines have tilt/trim switches built into the engine shift and throttle controls that allow the operator to control the position of the outboards from the helm. Typically, a switch or switches on the port control lever grip activates the tilt/trim for the engines simultaneously. Yamaha engine controls have two switches for twin engines or three switches for triple engines on the cover that activate each engine tilt/trim individually. The maximum tilt angle on the Yamaha F350 engines is preset at the factory. If necessary, the maximum tilt angle can be adjusted by your Everglades or Yamaha dealer by reprogramming the settings using the Yamaha engine diagnostic system.



Moving the outboards closer to the boat transom is called trimming "in" or "down." Moving the outboards further away from the boat transom is called trimming "out" or "up." In most cases, the boat will run best with the outboards adjusted so the hull will run at a 3 to 5 degree angle to the water.

The term "trim" generally refers to the adjustment of the outboards within the first 20° range of travel. This is the range used while operating your boat on plane. The term "tilt" is generally used when referring to adjusting the outboards further up for shallow water operation or trailering. For information on the proper use and maintenance of the power tilt and trim, please refer to the engine owner's manual.

**CAUTION**

THE ENGINE HOSES AND CABLES OR THE TRANSM GEL COAT CAN BE DAMAGED BY TILTING THE ENGINES TO THE FULL UP POSITION WITH THE ENGINES TURNED TO THE WRONG POSITION. MOST BOATS REQUIRE THE STEERING WHEEL TO BE TURNED COMPLETELY TO PORT OR STARBOARD BEFORE TILTING THE ENGINES TO THE FULL UP POSITION. YOU SHOULD MONITOR EACH ENGINE AS IT TILTS TO DETERMINE BEST FULL TILT ENGINE POSITION FOR YOUR BOAT.

**CAUTION**

SOME AUTOPILOTS HAVE ENGINE POSITION SENSORS THAT ARE MOUNTED TO THE HYDRAULIC STEERING CYLINDER. WITH THESE AUTOPILOTS, THE ENGINE POSITION SENSOR BRACKET COULD HIT THE TRANSM WHEN THE ENGINES ARE TILTED TO THE FULL UP POSITION AND CAUSE DAMAGE TO THE ENGINE RIGGING, THE AUTOPILOT OR THE TRANSM. IF YOU HAVE AN AUTOPILOT INSTALLED ON YOUR BOAT, YOU SHOULD MONITOR THE LOCATION OF THE ENGINE CABLES AND AUTOPILOT BRACKETS AS THE ENGINES ARE TILTED TO DETERMINE THE BEST ENGINE POSITION AND MAXIMUM ENGINE TILT FOR YOUR APPLICATION.



Yamaha Triple Engine Trim Switches

### 4.5 Engine Stop Switch

Your boat is equipped with an engine stop switch and lanyard at each helm. When the lanyard is pulled it will engage the switch and shut off the engines. We strongly recommend that the lanyard be attached to the driver whenever the engines are running. If an engine will not start, it could be because the lanyard is not properly inserted into the engine stop switch. Always make sure the lanyard is properly attached to the engine stop switch before attempting to start the engines.



Engine Stop Switch & Lanyard Ignition Switch

Refer to the engine owner's manual for more information on the engine stop switch.

## 4.6 Steering System

### Hydraulic Steering Overview

Two power assisted steering systems have been used on 350 LX models. Older models are equipped with Teleflex steering and new models are equipped with Verado steering systems. Both steering systems are hydraulic and made of four main components: the helm assembly, hydraulic power pump, hydraulic hoses and the hydraulic steering cylinders. The Teleflex helm unit acts as both a fluid reservoir and pump. The reservoir for the Verado system is at the power assist pump, so the helm acts only as a pump. Turning of the helm or steering wheel pumps the fluid in the hydraulic hoses and activates the hydraulic cylinders causing the motors to turn. A slight clicking sound may be heard as the wheel is turned. This sound is the opening and closing of valves in the helm unit and is normal.

### Power Assist Hydraulic Steering

The power assist steering system is standard equipment with both steering systems on the 350 LX. It is comprised of two hydraulic circuits: a manual system, which is the control element and a hydraulic power pump, which is the working element.

The power system is an electronically controlled, 12 volt hydraulic pump that boosts the fluid pressure being sent from the helm pump to the steering cylinders to provide "Power" for the steering system which results in much easier effort at the steering wheel, even under heavy loads. In the event of a power loss or failure of the hydraulic steering pump, the steering system will automatically revert to a manual hydraulic system. The manual system operates as described in the Hydraulic Steering Overview described previously in this section.

### Steering Cylinders and Tie Bar

Dual outboards are coupled near the tiller arms by a tie bar and controlled by two steering cylinders. There is one cylinder on the port engine and one on the starboard engine. On triple engines, tie bars connect the center engine to the port and starboard engine which are equipped with steering cylinders.

The engines must be aligned to provide maximum stability on straight ahead runs and proper tracking through corners. Dual outboards or the port and starboard engines on triples are aligned so the



Typical Tilt Steering Wheel



Tie Bars and Dual Steering Cylinders  
Typical Triple Engine Steering

engines are towed in slightly (.25" to .5") at the propellers. Engine or steering system damage may require the engines to be realigned.

### Tilt Steering Wheel

The steering wheel can be tilted to five different positions by activating the tilt lock lever located on the bottom of the helm station. When the lever is released, it automatically locks the steering wheel at or close to that angle. Refer to the steering manufacturer owner's manual for specific information on the steering system.

## 4.7 Trim Tabs

The recessed trim tabs are mounted to the hull below the swim platform and integrated transom engine mounting system. A dual rocker switch is used to control the trim tabs. The switch controls



bow up and down movements. It also controls starboard and port up and down movements. Bow up and bow down will control the hull planing attitude, while port and starboard up and down provides control for the hull listing.

An LED indicator built into the switch displays the position of your trim tabs. When one LED is flashing at the top of the display, the tabs are in the "full-up" (bow up) position. When all LED lights are lit from the top to the bottom of the display, the tabs are fully extended (bow down).

The trim tabs are programmed to automatically retract when the engines are shutdown to keep the actuators clean and set the tabs in the full "UP" position when leaving the dock. Refer to the trim tab operating manual for more information on the operation and programming of the trim tabs.

Before leaving the dock, make sure that the tabs are in the full "UP" position. If they are not, press and hold the control in the bow up position for ten (10) seconds to fully retract the tabs.

Always establish the intended heading and cruise speed before attempting to adjust the hull attitude with the trim tabs. After stabilizing speed and direction, move the trim tabs to achieve a level side to side running attitude being careful not to over trim.

After depressing a trim tab switch, always wait a few seconds for the change in the trim plane to take effect. Avoid depressing the switch while awaiting the trim plane reaction. By the time the effect is noticeable the trim tab plane will have moved too far and thus the boat will be in an overcompensated position.

When running at a speed that will result in the boat falling off plane, lowering the tabs slightly, bow down, will improve the running angle and operating efficiency. Too much bow down tabs can reduce operating efficiency and cause substantial steering and handling difficulties.

Be extremely careful when operating in a following sea. The effect of trim tabs is amplified under such conditions. Steering and handling difficulties can result from improper trim tab usage, particularly in a following sea. Always raise the tabs to the full bow up position in these conditions.

When running at high speeds be sure that the tabs are in the full "UP" position. Only enough trim plane action should be used to compensate



Typical Trim Tab Switches



Trim Tab Plane

for any listing. Trim tabs are extremely sensitive at high speeds. Adjust for this and be prepared to slow down if difficulties arise.

When running into a chop, a slight bow down attitude will improve the ride. Be careful not to over trim. Handling difficulties may result.

## 4.8 Bow Thruster (Optional)

The optional bow thruster provides the operator additional control of the bow while docking or anchoring the boat in tight quarters or high winds and strong currents. The control joystick/touch pad is located in the helm and controls the bow thruster that is mounted to the hull in the bilge below the bow seat.

The momentary touch pad buttons and joystick are activated by the pressing and holding the power button in the touch pad for 1 second. Press the button or move the joystick for the direction you wish to thrust. Press the opposite button or move joystick to change direction. A 1 second delay protects the thruster when the direction is changed. The arrow on each button indicates the direction the bow will move when it is pressed. The bow thruster will stop when the button or joystick is released.

Press and hold the power button for 1 second to deactivate the bow thruster control pad. The bow thruster will power down automatically if it is operated constantly for 3 minutes or senses no operation for 15 minutes.

The bow thruster circuit is protected by a fuse or circuit breaker and emergency shut off button/battery switch located in the forward bilge compartment below the V-Berth. It is activated automatically when the thruster control panel is switched on and turns off when the panel is deactivated. It can also be activated manually with the red knob on the switch.

Refer to the bow thruster owner's manual for details on operating the bow thruster and using the control pad.

## 4.9 Control Systems Maintenance

### Control Maintenance

Periodic inspection of the control systems and all connections should be made. Signs of rust, corrosion, wear or other deterioration should immediately be serviced. Generally, periodic lubrication of all moving parts and connections with a light waterproof grease is in order.

Lubrication should be performed as often as necessary to keep the system operating smoothly.

Control system adjustments may become necessary. If adjustments become necessary, see your Everglades dealer.



Power Steering Unit in Behind Access Hatch in Aft Berth

### Steering System Maintenance

A periodic inspection of all steering hoses, linkage and helm assemblies should be made. Signs of corrosion, cracking, loosening of fastenings, excessive wear or deterioration should be corrected immediately.

The fluid level for the hydraulic steering should be checked frequently and maintained at the proper level. The steering fluid level in the helm reservoir on Teleflex systems should be maintained at no less than 1/2" below the bottom of the fill plug hole. The steering fluid level on Verado systems should be maintained at no less than 1/2" below the bottom of the fill plug hole on the hydraulic power assist pump reservoir located in the bilge on the starboard side of the aft berth. Only use power steering fluid recommended by the steering system manufacturer when adding fluid. If your boat is equipped with the optional tower, the steering fluid level for Teleflex steering systems must be checked and filled at the upper helm.

Generally, periodic lubrication of all moving parts and connections with a light waterproof grease is in order. Check the hydraulic hoses and fittings for chaffing, rub marks and leaks. Replace if necessary. Failure to do so could lead to steering system failure that would result in loss of control.

When new or after repairs, hydraulic steering systems may need to have all air purged from the system. Only use hydraulic steering fluid recommended by the steering system manufacturer. Difficult steering and premature seal failure can result if the wrong fluid is used in the steering system. Review the information provided by the steering system manufacturer for proper

	<b>WARNING</b>	
<b>DO NOT ATTEMPT CONTROL ADJUSTMENTS UNLESS YOU ARE FAMILIAR WITH SERVICING CONTROL SYSTEM PROCEDURES. CONTROL MISADJUSTMENT CAN CAUSE LOSS OF CONTROL AND SEVERE ENGINE OR LOWER UNIT DAMAGE.</b>		

specifications and details on system service and maintenance.

## Trim Tab Maintenance

The trim tab actuators are electric and require no routine maintenance except to periodically inspect the tab actuators for corrosion or marine growth and test the system to ensure that it is operating properly.

Marine growth can interfere with the proper operation of the trim tab planes and actuators. To reduce problems due to marine growth, always return the trim tabs to the full "UP" position after operating the boat and periodically inspect and clean marine growth from the actuators and planes.

If the boat is kept in the water, the trim tabs must be equipped with a zinc anode to prevent galvanic corrosion. Galvanic corrosion is the corrosion process occurring when different metals are submerged in an electrolyte. Seawater is an electrolyte and submerged metal components must be properly protected. The anodes will need to be changed when they are 75% of their original size. Refer to the Routine Maintenance chapter of this manual for information on maintaining zinc anodes.

To discourage any marine growth on the tabs or actuators, antifouling paint can be applied. When applying paint to the actuator, make sure it is fully retracted. Do not paint the stainless ram above the area that is exposed when retracted. The bottom paint will damage the O-ring seals when the ram is retracted and allow seawater to enter the actuator motor. Contact your dealer or the trim tab manufacturer for information regarding the correct bottom paint for the trim tabs.

Refer to the trim tab owner's manual for additional maintenance information, specifications, troubleshooting and operating instructions.

## Bow Thruster Maintenance (Optional)

The bow thruster is mounted in the forward bilge below the V-Berth. Periodically inspect the components inside the hull for leaks and for loose or corroded electrical connections. Signs of leaks and loose or corroded electrical connections should be corrected immediately by a qualified marine technician.

Marine growth, weeds and debris can interfere with the proper operation of the bow thruster so



Typical Trim Tab Dual Actuators

you should inspect the tunnel regularly and clean as necessary. This is particularly important when operating in areas with weeds or if the thruster is not responding normally. You should also check the propeller. If the propeller is damaged or heavily contaminated, it should be replaced.

The thruster is protected from galvanic corrosion by an anode on the propeller shaft. The anode should be inspected regularly and changed when it is 75% of its original size.

If the boat is kept in the water, the anode should be inspected at least once every 3-4 months. Antifouling paint can be applied to the tunnel and underwater components to discourage marine growth. Bow thrusters have specific requirements for the type of antifouling paint that can be used and where it can be applied. Applying the wrong paint or paint that is not applied correctly can damage the bow thruster and void the warranty. Contact your authorized Everglades dealer or the bow thruster manufacturer for information regarding the correct bottom paint and application.

Refer to the bow thruster owner's manual for additional maintenance information, specifications, troubleshooting and operating instructions.

## FUEL SYSTEM

### 5.1 General

The gasoline fuel system used in Everglades boats is designed to meet or exceed the requirements of the U.S. Coast Guard, the Boating Industry Association and the American Boat and Yacht Council in effect at the time of manufacture.

All gasoline fuel systems have been factory inspected and pressure tested in accordance with regulations in effect at the time of manufacture. This inspection assures that the system is air tight, leak proof and safe. It is the responsibility of the purchaser to maintain it in that condition. Make frequent inspections to assure that no deterioration or loosening of connections is resulting from vibration.



### DANGER



**DO NOT LET THE ODOR OF GASOLINE GO UNCHECKED. ANY ODOR OF GASOLINE MUST BE IMMEDIATELY INVESTIGATED AND STEPS TAKEN TO PROTECT THE BOAT AND ITS OCCUPANTS UNTIL THE PROBLEM IS CORRECTED. IF THE ODOR OF GASOLINE IS NOTED, SHUT OFF ALL ENGINES AND ELECTRICAL EQUIPMENT. INVESTIGATE AND CORRECT THE SITUATION IMMEDIATELY. HAVE ALL PASSENGERS PUT ON PERSONAL FLOTATION DEVICES AND KEEP A FIRE EXTINGUISHER READY UNTIL THE SITUATION IS RESOLVED.**



Typical Fuel Fill

### Fuel Withdrawal Tubes

The fuel withdrawal tubes are positioned in the fuel tank to achieve optimum fuel usage, fuel line routing, etc. At certain speeds and hull trim angles, the fuel supply at the withdrawal tank location can increase or decrease accordingly. Be extremely careful when attempting to operate the boat when low on fuel. Though some fuel may be in the tank, the relative trim angle of the boat may cause the fuel to flow away from the withdrawals.

### Fuel Gauge

Indicates the amount of fuel in the tank. Due to the mechanical nature of the fuel sender, variations in readings during various speeds of operation may occur. This system is merely a relative indication of the available fuel supply and not a calibrated instrument.

### Fuel Fill

Fuel fill deck plate is located on the port gunnel and is marked "GAS." The fuel fill is opened by turning it counter clockwise with a special key. Be sure to use the proper type and grade fuel. Refer to the engine owner's manual for additional information on the fuel requirements for your engines.

### Notice:

**Do not overtighten the fuel cap. If the cap is overtightened, the O-ring seal could be damaged allowing water to contaminate the fuel system.**

### Fuel Tank Vent

There is a vent fitting for the fuel tank on the port side of the hull. While the tank is being filled, the air displaced by the fuel escapes through the vent. When the tank is full, fuel will be ejected from the fuel vent.

After fueling, replace the fill cap and wash the areas around the fuel fill plate and below the fuel vent. Residual fuel left on the deck and hull sides can be dangerous and will yellow the fiberglass or damage the striping.





Typical Yamaha Engine Fuel Filters

## 5.2 Outboard Engine Fuel System

The gasoline fuel system has one fuel tank that fills from the port gunnel. The starboard engine is supplied by the starboard fuel line and the port engine is supplied by the port fuel line. If your boat is equipped with triple engines, the center engine will be supplied by a center fuel line. There is an on/off valve for each supply line located on the fuel tank near each withdrawal tube. The valves provide a means to turn off the fuel supply to service the fuel system.

Fuel withdrawal lines are equipped with anti-siphon valves where the lines attach to the fuel tanks. These valves prevent gasoline from siphoning out of the fuel tank should a line rupture.



Primer Bulb at Rear Of Access Hatch



### WARNING



DO NOT REMOVE THE ANTI-SIPHON VALVES FROM THE SYSTEM. SHOULD AN ANTI-SIPHON VALVE BECOME CLOGGED, CLEAN AND REINSTALL OR REPLACE. IF A FUEL LINE SHOULD LEAK, ANTI-SIPHON VALVES PREVENT A SUBSTANTIAL AMOUNT OF FUEL FROM FLOWING INTO THE BILGE. ANTI-SIPHON VALVES ARE REQUIRED TO BE INSTALLED IN ALL BOATS EQUIPPED WITH GASOLINE ENGINES BY THE U.S. COAST GUARD

### Engine Fuel Filters

On most engine installations, the fuel filter for each engine is installed in the stern systems compartment. The filters are accessed through the hatch at the rear of the cockpit sole. The fuel filters for Verado engines are mounted on each

engine. The filters are the water separator type and should be serviced frequently to assure an adequate supply of clean, dry fuel to the engines. It is recommended that the filters are inspected periodically and the elements changed as needed.

There is a primer bulb in each fuel line located near the rear of the hatch that is used to prime the fuel system after service or as required. See Fuel System Maintenance and the engine owner's manual for additional information regarding fuel filters and the outboard engine fuel system.

**Notice:**

Clean fuel is especially important in fuel injected engines. The engine manufacturer's recommendations for fuel filter maintenance must be followed exactly.

**Notice:**

The procedure to prime the fuel system on outboard engines is specific to the type and model of engines on your boat. You should refer to engine manufacturer owner's manual for the priming procedure for your engines.

### 5.3 Generator Fuel System

The generator fuel system is much like the primary engine fuel system. A fuel shut-off valve is located on the fuel withdrawal at the fuel tank. The valve should always be closed before servicing the fuel filter.

The generator draws fuel from the main fuel tank. The withdrawal tube is shorter than the main engine withdrawal tubes to prevent the generator from consuming reserve fuel. Therefore, the generator will run out of fuel if the fuel level drops below 1/4 tank.

There is a water separator type fuel filter located in the systems compartment near the generator. Another in-line fuel filter is located on the generator near the fuel pump. It is recommended that the filters are inspected periodically and replaced when the main engine fuel filters are changed.



Generator Water Separator Filter





Generator In-line Fuel Filter

	<b>DANGER</b>	
<b>TO REDUCE THE POSSIBILITY OF A FIRE OR EXPLOSION, MAKE SURE ALL ELECTRICAL SWITCHES ARE IN THE "OFF" POSITION BEFORE SERVICING THE FUEL SYSTEM.</b>		



	<b>WARNING</b>	
<b>DO NOT DRAIN ANY FUEL IN THE BILGE. THIS COULD LEAD TO A FIRE OR EXPLOSION.</b>		
<b>CHECK ALL FUEL LINE FITTINGS FOR LEAKS BEFORE AND AFTER STARTING THE ENGINES FOLLOWING ANY FUEL SYSTEM SERVICE.</b>		





## 5.4 Fueling Instructions

 **WARNING** 

FUEL IS VERY FLAMMABLE. BE CAREFUL WHEN FILLING THE FUEL TANK. NO SMOKING. NEVER FILL THE TANK WHILE AN ENGINE IS RUNNING. FILL THE FUEL TANK IN AN OPEN AREA. DO NOT FILL THE TANKS NEAR OPEN FLAMES.

 **CAUTION** 

TO PREVENT DAMAGE TO THE FUEL SYSTEM, USE ONLY A GOOD GRADE OF GASOLINE FOR GASOLINE ENGINES. DO NOT USE FUEL THAT CONTAINS HARSH ADDITIVES OR IS AN ALCOHOL BLEND OF HIGHER CONCENTRATION THAN RECOMMENDED BY THE ENGINE MANUFACTURER. ANY DAMAGE DONE TO THE FUEL SYSTEM THAT IS THE RESULT OF USE OF AN ALCOHOL BLEND IS NOT COVERED BY THE EVERGLADES WARRANTY. REFER TO THE ENGINE MANUFACTURER OWNER'S MANUAL REGARDING FUEL REQUIREMENTS FOR YOUR ENGINES.

 **WARNING** 

DO NOT CONFUSE THE FUEL FILL DECK PLATE WITH THE WATER OR WASTE PUMP OUT DECK PLATE. THESE PLATES ARE LABELED ACCORDINGLY. IF GASOLINE OR DIESEL FUEL IS ACCIDENTALLY PUMPED INTO THE WATER OR WASTE TANK, DO NOT ATTEMPT TO PUMP IT OUT YOURSELF. WATER AND WASTE PUMPS ARE NOT DESIGNED TO PUMP FUEL AND A FIRE OR EXPLOSION COULD RESULT. CONTACT YOUR DEALER OR THE EVERGLADES CUSTOMER SERVICE DEPARTMENT FOR ASSISTANCE IN HAVING THE FUEL PROFESSIONALLY REMOVED.

### To fill the fuel tank at a marina, follow this procedure:



1. Make sure all switches are in the OFF position.
2. Make sure the boat is securely moored.
3. Make sure all passengers leave the boat.
4. Estimate how much fuel is needed and avoid over filling the tank.

#### Notice:



**When the fuel tank is overfilled, fuel will come out through the fuel vent. The fuel vent is located on the stbd side of the hull.**

5. A special key to open the fuel cap is supplied.

6. Turn the key counter clockwise to open the cap.
7. Remove the cap.
8. Put the nozzle in the fuel opening.



 **WARNING** 

STATIC ELECTRICITY CAN BE GENERATED WHILE FUELING AND CAN CAUSE A FIRE OR EXPLOSION. TO PREVENT STATIC SPARKS WHEN FILLING THE TANK, MAKE SURE THE NOZZLE IS IN CONTACT WITH THE FUEL OPENING.

 **WARNING** 

SPILLED FUEL IS DANGEROUS AND CAN YELLOW FIBERGLASS OR IGNITE. MAKE SURE YOU DO NOT SPILL ANY FUEL. IF FUEL IS SPILLED ON THE DECK, USE A CLOTH TO REMOVE THE FUEL AND PROPERLY DISPOSE OF THE CLOTH ON SHORE. IF FUEL IS SPILLED ON THE WATER, EXERCISE EXTREME CAUTION. FUEL FLOATS ON TOP OF THE WATER AND CAN IGNITE. IF EXCESS FUEL IS SPILLED INTO THE WATER, IMMEDIATELY EVACUATE THE AREA AND NOTIFY THE MARINA AND THE PROPER OFFICIALS.

9. Fill the fuel tank slightly less than the rated capacity to allow for expansion to avoid spilling fuel out of the vents and fuel fill.
10. Remove the nozzle.
11. Install and tighten the fuel cap. Be careful not to overtighten the cap.
12. Check the fuel compartment and below the deck for fuel odors. If you smell fuel, do not start the engines.

 **WARNING** 

TO REDUCE THE RISK OF A FIRE AND/OR EXPLOSION, DO NOT START THE ENGINES WHEN FUEL FUMES ARE PRESENT. FUEL FUMES ARE DANGEROUS AND HARMFUL TO YOUR HEALTH.

MAKE SURE ALL GASOLINE ODORS ARE INVESTIGATED IMMEDIATELY.

## 5.5 Fuel System Maintenance

Periodically inspect all primer bulbs, connections, clamps and hoses for leakage, damage or deterioration. Replace as necessary. Spray the valves, tank fuel gauge senders and ground connections with a metal protector.



Frequently inspect and lubricate the fuel fill cap O-ring seal with Teflon or silicone grease. The O-ring seal prevents water from entering the fuel system through the fuel fill cap and it should be immediately replaced if there is any sign of damage or deterioration.

The fuel vent screen should be clear and free from corrosion and salt buildup. The screen will prevent insects and other foreign matter from contaminating the fuel and fuel system. The fuel vent should be replaced if the vent or screen is damaged or badly corroded. Fuel vent screens that are clogged will prevent the fuel tank from venting properly and make filling the fuel tank difficult or cause fuel supply problems to the engines.

Contaminated fuel may cause serious damage to your engine. Fuel filters must be checked for corrosion and deterioration frequently. Fuel filters must be changed at least once a season or more frequently depending on the type of engine and the quality of the fuel. Please refer to the engine or fuel filter manufacturer's instructions for information on servicing and replacing the fuel filter.

The age of gasoline can effect engine performance. Chemical changes occur as the gasoline ages that can cause deposits and varnish in the fuel system as well as reduce the octane rating of the fuel. Severely degraded fuel can damage the engine and boat fuel tank and lines. Therefore, if your boat is not being run enough to require at least one full tank of fresh fuel a month, a fuel stabilizer should be added to the gasoline to protect the fuel from degradation. Your dealer or the engine manufacturer can provide additional information on fuel degradation and fuel stabilizers recommended for your engine.

In many states, most gasoline is blended with ethanol alcohol. Ethanol is a strong solvent and can absorb water during periods of storage. You should refer to the engine operating manual for information regarding alcohol blended fuels and how it affects the operation of your marine engine.

	<b>WARNING</b>	
<p><b>DO NOT DRAIN ANY FUEL INTO THE BILGE WHEN SERVICING THE FUEL SYSTEM. THIS COULD LEAD TO A FIRE OR EXPLOSION.</b></p>		
<p><b>AFTER THE FILTER ELEMENTS HAVE BEEN CHANGED, PRIME THE FUEL SYSTEM AND CHECK ALL FITTINGS FOR LEAKS BEFORE AND AFTER STARTING THE ENGINES.</b></p>		
<p><b>BEFORE STARTING THE ENGINES, ALWAYS OPEN ALL HATCHES, WINDOWS AND DOORS TO COMPLETELY VENTILATE THE BOAT AFTER SERVICING THE FUEL SYSTEM.</b></p>		



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## ELECTRICAL SYSTEM

### 6.1 General

Your Everglades is equipped with 120 volt AC and 12 volt DC electrical systems. The AC system can draw current from one of two sources, either shore power outlets at dockside or the generator. The DC system draws current from on board batteries.

Your boat and engine charging system are designed for 12 volt, AGM (Absorbed Glass Mat) marine batteries such as Optima Blue Top batteries. These are sealed maintenance free batteries that will not emit dangerous hydrogen gas into the aft berth during charging.

	<b>WARNING</b>	
<p><b>WET CELL MARINE BATTERIES WILL EMIT DANGEROUS HYDROGEN GAS INTO THE AFT BERTH DURING CHARGING. HYDROGEN GAS IS A HEALTH HAZARD AND CAN EXPLODE CAUSING SEVERE INJURY OR EVEN DEATH TO PASSENGERS.</b></p> <p><b>USE ONLY AGM (ABSORBED GLASS MAT) MARINE BATTERIES SUCH AS OPTIMA BLUE TOP BATTERIES. AGM BATTERIES ARE SEALED AND DO NOT EMIT DANGEROUS GASES DURING CHARGING. NEVER USE STANDARD WET CELL BATTERIES IN YOUR BOAT.</b></p>		

All wires in the electrical systems are color coded to make identifying circuits easier. Wiring schematics have been included with this manual to aid in following an individual circuit of the boat.

### 6.2 DC System Overview



The 12 volt system is a fairly standard marine system. There are four batteries, one for the starboard engine, one for the port engine and two for the house, generator and electronics on twin engine boats. There is one battery for each engine and one for the house, generator and electronics on triple engine boats.

The batteries are located in a battery box behind the aft berth. Twin engine battery systems are controlled by three battery switches, one for the port engine, one for the starboard engine and one for the house 12 volt accessories, generator and the electronics. Triple engine battery systems are

controlled by four battery switches, one for the port engine, one for the starboard engine, one for the center engine and one for the house 12 volt accessories, generator and the electronics. The batteries are charged by the engines or the battery charger when connected to shore power or when the generator is operating.

Most 12 volt power is distributed to the 12 volt accessories through individual circuit breakers and fuses located in panels near the batteries and at the helm. All circuit breakers are labeled by the name of the circuit they protect. Main circuit breakers near the batteries protect the primary circuits for the DC main, electronics, windlass and power steering system. Additional fuses near the main circuit breakers protect continuous power circuits for the stereo memory, DVD memory, automatic switches for bilge pumps and the carbon monoxide monitor. Most 12 volt accessories are operated directly by switches in the helm switch panel optional tower helm switch panel or the cabin. Most accessory circuits are protected by "push to reset" circuit breakers located near the switches.

Main breakers or fuses located on each engine protect the ignition systems and gauge panel display. Yamaha engine electrical circuits are protected by fuses located in a fuse panel on the side of the engine. The fuse panel is equipped with a spare fuse for each circuit. Always replace fuses used with the fuse specified by Yamaha or your engine manufacturer. Refer to the engine owner's manual for more information on the fuses, fuse panels or circuit breakers on your engines.

	<b>CAUTION</b>	
<p><b>PROPER FUSE OR BREAKER PROTECTION MUST BE PROVIDED FOR ALL 12 VOLT EQUIPMENT ADDED. DO NOT OVERLOAD THE ACCESSORY CIRCUIT BREAKERS OR OTHER CIRCUITRY THROUGH ADDITIONAL 12 VOLT EQUIPMENT.</b></p>		



Battery Switches, Emergency Parallel Switches, PT & STBD Voltage Sensitive Relays, Main Circuit Breakers and Continuous Power Fuse Panel

## 6.3 Batteries and Battery Switches

The DC electrical system on your boat is designed for Absorbed Glass Mat marine batteries such as Optima Blue Top batteries. Do not attempt to use gel cell or wet cell marine batteries. The engine charging systems are not designed to recharge these batteries which could cause unusually short battery life, engine starting problems and damage to the DC charging systems. **Additionally, wet cell batteries will emit dangerous hydrogen gas into the aft berth during charging that can explode causing severe injury to passengers and damage to the boat.**

You should also not mix the size or brand of wet cell batteries. Always consult your Everglades dealer before changing the type of batteries in your boat.

The batteries should be of the size and capacity recommended by the manufacturer of your engines. These specifications should be considered the minimum size battery required. Consider increasing the capacity of the batteries if you will be trolling, drift fishing or have extensive electronics on board. Larger batteries will give you additional capacity to operate the livewell, DC accessories and electronics at low speed when the charging system output from the engines is minimal. Refer to the engine owner's manual for

additional information on the battery requirements for your engines.

### Batteries and Battery Switches Twin Engine Boats

Twin engine boats are equipped with four batteries located in the battery compartment behind the aft berth in the cabin. One for each engine and two in parallel for the house, generator and electronics circuits.

There are three remotely activated battery switches and two remotely activated emergency parallel switches located in the panel near the batteries. The remote battery switches and emergency parallel switch are activated by special switches in the helm switch panel. Each battery or the emergency parallel switch has a manual override that can activate (enable) or deactivate (disable) the switch if the remote switch or relay fails. The manual override is a yellow knob on each battery switch that can be pressed to manually activate the switch or rotated to reactivate remote activation of the switch or to lockout the switch in the OFF position when servicing the electrical system. The normal operating position for each switch is the "Enabled" Position. Refer to the instructions printed on each switch and/or the battery switch operating manual for additional information on the remotely activated switches.



## Triple Engine Boats

Triple engine boats are equipped with four batteries located in the battery compartment behind the aft berth in the cabin. One battery for the port engine, one battery for the starboard engine and two batteries in parallel for the center engine and the house, generator and electronics circuits.

There are four remotely activated battery switches and two remotely activated emergency parallel switches located in the panel near the batteries. The remote battery switches and emergency parallel switches are activated by special switches in helm switch panel. Each battery or emergency parallel switch has a manual override that can activate (enable) or deactivate (disable) the switch if the remote switch or relay fails. The manual override is a yellow knob on each battery switch that can be pressed to manually activate the switch or rotated to reactivate remote activation of the switch or to lockout the switch in the OFF position when servicing the electrical system. The normal operating position for each switch is the "Enabled" Position. Refer to the instructions printed on each switch and/or the battery switch operating manual for additional information on the remotely activated switches.

## Remote Battery Switch Operation

Each battery switch and the emergency parallel switches are controlled by a single switch in the helm switch panel. Slide the label down and press the top of the remote switch to engage the battery switch. A red light will illuminate to indicate that the battery is now ON. To turn off, simply slide the label up and press the bottom of the momentary switch. The red light may not turn off immediately or will slowly fade out if there are no loads present on the system. This is normal as the capacitors in the system drain.

Automatic Voltage Sensitive Relays (VSR) control the charging of the engine and house batteries whenever the engines are operating. The port and starboard engine batteries can be temporarily connected in parallel by the emergency parallel switch in the helm to provide additional starting current for those engines. The center engine (triple engine boats) is connected to the house batteries which are not connected to the emergency parallel system, however, these batteries will be recharged quickly by the port and starboard engines when they are running. The engine and house batteries are also charged by the battery charger whenever it is activated.



Typical Remote Battery Switch

The VSR battery isolator systems manage the charging current for the 12 volt system whenever the engines are running. The systems automatically sense the condition of each battery and direct the available current to the batteries that require charging. When the engines are started, the engine alternators start to recharge the batteries. This charging current passes through the VSR sensing circuits. The circuits sense the charge and it is split between the batteries, with the lowest battery receiving the most charge. When the engines are turned off, the charging stops and the sensing circuit turns off each VSR, disconnecting the batteries from the charging circuit, thereby automatically isolating the batteries from one another.

When in port or at anchor, the engine switches should be off. Only the battery switch that activates the House circuit and generator should be on. This will keep the port and starboard engine starting batteries in reserve for starting the engines.



**Notice:**

**Current is supplied to the automatic switches for the bilge pumps when the batteries are connected and the battery switches are off.**

**Notice:**

**The manual battery switches completely bypass the remote switches when they are activated. The circuits cannot be turned off using the remote battery switches on the helm panel if the circuits have been activated by the manual switches.**

## 6.4 DC System Switch Panels

### Ignition Switch Panels

Ignition switch panels are unique to each engine manufacturer and the engine control options selected. Your dealer will provide you with the proper starting procedure for your boat at the time of delivery. Additional information for the ignition switch system installed in your boat is located in the engine and control system operating manuals included in your information packet.

#### Yamaha Command Link Plus® Ignition

Most Everglades boats are equipped with Yamaha engines and the Command Link Plus® ignition key panels that offer the latest in technology and durability. For twin and triple engine installations, these are "key" panels; which energize the ignition system of multiple outboards with only one key.

The Start/Stop panel is used in conjunction with the key panel and features lights which indicate when engines are running and a start/stop button for each engine. This system greatly simplifies the starting and stopping process of your engines. For convenience and protection, engines can not be restarted while running.

#### Starting procedure

Make sure the engines are down with the shift levers in the neutral position and your hand is on the control levers. Turn the ignition key to the ON position to activate the start buttons for the engines. Press and release the Start/Stop button for the port engine. The computer will automatically check all engine systems and start the engine. Once the engine stabilizes, repeat the starting procedure for the starboard engine and then for the center engine, if your boat is equipped with triples. Stop the engines by pressing the start/stop buttons again.



Typical Yamaha Triple Engine Ignition Switch and Start Buttons

The engine ignition circuits are protected by fuses or circuit breakers located on each engine.

#### 12 volt Helm Accessory Switch Panel

The main accessory switch panel is located at the helm. Most of the circuit breakers that protect the accessories are located in the panel near each switch. An LED light built into the switches indicates that the circuit is activated.

If a circuit breaker trips, the reset button pops out and can be felt through the black silicone protective cover. Press the button to reset the tripped breaker. If the breaker trips again, find and correct the problem before resetting the breaker.

**The following is a description of the accessories controlled by the main accessory switch panel:**

#### Horn

Activates the boat air horn located on the hardtop.

#### Nav/Anc

A three-position switch that activates the navigation and anchor lights. The middle position is OFF. Moving the switch in one direction will activate the navigation lights. Moving the switch in the opposite direction activates the anchor light.



Helm Accessory Switch Panels

### Courtesy Lights

A three-position switch that activates the cockpit lighting. The middle position is OFF. Move the switch in one direction to activate white lights. Move the switch in the opposite direction to activate red lights.

**Red lights have less effect on night vision and should be selected if you need to illuminate the helm area and cockpit while navigating at night.**

### Underwater Lights

Activates the lights in the transom below the waterline.

### Upper Docking

Activates the overhead lights at the front of the hardtop that illuminate the forward cockpit and the area immediately in front of the boat for better visibility while docking at night.

### Lower Docking Lights

Activates the lights in the hull on each side of the bow that illuminate the area in front of the boat for better visibility while docking at night.

### Aft Flood Lights

Activates the overhead lights at the rear of the hardtop that illuminate the aft cockpit.

### Battery Parallel

Activates the circuit that connects the port and starboard engine starting batteries in parallel for extra battery power while starting those engines. When the switch is turned on, relays are engaged that connect the engine starting batteries, when the switch is turned off, the relay is deactivated and the batteries are isolated.

## House

Remotely activates the House battery switch. A red LED light in the switch glows when the battery switch it controls is activated. Slide the label down and press the top of the switch to activate the indicated battery switch. Slide the label up and press the bottom of the switch to turn the indicated battery switch off. The red light may not turn off immediately or will slowly fade out if there are no loads present on the system.

## Engine 1

Remotely activates the Port Engine battery switch. A red LED light in the switch glows when the battery switch it controls is activated. Slide the label down and press the top of the switch to activate the indicated battery switch. Slide the label up and press the bottom of the switch to turn the indicated battery switch off. The red light may not turn off immediately or will slowly fade out if there are no loads present on the system.

## Engine 2

Remotely activates the Starboard Engine battery switch. A red LED light in the switch glows when the battery switch it controls is activated. Slide the label down and press the top of the switch to activate the indicated battery switch. Slide the label up and press the bottom of the switch to turn the indicated battery switch off. The red light may not turn off immediately or will slowly fade out if there are no loads present on the system.

## Engine 3 (Optional)

Remotely activates the Center Engine battery switch. A red LED light in the switch glows when the battery switch it controls is activated. Slide the label down and press the top of the switch to activate the indicated battery switch. Slide the label up and press the bottom of the switch to turn the indicated battery switch off. The red light may not turn off immediately or will slowly fade out if there are no loads present on the system.

## Notice:

**The Emergency Parallel and remote battery switches are always supplied power whenever the house battery is connected.**

## Aft Bilge 1

Manually activates the aft bilge pump located in the stern bilge near the transom. The pump moves water out a thru-hull fitting in the hull. The pump is also activated by an automatic switch that is activated whenever the batteries are con-



Parallel and Battery Switches

nected. This pump will run as needed whenever the water in the bilge accumulates high enough to cause the switch to activate and turn off when the water is removed.

## Aft Bilge 2

Manually activates the aft bilge pump located in the stern bilge below the systems compartment. The pump moves water out a thru-hull fitting in the hull. The pump is also activated by an automatic switch that is activated whenever the batteries are connected. This pump will run as needed whenever the water in the bilge accumulates high enough to cause the switch to activate and turn off when the water is removed.

## Fwd Bilge

Manually activates the forward bilge pump located in the bilge below the cabin sole. The pump moves water out a thru-hull fitting in the hull. The pump is also activated by an automatic switch that is activated whenever the batteries are connected. This pump will run as needed whenever the water in the bilge accumulates high enough to cause the switch to activate and turn off when the water is removed.

## Notice:

The bilge pumps will start automatically when there is sufficient water in the bilge to activate the automatic switch. Each automatic switch is protected by a fuse located near the battery switches and is always supplied current when the batteries are connected.

## Shower Sump

Overrides the automatic float switch to manually activate the sump pump system for the cabin sink and head compartment shower drain system. During normal operation the automatic float switch in the sump controls the pump.

## Aft Livewell #1

Activates the pump that supplies seawater to the livewell.

## Aft Livewell Recirc

Activates the pump that recirculates the water in the livewell.

## Aft Livewell Lights

Activates the light in the livewell.

## Wipers/Washer/ACC

A three position switch that activates the windshield wipers and washer. Press the lower position to turn the wiper OFF. Move the switch to the center position to activate only the wipers. Press the upper position to activate the washer and wiper simultaneously.

If the windshield is excluded on your boat, this switch will be labeled ACC and be reserved for additional DC accessories installed by you or your Everglades dealer.

## Fresh Water

Activates the pump that supplies water pressure for the fresh water system. The pump is the pressure demand type. A pressure switch automatically controls the water pump when the system is activated and properly primed.

## Raw Water

Activates the raw water system pump that supplies the raw washdown hose connector in the cockpit. The pump is the pressure demand type. A pressure switch automatically controls the water pump when the system is activated and properly primed.

## 12 volt Receptacle (2)

Provide electrical current for portable 12 volt equipment. The receptacles are located on the starboard side of the helm. The circuit breakers that protect the receptacle circuits are located in the panel next to each receptacle.



Typical Spot Light Switch

## MP3 Connection

Located on the starboard side of the helm near the 12 volt receptacles. Provides an input for MP3 players to connect to the boat stereo system.

## Additional DC Switches and Panels

### Trim Tab Switch

Located in the helm. This switch controls the trim tab planes located on the transom of the boat. It is protected by a fuse located in the accessory fuse panel near the power steering pump. Please refer to the Helm Control Systems chapter for detailed information on the operation of the trim tab controls.

### Engine Trim and Tilt Switches

Located in the helm. These switches are typically installed in the engine throttle and shift controls. They control the trimming and tilting of the engines. Please refer to the Helm Control Systems chapter and the engine owner's manual for information regarding the proper use of the tilt and trim switches.

### Spot Light (Optional)

Located in the helm. Controls the spot light that is mounted on the hardtop. It is protected by a fuse located in the accessory fuse panel near the power steering pump. Refer to the spot light owner's manual for details on operating the control pad.



## Windlass

Located in the windlass compartment below a hatch in the deck near the bow. This switch controls the windlass which is mounted in the compartment above the rope locker. It is protected by a circuit breaker of the type and rating recommended by the windlass manufacturer that is located near the battery switches.

The switch is a three-position switch. The center position is OFF. Moving the switch in one direction will pay the anchor line out. Moving the switch in the opposite direction will pull the anchor line in.

## Table

Located near the cabin door. A three position momentary switch that raises and lowers the table pedestal. The center position is OFF. Press the top of the switch to raise the table, press the bottom of the switch to lower it. The pedestal will stop immediately when the switch is released. It is protected by a fuse located in the accessory fuse panel near the power steering pump.

## Power Ports

A 12 volt power port is located below the gunnel on each side of the cockpit. The power ports provide a 12 volt DC power connection for downriggers or electric reels. Each power port requires a special twist lock plug to be installed on the power cord of the accessory. One plug for each port was included with your boat. Additional plugs can be ordered through your dealer.

The power ports are protected by fuses located in the accessory fuse panels near the power steering pump.

## Waste Discharge Switch

A key activated momentary switch located in the head compartment that controls the overboard discharge pump system for the holding tank and marine head system. Monitor the waste level in the tank while pumping and turn the waste discharge switch OFF immediately when pumping is complete.

The key must be removed from the switch whenever the discharge pump is not being operated.

## 6.5 DC System Circuit Protection

### DC Accessory Fuse Panels

Power is distributed to cabin 12 volt accessories and other accessories not activated by switches in the helm switch panel through individual blade



Typical Power Port and Twist Lock Accessory Plug



Typical DC Accessory or Electronics Fuse Panel

type fuses in panels located in the compartment on the starboard side of the aft berth near the power steering pump. The "Main #1" circuit breaker protects the fuse panel circuits from an overload. The fuses are labeled for the accessory circuit they protect. Blank fuse holders are reserved



for additional accessories not usually installed by the factory.

If a fuse blows, it must be replaced with a fuse of the same amperage as the original. The fuses are labeled and color coded. Never try to correct a problem with a 12 volt accessory by installing a larger fuse. This could cause the accessory or circuit with a problem to overheat, which could result in an electrical fire.

## Continuous Power Fuse Panel

Located near the battery switches. The fuses in the panel protect the circuits that are always active and not turned off by the battery switches. The continuous power circuits are always supplied current when the house batteries are connected.

**The fuses in this panel provide continuous power and protect the circuits for the following accessories:**

### Stereo Memory

Protects the circuit that supplies continuous 12 volt electrical current to the memory circuit in the stereo.

### DVD Memory

Protects the circuit that supplies continuous 12 volt electrical current to the memory circuit in the DVD player.

### CO Monitor/Shower FLT

Protects the circuit that supplies continuous 12 volt electrical current to the carbon monoxide detector in the aft berth and shower sump pump.

The power indicator on the carbon monoxide detector should be lit whenever someone is occupying the cabin. If the fuse has blown, it indicates that there is a problem with the carbon monoxide detector or the wiring from the fuse panel to the detector. Always determine the cause of the problem and correct it before replacing the fuse or occupying the cabin.

### Fwd Blg FLT

Protects the circuit for the automatic switch that activates the bilge pump located in bilge below the head compartment. The pump and switch are accessed through a hatch below the head compartment sole. A red light in the Forward Bilge Pump switch will be lit whenever the pump is activated.

### Aft 1 FLT

Protects the circuit for the automatic switch that activates the mid stern bilge pump located in the



Continuous Power Fuse Panel

bilge below the systems compartment. A red light in the Aft 2 Bilge Pump switch will be lit whenever the pump is activated.

### Aft 2 FLT

Protects the circuit for the automatic switch that activates the stern bilge pump located in the bilge near the transom. A red light in the Aft 1 Bilge Pump switch will be lit whenever the pump is activated.

### Notice:

**The continuous power circuit breakers are always supplied current when the batteries are connected. These circuits are not deactivated when the battery switches are off.**

## Electronics and Helm Fuse Panels

There are two fuse panels located in the helm that are accessed through access hatches in the aft berth. The fuse panels are supplied power by the Electronics main breaker located in the systems compartment. Fuses in the panel protect the individual circuits for electronics or other accessories mounted in the helm area of your boat.



## CAUTION



**PROPER FUSE OR BREAKER PROTECTION MUST BE PROVIDED FOR ALL 12 VOLT EQUIPMENT ADDED. DO NOT OVERLOAD THE ACCESSORY CIRCUIT BREAKERS, FUSE PANELS OR OTHER CIRCUITRY THROUGH ADDITIONAL 12 VOLT EQUIPMENT.**



Main Circuit Breakers and Continuous Power Fuse Panel

## Main Circuit Breakers

DC Power is distributed to the fuse panels, helm switch panels, electronics and other main circuits through heavy duty circuit breakers located in the aft berth near the battery switches. These main circuits are deactivated when the house battery switch is OFF. The breakers are supplied power whenever the House battery switch is on.

These breakers are equipped with a red "push to test" button and a black or yellow reset lever. If the circuit breaker is tripped by an overload, a yellow or black lever near the center of the breaker will be visible and pointing downward. Reset the breaker by pushing the lever until it resets and locks in the "On" position. The circuit breaker can be tested for proper operation by pressing the red test button.

### Notice:

**If a main circuit breaker trips, always make sure the problem that caused the breaker to trip is found and corrected before resetting the breaker.**

**The following are the main circuits supplied and protected by heavy duty circuit breakers:**

### Main #1

Protects the circuit that supplies 12 volt current to the helm switch panel, accessory switch panels and all DC accessories in the cabin and cockpit. This circuit is deactivated when the House battery switch is off.

### Electronics

Protects the main circuit that supplies 12 volt current to the electronics fuse panels in the helm. This circuit is deactivated when the House battery switch is off.

### Power Steering

Protects the circuit that supplies 12 volt current to the hydraulic steering assist system. This circuit is deactivated when the House battery switch is off.

### Windlass

Protects the circuit that supplies 12 volt current to the windlass main circuit. This circuit is deactivated when the House battery switch is off.

## 6.6 120 Volt AC Electrical System

The AC electrical system is supplied 120 volt, 60 cycle current by a 30 amp shore power outlet at dockside or by the generator. It is wired totally separate from the 12 volt DC system and is equipped with an onboard isolation system.

An Equipment Leakage Circuit Interrupter (ELCI), located in the cabin AC panel, provides whole-boat ground fault protection (electrical shock protection from stray current) for the entire AC shore power system. The main circuit breaker and breakers for each accessory circuit are located in the cabin AC panel.

The AC system can be fed by either the shore power inlet or by the optional generator. The main breakers in the AC panel are used to select the source of power desired, Shore Main or Generator Main. The AC main breakers must be switched to the OFF position before selecting a different power source.

All AC current is distributed to the AC accessories through individual circuit breakers located in the cabin AC panel. The main breakers protect the system from an overload and a reverse polarity light indicates any problems due to an improper shore power supply. All AC outlets in the cabin and cockpit are protected by ground fault interrupters to protect against electrical shock.

While moored dockside, 120 volt AC power should be utilized from dockside power, if available. A cord set is provided to supply power from the shore power outlet to the boat's 120 volt AC system.



Shore Power Inlet Plug and Shore Water Connection

### Recommended procedure for making a shore connection:

Turn the AC Shore Main breaker to the "OFF" position. If the dockside outlet includes a disconnect switch, turn it to the "OFF" position also.

To avoid strain on the cable make sure it has more slack than the mooring lines. Dress the cable so it cannot be damaged by chafing between the boat and the dock. Make sure the cable doesn't come in contact with the water and connect the cable in the boat plug inlet and then the dockside outlet, making sure the connection plugs include a three-prong plug with a ground wire. Tighten the lock rings on both the shore and the boat connector plugs.

Turn the dockside disconnect switch or circuit breaker to the "ON" position and check for proper polarity. If reversed polarity has been achieved, the red reversed polarity indicator in the cabin AC panel will light. If this should happen, make sure the Shore Main breaker on the panel is in the "OFF" position and turn the dock power switch or breaker off. If the Shore Main light illuminates and the red Reversed Polarity light does not illuminate when power is supplied to the panel the polarity is correct and the AC main breaker can be moved to the "ON" position.

**DANGER**

**TO REDUCE THE RISK OF ELECTRICAL SHOCK IN WET WEATHER, AVOID MAKING CONTACT WITH THE SHORE CABLE OR MAKING A CONNECTION TO A LIVE SHORE OUTLET. NEVER SPRAY WATER ON ELECTRICAL CABLES WHILE WASHING DOWN DECKS.**

**TO REDUCE THE POSSIBILITY OF AN ELECTRICAL SHOCK, IT IS IMPORTANT THAT THE AC GROUND SYSTEM IS FUNCTIONING PROPERLY AND THAT A PROPER CONNECTION EXISTS BETWEEN THE SHORE POWER CORD, THE SHORE POWER INLET, THE BOAT BONDING SYSTEM AND THE OUTLET GROUND CIRCUITS. IF THERE IS ANY DOUBT ABOUT THE INTEGRITY OF THE GROUND CIRCUIT, A QUALIFIED MARINE ELECTRICIAN SHOULD BE CONTACTED IMMEDIATELY AND THE AC POWER SHOULD BE DISCONNECTED UNTIL THE NECESSARY REPAIRS ARE COMPLETED.**



Cabin AC Circuit Breaker Panel

Check the ELCI located in the panel for faults. The green "POWER" LED should show steady illumination and the red "FAULT" LED should remain off. The ELCI trips and opens the main circuit when there is a ground fault condition. If the red LED is continuously illuminated the ELCI has tripped due to a ground fault condition. Some faults are self-clearing. Try resetting the ELCI once. If the green LED shows steady illumination and the ELCI does not trip again, the circuit is correct and activated.

If the reversed polarity light is lit or the ELCI continues to trip and the red "FAULT" LED is lit after being reset there is a problem with the AC electrical system and it is unsafe to use. Make sure the Shore Main breaker on the panel is in the "OFF" position and turn the dock power switch or breaker off. Disconnect the shore power supply cord from the boat and notify a qualified marine electrician to check the wiring and correct the problem.

**⚠ DANGER ⚠**

**REVERSED POLARITY AND GROUND FAULT CONDITIONS WILL DAMAGE THE SYSTEM AND EXPOSE PASSENGERS TO ELECTROCUTION HAZARDS THAT WILL CAUSE SEVERE INJURY OR DEATH. THIS CONDITION COULD ALSO CAUSE A FIRE IN THE ELECTRICAL SYSTEM. NEVER OPERATE THE AC ELECTRICAL SYSTEM WITH REVERSED POLARITY OR A GROUND FAULT CONDITION.**

**⚠ WARNING ⚠**

**ELECTRIC SHOCK CAN CAUSE SEVERE INJURY OR EVEN DEATH. DO NOT ATTEMPT TO CORRECT THE WIRING YOURSELF. ALWAYS HAVE A QUALIFIED ELECTRICIAN CHECK WIRING.**

**KEEP CHILDREN AWAY FROM ANY ELECTRICAL CABLES OR EQUIPMENT AND ALWAYS USE GROUNDED APPLIANCES ON BOARD YOUR BOAT.**

**UNDETECTED FAULTS IN THE AC ELECTRICAL SYSTEM COULD CAUSE THE WATER AROUND THE BOAT TO BECOME ENERGIZED. THIS COULD CAUSE A SEVERE SHOCK OR EVEN DEATH TO SOMEONE IN THE WATER NEAR THE BOAT. NEVER SWIM OR ALLOW SWIMMING AROUND THE BOAT WHEN THE AC SYSTEM IS ACTIVATED BY THE SHORE POWER CONNECTION OR THE GENERATOR.**



## **Disconnecting procedure for shore power connection:**

Turn the Shore Main breaker on the AC panel to the "OFF" position. Turn the disconnect breaker on the dockside outlet to the "OFF" position.

Disconnect the cable from the dockside outlet and replace the outlet caps. Disconnect the cable from the boat and replace the outlet cap. Store cable.

## **120 volt AC Circuit Breaker Panel**

The AC panel is located in the cabin above the galley sink. The following is a description of the AC panel equipment and the breakers that protect the accessories:

### **AC Meter**

The multifunction meter located in the cabin breaker panel can monitor the voltage, current load or frequency when the boat is connected to AC power. Switches next to the meter allow you to monitor AC current, adjust the brightness and select the meter to display volts, amps, frequency, watts or to scroll the display. It also can be programmed to sound an alarm for high and low voltage or high current.

The voltage should be checked each time the AC system is activated. The AC system and accessories can be damaged by voltage that is below 105 volts or above 125 volts. You should monitor the voltage and never operate your AC electrical system if the voltage is below or above this range.

The amp or current load should be monitored particularly when operating the air conditioner and water heater. You should always be aware of the electrical load needed to activate accessories and manage the amperage being supplied so the load can be kept within safe limits. Avoid excessive current load that can overload the circuits or the generator. If you have any questions about managing the power in your boat, contact your authorized Everglades dealer.

The frequency should be monitored when the generator is operating. In the U.S., AC accessories are designed to operate on a frequency of 60 cycles per second. The generator should be able to maintain this frequency within + or - 3 cycles. Do not operate the AC electrical system if the frequency is not in the proper range.

Refer to the volt meter owner's manual for more information on the features and operation of the AC Multimeter.

## **Shore Main and Generator Main Breakers**

These breakers select the power source and protect the general distribution network. There is a main breaker for the shore circuit and the generator. A sliding safety cover on the main breakers prevent activating circuits for the generator and shore circuit simultaneously. These breakers are very sensitive. The resulting power surge that occurs when connecting the dockside cord may cause the main breaker to trip. To avoid this surge, always turn the Shore Power main breaker to the "OFF" position before plugging or unplugging the shore power cord and the Generator Main breaker to the "OFF" position when starting the generator.

Care must be taken when operating the AC system from the generator or the shore power supply line. On some boats it may be possible to overload the generator or shore power circuit if too many AC accessory breakers are activated. Too much amperage being supplied through the panel will cause the Shore Main or Generator breaker to trip and could damage the system. This is particularly important when operating the air conditioner, water heater or cockpit grill. You should always be aware of the electrical load needed to activate accessories and manage the amperage being supplied so the load can be kept within safe limits. If you have any questions about managing the power in your boat, contact your authorized Everglades dealer.

## **Reversed Polarity Light**

The red Reversed Polarity light indicates that reversed polarity current is being supplied to the panel. This situation will cause the red light to remain lit. If reverse polarity is achieved, immediately turn off all cabin AC breakers and dockside outlet breakers. Disconnect the power cable from the dockside outlet and notify a qualified electrician to check the dockside wiring.

No red light indicates the polarity is correct and it is safe to activate the panel and AC accessory breakers.



## Equipment Leakage Circuit Interrupter (ELCI)

The ELCI provides whole-boat ground fault protection (electrical shock protection from stray current) for the entire AC shore power system. The ELCI face plate is equipped with TEST and RESET buttons. There are also two LED lights that indicate circuit status. When the 120 volt AC system is activated, the green "POWER" LED should show steady illumination and the red "FAULT" LED should remain off.

The ELCI trips and opens the main circuit when there is a ground fault condition. If the red "FAULT" LED is continuously illuminated the ELCI has tripped due to a ground fault condition. Some faults are self correcting. If it trips, try resetting the ELCI once. If the green LED shows steady illumination and the ELCI does not trip again, the circuit is OK. If the ELCI continues to trip and the red LED is lit after being reset there is a problem with the AC electrical system and it is unsafe to use. Make sure the all main breakers are turn off and notify a qualified marine electrician to check the wiring and correct the problem.

It is important that the ELCI is working properly to provide protection against electric shock. It should be tested at least once each month to ensure proper operation by pressing the TEST/RESET buttons in the faceplate. Refer the ELCI instructions for the testing procedure.

### Blower

Activates the 12 volt DC blower that provides ventilation and cooling for the systems compartment when the generator is operating. Always make sure the blower is activated at least four minutes before starting the generator.

The blower switch is supplied DC current whenever the House battery switch is ON. It is protected by a "push to reset" circuit breaker in the panel near the switch.



Typical Equipment Leakage Circuit Interrupter (ELCI) Shore Main Breaker, Reverse Polarity Light and Generator Main Breaker

### Air Cond

Supplies electrical current to the air conditioner compressor and control panel located in the cabin.

#### Notice:

**After a certain amount of time without water flow, the air conditioning unit will automatically power down. If this occurs, reset the unit and check for water flow out of the air conditioning thru-hull. Refer to the air conditioner owner's manual for more information.**

### Battery Charger

Supplies electrical current directly to the automatic battery charger. The battery charger will charge and maintain the 12 volt batteries simultaneously when activated. It is fully automatic.

The wires that supply DC charging current to the batteries are protected by an internal fuse in the battery charger and external fuses, one for each battery output wire near the batteries. The external fuses protect the DC charging circuit from the batteries to the charger. The internal fuses in the charger protect the DC charging circuit from the charger to the batteries. Refer to the battery charger owner's manual for more information on the features and operation of the battery charger.

The charge to the engine batteries can be monitored by using the volt meters in the engine gauge cluster or the LED lights on the charger. To monitor the engine batteries with the volt meters in the engine gauge cluster, activate the charger and turn the engine battery switches on. Turn the ignition key switch for each engine to the "ON"

**WARNING**

**GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING THE GENERATOR, OPERATE THE BLOWER FOR FOUR (4) MINUTES. OPEN THE SYSTEMS COMPARTMENT ACCESS HATCH, INSPECT THE FUEL SYSTEM AND CHECK FOR THE ODOR OF GASOLINE VAPORS. ALWAYS OPERATE THE BLOWER WHENEVER THE GENERATOR IS OPERATING. UNDER NO CIRCUMSTANCES SHOULD THIS PROCEDURE BE OVERLOOKED.**

position (DO NOT START THE ENGINES) and read the voltage on the volt meter for each engine. If the batteries are in good condition and charging properly, the volt meters will indicate between 12 and 14.5 volts. If the reading is below 12 volts, then the battery is not accepting a charge or the charger is not working properly. Always turn the ignition switches off immediately after the monitoring is complete when using the voltmeters in the engine gauge cluster.

### Cockpit Grill

Supplies 120 volt AC electrical current to the electric grill in the cockpit.

### Microwave

Supplies electrical current to the microwave and coffee maker.

### Outlets

Supplies 120 volt AC electrical current to the cabin Ground Fault Interrupter (G.F.I.) outlets.

### Notice:

**All AC electrical outlets are provided with ground fault interrupts to protect against electric shock. These outlets should be tested periodically to ensure proper operation by pressing the test/reset buttons in the center of the faceplate. G.F.I. outlets do not protect against short circuits and overloads. This is done by the Outlets breaker on the AC panel.**



Battery Charger

**⚠ WARNING ⚠**

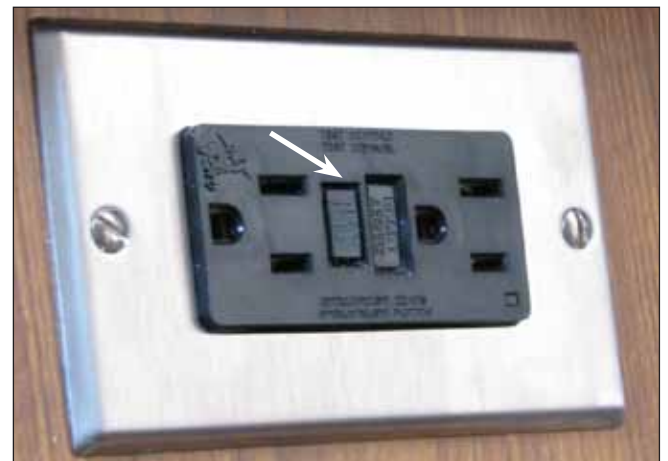
**GFI OUTLETS DO NOT PROVIDE 100% PROTECTION FROM ELECTRIC SHOCK. EVEN THOUGH GROUND FAULT INTERRUPTERS PROVIDE PROTECTION BY REDUCING EXPOSURE TIME FROM LINE TO GROUND SHOCK HAZARDS, IT IS STILL POSSIBLE TO RECEIVE AN ELECTRIC SHOCK FROM DEFECTIVE APPLIANCES OR POWER TOOLS AND MISUSED ELECTRICAL EQUIPMENT.**

### Refrigerator

Supplies 120 volt electrical current directly to the refrigerator when AC power is available and chosen over the 12-volt power supply. See the refrigerator manual for more information.

### Water Heater

Supplies electrical current directly to the hot water heater circuit. A thermostat in the water heater control panel automatically controls the water temperature. Before operation, you must have



GFI Outlet Test and Reset Buttons

water in the water heater. (See the water heater manual for details)

### Accessory

Reserved for additional 120 volt AC equipment.

## 6.7 Generator

The generator is activated by the House battery bank and is located in the engine compartment. The generator oil and coolant should be checked whenever you check the oil and coolant in the main engines.

A switch in the cabin generator control panel controls the starting, running and stopping of the optional generator. Lights in the panel monitor engine temperature, exhaust temperature and oil pressure. A panel at the helm allows the operator to monitor the generator status at the helm when the boat is underway.

Another switch in the cabin AC panel activates the 12 volt DC blower that provides ventilation and cooling for the systems compartment when the generator is operating. Always make sure the blower is activated at least four minutes before starting the generator.

The generator can also be operated from a control panel on the generator. The circuit breakers and fuses that protect the generator AC and DC circuits are also on this panel or on the side of the panel control box. An owner operator's manual for the generator has been supplied with this manual. Please refer to it for details on the generator operation.

The generator engine uses a closed cooling system with a seawater-cooled heat exchanger. A sacrificial anode in the seawater cooling system protects generator components that are in contact with seawater. There is an expansion tank for the engine coolant mounted on the bulkhead near the generator. Make sure the fluid level in the expansion tank is kept between the maximum and minimum lines of the tank. You should also check the exhaust port for water flow each time the generator is started. If there is no discharge within thirty seconds, shut down the generator, then find and correct the problem.

The seawater cooling system includes a strainer that prevents debris in the seawater from entering the cooling pump. The strainer and a seacock valve is located in the systems compartment bilge



Generator



Generator Onboard Control Switch and Engine Monitor Fuses and Circuit Breaker

near the generator. It is important to check and clean the strainer regularly to ensure the seawater system can circulate enough water to provide cooling for the closed cooling and exhaust systems on the generator. **You should also make sure the generator seacock valve is open and check the exhaust port for water flow each time the generator is started.** If there is no discharge within thirty seconds, shut down the generator and find and correct the problem.

Refer to the Raw Water Systems Maintenance section in the Raw Water System Chapter of this manual for instructions on cleaning the generator sea strainer.



## Notice

The generator may not be able to operate all 120 volt accessories at the same time. **POWER MANAGEMENT PRACTICES** may need to be observed depending on the AC power load.

## Notice:

**Generators consume DC electrical current and charge the House/generator battery just enough to compensate for the DC electrical current the engine requires to operate. Therefore, it is important to activate the battery charger to maintain the House and engine batteries whenever the generator is running.**

The generator fuel system is equipped with a water separating fuel filter and operates much like the fuel system for the main engines. Please refer to the Fuel System chapter for more information on the generator fuel system.

You should also read the generator owner's manual for detailed information on the safe operation and maintenance of the generator.



Cabin Generator Control Switch and Monitoring Lights

**DANGER**

GENERATOR ENGINES PRODUCE CARBON MONOXIDE WHICH IS A LETHAL, TOXIC GAS THAT IS COLORLESS AND ODORLESS. IT IS A DANGEROUS GAS THAT WILL CAUSE DEATH IN CERTAIN LEVELS. ONLY OPERATE THE GENERATOR IN WELL VENTILATED AREAS AND NEVER OPERATE THE GENERATOR WHILE YOU ARE SLEEPING.



Generator Sea Strainer and Seacock Valve

## 6.8 Bonding System and Galvanic Isolator

Your boat is equipped with a bonding system that interconnects all underwater hardware and thru-hull fittings to ensure that they are of the same electrical potential. Anodes are attached to the bonding system at the transom, the engines and could be installed on the trim tab planes if your boat is kept in the water. There is also an anode in the seawater cooling system for the generator. The anodes deteriorate before the other metals, thereby protecting the underwater metals from galvanic corrosion or stray electrical current. Since the anodes are sacrificial, it is important to monitor them and replace them when they have deteriorated to 50 - 75% of their original size. The

bonding system is connected to the DC ground and the earth ground wire for the AC electrical system. It provides a path for dangerous short circuits in the AC electrical system to the safety earth ground in the event of a fault in the shore earth ground connection and when the boat is away from the dock.

When the boat is connected to shore power at a marina or city dock, all boats connected to shore power are connected to a common shore safety earth ground connection. This circuit provides essential protection against electrical shock from

faults or short circuits in AC electrical equipment and, unfortunately, provides a path for low voltage galvanic current to flow between the bonding system of other boats in the circuit. If one or more of the boats in the circuit has a stray current electrical problem or is not equipped with proper galvanic protection, it will seek protection from your boat's bonding system through the safety ground circuit. This could cause accelerated deterioration of the anodes and/or severe damage to the underwater hardware. To prevent damage from other boats in the circuit, a galvanic isolator is installed in the shore ground circuit that isolates your boat's bonding system from the other boats. It prevents the flow of low voltage galvanic current while still providing a path for dangerous short circuit currents in the AC system to the shore safety ground.

## 6.9 Electrical System Maintenance

### DC Electrical System Maintenance

At least once a year, spray all exposed electrical components behind the helm, in the transom area and in the plugs with a protector. Exterior light fixture bulbs should be removed and the metal contact areas coated with a non-water soluble lubricant like Teflon or Silicone grease. The sockets should be sprayed with a protector. Care must be taken not to get any oil or grease on the glass portion of the bulbs as this will cause the bulb to overheat and burn out. LED lights are sealed and not serviceable.

	<b>WARNING</b>	
<b>WHEN REPLACING LIGHT BULBS IN MARINE LIGHT FIXTURES, ALWAYS USE A BULB WITH THE SAME RATING AS THE ORIGINAL. USING A DIFFERENT BULB COULD CAUSE THE FIXTURE TO OVERHEAT AND MELT OR SHORT CIRCUIT.</b>		

Inspect all wiring for proper support, sound insulation and tight terminals, paying particular attention to portable appliance cords and plugs.

Check all below deck wiring to be sure it is properly supported, that the insulation is sound and that there are no loose or corroded terminals. Corroded terminals should be thoroughly cleaned with sandpaper or replaced, tightened securely and sprayed with a metal and electrical protector. Inspect all engine wiring.

Your boat is equipped with AGM (Absorbed Glass Mat) batteries that are installed by your dealer. AGM batteries are maintenance free with cells that are sealed and do not require inspection or service.

Do not use standard wet cell or gel cell marine batteries. The battery compartment and the boat's charging system are not designed for wet cell or gel cell marine batteries. Use only AGM (Absorbed Glass Mat) marine batteries such as Optima Blue Top batteries. These are sealed maintenance free batteries that will not emit dangerous hydrogen gas into the aft berth during charging.

	<b>WARNING</b>	
<b>WET CELL MARINE BATTERIES WILL EMIT DANGEROUS HYDROGEN GAS INTO THE AFT BERTH DURING CHARGING. HYDROGEN GAS IS A HEALTH HAZARD AND CAN EXPLODE CAUSING SEVERE INJURY OR EVEN DEATH TO PASSENGERS.</b>		
<b>USE ONLY AGM (ABSORBED GLASS MAT) MARINE BATTERIES SUCH AS OPTIMA BLUE TOP BATTERIES. AGM BATTERIES ARE SEALED AND DO NOT EMIT DANGEROUS GASES DURING CHARGING. NEVER USE STANDARD WET CELL BATTERIES IN YOUR BOAT.</b>		

Keep the battery tops clean and dry. Dirt and water can conduct electricity from one post to the other causing the battery to discharge.

The battery posts should be kept free of corrosion. Remove the cables and clean the posts and cable clamps with a battery post cleaner or sandpaper as required. Coating the battery posts and cable clamps with Teflon or Silicone grease will protect them and reduce corrosion. Battery cables, both hot and ground, must be replaced when they show signs of corrosion or fraying. Deteriorated cables cause a considerable voltage loss when high currents are drawn, as for starting the engines.



## AC Electrical System Maintenance

Periodically inspect all wiring for nicks, chafing, brittleness, improper support, etc. Examine the shore power cord closely for cracks in the insulation and corrosion in electrical connectors. Spraying receptacles and electrical connections with an electrical contact cleaner or a metal and electrical protector will reduce corrosion and improve electrical continuity.

Inspect all wiring for proper support, sound insulation and tight terminals, paying particular attention to portable appliance cords and plugs. The entire AC circuitry, especially the shore power cord, should be seasonally tested for proper continuity by an experienced electrician. This will detect any shorts, open wires or ground faults.

Ground fault interrupt outlets and ELCI should be tested monthly to ensure proper operation by pressing the test/reset buttons. The polarity indicator system should also be inspected for proper operation.

## Generator Maintenance

The engine maintenance required on the generator is similar in many ways to the main engines. The most important factors to the generator's longevity are proper ventilation and maintenance of the fuel system, ignition system, cooling system, lubrication system and the AC alternator.

Maintenance schedules and procedures are outlined in your generator owner's manual. They should be followed exactly.



## WARNING



CORROSION ALLOWED TO BUILD ON THE ELECTRICAL CONNECTORS CAN CAUSE A POOR CONNECTION RESULTING IN SHORTS, GROUND FAULTS OR POOR GROUND CONNECTIONS. ELECTRICAL CONNECTORS SHOULD BE CHECKED AT LEAST ANNUALLY AND CLEANED AS REQUIRED. DO NOT ALLOW CORROSION TO BUILD ON CONNECTIONS.

ELECTRIC SHOCK CAN CAUSE SEVERE INJURY OR EVEN DEATH. THE AC AND DC ELECTRICAL SYSTEMS ALWAYS SHOULD BE DISCONNECTED FROM THE POWER SOURCE BEFORE INSPECTING OR SERVICING THE SYSTEM. NEVER SERVICE ANY COMPONENT OF AN ELECTRICAL SYSTEM WHILE IT IS ENERGIZED.

THE AC AND DC ELECTRICAL SYSTEMS ALWAYS SHOULD BE DISCONNECTED FROM THE POWER SOURCE BEFORE INSPECTING OR SERVICING THE SYSTEM. NEVER SERVICE ANY COMPONENT OF AN ELECTRICAL SYSTEM WHILE IT IS ENERGIZED.



## FRESH WATER SYSTEM

### 7.1 General

The fresh water system consists of a potable water tank, distribution lines and a distribution pump. The pump is equipped with an automatic pressure switch and is located near the water tank in the systems compartment. The tank is located in the systems compartment bilge.

⚠	<b>CAUTION</b>	⚠
<p><b>DO NOT FILL SYSTEM WITH ANYTHING OTHER THAN WATER. SHOULD THE SYSTEM BECOME CONTAMINATED WITH FUEL OR OTHER TOXIC FLUIDS, COMPONENT REPLACEMENT MAY BE NECESSARY.</b></p>		



Fresh Water Fill

⚠	<b>WARNING</b>	⚠
<p><b>DO NOT CONFUSE FUEL FILL DECK PLATES WITH THE WATER OR WASTE FILL DECK PLATES. THESE PLATES ALSO ARE LABELED ACCORDINGLY. IF GASOLINE IS ACCIDENTALLY PUMPED INTO THE WATER OR WASTE TANK, DO NOT ATTEMPT TO PUMP IT OUT YOURSELF. WATER AND WASTE PUMPS ARE NOT DESIGNED TO PUMP FUEL AND A FIRE OR EXPLOSION COULD RESULT. CONTACT YOUR DEALER OR THE EVERGLADES CUSTOMER SERVICE DEPARTMENT FOR ASSISTANCE IN HAVING THE FUEL PROFESSIONALLY REMOVED AND COMPONENTS OF THE FRESH WATER SYSTEM REPLACED AS NECESSARY.</b></p>		

tended period, air bubbles may accumulate at the pump and the system may have to be reprimed.

Whenever the boat is left unattended, the Fresh Water switch should be placed in the OFF position.

⚠	<b>CAUTION</b>	⚠
<p><b>DO NOT ALLOW THE FRESH WATER PUMP TO RUN DRY. THE FRESH WATER PUMP WORKS ON DEMAND AND WILL NOT SHUT OFF AUTOMATICALLY WHEN THE TANK IS EMPTY. THIS CAN RESULT IN DAMAGE TO THE PUMP. ALWAYS TURN THE FRESH WATER SWITCH OFF WHEN THE FRESH WATER SYSTEM IS NOT IN USE.</b></p>		

### 7.2 Fresh Water System Operation

Fill the water supply tank slowly through the labeled deck plate located at the rear of the cockpit. After filling the water tank, partially open all faucets. The Fresh Water switch on the helm switch panel should be on. Allow the pump to run until all of the air is purged from the system and a steady stream of water is flowing from each outlet. Next, turn off the faucets one by one. As the pressure builds, the pump will automatically shut off.

When properly primed and activated the water system will operate much like the water system in a home. An automatic pressure sensor keeps the system pressurized. If the system has been recently filled or has not been used for an ex-

#### Work Station Sink and Fresh Water Shower

The sink in the cockpit work station is equipped with fresh and raw water. A spray head/shower on a retractable hose is mounted in a recess next to the faucet.

To use the fresh water spray head, pull it out of the recess and make sure the Fresh Water switch is on. Turn on the fresh water faucet and activate the shower using the thumb activated valve on the spray head.

## Head Sink and Shower

The vanity sink faucet converts to a retractable hand-held shower head. To use the shower, make sure the Fresh Water and Shower Sump switches in the helm switch panel are on. Then pull the shower head out of the faucet and adjust the hot and cold water faucet until the desired temperature is obtained. Some minor variations in the water temperature may occur as the pressure pump cycles.

Shower and sink water is drained overboard by the shower sump pump. The pump is automatically controlled by a float switch in the sump that is activated whenever the house battery switch is ON. The Shower Sump switch in the helm switch panel overrides the automatic float switch and provides a means to activate the shower sump pump manually. After showering, let the cold water flow for a period of time to flush the drainage system of soap residue.

The cabin drain and shower sump system is located in the forward bilge, below a hatch in the cabin sole. It is essential that the drain pump strainer is cleaned regularly to remove accumulated debris that will clog the shower drain system.

## The Fresh Water Washdown

The cockpit fresh water washdown hose connection is located on the starboard side of the cockpit and uses a standard garden hose connection. It is equipped with a valve that allows the flow of water to be turned on or off at the hose connection.

Make sure the Fresh Water switch in the helm switch panel is on before using the washdown hose and that the washdown faucet valve or hose spray nozzles are off when the fresh water system is activated.

## 7.3 Water Heater

The water heater is located in the port rear of the systems compartment. The 120 volt AC element that heats the water is thermostatically controlled at the heater and activated by a circuit breaker located in the AC panel. A high pressure relief valve protects the system from excessive pressure. To avoid damage to the water heater, always make sure all air is purged from the water heater and lines before activating the water heater breaker. Refer to the water heater owner's manual for additional information.



Head Compartment Vanity Sink and Shower



Fresh Water Pump and Strainer



Freshwater Washdown Connection

**CAUTION**

DO NOT SUPPLY CURRENT TO AN EMPTY WATER HEATER. DAMAGE TO THE HEATER WILL RESULT. THE SYSTEM MUST BE FILLED AND PRIMED BEFORE USING THE WATER HEATER.

## 7.4 Shore Water Connection

The shore water connection allows the direct connection of the boat water system to a shore side water supply. This provides the system with a constant supply of fresh water and minimizes the pressure pump operation. A female inlet fitting is mounted on the side of the deck near the shore power inlet. A pressure reducer is installed in the system along with two check valves. One check valve keeps water from running out of the shore water inlet fitting when the pressure pump operates. The second provides protection for the pressure pump when high pressure city water is connected.

To use shore water, connect a hose from the shore side water faucet to the shore water inlet fitting on the boat. Next, turn on the shore water. The pressure pump will not run and the water in the boat's water tank will not be used.

**Notice:**  
**The water tank will not be filled by connecting to shore water.**



Water Heater



Shore Water Inlet Connection

**CAUTION**

DO NOT MODIFY OR CHANGE THE SHORE WATER INLET CONNECTOR WITH ANOTHER TYPE WITHOUT CONSULTING EVERGLADES CUSTOMER SERVICE OR YOUR DEALER. THE USE OF THE WRONG TYPE OF INLET CONNECTOR CAN DAMAGE THE FRESH WATER SYSTEM.



## 7.5 Fresh Water System Maintenance

Information supplied with water system components by the equipment manufacturers is included with this manual. Refer to this information for additional operation and service data.

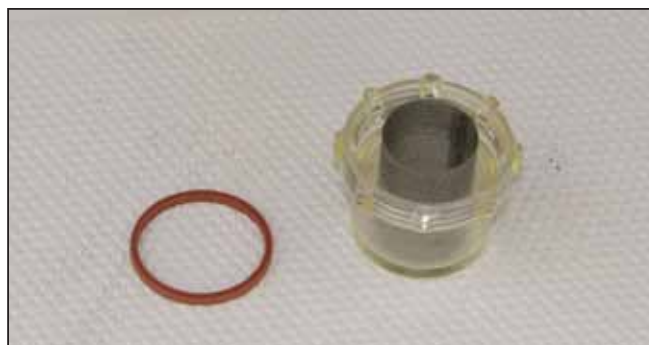
### Routine Maintenance

The following items should be done routinely to maintain your fresh water system:

- Periodically remove and clean the water strainer located near the intake side of the fresh water pump. To clean the strainer, make sure the Fresh Water switch is off. Rotate the strainer bowl counterclockwise to release it. Remove and clean the screen with fresh water. Lubricate the O-ring lightly with Teflon or silicone grease and reinstall the strainer bowl.
- Remove the filter screens from the faucet spouts and eliminate any accumulation of debris. A build up of debris can cause the pump to cycle excessively.
- Periodically remove the lid on the cabin drain and shower sump and clean the water strainer for the sump pump and the sump.
- Periodically spray the fresh water pump and metal components with a metal protectant.
- The batteries must be properly maintained and charged. Operating the pressure pump from a battery with a low charge could lead to pump failure.
- Add a commercially available potable water conditioner to the water tank to keep it fresh.

### Notice:

**The fresh water system must be properly winterized prior to winter lay-up. Refer to the section on winterizing for more information.**



Typical Fresh Water Pump Strainer Removed for Cleaning

### Sanitizing the Fresh Water Tank

The fresh water system should be sanitized if it has not been used for a long period or you are unsure of the quality of the water in the system.

The following steps can be used to sanitize the system:

- Activate the system, open all faucets and pump out as much water as you can.
- Make a chlorine solution by mixing two ounces of household chlorine bleach in a gallon of water. This mixture will treat approximately fifteen gallons. If the water tank on your boat is larger or smaller than 15 gallons, then adjust the mixture accordingly. Always mix the chlorine with water in a separate container first and never add straight chlorine to the fresh water tank.
- Fill the water tank half full with fresh water and pour the mixture into the water tank. Top off the tank.
- Activate the system and allow the water to run for about one minute at each faucet. Let the treated water stand for 4-6 hours.
- Drain the system by pumping it dry and flush with several tank fills of fresh water.
- The system should now be sanitized and can be filled with fresh water. If the chlorine smell is still strong, it should be flushed several more times with fresh water.

### Notice:

**The quality of the water in marine freshwater systems can be questionable. We recommend that you avoid using the water from the freshwater system for drinking and cooking. You should only use bottled water for these purposes.**



## CAUTION



THE FRESH WATER SWITCH SHOULD BE PLACED IN THE "OFF" POSITION WHENEVER LEAVING THE BOAT UNATTENDED OR WHEN THE FRESH WATER SYSTEM IS NOT IN USE.

## RAW WATER SYSTEM

### 8.1 General

A raw water manifold located in the systems compartment bilge supplies seawater to the raw water pumps. The intake for the manifold is equipped with a ball valve that turns the raw water main supply to the manifold on or off. Other ball valves at each connection on the manifold enable the operator to turn the water supply on or off for each individual pump in the system. Always make sure all ball valves are open before attempting to operate any component of the raw water system.

#### Priming the System

Make sure the ball valves are open and the Raw Water switch in the helm switch panel is on. Run the pressure pump by turning on the raw water washdown hose until all of the air is purged from the system and then turn the hose off. Turn the Livewell pump switch to the ON position and run the livewell pump until all of the air is purged from the system and turn the pump off.

The intake for the raw water manifold is equipped with a scoop and ball valve. If a pump runs but will not prime make sure the valve is open. If the pump still won't prime, it may be air locked. Make sure the valve is open and run the boat at or above 15 M.P.H. The water pressure from the scoop will force the trapped air through the pump and allow it to prime. If this procedure doesn't work, contact your Everglades dealer.

Closing the thru-hull valves before the boat is hauled from the water will help to eliminate air locks in raw water systems. The valves should also be closed whenever you leave the boat in the water unattended.

#### Notice:

**It may be necessary to reprime the raw water system if it is not used for an extended period and at the time of launching.**

### 8.2 Raw Water System Operation

A high pressure pump, controlled by a pressure sensor, is activated by the Raw Water switch located in the helm switch panel. When activated,



Raw Water Manifold, Livewell Pump, Raw Water Supply Pump Connections and Ball Valves



Raw Water Pressure Pump and Sea Strainer

the pressure switch will automatically control the pump that supplies the raw water hose connector.

As the pressure builds in the system, the pump will shut off. When the system is in use and the pressure drops, the pump will turn on. The water pump is equipped with a strainer on the intake side of the pump. The strainer should be checked frequently and cleaned as necessary.

Whenever the boat is left unattended, the Raw Water switch should be placed in the OFF position.

## Washdown Hose Connector

The raw water washdown hose connection is located on the port side of the cockpit below the gunnel and uses a standard garden hose connector. It is equipped with a valve that allows the flow of water to be turned on or off.

Make sure the Raw Water switch in the helm switch panel is on before using the washdown hose and that the washdown faucet valve or hose spray nozzle are off when the water system is activated.

## Work Station Sink

The sink in the cockpit work station is equipped with fresh and raw water. A spray head on a retractable hose is mounted in a recess next to the faucet.

To use the raw water spray head, pull it out of the recess and make sure the Raw Water switch is on. Turn on the raw water faucet and activate the spray head using the thumb activated valve on the spray head.



Typical Washdown Hose Connection

	<b>CAUTION</b>	
<b>DO NOT ALLOW THE WATER PUMP TO RUN DRY. THE PUMP WORKS ON DEMAND AND WILL NOT SHUT OFF AUTOMATICALLY IF NO WATER IS AVAILABLE. THIS CAN RESULT IN DAMAGE TO THE PUMP. ALWAYS TURN THE RAW WATER SWITCH OFF WHEN THE RAW WATER SYSTEM IS NOT IN USE.</b>		



Livewell

## 8.3 Livewell

Seawater is provided to the livewell by a 12 volt circulation pump. This pump is designed to carry a constant flow of water to the livewell. The pump does not have a pressure sensor and is activated by the Livewell Pump switch in the helm switch panel. There is also a light in the livewell that is activated by the Livewell Light switch.

An overflow built into the livewell drain automatically controls the water level in the livewell. Always turn the pump off at the switch panel when the livewell is not in use.

To fill the livewell, insert the plug into the drain fitting at the bottom of the livewell. Make sure the livewell pump ball valve on the manifold and the supply valve in the livewell are open. Then



Livewell Recirculation Pump

activate the livewell pump. When the water level reaches the overflow, it will begin to circulate.

When the recirculating livewell is activated by the Livewell Recirc switch, a separate pump will recirculate and aerate the water that is in the livewell without drawing additional seawater into the system. A valve in the side of the livewell is used to regulate the flow of oxygen in the water when the recirculating feature is activated.

The raw water manifold intake is equipped with a high speed pickup that will supply water to the livewell if the pump should fail and helps prime the system during normal operation. To supply water to the livewell using the high speed pickup, make sure the ball valves on the manifold are open and run the boat at a speed above 15 miles per hour. Water will circulate through the livewell and out the overflow.

To drain the livewell, turn off the livewell pump and remove the plug in the drain fitting. When the livewell has completely drained, use the wash-down hose to flush the livewell and drain of debris. There is a hook on the side of the livewell for the drain plug when the livewell is not in use.

The ball valve at the livewell pump should be closed whenever the livewell is not in use. This will prevent water from entering the livewell while the boat is cruising.

**Notice:**

**Do not use the livewell as a dry storage area when it is not in use. Seawater could accidentally be delivered to the livewell from the thru-hull fitting and damage equipment stored there.**

	<b>CAUTION</b>	
<b>A RUPTURED RAW WATER INTAKE OR PRESSURE LINE COULD CAUSE THE BOAT TO TAKE ON WATER. ALWAYS TURN THE RAW WATER SYSTEMS OFF AND CLOSE THE THRU-VALVES WHEN LEAVING THE BOAT UNATTENDED.</b>		



Air Conditioner Seawater Pump and Strainer

## 8.4 Air Conditioning Pump

The air conditioning unit is self-contained and seawater cooled. A 120 volt AC centrifugal raw water pump supplies seawater that cools the condensing unit as it circulates through the system and is discharged overboard. The seawater pump for the air conditioner is located in the systems compartment and runs whenever the air conditioner is activated.

Seawater is supplied to the pump by a ball valve and hose connected to the raw water manifold. A sea strainer between the pump and ball valve on the manifold protects the system from contaminants that could damage the pump or the air conditioning system. Make sure the pump receives adequate seawater by periodically cleaning the sea strainer basket. Refer to Raw Water System Maintenance in this chapter for information on cleaning the sea strainer.

You should refer to the air conditioner owner's manual for more information on the operation and maintenance of the seawater pump.



## 8.5 Generator Raw Water Supply

The generator engine uses a closed cooling system with a seawater-cooled heat exchanger. The seawater circulates through the heat exchanger and is expelled through the generator exhaust system, cooling it as well. It includes a strainer that prevents debris in the seawater from entering the cooling pump. The strainer is located in the stern bilge and supplied seawater by a dedicated thru-hull fitting and seacock valve near the strainer. It is important to check and clean the strainer regularly to ensure the seawater system can circulate enough water to cool the heat exchanger and exhaust system on the generator. Refer to Raw Water System Maintenance in this chapter for information on cleaning the sea strainer.

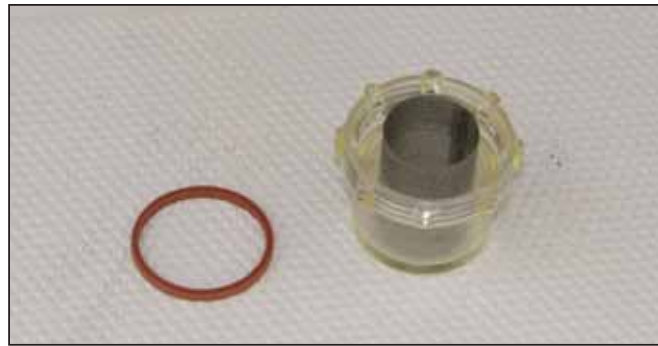
You should also read the generator owner's manual for detailed information on the safe operation and maintenance of the generator.

## 8.6 Raw Water System Maintenance

The following items should be done routinely to help maintain your raw water system:

### Routine Maintenance

- Check hoses, particularly the seawater supply lines, for signs of deterioration. Tighten fittings or replace deteriorated hoses and components as necessary.
- Periodically remove and clean the water strainer located near the intake side of the washdown pump. To clean the strainer, make sure the Raw Water switch is off and close the valve at the thru-hull fitting. Rotate the strainer bowl counterclockwise to release it. Remove and clean the screen with fresh water. Lubricate the O-ring lightly with silicon or Teflon grease and reinstall the strainer bowl.
- Spray pumps and thru-hull valves with a protective oil periodically.
- The fishbox and livewell should be drained and cleaned after each use.
- Operate all valves at least once a month to keep them operating properly.



Typical Fresh Water Pump Strainer Removed for Cleaning



Generator Seawater Supply Seacock Valve and Water Strainer

	<b>CAUTION</b>	
<p><b>SHOULD A HOSE RUPTURE, TURN THE PUMP OFF IMMEDIATELY. ALWAYS CLOSE THE THRU-HULL VALVE WHEN PERFORMING MAINTENANCE ON A SEAWATER PUMP.</b></p>		
<p><b>THE BATTERIES MUST BE PROPERLY CHARGED. OPERATING ANY PUMPS FROM A BATTERY WITH A LOW CHARGE MAY LEAD TO A PUMP FAILURE.</b></p>		
<p><b>THE RAW WATER SYSTEM MUST BE PROPERLY WINTERIZED PRIOR TO WINTER LAY-UP. SEE SECTION ON WINTERIZING.</b></p>		



## Cleaning the Generator Sea Strainer

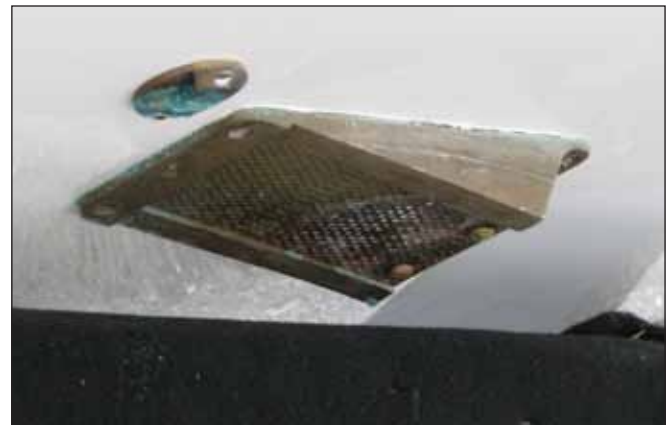
- Turn off the generator.
- Close the generator intake water seacock.
- Turn the strainer bowl counterclockwise to remove it and remove the screen.
- Thoroughly flush the screen and the inside of the strainer bowl to remove foreign matter.
- Lubricate the seal.
- Reassemble the strainer making sure that the bowl is tight.
- Open the seacock and check for leaks.
- Start the generator and inspect the strainer for leaks and proper water flow at the exhaust port. If there is no discharge within thirty seconds, shut down the generator and find and correct the problem.



Air Conditioner Sea Strainer

## Cleaning the Air Conditioner Strainer

- Turn off the air conditioner and deactivate the air conditioner circuit breaker on the cabin AC panel.
- Close the intake water ball valve at the raw water manifold.
- Turn the strainer bowl counterclockwise to remove it and remove the screen.
- Thoroughly flush the screen and the inside of the strainer bowl to remove foreign matter.
- Lubricate the seal.
- Reassemble the strainer making sure that the bowl is tight.
- Open the seawater ball valve and check for leaks.
- Activate the air conditioner and monitor the flow of water out of the air conditioner thru-hull fitting in the hull side. If no water is flowing after 30 seconds, shutdown the air conditioner and find and correct the problem.



Raw Water Manifold Intake Scoop and Strainer

## Intake Scoop Strainer

A thru-hull water intake scoop and strainer provides seawater to the raw water manifold. This strainer is located on the hull bottom and must be kept free of mud, weeds and other debris.

The strainer should be visually inspected each time the boat is hauled for accumulation of marine growth, weeds and other foreign objects. If clogged or dirty, the strainer should be cleaned.

## Cleaning the Intake Scoop Strainer

- Make sure the boat is properly blocked and supported.
- Remove the screws at the rear of the strainer.
- Slide the strainer out of the track and remove debris or marine growth. Thoroughly flush the strainer screen and the inside of the strainer to remove foreign matter.
- Install the strainer screen and install the screws.

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## DRAINAGE SYSTEMS

### 9.1 General

All water is drained by gravity to overboard thru-hull fittings located in the hull above the water line. It is important to check the drain system frequently to ensure it is free flowing and that the hoses on the thru-hull fittings are secure and not leaking. Please review the drainage schematic to become familiar with the location of the drain thru-hull fittings.

### 9.2 Cockpit and Deck Drainage Cockpit Drains

Your Everglades has four scupper drains located in the rear of the cockpit below a small hatch. The scuppers drain to thru-hull fittings in each trim tab well to reduce the surge of seawater through the scuppers and into the cockpit while maneuvering or in rough water.

Water is channeled away from all hatches by a gutter or drain rail system. The water then drains overboard through the scupper drain system.

#### Work Station Sink Drains

The work station sink is drained by gravity to a thru-hull fitting in the hull side.

#### Cup Holder Drains

All cup holders in the helm and cockpit areas drain by gravity to the cockpit sole.

#### Rope Locker Drain

The rope locker drains overboard thru a drain hole in the bottom of the locker. It is important to inspect the drain frequently to remove any accumulated debris.

### 9.3 Hardtop and Crow's Tower Drains

There is a hole drilled in the leg bases on the frame to prevent water from being trapped within the legs. Additional drain holes are drilled in the tubing to drain other areas as required.

Always make sure the leg drain holes are clear when the boat is laid up for the winter. Water trapped inside the legs could freeze and cause the legs to split.



Typical Scupper Drains and Drain Rail



Scupper Drain Thru-hull Fittings



Rope Locker Drain Fitting in Hull Side

## 9.4 Bilge Drainage

The bilge pumps are activated both manually by switches in the helm switch panel and automatically by switches near each pump in the bilge. The automatic switches remain activated when the battery switches are in the OFF position and the batteries are connected. All bilge pumps pump water out of thru-hull fittings located above the waterline in the hull.

**Notice:**

**See Electrical Systems for additional information on bilge pump operation.**

When the boat is out of the water the bilge can be drained by a garboard drain located in the transom near the bottom of the hull. The plug should be removed whenever the boat is hauled out of the water and installed just prior to launching. It is important to check the drain plug regularly to make sure it is tight.



Typical Bilge Pump and Automatic Switch

	<b>CAUTION</b>	
<p>A LOOSE DRAIN PLUG WILL ALLOW SEAWATER TO ENTER THE BILGE AND COULD CAUSE THE BOAT TO TAKE ON ENOUGH WATER TO DAMAGE EQUIPMENT OR ENDANGER THE CREW. IT IS VERY IMPORTANT TO CHECK THE DRAIN PLUG FREQUENTLY TO ENSURE IT IS PROPERLY TIGHTENED.</p>		

**Important:**

**Any oil spilled in the bilge must be thoroughly removed and properly disposed of before operating the bilge pump. The discharge of oil from the bilge is illegal and subject to a fine.**

	<b>CAUTION</b>	
<p>THE FEDERAL WATER POLLUTION CONTROL ACT PROHIBITS THE DISCHARGE OF OIL OR OILY WASTE INTO OR UPON THE NAVIGABLE WATERS OF THE UNITED STATES OR THE WATERS OF THE CONTIGUOUS ZONE IF SUCH DISCHARGE CAUSES A FILM OR SHEEN UPON OR A DISCOLORATION OF THE SURFACE OF THE WATER OR CAUSES A SLUDGE OR EMULSION BENEATH THE SURFACE OF THE WATER. VIOLATORS ARE SUBJECT TO A PENALTY OF \$10,000.</p>		

## 9.5 Fishbox, Livewell and Storage Compartment Drains

### Aft Fishbox

The aft fishbox drains by gravity to a thru-hull fitting in the hull.

### Livewell

The livewell drain is drained by gravity to a thru-hull fitting in the hull. The overflow drains to the livewell drain system.

### Lounge Seat Storage Compartment

The storage compartment below the lounge seat is drained by gravity to the cockpit.

## 9.6 Cabin Drainage

### Shower and Cabin Drain Sump Pump

The sump system is equipped with a strainer, centrifugal pump and automatic float switch. It is activated whenever the House battery switch is ON. The Shower Sump switch in the helm switch panel overrides the automatic switch and provides a means to manually activate the sump pump. Always make sure the House battery switch is activated before using the shower or cabin sinks.

After showering, it is important to let the cold water flow for a period of time to flush the drainage system of soap residue. Make sure to inspect the sump system regularly and keep the sump components and strainer screen clean.

The sump pump is located in the forward bilge below a hatch in the cabin sole. The teak and

holly cockpit pit sole is secured with Velcro and must be removed to access the hatch above the sump system and the forward bilge pump.

### Cabin Sole

The cabin sole drains by gravity to the bilge through a drain fitting below the cabin steps.

### Cabin Sinks

The head compartment and galley sinks drain by gravity to cabin sink and shower drain sump pump system.

### Air Conditioner

The air conditioning condensation pan is drained by a hose attached to the pan that drains the water to the forward bilge.



Bilge Pump Strainer, Automatic Switch

## 9.7 Drainage System Maintenance

It is essential that the following items be done periodically to maintain proper drainage of your boat:

- Clean the cockpit drain rails with a hose to remove debris that can block water drainage.
- Clean the hardtop and Tower leg drain holes. This is especially important just before winter lay-up.
- Clean the bilge pump strainers of debris and check the bilge for foreign material that can cause the automatic switch to malfunction.
- Frequently test the automatic bilge pump switches for proper operation. This is accomplished by simultaneously holding your fingers on the two recessed discs on the side of the switch until the pump is activated. You can also use a garden hose to flood the bilge until the water level is high enough to activate the pump.
- Clean and inspect the shower drain sump system. Remove accumulated debris and flush with fresh water. Frequently test the automatic pump switch for proper operation.
- Flush the air conditioner condensation pan drain with fresh water at least once each season to remove mold and debris. This is particularly important because mold tends to accumulate in condensation pan drain and, if it is not cleaned regularly, the drain can clog and flood the cabin sole when the air conditioner is operating.



Auto Switch and Test Disc Locations

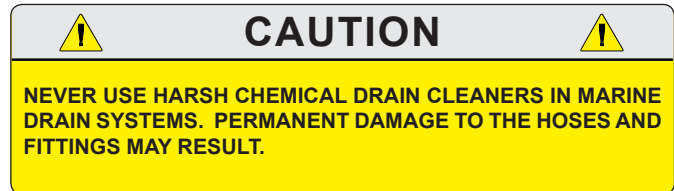


Air Conditioning Condensation Pan



- Flush all gravity drains with fresh water to keep them clean and free flowing.
- Clean and flush the fishboxes, coolers and storage boxes with soap or a bilge cleaner and fresh water after each use to keep them clean and fresh.
- Operate all seacock valves at least once a month to keep them operating properly.

**Notice:**  
**All drains and pumps must be properly winterized before winter lay-up.**



## VENTILATION SYSTEM

### 10.1 Cabin Ventilation

Ventilation to the cabin area is provided by a deck hatch, port window and a 12-volt exhaust blower in the head compartment that provides forced ventilation to that area whenever the blower is activated by the switch on the companionway wall.

#### Deck Hatch

The deck hatch is supported in the open position by two adjustable hatch adjusters. It is secured in the closed position by two twist action cam levers on the inside of the hatch. There is a sliding lock on each cam lever to prevent them from opening accidentally.

To open a hatch, release the lock and rotate each cam lever to the open position. Raise the hatch to the desired position and secure it with the cam locks on each hatch lifter. To close the hatch, release the cam locks and lower the hatch. Secure in the closed position with the two cam levers and slide locks.

The cam levers can secure the hatch in two positions, the vent position or fully closed. The hatch is secured in the vent position by opening the hatch slightly until the cam levers align with the notch in the hatch frame just above the fully closed, watertight position. With the cam levers secured in this position, the hatch will be open just enough to let air circulate into the cabin. Always secure the hatch in the water tight position when leaving the boat unattended or when running offshore.

When the cabin hatch is open, a removable screen can be installed in the hatch trim ring to prevent insects from entering the cabin. The screen must be removed to access the cam levers to open or close the hatch.

#### Port Window

An opening port window is located in the side of the aft berth. The port window is equipped with a screen and secured in the closed position by three twist action locks. The locks should be adjusted so they are tight enough to seal the window in the closed position, but not so tight that they break the plastic.



Deck Hatch Open



Deck Hatch Latched in the Vent Position



Aft Cabin Port Window

Always make sure the window is closed and secured with the cam levers whenever the boat is underway. Sea spray could enter the aft berth through the open window and damage equipment or items stowed there.

## 10.2 Windshield Ventilation

The optional windshield is equipped with an opening center panel to provide ventilation to the cockpit. To open the panel, loosen the friction knobs on the windshield vent adjusters and turn the twist locks on the vent panel to the unlocked position. Open the panel to the desired position and tighten the friction knobs. The adjusters will hold the windshield panel in that position. To close the vent panel, loosen the friction knobs on the adjusters and close the vent. Turn the panel locks on the windshield to the locked position, then tighten the friction knobs.

## 10.3 Carbon Monoxide and Proper Ventilation

**DANGER**

**FAILURE TO PROPERLY VENTILATE THE BOAT WHILE THE ENGINES OR GENERATOR ARE RUNNING MAY PERMIT CARBON MONOXIDE TO ACCUMULATE WITHIN THE CABIN AND OPEN AREAS OF YOUR BOAT. CARBON MONOXIDE IS A COLORLESS AND ODORLESS GAS THAT IS LETHAL WHEN INHALED. CARE MUST BE TAKEN TO PROPERLY VENTILATE THE BOAT AND TO AVOID CARBON MONOXIDE FROM ACCUMULATING IN THE BOAT WHENEVER AN ENGINE IS RUNNING.**

A by-product of combustion, carbon monoxide (CO) is invisible, tasteless, odorless and is produced by all engines and gas heating and cooking appliances. The most common sources of CO on boats are gasoline engines, auxiliary generators and propane or butane stoves. These produce large amounts of CO and should never be operated while sleeping. The hazard also may be created by a boat nearby whose exhaust fumes are entering your boat. Boats also have a problem due to the "station wagon effect" where engine exhaust fumes are captured in the vacuum or low pressure area, usually the cockpit, bridge deck and cabin, that can be created by the forward speed of the boat.

Boats underway should close all aft facing hatches and doors. The forward facing deck hatch should be open whenever possible to help pressurize the living spaces of the boat. No sleeping in the cabin should be permitted while underway. Proper ventilation should be maintained on the bridge deck by opening windshield or forward clear connector panel as far as possible to help pressurize the cockpit area. The canvas drop or aft curtain must be removed and the side curtains should be opened or removed to increase air flow and maintain proper ventilation whenever the engines are running. **Under no circumstances should the engines be operating with side curtains closed and the aft or drop curtain installed.**

Extreme caution must be taken while at anchor or in a slip when an auxiliary power generator is operating. Wind still nights can easily allow exhaust fumes, containing high concentrations of CO, from the generator on your boat or from an adjacent boat's generator to enter the boat. The exhaust fumes may enter your boat through open hatches or windows.

A carbon monoxide detector has been installed in your cabin as standard equipment. While a CO detector enhances your protection from CO

<p>Onboard Generator Exhaust - exhaust accumulates because of bulkhead.</p>	<p>Nearby Generator Exhaust - wind carries exhaust to the other boat</p>
<p>Back Drafting / Station Wagon Effect - at cruising speed with no forward ventilation</p>	<p>Back Drafting / Station Wagon Effect - at cruising speed with canvas closed</p>
<p>Slow Speed or Boat Stopped w/ engines running - CO can accumulate in cabin, cockpit &amp; bridge</p>	<p>Desired Air Flow Through the Boat</p>

poisoning, it does not guarantee it will not occur. Do not use the carbon monoxide detector as a replacement for ordinary precautions or periodic inspections of equipment. Never rely on alarm systems to save your life, common sense is still prudent and necessary. Remember, the operator of the boat carries the ultimate responsibility to make sure the boat is properly ventilated and the passengers are not exposed to dangerous levels of carbon monoxide. You should always be alert to the symptoms and early warning signs of carbon monoxide poisoning. You should also read the "Carbon Monoxide Monitoring System" in the Safety Equipment chapter of this manual and the owner's manual supplied by the CO detector manufacturer for operation instructions and additional information regarding the hazards and symptoms of carbon monoxide poisoning.

**⚠ DANGER ⚠**

**ACTIVATION OF THE CARBON MONOXIDE DETECTOR INDICATES THE PRESENCE OF CARBON MONOXIDE (CO) WHICH CAN BE FATAL. EVACUATE THE CABIN IMMEDIATELY. DO A HEAD COUNT TO CHECK THAT ALL PERSONS ARE ACCOUNTED FOR. DO NOT REENTER THE CABIN UNTIL IT HAS BEEN AIRED OUT AND THE PROBLEM FOUND AND CORRECTED.**



Typical Carbon Monoxide Detector and Alarm

Periodically test the carbon monoxide alarm per the manufacturer's instructions. Please refer to the carbon monoxide alarm manual or contact the manufacturer for more information on maintaining and calibrating the alarm.

## 10.4 Bilge and System Compartment Ventilation

Ventilation to the bilge and systems compartment is provided by vents located on each side of the cockpit liner, below the gunnels and aft of the cockpit near the engines. The ventilation system consists of intake ducts, exhaust ducts and an exhaust blower. The system is designed to meet or exceed the requirements of the United States Coast Guard in effect at the time of manufacture to remove fuel vapors and excess heat from the systems compartment while the generator is operating. Additionally, the vents provide air circulation to reduce odors and mildew. Make sure to keep these vents clear and unobstructed.



Bilge and Systems Compartment Vents

### Free Air System

A flow of air that circulates in and out of the bilge and systems compartment is provided by four vents located on either side of the cockpit and two vents just aft of the cockpit near the engines. The pressure differential created at the vents as the wind passes over the cockpit provides adequate air movement while operating at or near cruise speeds.

## Forced Ventilation

Your boat is equipped with electric blower connected to the starboard rear vent near the transom that provides forced ventilation to the systems compartment prior to generator start up and while it is operating. The in-line blower is activated by a switch in the cabin AC breaker panel and is located in the vent hose just below the vent. Refer to the Electrical Systems chapter for more information on generator and blower operation.

## 10.5 Maintenance

- Periodically lubricate all hinges and latch assemblies with a light oil.
- Periodically clean and coat gasket materials with silicone to help keep them pliable.
- The opening cabin deck hatch and port window is made of acrylic plastic glass. Acrylic glass scratches easily. Never use a dry cloth or glass cleaning solutions on acrylic glass. Use a soft cloth and mild soap and water for routine cleaning. Solvents and products containing ammonia can permanently damage acrylic glass. Please refer to the Routine Maintenance chapter for more information on the proper maintenance for acrylic plastic glass.
- Periodic inspection and cleaning of the bilge and systems compartment ventilation ducts is necessary to ensure adequate air circulation. A buildup of leaves, twigs or other debris can severely reduce ventilation.
- The bilge blower is permanently lubricated and requires no maintenance. Blower operation can and should be tested by placing a hand over the exhaust vent. Do not rely on the sound of the blower. A substantial amount of air should be exhausted by the blower. Frequently check the intake vents for obstructions and proper blower operation, preferably before each cruise.



Aft Forced Air Vent

### Notice:

**Should blower noise become excessive, the source of the noise should be found and corrected before operating the boat.**

	<b>DANGER</b>	
<p><b>GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING THE GENERATOR, OPERATE THE BLOWER FOR FOUR (4) MINUTES, OPEN THE SYSTEMS COMPARTMENT ACCESS HATCH, INSPECT THE FUEL SYSTEM AND CHECK FOR THE ODOR OF GASOLINE VAPORS. ALWAYS OPERATE THE BLOWER WHILE GENERATOR IS RUNNING. UNDER NO CIRCUMSTANCES SHOULD THIS PROCEDURE BE OVERLOOKED.</b></p>		

	<b>WARNING</b>	
<p><b>OBSTRUCTING THE VENTILATION SYSTEM WILL RESTRICT AIR IN AND OUT OF THE SYSTEMS COMPARTMENT. THE AIR FLOW THROUGH THE AFT FORCED AIR VENT IS IMPORTANT FOR PROPER AIR FLOW VOLUME WHILE THE GENERATOR IS RUNNING. MAKE SURE THE AIRFLOW OUT OF THIS VENT IS NOT OBSTRUCTED.</b></p>		



## EXTERIOR EQUIPMENT

### 11.1 Deck

#### Rails and Deck Hardware

The rail system and hardware fittings have been selected and installed to perform specific functions. Hand rails are installed to provide a handhold in certain areas of the boat. You should make sure you keep at least one hand on the handholds as you move about the boat.

Fenders or mooring lines should be secured to the cleats and not to rails or stanchions. The cleats on your boat are retractable and flush with the deck when not in use. To use the cleats, pull up on the center of the cleat until it locks in the mooring position. Be sure a clear lead exists when running dock lines or anchor lines. A line inadvertently run around a stanchion or over the rail could cause damage.

#### Important:

**All fittings must be periodically inspected for loose fit or wear and damage. Any problems should be corrected immediately.**



Rope Locker and Windlass



### WARNING



EVERGLADES BOATS ARE NOT EQUIPPED WITH HARDWARE DESIGNED FOR TOWING PURPOSES. THE MOORING CLEATS ARE NOT TO BE USED FOR TOWING ANOTHER VESSEL OR HAVING THIS BOAT TOWED.

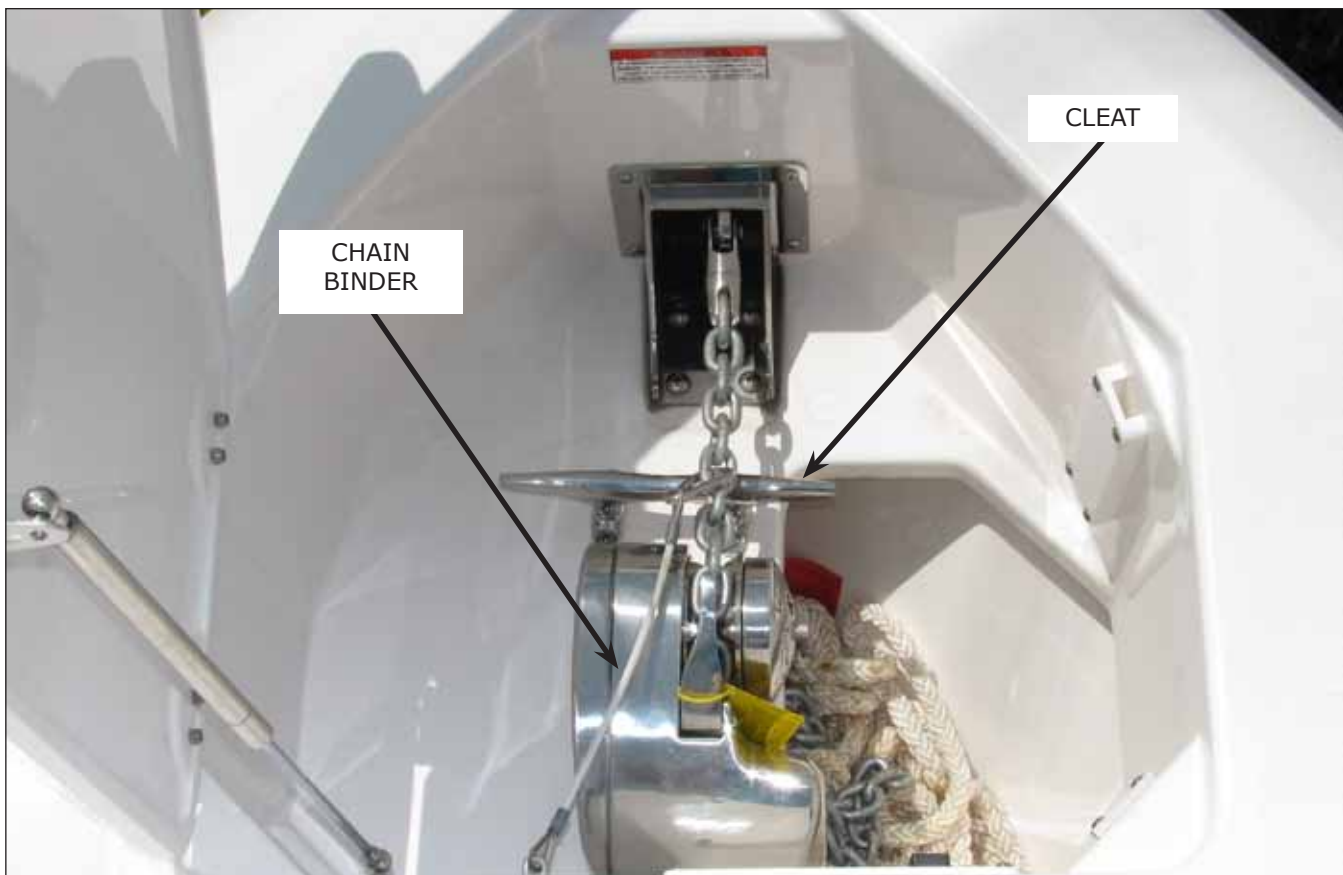
### 11.2 Rope Locker and Windlass

#### Bow Roller

The bow roller is built into the hull and is equipped with hardware that allows the anchor to be operated and stored at the roller. The roller assembly, anchor line and chain binder are concealed below a hatch in the deck. The anchor line is stored in the rope locker and routed out the windlass, through the roller and connected to the anchor chain. A chain binder is provided between the windlass and

the roller to secure the anchor. Always make sure the anchor is properly secured by the chain binder when it is in the stored position on the roller.

The chain binder is accessed by opening the hatch and is designed to connect to a link in the anchor chain when the anchor is hauled in. To release the binder, pull the anchor chain in slightly to relieve the tension on the binder, then release the binder from the chain. To secure the anchor in the up and stored position, raise the anchor until it seats firmly in the roller with the chain snug. Attach the chain binder to a link in the chain. Before getting underway after hauling the anchor, always make sure the binder is properly attached to the anchor chain link and the hatch is closed and latched.



Windlass, Chain Binder and Cleat

## Anchor and Rope Locker

The anchor rope locker, windlass and windlass switch are concealed in a recess below a hatch in the deck. A gas spring supports the hatch in the open position. A flush, twist lock latch secures the hatch in the closed position. There is a large red dot in the handle that indicates that the latch is in the open position and that it is not secure. Always make sure the hatch is closed with the latch in the secured position before operating the boat above idle speed.

The rope locker and anchor line is accessed through an opening next to the windlass. The anchor line is always stored in the rope locker and there is an eye fitting to secure the bitter end of the anchor line.

The rope locker is designed for the anchor line and not for storing anchors or additional anchor lines. Do not store anchors or any heavy objects in the locker. Anchors and weights for floating markers will bounce and damage the hull or rope locker if

they are stored there. They will also interfere with the operation of the windlass. Always store and secure additional anchors and weights in a storage compartment in the cockpit as far aft as possible.

The rope locker is drained by a fitting in the hull side near the bottom of the locker. It is very important to check the drain frequently to make sure it is clean and free flowing.

Periodically remove the anchor line from the rope locker, rinse it with fresh water and allow it to dry in the sun. Cleaning the anchor line regularly will reduce odors in the rope locker and increase the life of the line.

The line should also be inspected for abrasions or signs of deterioration. Replace the line if it shows any sign of damage or deterioration. It is important to replace the anchor line with a new line of the type recommended or supplied by the windlass manufacturer.

## Windlass

The windlass is mounted in the compartment below the hatch in the deck. The anchor is stored on the roller and is raised and lowered by the windlass. The anchor line is stored in the rope locker and routed out through the windlass to the anchor chain.

The anchor is lowered by releasing the anchor chain from the chain binder and moving the windlass switch in the compartment near the windlass to "DOWN." The windlass control switch is protected by a fuse in the accessory fuse panel near the power steering unit.

After the anchor is set, the windlass must not be left to take the entire force from the anchor line. Boats lying to their anchor in a high swell or heavy weather conditions will snub on the line. This can cause slippage or apply excessive loads to the windlass. The line should be made fast to a cleat provided to relieve the load on the windlass.

The anchor is hauled in by releasing the line from the cleat and moving the Windlass switch to "UP." Always start the engines before hauling the anchor and motor up to the anchor as the line is retrieved to relieve the load on the windlass. Once the anchor is retrieved, independently secure the anchor to the chain binder to prevent it from being accidentally released. This is especially important while the boat is under way.

The windlass manufacturer provides an owner's manual with its product. It is extremely important that you read the manual and become familiar with the proper care and operation of the windlass. Refer to the Operation chapter for tips on anchoring your boat.



Windlass Switch in the Rear of the Rope Locker





Windshield

## Windshield (Optional)

Your boat could be equipped with an optional heavy duty aluminum windshield with tinted glass. The side wing panels and front panels are tempered safety glass. Ventilation through the windshield is provided by a vent panel in the center of the windshield. To open the panel, loosen the friction knobs on the vent panel adjusters and turn the twist locks securing panel to the unlocked position. Open the vent panel to the desired position and tighten the friction knobs. The adjusters and friction knobs will hold the vent panel in the selected position. To close the panel, loosen the friction knobs on the adjusters and close the vent. Turn the panel twist locks to the locked position, then tighten the friction knobs.

Optional windshield wipers and washers could be included with the windshield option. The windshield wiper should only be used when the windshield is wet. The glass can be scratched by activating the wipers when there is dried salt or dirt on the windshield.

The windshield frame is powder coated aluminum. Powder coated aluminum is very durable and provides excellent resistance to the corrosive effects

**WARNING**

**A WINDLASS MUST BE USED WITH CARE. IT IS EXTREMELY IMPORTANT THAT YOU READ THE OWNER'S MANUAL AND BECOME FAMILIAR WITH THE SAFETY INSTRUCTIONS AND PROPER OPERATION OF THE WINDLASS BEFORE USING IT WITH YOUR BOAT. ALWAYS ENSURE THAT LIMBS, FINGERS, HAIR AND CLOTHING ARE KEPT CLEAR OF THE WINDLASS AND ANCHOR LINE DURING OPERATION.**

**A PARTIALLY LOWERED AND LOOSE ANCHOR CAN CAUSE CONSIDERABLE DAMAGE TO THE HULL. DO NOT USE A WINDLASS AS A SOLE MEANS OF SECURING AN ANCHOR IN THE BOW ROLLER. ALWAYS SECURE THE ANCHOR TO A CHAIN BINDER BEFORE OPERATING YOUR BOAT.**

of saltwater, however, it must be maintained properly and certain precautions must be observed.

The windshield should be washed after each use with soap water to keep it clean and reduce the corrosive effects of the saltwater. Saltwater allowed to remain on the windshield frame will eventually begin to attack the aluminum, usually around fasteners and hardware mounted to the frame.

Do not drill into or install any hardware to the aluminum frame. Poor maintenance or hardware and snaps mounted to the frame can void the warranty on the powder coated windshield frame.

Refer to the Routine Maintenance chapter for more information on the care and maintenance of powder coated aluminum.



Transom Boarding Ladder

## 11.3 Hull

### Engine Mounting System and Swim Platform

Your Everglades is equipped with an engine mounting system that is integrated into the hull and stringer system that is designed to distribute the stresses of engine weight and thrust throughout the entire hull.

The engine hoses and cables or the transom gel coat can be damaged by tilting the engines to the full up position with the engines turned to the wrong position. You should monitor the engines as they tilt to determine best full tilt engine position for your boat.

A swim platform built into the engine mounting system is standard on your boat.

### Stern Boarding Ladder

A telescopic boarding ladder is recessed into the swim transom. To use the ladder, release the retaining pin, pull the ladder out of the recess and rotate it to the down position. Unfold the steps. The ladder must be retracted and secured in the recess before starting the engines.

### Trim Tabs

The trim tabs are recessed into the hull below the transom. The trim tabs are an important part of the control systems. Please refer to the Helm Control Systems chapter for detailed information on the operation of the trim tabs.

### Underwater Lights

The LED underwater lights are mounted in the transom, below the water line. The lights are activated by the Underwater Light switch at the helm and should only be used when the boat is in the water with the lights submerged.

## 11.4 Cockpit Features All Models

### General

Most hatches and doors in the cockpit are secured with special cam action, draw or automatic "push to close" latches. Gas charged springs are used on most hatches in the deck and cockpit that help raise the hatches and hold them in the open position.

Some large hatches in the cockpit sole and deck are secured with special flush mounted, twist lock latches with handles that store flush in the latch in the open or latched position. There is a large red dot in the handle that indicates that the latch is in the open position and the hatch is not secure. Always make sure that all hatches are closed with the latches in the secured position before operating the boat above idle speed.



## WARNING



**MOVING PROPELLERS ARE DANGEROUS. THEY CAN CAUSE DEATH, LOSS OF LIMBS OR OTHER SEVERE INJURY. DO NOT USE THE SWIM PLATFORM OR SWIM LADDER WHILE AN ENGINE IS RUNNING. STOP THE ENGINES IF DIVERS OR SWIMMERS ARE ATTEMPTING TO BOARD. ALWAYS RETRACT AND PROPERLY SECURE THE LADDER BEFORE STARTING THE ENGINES.**



Round access plates located in the sides of the cockpit liner provide access to the fill hoses and fittings. Other access plates in the cockpit sole and cabin provide accesses to fuel supply lines, fuel gauge sender and the fuel fill and vent hose connections on the fuel tank.

**⚠ WARNING ⚠**

**IN CERTAIN CONDITIONS, OPEN EXTERIOR DOORS AND HATCHES THAT ARE NOT SECURED PROPERLY CAN SLAM CLOSED UNEXPECTEDLY AND CAUSE INJURY TO PASSENGERS OR DAMAGE TO THE BOAT. SOME DOORS AND HATCHES ARE EQUIPPED WITH SPECIAL FASTENERS, HATCH LIFTERS, MAGNETIC LATCHES OR SNAPS AND STRAPS TO SECURE THEM IN THE OPEN POSITION. ALWAYS MAKE SURE THAT THESE HATCHES AND DOORS ARE PROPERLY SECURED WHENEVER THEY ARE IN THE OPEN POSITION.**



Twist Latch Unlatched  
Red Dot Showing



Twist Latch latched  
Red Dot is Not Showing

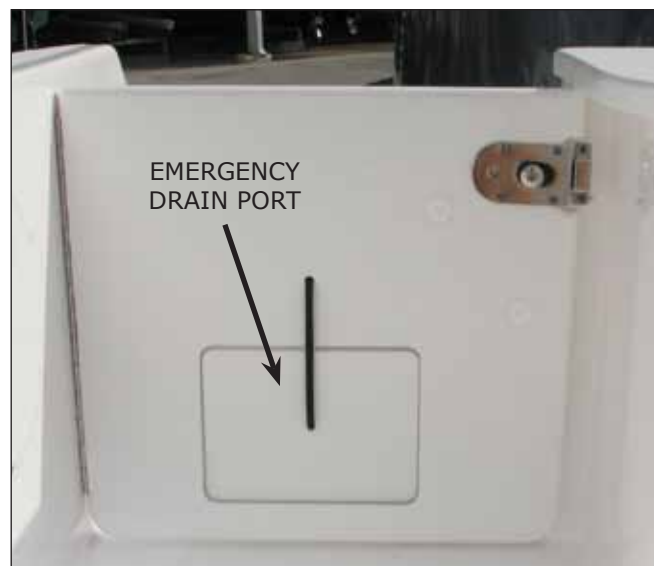
## Transom Door

A transom door is incorporated into the rear of the cockpit. It is secured by a special latch mounted on the inboard side of the door. A magnet in the latch automatically pulls the dead bolt into the receiver when the door is closed. A rotating safety knob secures the latch in the closed position. When the transom door is closed, make sure the latch is completely closed and that the safety knob is fully rotated to the locked position to prevent the latch from opening accidentally.

The transom door is equipped with a large emergency drain port that automatically opens to provide additional drainage if the cockpit should become flooded by a large wave when the transom door is closed. The drain port is designed to open only from water pressure inside the cockpit.

The transom door should only be opened when the boat is not underway. The door must be latched in the full CLOSED position whenever the boat is underway. Never leave the transom door unlatched.

**Notice:**  
**Periodically inspect the transom door fittings for wear, damage or loose fit. Any problems should be inspected and corrected immediately.**



Transom Door and Emergency Drain Port



Transom Door Latch



**WARNING**

THE TRANSOM DOOR SHOULD BE CLOSED AND PROPERLY LATCHED WHENEVER THE ENGINES ARE RUNNING. NEVER OPEN THE TRANSOM DOOR WHILE UNDERWAY OR IN ROUGH SEA CONDITIONS. IN CERTAIN SITUATIONS, AN OPEN TRANSOM DOOR COULD ALLOW A SUBSTANTIAL AMOUNT OF WATER TO ENTER THE COCKPIT CREATING A POTENTIALLY DANGEROUS CONDITION.



Dive Door

**WARNING**

OPERATING THE BOAT UNDER POWER WITH THE TRANSOM DOOR OPEN MAY ALLOW PERSONS TO FALL OVERBOARD AND INTO BOAT PROPELLERS OR TO BE LOST IN OPEN WATER. ALWAYS CHECK TO MAKE SURE THE TRANSOM DOOR IS PROPERLY CLOSED AND LATCHED BEFORE STARTING THE ENGINES AND NEVER OPERATE THE BOAT UNDER POWER WITH THE TRANSOM DOOR OPEN.

**Dive Door and Boarding Ladder (Optional)**

A dive door in the port hull side is available as optional equipment. The door provides divers and swimmers easy, unobstructed access to the water and cockpit. It also makes boarding and exiting the boat much easier in many docking situations.

A friction latch holds the door in the full open position and a special latch mounted on the inboard side of the door secures it when it is closed. The door latch has a spring loaded safety pin. When the dive door is closed, make sure the latch is completely closed and that the safety pin is snapped into place to prevent the latch from opening accidentally.



Dive Door Latch and Safety Pin

The dive door should only be opened when the boat is not in motion with the engines shutdown. The door must be secured in either the full "OPEN" position to the side of the cockpit or in the full "CLOSED" position with the main latch and safety pin. Never leave the dive door unlatched.

**Notice:**  
**Periodically inspect the dive door hinges and hardware for wear, damage or loose fit. Any problems found should be corrected immediately.**

**WARNING**

THE DIVE DOOR SHOULD BE CLOSED AND PROPERLY LATCHED WHENEVER THE ENGINES ARE RUNNING. NEVER OPEN THE DIVE DOOR WHILE UNDERWAY OR IN ROUGH SEA CONDITIONS. IN CERTAIN SITUATIONS, AN OPEN DIVE DOOR COULD ALLOW A SUBSTANTIAL AMOUNT OF WATER TO ENTER THE COCKPIT CREATING A POTENTIALLY DANGEROUS CONDITION.

OPERATING THE BOAT UNDER POWER WITH THE DIVE DOOR OPEN MAY ALLOW PERSONS TO FALL OVERBOARD AND INTO BOAT PROPELLERS OR TO BE LOST IN OPEN WATER. ALWAYS CHECK TO MAKE SURE THE DIVE DOOR IS PROPERLY CLOSED AND LATCHED BEFORE STARTING THE ENGINES. NEVER OPERATE THE BOAT UNDER POWER WITH THE DOOR OPEN.

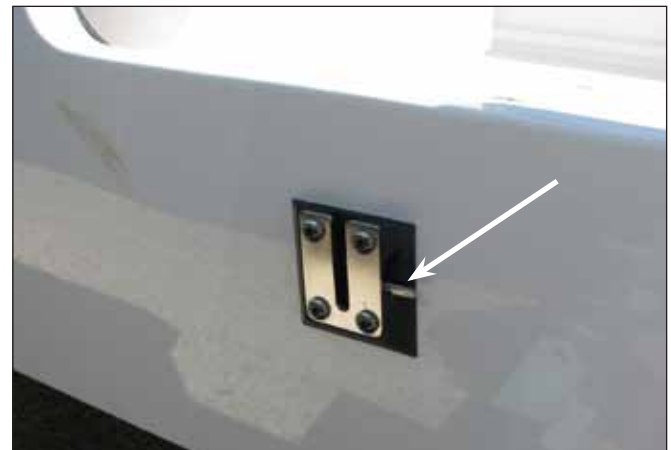
## Dive Boarding Ladder

The boarding ladder is mounted to special brackets in the port side of the cockpit when it is in the stored position. To use the ladder, remove it from the storage clips and slide the studs into the special bracket on the hull side just below the door. The ladder floats and is secured in the ladder bracket by a spring loaded latch that prevents the ladder from floating off the bracket. To remove the ladder, push up on the release lever on the side of the ladder bracket to release the latch, then slide the ladder up and off the bracket. To prevent damage to the ladder or hull side, the ladder must be removed from the bracket and properly secured in the cockpit storage clips before starting the engines.



Dive Ladder in Storage Brackets

	<b>WARNING</b>	
<p>MOVING PROPELLERS ARE DANGEROUS. THEY CAN CAUSE DEATH, LOSS OF LIMBS OR OTHER SEVERE INJURY. DO NOT USE THE DIVE DOOR OR LADDER WHILE THE ENGINES ARE RUNNING. STOP THE ENGINES IF DIVERS OR SWIMMERS ARE ATTEMPTING TO BOARD. ALWAYS PROPERLY STORE THE LADDER AND CLOSE THE DIVE DOOR BEFORE STARTING THE ENGINES.</p>		



Dive Ladder Bracket and Release Lever

## Stern Livewell

The stern livewell is in the port rear of the cockpit. The livewell is equipped with a Plexiglas hatch with a "push to close" latch. It is equipped with a light, built in overflow and recirculation pump. It is drained by gravity to a thru-hull fitting in the hull. The livewell is supplied seawater by a centrifugal raw water pump located in the stern bilge. Another pump can be activated by a switch in the helm panel to recirculate and aerate the water in the livewell. The overflow built into the side of the livewell automatically controls the water level. The livewell should be drained and rinsed clean with fresh water after each use. Refer to the Raw Water System and Drainage Systems chapters for more information on the operation of the livewell.



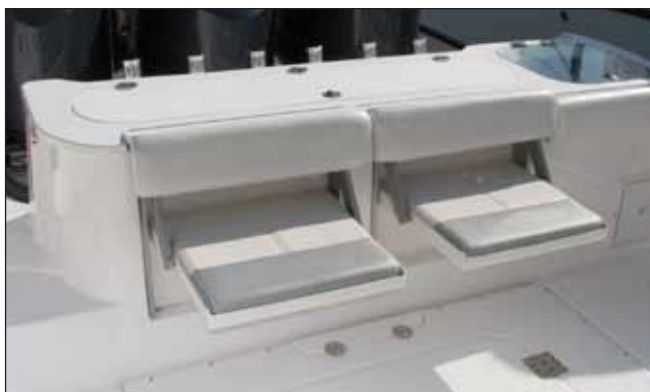
Livewell

## Rod Racks

There are recessed rod storage racks located below the gunnel on each side of the cockpit. They are equipped with stretch cords to secure the rods to the racks. Always make sure the rods are properly secured in the storage racks with the rod tips forward.



Aft Bench Seats Folded



Aft Bench Seats Folded Out

## Aft Bench Seats

Your boat is equipped with two aft bench seats. The seats are designed to fold flush against the rear of the cockpit when they are not in use. Each seat is secured in the folded position by a hinged cockpit bolster that becomes the backrest when the seats are in use.

To use the seats, swing the bolster up, then pull the top of the seat toward the cockpit. The bottom of the seat slides in a track and two side supports move out with the seat as it folds out. The seat automatically locks into the seating position when the cushion reaches the full down position.

To store the seat, pull the seat out slightly as you raise the front of the seat. The rear supports will release and slide down in the track as the seat and side supports fold into the recess. Swing the bolster up and fold the seat in until it is flush with the recess. Lower the bolster to secure the seat in the folded position.



Systems Compartment Hatch

## Systems Compartment Access

A hatch in the rear of the cockpit provides access to the generator, pumps, strainers and other equipment in the systems compartment. The stern bilge pumps, raw water supply manifold, livewell supply pump, water heater, fresh water and raw water pumps are among the equipment in this compartment. The hatch is held open by a gas spring and secured with two rotating latches when it is closed. There is a large red dot in each latch handle that indicates that the latch is in the open position and the hatch is not secure. Always make sure the hatch is closed with the latches in the secured position before operating the boat above idle speed.

## Work Station

A work station equipped with a sink/prepped bait storage, cutting board and tackle storage is lo-



Work Station

cated on the starboard side of the cockpit next to the helm. The sink is plumbed to the fresh and raw water systems and has a removable spray head that reaches to each side of the station or can be used as a shower. The sink is drained by

gravity to a thru-hull fitting in the hull side. Grab rails, cup holders, accommodation for hooks, knives and tools are built into the top of the station. There are three large drawers for tackle storage and dunnage. "Push to close" latches secure each drawer. They latch automatically when the drawers are closed and are lockable.

### Seat Base and Helm Seats

The helm and passenger seats are equipped with a flip up bolster to provide more room between the seats and the helm. The bolsters convert the seats to a leaning post style seat with a backrest, allowing the operator and passenger to sit or stand at the helm. To convert each seat to a leaning post, lift the front of the seat cushion to raise the bolster and push it back above the seat cushion.

Arm rests on each side of the seats and on the console glove compartment provide a more comfortable driving position. A molded in footrest on the rear of the console makes the helm more comfortable when the bolsters are set to the seat position. There is also a foldout footrest below each seat for additional convenience.

Molded recesses located on each side of the seat base are designed for fire extinguishers. The recessed mounting locations keep the fire extinguishers out of the way and readily available.

A large cooler is mounted on a slide track below the seats. Special stretch straps secure the cooler to the base on the slide track. The cooler can be slid out for easy access or removal. A spring loaded pin in the rear of the cooler mount secures the cooler in any position along the slide track.

To slide the cooler, lift up on the pin and slide the cooler to the desired position. Then release the pin to hold the cooler in position.

### Cockpit Lounge Seats and Table

There is a lounge seat and table in the forward section of the cockpit. An insulated storage box/cooler that drains to the bilge is located below the starboard lounge seat cushion. Air conditioning vents in the front of the helm station provide cooling for the lounge area whenever the air conditioner is activated.



Helm Seats with Bolsters in Seat Position



Helm Seats with Bolsters in Leaning Post Position



Slide Out Cooler



The retractable table converts the lounge area into either a sitting area with a table or a double bed. The table is mounted on an electrically actuated pedestal that is controlled by a rocker switch in the side of the cockpit near the cabin door. The switch is a three position momentary switch. The center position is OFF. Press the top of the switch to raise the table, press the bottom of the switch to lower it. The pedestal will stop immediately when the switch is released.

To convert the seating area to a bed, lower the table to full down position and make sure it is sitting firmly on the support rails in the recess. Install the table filler cushion to complete the conversion. Remove the filler cushion and raise the table to the full up position to convert the bed to a sitting or eating area. Always store the filler cushion in the cabin and out of the weather when it is not being used.

To avoid damage to the table and pedestal, always make sure the table is in the full down position and sitting firmly on the support rails whenever the boat is operating above slow speed. This is particularly important when the boat is being run offshore.

### Cockpit Grill

An electric, stainless steel grill is located in the cockpit lounge area near the cabin door. The grill is recessed into the counter top and operates on 120 volt AC power only. A foldout waste basket is mounted in a compartment below the grill.

To use the grill, make sure the Electric Grill breaker in the cabin AC panel is on and open the lid. Use the touch control on the grill to activate the burner and control the temperature. After cooking, be sure the burner is turned off and allowed to cool before closing the lid. Never close the cover while the grill is hot. Turn the Electric Grill breaker in the cabin AC panel off whenever the grill is not being used to ensure it is not activated accidentally.

The grill lid is removable to make cleaning easier. The starboard hinge on the lid has a pin that slides into the female receiver on the grill. The port hinge is secured with a removable pin. **Make sure the handle on the L-shaped removable hinge pin is facing toward the grill when it is installed in the hinge.** If the pin is installed with the handle facing away from the grill, the cover



Lounge Seat and Table



Cockpit Grill



Grill Touch Control



will be damaged by the pin when it is opened. Refer to the grill operating manual for additional information on the proper operation and maintenance of the grill.

### Cockpit Cooler Storage

Molded storage for three coolers is located in the lounge area below the port gunnel. The coolers are secured to the compartment with stretch cords. Always make sure the coolers are properly seated in each recess and secured with the straps before operating the boat.



Cockpit Cooler Storage

### Cabin Door

The sliding cabin door is made of acrylic plastic glass and slides on a top and bottom track. A lockable latch secures the door in the closed position. A special vinyl-covered latch near the bottom door track secures the door in the open position.

It is very important that the cabin door is secured properly in the open or closed position. The cabin door is heavy and if the door is not properly latched, it could slide when the boat rocks and pinch someone's fingers between the door and the bulkhead or damage the door.

When closing the door, make sure you push the door against the door jam with enough pressure to allow the latch to secure the door. When the door is open, it must be properly secured with the latch at the bottom door track and to the port side of the companionway. To latch the door in the open position, open the door completely, then rotate the latch to lay on the track in front of the door, preventing the open door from sliding as the boat rocks.



Cabin Door Closed



Cabin Door Latched in Open Position

The door is made of acrylic plastic glass. Acrylic glass scratches easily and can chip. Always make sure the vinyl-covered latch is in good condition. It should be changed whenever it shows signs of deterioration from the exposure to elements. Please refer to the Routine Maintenance chapter for information on the proper care and maintenance of acrylic plastic glass.

**CAUTION**

NEVER LEAVE THE CABIN DOOR UNLATCHED. THE CABIN DOOR IS HEAVY AND SLIDES EASILY. IF THE DOOR IS LEFT UNLATCHED, IT COULD SLIDE UNEXPECTEDLY AS THE BOAT ROCKS, DAMAGING THE DOOR OR CAUSING AN INJURY TO A PASSENGER. ALWAYS MAKE SURE THE DOOR IS PROPERLY LATCHED IN THE OPEN OR CLOSED POSITION.

SECURE THE DOOR WHEN CRUISING. DO NOT SIT, STAND OR PLACE HEAVY OBJECTS ON THE DOOR.

**DANGER**

CARBON MONOXIDE (CO) CAN CAUSE BRAIN DAMAGE OR DEATH. CARBON MONOXIDE CAN BE PRESENT IN THE CABIN. SIGNS OF CARBON MONOXIDE POISONING INCLUDE NAUSEA, HEADACHE, DIZZINESS, DROWSINESS AND LACK OF CONSCIOUSNESS. GET FRESH AIR IF ANYONE SHOWS SIGNS OF CARBON MONOXIDE POISONING. GET FRESH AIR IF CARBON MONOXIDE DETECTOR ALARM SOUNDS. CARBON MONOXIDE DETECTOR MUST BE FUNCTIONING AT ALL TIMES.



Helm



Overhead Electronics Locker



Overhead Electronics Locker Lowered for Inside Access

## 11.5 Helm

### Helm

The steering, engine controls, engine instruments and switches for exterior equipment and navigation lights are located on the helm station. An area for flush mounted electronics is located forward of the steering and engine controls. The helm is equipped with molded in cup holders and grab rails. There are also MP3 and 12 volt accessory plugs on the starboard side. Two air conditioning ducts on each side of the helm provide cooling to helm station whenever the air conditioning system is operating.

Large removable access hatches in the cabin aft berth provide access to the back of the helm for servicing equipment and installing electronics or other accessories. There are also fuse panels that provide protection for equipment installed by Everglades or other equipment added by you or dealer.

### Overhead Electronics Locker

An overhead electronics locker is mounted to the hardtop above the helm. It is designed to accommodate small flush mounted electronics like a stereo or VHF radio. The locker is hinged at the rear and secured in the up position with a special stainless steel rotary draw latch on the

forward side. When the latch is released, the locker swings down to provide access to service and install equipment.

To release the latch and lower the locker, rotate the latch handle counterclockwise until it stops. This will extend the latch slide and slightly lower the front of the locker. Push up on the front of the locker and swing the latch forward and off the keeper plate. Slowly lower the locker until it is in the full down position.

To secure the locker in the up position, raise the front of locker to the full up position and swing the latch against the keeper plate. Slowly lower the locker slightly until the latch slide hooks to the keeper plate. Then firmly rotate the handle clockwise until it stops to draw the latch slide in and secure the locker in the full up position. Fold the latch handle flush against the latch.



Rotating Draw Latch on Overhead Electronics Locker

### 11.6 Hardtop and Upper Station

#### Hardtop

The standard hardtop consists of a laminated fiberglass top mounted to a powder coated aluminum frame that is bolted to the deck. It is equipped with stereo speakers, LED overhead lighting for the cockpit, rod holders and speakers. Three sky lights provide additional light for the cockpit and lounge area. Additionally, removable hatches in the hardtop liner provide access to wiring and rigging for hardtop and upper station accessories.

The outside of the top is equipped with forward docking lights and aft spreader lights, navigation lights, a spotlight and rod holders. It could also be equipped with optional outriggers. Plexiglas panels mounted on the inside of the rear legs on each side of the hardtop provide protection from sea spray for the helm. Acrylic glass scratches easily. Never use a dry cloth or glass cleaning solutions on acrylic. Use a soft cloth and mild soap and water for routine cleaning. Solvents and products containing ammonia can permanently damage acrylic. Please refer to the Routine Maintenance chapter for more information on the proper care and maintenance of acrylic plastic glass.

Standard hardtops and hardtops equipped with the optional upper station are not designed to support the additional weight of heavy items like a life raft. GPS, VHF and other electronics antennas must be mounted to the top between the front and rear legs. A special mounting location is provided for a radar antenna. Do not mount any antennas or



Hardtop and Tower

equipment to the brow area forward of the front legs. The hard top frame is not designed to support the weight of accessories in this area and could be damaged. The port and starboard rear legs are the wire chase for lights and antennas mounted to the top.

The warranty for the hard top will be void if the top is modified in any way or heavy accessories like life rafts are mounted to the top. Additionally, if items like radar antennas, spotlights and other accessories are mounted in the wrong location, the warranty could be void. If you intend to add equipment or make modifications to the hard top, you should contact Everglades Customer Service or your dealer to make sure the equipment you would like to add or the intended modification will not void the warranty on the top.



## Upper Station (Optional)

The upper station is a powder coated, welded aluminum frame that is attached topside of the hardtop. It is equipped with an upper control station that provides full control of the boat from the upper helm and a sunshade. A ladder built into both sides of the frame provides access to the upper station. Refer to the Operation chapter for information on the safe operation of the boat from the upper helm.

The upper station seats are equipped with a flip up bolster to provide more room between the seats and the helm. The bolsters convert the seats to a leaning post style seat with a backrest allowing the operator and passenger to sit or stand at the helm. To convert each seat to a leaning post, lift the front of the seat cushion to raise the bolster and push it back above the seat cushion.

Do not overload the upper station. It is designed to hold the weight of only two average-sized people. Weight in the upper station raises the boat's center of gravity. Too much weight could make the boat unstable or damage the frame. Refer to the Operation chapter for information on the safe operation of the boat from the upper helm.

## Folding the Upper Helm Station for Hauling

The upper helm station is hinged where it attaches to the hardtop and is designed to fold down to lower the height of the boat for trailering.

There are two sections to the upper station frame that are secured together with special pins and hand bolts. The forward section includes the upper helm and lowers to scuff pads on the hardtop. The rear section that includes the seats and sunshade rotates behind the rear of the hardtop and down into the cockpit. A special shipping cradle included with your boat is positioned in the cockpit to support the sunshade and rear section of the upper station.

The Upper station sections are heavy and a minimum of two people are required to separate the sections and lower them for transport. It is also important that the sections are secured with straps before transporting the boat on the highway.



Upper Control Station Helm



Upper Helm Station



Hand Bolt On Each Side  
Securing Upper Station Sections

## To lower the Upper helm station:

1. Before raising or lowering the upper station, the boat should be either on a cradle, the trailer or moored to a dock in a safe location close to the haul out where rough water, wind or boat wakes are not a problem. Also make sure there are no low hanging power lines near the boat that could come in contact with sunshade as it is rotated.
2. Place the cradle for the sunshade and rear section in the center of the cockpit.
3. Remove the outriggers and lower or remove antennas that may interfere with the operation.
4. Fold the seat bolsters up to the leaning post position.
5. Secure 1/2" x 15' nylon handling lines to each side of the sunshade frame.
6. Loosen the hand bolts on each side of the Upper station near the seats.
7. With one or two people on the rear section and one on the front, lift each section slightly to take the strain off the alignment pins where the sections separate.
8. Rotate the rear section just enough to separate it from the front section and carefully lower the front section until it rests on the pads on the hardtop.
9. The person handling the front section can now move to the cockpit to assist in rotating the rear section to the cradle.
10. The person or persons supporting the rear section can now use the handling lines to carefully and slowly rotate the rear section behind the rear of the hardtop to the person in the cockpit.
11. As the rear section is lowered the person in the cockpit will help support the weight and align the cradle.
12. Continue lowering the rear section until it rests in the cradle.
13. Use straps to secure the front section to the hardtop and the rear section to the stern cleats so they don't bounce during transport. Make sure to use padding between the straps and powder coated frame to prevent chaffing and damage to the powder coating.

## To raise the Upper Helm Station:

1. Make sure there are no low hanging power lines near the boat that could come in contact with the sunshade as it is rotated to the "UP" position.
  2. Remove the straps and position one person on the gunnel near the rear of the hardtop and one in the cockpit.
  3. Secure two handling lines to each side of the sunshade frame. Then position one person in the cockpit and one or two persons on top of the hardtop.
  4. With everyone in position and ready, slowly lift the rear section as high as possible. The person in the cockpit should lift the section using the cradle to increase his lifting height.
  5. Use the handling lines to continue rotating the rear section until it is in the "UP" position.
  6. While one person on the hardtop holds the rear section, the other person can lift the front section until it aligns with the rear section.
  7. Raise or lower each section as required to achieve proper alignment for the pins. Then lower each section slightly to seat them together.
  8. With the sections aligned and seated, secure the sections together by tightening the hand bolts. You may have to adjust the sections slightly to achieve proper alignment while starting the bolts.
  9. The hand bolts should be torqued as tight as you can get them by hand. Do not use pliers or tools to tighten the hand bolts.
- Notice:**  
**Periodically coating the hand bolts with Tef-Gel or anti-seize will lubricate the threads and make loosening or tightening the hand bolts easier. It will also prevent galvanic corrosion that could cause the threads to seize.**
10. Install antennas and outriggers as required and test all upper station controls and equipment before operating the boat.



**⚠ DANGER ⚠**

**ELECTRIC SHOCK FROM LOW HANGING POWER LINES CAN CAUSE SEVERE INJURY OR DEATH IF THEY COME IN CONTACT WITH THE ALUMINUM FRAME FOR THE SUNSHADE AND UPPER STATION. ALWAYS CHECK THE AREA AND MAKE THE BOAT IS A SAFE DISTANCE AWAY FROM ANY POWER LINES BEFORE RAISING OR LOWERING THE UPPER HELM STATION.**

## 11.7 Weather Enclosure

Because the aluminum frames vary slightly, the side curtains, front clear connector and drop curtain are custom made to each boat at the factory. To install the curtains, begin with the front center connector and do one curtain at a time. Lay the curtains on a soft surface that won't scratch the clear vinyl, mark the top and bottom rope filled hems and unzip the hems from the front clear connector. Slide the top and bottom hem into the slide tracks at the front of the hardtop and top of the windshield frame or on the deck. Zip the center connector to each hem, beginning with the top zippers. The clear connector will have to be stretched just enough to pull out the wrinkles to reach the zipper on the windshield or deck.

Once the center connector is completely installed, the side curtains can be put on. Follow the same procedure described for the front connector to attach the rope filled hems. Make sure to mark the rear hems on the side curtains that attach to rear frame legs. Then zip the curtains to the hems on each side of the top and to the zippers on the front connector. Then zip the curtains to the bottom hems. Finally, zip the rear of the side curtains to the zippers on the rear frame legs for the hardtop. The side curtains will have to be stretched slightly to pull out the wrinkles and reach the zipper on the windshield.

If you have an optional drop curtain, slide it into the slide track on the back of the hard top and attach it to the rear legs.

### Notice:

**Cold weather can make the clear vinyl material on the curtains stiff and difficult to stretch to the bottom zipper or snaps. This can be particularly difficult with new canvas that has been stored off the boat. Laying the curtains in the sun for 30 minutes during the heat of the day will make installing them much easier in cold weather.**



Weather Enclosure Port Side Curtain  
Windshield Excluded (Standard Deck Configuration)



Front Center Connector  
Windshield Excluded (Standard)



Typical Enclosure with Optional Windshield

### **11.8 Aftermarket Hardtop or Tower**

Everglades does not recommend installing an after market hardtop or tower. An improperly designed or installed fabrication can cause structural damage to the deck structure and void the Limited Warranty. Additionally, Everglades will not be responsible for any damage resulting from the installation of a fabrication not installed at the Everglades factory. If you intend to install an aftermarket hardtop, Upper helm station or tower on your boat, please contact your dealer or Everglades Customer Service.

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## INTERIOR EQUIPMENT

### 12.1 Head Compartment and Marine Toilet

The head compartment is equipped with a fresh water sink and faucet that converts to a shower by pulling the faucet out of the base. The shower head is equipped with a valve that allows the shower water to be turned on and off without affecting the temperature to conserve water while showering. The shower water drains to the sump system where it is pumped overboard. A float switch near the sump pump automatically activates and controls the pump while showering.

Ventilation is provided by an exhaust blower. There is also a 12-volt overhead light and 120 volt GFI duplex outlet. The light and exhaust blower are activated by switches on the companionway bulkhead.

There are storage cabinets above and below the vanity. The cabinet doors above the vanity sink are secured with push to release latches that are flush with doors when latched. Refer to Cabinet Door and Drawer Latches in the Cabin and Galley section of this chapter for more information on the latches. The switch that controls the toilet is in the vanity below the sink and the switches that control the overboard macerator pump are in a compartment near the toilet.

#### Marine Head System

Your boat is equipped with an electric marine toilet (head) and holding tank as standard equipment. A momentary switch in the vanity below the sink controls the filling and flushing of the toilet. The flush water is supplied by the freshwater system. Before using, make sure the freshwater system is activated and press the flush button briefly to wet the inside of the bowl. After use, activate pump to discharge the waste to the holding tank and empty the bowl.

Please refer to the toilet manufacturer owner's manual for more information on the operation and maintenance of the marine head.

#### Holding Tank and Overboard Discharge Pump

The holding tank is located in the bilge below the aft berth. A gauge near the flush button moni-



Head Compartment



Marine Toilet (Head)

tors the fluid level in the tank. Do not flush the toilet when the gauge reads full. When the gauge needle reads in the red zone, the tank must either be pumped out by an approved waste dumping station through the waste deck fitting or be pumped overboard with the macerator discharge pump, when legal to do so.

A switch panel with a key activated lockout is located in a compartment on the port side of the head. The overboard macerator discharge pump and discharge valve is in the bilge below an access hatch that is under the aft berth cushion. The pump discharges holding tank waste to a thru-hull fitting in the hull below the waterline.

To operate the overboard discharge pump, make sure the thru-hull valve in the bilge is open. Then turn the key switch in the panel to the ON position. Press and hold the momentary button next to the key switch to activate the pump. Use the gauge to monitor the fluid level in the holding tank as it is pumped out. When pumping is complete, release the button, close the pump out thru-hull valve and turn the key switch OFF. Remove the key from the switch and store in a safe location.

**Notice:**

**Monitor the waste level in the holding tank as the overboard discharge pump drains the tank and turn the pump off immediately when draining is complete. The macerator discharge pump will be damaged if it runs dry for more than a couple of seconds.**

**Notice:**

**In order to comply with current State, Federal and Coast Guard regulations, the lockout key switch must be off and the key removed whenever the boat is operating in areas in which the discharge of sewage is prohibited.**



Holding Tank Gauge and Head Flush Switch



Macerator Discharge and Key Lockout Switches In Compartment Next to the Head

	<b>CAUTION</b>	
<b>IN MANY AREAS IT IS ILLEGAL TO FLUSH HEAD WASTE DIRECTLY OVERBOARD. VIOLATION OF THESE POLLUTION LAWS CAN RESULT IN FINES OR IMPRISONMENT. ALWAYS KNOW THE LAW FOR THE AREAS IN WHICH YOU BOAT. NEVER DUMP HEAD OR HOLDING TANK WASTE OVERBOARD ILLEGALLY.</b>		

**Maintenance**

The head should be cleaned and inspected for leaks regularly.

The holding tank should be pumped out and flushed as needed. Always add chemical to the holding tank to help control odor and to chemically break down the waste. See the head manufacturer owner's manual for additional operating and maintenance information.

To reduce odor in the cabin, never allow waste to remain in the holding tank for more than one week. Make sure to add fresh water to the holding tank and pump the tank several times to flush it out during pump out operations.

**Important:**

**The head system must be properly winterized before winter lay-up. Please refer to the Seasonal Maintenance chapter and the manufacturer owner's manual for winterizing instructions.**



## 12.2 Cabin and Galley

### Cabinet Door and Drawer Latches

Most cabinet doors and drawers in the cabin are secured in the closed position with special latches that are flush to door or drawer when latched. To open, press and release the knob. The knob will pop out one inch, releasing the locking mechanism and providing a means to pull the door or drawer open. To close, make sure the door is completely closed and push the knob in. The knob will stay in and the locking mechanism will be activated. Other doors are held closed by “push to close” latches that latch automatically when the door is closed.



Cabin Switch Panel

### Cabin Light Switches

All lights in the cabin are powered by the DC electrical system. The overhead lights for the cabin, V-berth, head compartment and aft berth are controlled by ON/OFF switches in a panel on the cabin wall near the companionway. The switch for the exhaust fan in the head compartment is also in this switch panel.



Typical Cabin DC Fuse Panel

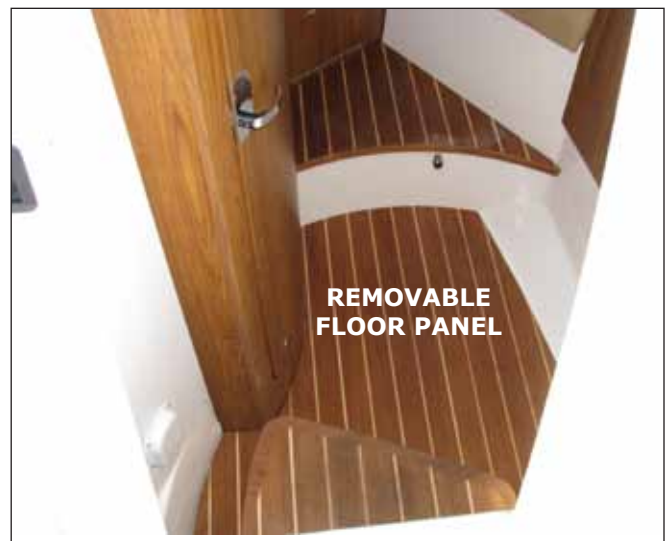
### Cabin DC Circuit Protection

The circuits for cabin DC lights and accessories are protected by fuses located in fuse panels in a compartment accessed through a door on the starboard side of the aft berth. The fuses are labeled for the circuits they protect. Refer to the Electrical Systems chapter for more information on the DC circuits and fuse panels.

### Forward Bilge Access

Access to the forward bilge is provided through a removable hatch in the cabin sole below the teak and holly floor panel. The shower sump pump, forward bilge pump and automatic switch are among the equipment installed in the forward bilge compartment.

The teak and holly floor panel is secured to the cabin sole with Velcro and is removable. To access the forward bilge hatch, carefully lift the floor panel, starting with the port rear corner. Continue working the panel loose in a clockwise direction being careful not to flex the panel too much, which could cause it to crack. Additionally, the panel is a tight fit and you will need to be careful not to scratch adjacent cabin woodwork as the panel is lifted. Once the panel is removed, the hatch is exposed and can be removed to access the bilge.



Removable Teak and Holly Floor Panel

## Galley and Sink

The galley is equipped with storage, a fresh water sink with hot and cold water, a removable stove plate, a refrigerator and a microwave/coffee maker. Water is supplied to the sink by a 12-volt pump located in the systems compartment below the cockpit. When activated by the Fresh Water switch in the helm switch panel, the system will operate much like the water system in a home. An automatic pressure sensor keeps the system pressurized. The sink drains overboard through the cabin and shower drain sump system. See the Fresh Water System chapter for more information on operating the fresh water system.



Galley, Microwave and Sink

Daylight and fresh air is provided to this area by an overhead hatch above the V-berth and the cabin door. Additional lighting is provided by lights above the galley that are controlled by an ON/OFF switch in the cabin switch panel. There is also a 120 volt GFI outlet below the counter top near the sink.

The sink counter tops are Faux Granite and the microwave is built into the cabinet above the galley counter. A large drawer in the cabinet below the sink provides storage for the removable stove plate.

## Stove Plate

The galley is equipped with a single burner stove plate that is stored in the drawer below the galley counter top. To use the stove plate, place it on the counter top and plug it into the AC outlet next to the refrigerator. After cooking, be sure the burner is turned off and allowed to cool before placing the stove in the drawer for storage.



Galley Storage Drawer, Outlet Plug and Refrigerator

A manual for the stove is included with your boat. It is extremely important that you read the manual and become familiar with the proper care and operation of the stove plate before attempting to use it.

## Refrigerator and Freezer

A dual voltage refrigerator/freezer is supplied as standard equipment. This unit will operate on 120 volt AC or 12-volt DC power. The refrigerator switches to 12-volt DC automatically when the AC power is disconnected. A fuse in the cabin fuse panel protects the DC circuit. When 120 volt AC current is provided by the Refrigerator breaker on the AC panel, the refrigerator automatically switches to AC power.

The refrigerator is controlled by a knob above the door and has a special latch to secure the door while underway. Always make sure the door is properly secured whenever the boat is underway. Refer to the refrigerator owner's manual for additional operating and maintenance instructions.

Care should be exercised while operating the refrigerator on 12-volt power without the engines running. It draws a substantial amount of cur-

rent and can severely drain the battery through extended use. Refer to the refrigerator owner's manual for additional operating and maintenance instructions.

### Microwave Oven

A microwave oven is standard equipment. The microwave operates on AC power and is activated and protected by the Microwave breaker in the AC breaker panel. Always make sure the microwave door is closed and latched whenever the boat is underway. Please refer to the microwave owner's manual for detailed information on the operation of the microwave oven installed in your boat.



120 Volt AC Breaker Panel, Generator Control Panel and Air Conditioning Control Panel Above Gally

### 120 Volt AC Breaker Panel

The cabin AC breaker panel, generator control panel and air conditioning control panel are built into the galley cabinet above the sink. Refer to the Electrical Systems chapter for more information on the operation of the components in the AC panel.

### Stereo and DVD/CD Player

The stereo is mounted in the overhead electronics locker at the helm. A key pad and display in the in the AC panel allows the stereo to be controlled in the cabin. A DVD/CD/MP3 player is mounted in the panel near the stereo key pad. The DC circuits for the stereo and DVD player are protected by fuses in the cabin fuse panels. Refer to the stereo and DVD player owner's manuals for detailed information on the operation of the stereo and DVD player.



120 Volt AC Panel, DVD/CD Player and Stereo Key Pad

## 12.3 V-Berth and Lounge Seat

The V-berth is located in the bow area, forward of the galley. A lounge seat is between the galley and V-berth. There is a cedar lined storage compartment below the mattress and a large storage compartment in the bulkhead below the V-berth.

Daylight and fresh air is provided to this area by an overhead opening hatch. The hatch is equipped with a removable screen. Additional lighting is provided by recessed 12-volt lights in the headliner that are controlled by a switch in the cabin switch panel. Refer to the Ventilation System chapter for more information on operating the hatch and screens.



V-Berth

### TV

The TV is mounted to the rear V-berth bulkhead. The DVD/CD player is located in the cabin AC panel. The TV and DVD/CD player are powered

by the DC electrical system. Fuses in the cabin fuse panels protect the circuits. Refer to the TV and DVD/CD player owner's manuals for detailed information on the operation of the TV and DVD player installed in your boat.



## Aft Berth

The aft berth compartment is located behind the cabin steps. Lighting is provided by recessed 12-volt lights in the headliner that are activated by a switch in the cabin switch panel. Additional light and ventilation is provided by an opening window on the port side of the aft berth. Access to the cabin bilge, holding tank and thru-hull seacock valve is located below the berth.

The batteries, battery switches, relays, main DC circuit breakers and the battery charger are located in the rear of the aft berth compartment. Large hatches in the rear of the head liner and in the rear bulkhead provide access to inside of the helm.

The air conditioner, carbon monoxide detector and an access door are located on the starboard side. The cabin fuse panels and power steering pump are among the equipment located in the compartment accessed through the door.

## Carbon Monoxide Detector

A carbon monoxide (CO) detector/alarm is installed on the starboard aft berth wall. The detector is always activated when the house batteries are connected and is protected by a fuse in the cabin fuse panel. If excess carbon monoxide fumes are detected, an audible beeping will sound indicating the presence of the toxic gas. A green light on the detector indicates that it is activated. Always make sure the green light is on whenever the cabin is occupied.



Aft Berth and Cabin Step



Helm Access in Aft Berth Rear Bulkhead



Equipment and Cabin Fuse Panel Access Door



Helm Access Panel in Aft Cabin Headliner

A by-product of combustion, carbon monoxide is invisible, tasteless, odorless and is produced by all engines and some heating and cooking appliances. The most common sources of CO on boats are the engines, auxiliary generators and propane or butane stoves. These produce large amounts of CO and should never be operated while sleeping.

You should read the owner’s manual supplied by the detector manufacturer for operation instructions and additional information regarding the hazards of carbon monoxide gas. Also read more about carbon monoxide, carbon monoxide detectors and proper ventilation in the Ventilation System and Safety Equipment chapters in this manual. This is especially essential since your boat is equipped with a generator as standard equipment. If you did not receive a manual for your carbon monoxide detector, please contact the Everglades Customer Service Department.



Typical Carbon Monoxide Detector and Alarm

⚠
WARNING
⚠

**ACTIVATION OF THE CARBON MONOXIDE DETECTOR INDICATES THE PRESENCE OF CARBON MONOXIDE (CO) WHICH CAN BE FATAL. EVACUATE THE CABIN IMMEDIATELY. DO A HEAD COUNT TO CHECK THAT ALL PERSONS ARE ACCOUNTED FOR. DO NOT REENTER THE CABIN UNTIL IT HAS BEEN AIRED OUT AND THE PROBLEM FOUND AND CORRECTED.**

## 12.4 Air Conditioner

The air conditioning unit is the reverse cycle type and operates on AC power. The unit is equipped with reverse cycle heat and can be operated as a cooling or heating unit. It is protected by a circuit breaker in the AC breaker panel.

To operate the system, make sure the thru-hull valve for the air conditioner seawater supply pump is on. The valve and sea strainer are located in the systems compartment bilge. Turn the Air Cond breaker in the AC breaker panel on. The air conditioning or heat then will be controlled by the electronic control panel in the cabin. When activated, water should continuously flow from the overboard discharge thru-hull.

The air conditioning system produces heat when it is operated in the reverse cycle mode. The ability of the unit to produce heat is affected by the temperature of the seawater. As the seawater



Air Conditioner Control Panel

temperature lowers, the air conditioner’s ability to produce warm air decreases. When the seawater temperature drops below 40 - 45 degrees, the unit will not be able to produce heat. You should not operate the air conditioner to produce heat when the water temperature is below 40 degrees.



You should always keep the cabin door closed when operating the air conditioner. If the cabin door is left open, it could cause the air conditioner unit to run continuously and not cycle enough to defrost the coiling condenser. This could cause the coils to develop enough ice to reduce the unit's ability to cool the boat.

The air conditioner is located behind the intake vent in the starboard aft berth bulkhead, near the cabin steps. The unit creates condensation that drips into the pan at the base of the unit. A hose attached to the pan drains the water to the forward bilge where it is pumped out by the forward bilge pump. You should monitor the operation of the bilge pump and make sure it is operating properly whenever the cabin air conditioner is activated. The air conditioner can produce enough condensation to flood the forward bilge if it is allowed to run for extended periods without the bilge pump operating properly.

It is normal for some water to be in the condensation pan whenever the air conditioner has been used. The pan should be checked periodically to make sure it is draining properly. The drain hoses, condensation pan and sump should be flushed clean if they become restricted by mold or debris.

The intake line for the seawater pump is equipped with a sea strainer that must be checked for debris frequently and cleaned as necessary. Refer to the Raw Water System chapter for information on the air conditioning pump and cleaning the sea strainer.

You should also refer to the air conditioner owner's manual for additional operating and maintenance instructions.

**Notice:**

**Air conditioners use surface water as a cooling medium. The boat must be in the water and the raw water supply system must be properly activated prior to use. Operation without proper cooling could cause the air conditioning unit to shut down and could cause system damage. Always check for proper water flow out of the air conditioning pump discharge thru-hull when the air conditioner is operating.**



Air Conditioner

## 12.5 Cabin Woodwork

### Floors and Steps

The wood cabin floor and Steps are made of teak and holly. The floor and steps are finished with a high quality urethane finish that will provide years of protection with proper care and treatment. It is important to avoid tracking sand and dirt on the cabin floor and steps. Sand and dirt acts like sand paper and will eventually sand off the finish in the traffic areas. The wood can be sanded and refinished as necessary.

Use caution when varnishing wood steps. The wood grain is a natural nonskid and too much varnish or polyurethane will fill the grain and make the wood slippery. You should use a satin or flat varnish and only apply one or two coats. A nonskid material mixed with the varnish may be required to keep the cabin steps from becoming slippery when they are refinished.

Carpeted or wood floors and steps can be cleaned with a vacuum. Wood floors can be vacuumed then washed with a mixture of water and Murphy's Oil Soap. Wipe the wood dry with a clean towel.

### Walls, Cabinets and Trim

The hardwood used for the trim moldings is finished with a high quality urethane varnish. The walls, cabinets and cabinet doors are made of a laminated, simulated wood that requires no maintenance. The walls and molding can be routinely cleaned with a damp cloth. For heavy duty cleaning, use a mixture of water and Murphy's Oil Soap or white vinegar and water to clean the wood or laminate and wipe it dry with a clean towel. Apply a furniture polish to add luster and help to preserve the finish.



Cabin Step



Teak and Holly Floor

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## ROUTINE MAINTENANCE

### 13.1 Exterior Hull and Deck

#### Hull Cleaning-Below The Water Line

When the boat is removed from the water, clean the outer bottom surface immediately. Algae, grass, dirt and other marine growth is easier to remove while the hull is still wet. Use a pressure cleaner or a hard bristle brush to clean the surface.

#### Bottom Painting

If the boat is to be left in saltwater for extended periods, the hull must be protected from marine growth by antifouling paint. Because of variations in water temperature, marine growth and pollution in different regions, a qualified boat yard in your area should be consulted when deciding what bottom paint system to apply to your hull. This is extremely important as pollution and marine growth can damage fiberglass hulls.

Use only standard antifouling paints and fiberglass wax removers and primers recommended by the antifouling paint manufacturer when preparing the hull for bottom paint. Light sanding, just enough to scuff the gel coat or a skip sand primer system can be used to prepare the hull for bottom paint. The use of a coating other than standard antifouling paint or epoxy barrier coatings are not recommended and will void the hull blister warranty.

Do not allow the hull antifouling paint to contact the outboard motors. Most antifouling paints designed for hull bottoms contain copper and can cause severe galvanic corrosion damage to the motors. Always leave at least a 1" barrier between the hull bottom paint and outboard motors.



#### CAUTION



SANDBLASTING THE HULL BOTTOM WILL DAMAGE THE FIBERGLASS. USE A FIBERGLASS WAX REMOVER AND SAND TO SCUFF THE GELCOAT SURFACE. THE INSTRUCTIONS AND RECOMMENDATIONS OF THE BARRIER COATING AND ANTIFOULING PAINT MANUFACTURERS SHOULD BE FOLLOWED EXACTLY.



#### CAUTION



BARRIER COATINGS AND BOTTOM PAINT SHOULD BE APPLIED ONLY BY QUALIFIED MARINE PROFESSIONALS IN A BOAT YARD OR DEALERSHIP THAT SPECIALIZES IN THEIR APPLICATION. USE ONLY STANDARD, HIGH QUALITY ANTIFOULING PAINTS AND BARRIER COATINGS FROM NAME BRAND MANUFACTURERS SUCH AS INTERLUX AND PETTIT.

DO NOT ALLOW THE HULL ANTIFOULING PAINT TO CONTACT THE OUTBOARD MOTORS. MOST ANTIFOULING PAINTS DESIGNED FOR HULL BOTTOMS CONTAIN COPPER AND CAN CAUSE SEVERE GALVANIC CORROSION DAMAGE TO THE OUTBOARD DRIVE UNIT. USE ONLY ANTIFOULING PAINT DESIGNED FOR OUTBOARD MOTORS IF APPLYING ANTIFOULING PAINT TO THE ENGINES. ALWAYS LEAVE A ONE INCH BARRIER BETWEEN THE HULL BOTTOM PAINT AND OUTBOARD MOTOR.

Most bottom paints require some maintenance. Proper maintenance is especially important when the boat is in saltwater and not used for extended periods or after dry storage. If the hull bottom has been painted with antifouling paint, contact your dealer or local boat yard for the recommended maintenance procedures.

#### Anodes

Sacrificial anodes are installed on the outboard motors, engine clamp brackets and could be installed on the trim tabs. The 350 LX is equipped with a large anode on the transom that is connected to the bonding system. The transom anode provides additional protection against galvanic corrosion for the engines, thru-hull fittings and other underwater hardware that is bonded.



Typical Transom Anode



The anodes are less noble than copper based alloys, stainless steel and aluminum. They will deteriorate first, protecting the more noble underwater hardware against galvanic corrosion. They must be monitored if the boat is to be left in the water. Anodes should be checked monthly and changed when they are 75% of their original size. When replacing the anodes, make sure the contact surfaces are clean, shiny metal and free of paint and corrosion. Never paint over the anode.

Boats stored in saltwater will normally need to have the anodes replaced every 6 months to one year. Anodes requiring replacement more frequently may indicate a stray current problem within the boat or at the slip or marina. Anodes that do not need to be replaced after one year may not be providing the proper protection. Loose or low quality anodes could be the problem. Contact your dealer or Everglades Customer Service for the proper size and type of anodes to be used and the specific installation procedure.

There are 2 anodes on Yamaha engines. There is a large anode on the bottom of the clamp bracket and another anode on the anti-cavitation plate, above the propeller. There are also anodes in the freshwater cooling system for the generator. Refer to the engine and generator owner's manuals for additional information on the location and type of anodes on your outboard engines and generator.

## Fiberglass Gel coat

Normal maintenance requires only washing with mild soap and water. A stiff brush can be used on the nonskid areas. Kerosene or commercially prepared products will remove oil and tar which could be a problem on trailered boats. Harsh abrasive and chemical cleaners are not recommended because they can damage or dull the gel coat, reducing its life and making it more susceptible to stains. When the boat is used in saltwater, it should be washed thoroughly with soap and water after each use.

At least once a season, wash and wax all exposed fiberglass surfaces. Use a high quality automotive or boat wax. Follow the procedure recommended by the wax manufacturer. The washing and waxing of your boat will have the same beneficial effects as they have on an automobile finish. The wax will fill minute scratches and pores thus helping to prevent soiling and will extend the life of the gel coat or paint.



After the boat is exposed to the direct sunlight for a period of time, the gel coat or painted surfaces tend to fade, dull or chalk. A heavier buffing is required to bring the finish back to its original luster. For power cleaning use a light cleaner. To clean the boat by hand, use a heavier automotive cleaner. Before cleaning the surfaces, read the instructions given with the cleaner. After cleaning the surfaces, apply wax and polish all fiberglass surfaces except the nonskid areas.

## Avoid the following on gelcoat surfaces:

- Do not use plastic or other nonporous (non-breathable) materials to cover gelcoat surfaces. Trapped moisture from condensation can cause gelcoat damage. Shrink wrap storage covers must be properly ventilated, including hull sides.
- Do not use abrasives, bleaches, ammonia, acids or harsh detergents. See your dealer for special marine formulations. Harsh abrasive and chemical cleaners are not recommended because they can damage or dull the gelcoat, reducing its life and making it more susceptible to stains.
- NEVER apply wax or buffing compound to a gelcoat surface in direct sunlight.

Chalking, stains and minor scratches can be removed in most cases with careful rubbing and polishing with appropriate compounds or chemicals and is best done by a professional - see your dealer.

If the fiberglass should become damaged and need repair, contact your dealer or Everglades Customer Service for assistance in finding an authorized repair person to make the repairs.

	<b>CAUTION</b>	
DO NOT WAX NONSKID AREAS AS THIS COULD MAKE THEM SLIPPERY AND CONSEQUENTLY INCREASE THE POSSIBILITY OF INJURY.		

## Stainless Steel Hardware

When using the boat in saltwater, the hardware should be washed with soap and water after each use. When your boat is used in a corrosive environment such as saltwater, water with a high sulfur content or polluted water, the stainless steel will



periodically develop surface rust stains. This is perfectly normal under these conditions.

### The following guidelines will help keep stainless steel looking good for many years.

- Clean stainless steel frequently (daily in salt or polluted environments) with mild soap and plenty of water. Any cleaner safe for use on glass is usually safe for stainless.
- Remove rust spots (especially around welds) immediately with a brass, silver or chrome cleaner. Irreversible pitting will develop under rust allowed to remain on stainless for any period of time.
- Remove rust stains on gelcoat. See dealer for recommended product.
- Stainless Steel can normally be cleaned and protected by using a high quality boat or automotive wax or a commercial metal cleaner and protectant.

### Never do the following on Stainless Steel.

- Do not use coarse abrasives like sandpaper or steel wool which may actually cause rusting.
- Do not use acids or bleaches which may etch the naturally occurring protective coating.
- Do not leave stainless steel in contact with iron, steel or other metals which cause contamination leading to rust or corrosion.

 **CAUTION** 



UNDER NO CIRCUMSTANCES SHOULD ANY ABRASIVE MATERIALS SUCH AS SANDPAPER, BRONZE WOOL OR STEEL WOOL BE USED ON STAINLESS STEEL. DAMAGE TO THE HARDWARE WILL RESULT.

### Anodized Aluminum Surfaces

Anodized aluminum should be washed periodically with soap and water to keep it clean. If the boat is used in saltwater or polluted water, the aluminum should be washed with soap and water after each use. Saltwater allowed to remain on anodized aluminum will penetrate the anodized coating and attack the aluminum.

Hardtops, bimini tops or T-tops with canvas and/or fiberglass tops require special attention to the anodized aluminum just below the top. This area is subject to salt build up from salty condensation

and sea spray. It is also frequently overlooked when the boat is washed and will not be rinsed by the rain. Consequently, the aluminum just below the top is more likely to become pitted than the exposed aluminum on the structure. Make sure the aluminum in this area is washed frequently with soap and water and rinsed thoroughly. Pay particular attention to places where the top material or lacing contact the frame. Once a month coat the entire frame with a metal protector made for anodized aluminum to protect against pitting and corrosion caused by the harsh effects of saltwater. Do not use automotive or boat wax designed for paint or gel coat on anodized aluminum. The wax can contaminate the aluminum and damage the anodized surface.

 **CAUTION** 

ONE DRAWBACK TO METAL PROTECTORS IS THAT THEY CAN MAKE THE METAL SLIPPERY. THEREFORE, THEY SHOULD BE NOT BE USED ON TOWER LADDERS, STEERING WHEELS AND OTHER AREAS WHERE A GOOD GRIP AND SURE FOOTING IS IMPORTANT.

Stains can be removed with a metal polish or fine polishing compound. To minimize corrosion, use only high quality stainless steel fasteners on aluminum fabrications. Isolate the fasteners from the aluminum by using fiber washers and caulking compound or Tef Gel to bed hardware and fasteners mounted to aluminum fabrications. If the anodized coating is badly scratched, it will require special attention and more frequent cleaning to the damaged area. With proper care, anodized aluminum will provide many years of service.

### Powder Coated Aluminum

Powder coated aluminum should be washed periodically with soap and water to keep it clean. If the boat is used in saltwater or polluted water, the aluminum should be washed with soap and water after each use. Saltwater allowed to remain on powder coated aluminum will penetrate the coating and attack the aluminum, usually around fasteners and hardware mounted to the aluminum.

Pay special attention to the area just below the top. This area is subject to salt buildup from salty condensation and sea spray. It is also frequently overlooked when the boat is washed and will not be rinsed by the rain. Consequently, the powder coating near fasteners and hardware mounted just below the top is more likely to be attacked by

the salt and become corroded than the exposed areas on the structure. Make sure the aluminum in this area is washed frequently with soap and water and rinsed thoroughly. Pay particular attention to places where the top material or lacing contact the frame.

Once a month check the entire frame for damaged powder coating and corrosion around fasteners and hardware. Nicked or badly scratched powder coating can be sanded and touched up with enamel paint. Corrosion will have to be sanded, then touched up with paint. Periodically applying automotive or boat wax to the powder coating will provide additional protection from the harsh effects of saltwater.

We recommend that you do not drill into or install any hardware to the aluminum frame. Poor maintenance or hardware and snaps mounted to the fabrication can void the warranty on the powder coated frame. If you do install hardware to the frame, the fasteners will require fiber washers and sealing with caulk or Tef Gel to isolate the fastener from the aluminum and reduce damage to the powder coating when the fastener is installed.

Always repair scratches, nicks and corroded areas in powder coating as soon as possible. Corrosion left unaddressed will lift the powder coating allowing moisture to travel between the powder coating and the aluminum causing the corrosion to spread below the coating and damage the aluminum.

If excessive chipping and peeling occurs, it could be an indication of an electrical fault in the boat or aluminum fabrication. You should contact a qualified marine electrician to inspect your boat immediately and correct the problem if you suspect that your boat may have a fault in the aluminum frame. You should also contact your dealer or Everglades Customer Service.

**Notice:**  
**Boats that are towed behind larger vessels require special attention to the aluminum hardware. The salt spray, salty steam and chemicals in exhaust gases are particularly corrosive and will damage the surface of anodized or powder coated aluminum. It is imperative that the boat and the aluminum are cleaned thoroughly at the completion of each trip or at the end of each day on long cruises to reduce accelerated deterioration of the anodizing or powder coating and premature corrosion to the aluminum.**

**Notice:**  
**You should contact Everglades Customer Service before making any modifications to aluminum fabrications. Unauthorized modifications can void the warranty.**

## Chrome Hardware

Use a good chrome cleaner and polish on all chrome hardware.

## Acrylic Plastic Glass

Acrylic glass scratches easily. Never use a dry cloth or glass cleaning solutions on acrylic. Use a soft cloth and mild soap and water for routine cleaning. Solvents and products containing ammonia can permanently damage acrylic plastic glass.

Fine scratches can be removed with a fine automotive clear coat polishing compound. A coat of automotive or boat wax is beneficial to protect the surface.

## Do not use the following on acrylic glass:

Abrasive cleaners	Acetone
Solvents	Alcohol
Cleaners containing ammonia	Glass cleaners

## Engines and Fuel

Proper engine maintenance is essential to the proper performance and reliability of your outboard engines. Maintenance schedules and procedures are outlined in your engine owner's manual. They should be followed exactly.

If the boat is used in saltwater, flush the cooling system after each daily use. To flush the systems when the boat is out of the water, follow the procedure outlined in your engine owner's manual.

Proper engine operation requires a good supply of clean, dry fuel. Improper marina fuel storage techniques, limited boat usage, etc. can cause the fuel to become contaminated.

The age of fuel can affect engine performance. Chemical changes occur as the fuel ages that can cause deposits and reduce the octane rating of the fuel. Severely degraded fuel can damage the engine and boat fuel tank and lines. Therefore, if your boat is not being run enough to require at least one full tank of fresh fuel a month, a fuel additive should be added to protect it from degradation. Your dealer or the engine manufacturer can

provide additional information on fuel degradation and fuel stabilizers recommended for your engine.

In many states, most gasoline is blended with ethanol alcohol. Ethanol is a strong solvent and can absorb water during periods of storage. You should refer to the engine operating manual for information regarding alcohol blended fuels and how it affects the operation of your marine engine.

## Generator

The engine maintenance required on the generator is similar in many ways to the main engines. The engine incorporates a pressure-type lubrication system and a freshwater cooled engine block which is thermostatically controlled.

The seawater cooling system on the generator is equipped with a sacrificial anode to protect cooling system components from galvanic corrosion. The anode should be inspected when the generator is serviced and replaced when it is 75% of its original size or at least once each year.

The most important factors to the generator's longevity are proper ventilation and maintenance of the fuel system, ignition system, cooling system, lubrication system and the AC alternator.

Maintenance schedules and procedures are outlined in your generator owner's manual. They should be followed exactly.

## 13.2 Upholstery, Canvas and Enclosures Vinyl Upholstery

The vinyl upholstery used on the seats, cushions, bolsters and for the headliner in some cabins, should be cleaned periodically with mild soap and water. Any stain, spill or soiling should be cleaned up promptly to prevent the possibility of permanent staining. When cleaning, always rub gently. Avoid using products containing ammonia, powdered abrasive cleaners, steel wool, ink, strong solvents, acetone and lacquer solvents or other harsh chemicals as they can cause permanent damage or shorten the life of vinyl. Never use steam heat, heat guns or hair dryers on vinyl.

Stronger cleaners, detergents and solvents may be effective in stain removal, but can cause either immediate damage or slow deterioration. Lotions, sun tan oil, waxes and polishes, etc., contain oils and dyes that can cause stiffening and staining of vinyls.

- Dry soil, dust and dirt - Remove with a soft cloth.
- Dried on dirt - Wash with a soft cloth dampened with water.
- Variations in surface gloss - Wipe with a water dampened soft cloth and allow to air dry.
- Stubborn dirt - Wash with a soft cloth dampened with Ivory Flakes<sup>®</sup> and water. Rinse with clean water.
- Stubborn spots and stains - Spray with either Fantastik Cleaner<sup>®</sup> or Tannery Car Care Cleaner<sup>®</sup> and rub with a soft cloth. Rinse with clean water.
- Liquid spills - Wipe immediately with a clean absorbent cloth. Rinse with clean water.
- Food grease and oily stains - Spray immediately using either Fantastik Cleaner<sup>®</sup> or Tannery Car Care Cleaner<sup>®</sup>, wiping with a soft cloth. Take care not to extend the area of contamination beyond its original boundary. Rinse with clean water.

## Acrylic Canvas (Sunbrella)

Modern, bright colored canvas tops are usually fabricated from acrylic fabrics with the trade names like Sunbrella<sup>®</sup>, Argonaut<sup>®</sup>, etc. Acrylic fabrics look similar to cotton canvas but are much more durable and color fast.

Acrylic canvas can be cleaned by using Ivory Flakes, Ivory Liquid or another mild soap and water. Scrub lightly and rinse thoroughly to remove the soap. Do not use detergents, as they will deteriorate the waterproofing in the fabric. The underside can be brushed with a soft brush and sprayed with a disinfectant to prevent the accumulation of dirt and mildew. The top or accessories should never be folded or stored wet.

In fresh water areas, the top and curtains should be washed weekly. This is particularly important if the boat is stored near a highway, airport or in a large city. Residue from jet fuel, exhaust fumes and industrial pollution can shorten the life of tops and enclosures.

In saltwater areas, the top and curtains should be rinsed with fresh water after each use and at least weekly if it is stored outside. Saltwater attracts moisture and dirt can shorten the life of fabric tops



and enclosures. The salt is also abrasive and can cause premature wear in the fabric and stitching.

After several years, the acrylic canvas may lose some of its ability to shed water. If this occurs, wash the fabric and let it dry thoroughly. Then treat the outside surface with a commercially available waterproofing designed for this purpose. Waterproofing is available in bulk at most canvas shops. One-gallon garden sprayers are excellent for applying waterproofing.

**Notice:**  
**Some leakage at the seams is normal and unavoidable with acrylic enclosures.**

## Laminated Vinyl Tops

Laminated vinyl top material is a lamination of two plies of specially formulated vinyl with an inner reinforcing core fabric. The most common trade names for this fabric is Weblon® or Stamoid®. It is not unusual for the interior ply to be a different color than the exterior. There is a greater tendency for this type of fabric to leak at the seams than with acrylic or vinyl coated polyester. Paraffin wax that matches the top can be used to seal the seams if necessary.

Laminated vinyl fabrics should be cleaned periodically by using Ivory Flakes, Ivory Liquid or another mild soap and water. Scrub lightly and rinse thoroughly to remove the soap. Do not use detergents or harsh cleaners like bleach and ammonia. They will attack the vinyl in the fabric and shorten its life. The top or accessories should never be folded or stored wet.

In fresh water areas, the top and curtains should be washed weekly. This is particularly important if the boat is stored near a highway, airport or in a large city. Residue from jet fuel, exhaust fumes and industrial pollution can shorten the life of tops and enclosures.

In saltwater areas, the top and curtains should be rinsed with fresh water after each use and at least weekly if it is stored outside. Saltwater attracts moisture and dirt can shorten the life of fabric tops and enclosures. The salt is also abrasive and can cause premature wear in the stitching.

## Clear Curtains and Connectors

Side curtains and clear connectors can be cleaned with mild soap and water. They should not be allowed to become badly soiled. Dirt, oil, mildew

and cleaning agents containing ammonia, will shorten the life of the vinyl that is used for clear curtains. After cleaning the curtains and allowing them to dry, apply a non-lemon furniture polish or an acrylic glass and clear plastic protector to extend the life of the curtains.

Vinyl curtains should be stored either rolled or flat, without folds or creases. Folding the curtains will make permanent creases that could cause the vinyl to crack.

**Notice:**  
**Do not use any polish containing lemon scents or lemon. The lemon juice will attack the vinyl and shorten its life.**

Snaps should be lubricated periodically with Teflon or silicone grease or a lubricant designed for snaps. Zippers should be lubricated with silicone spray, paraffin or silicone stick.

## Strataglass

Strataglass® is a special coated vinyl that could be used in the curtains for the hardtop enclosure. The coating protects the vinyl glass and resists scratching. Waxes and Plexiglas polishing compounds should not be used on strataglass as the protective coating prevents them from penetrating into the vinyl and they will build up on the surface. These products will create a hazy, greasy appearance that will affect the clarity of the strataglass. Products that repel water, like Rainex®, should not be used as they will not take well to the surface and could appear spotty and may also yellow or dull the Strataglass over time.

Strataglass can be cleaned by rinsing off dirt or salt deposits with fresh water, then washing with a clean cloth and mild soap. Chamois dry to remove water spots and improve clarity. If a polish is accidentally used, use Windex® or its equivalent to remove it. While window cleaners will destroy the standard vinyl normally used in side curtains and clear connectors, it will not harm strataglass. Always roll down the curtains and snap in place at the end of each day so the curtains will maintain their shape and to minimize fold distortions.

Depending upon usage, it is recommended that an occasional application of Aquatech Strataglass Cleaner be done. Treat this like a polish, as opposed to a cleaner - wash and dry curtains first, then apply Aquatech Strataglass Cleaner, actually buffing the surface to a beautiful sheen. This is



not just a wipe on/ wipe off product...it needs to be buffed to perform.

Remember, the coating on strataglass is scratch resistant and not scratch proof. Always handle the curtains with care and never roll up curtains that are salty or dirty. If you have any questions about the clear curtains used on your boat, please contact your dealer or Everglades Customer Service.

**Notice:**

**Hardtop enclosures must be removed when trailering. Canvas enclosures are not designed to withstand the extreme wind pressure encountered while trailering and will be damaged. Always remove and properly store the enclosure before trailering your boat.**

### 13.3 Interior

The cabin or head interior can be cleaned just like you would clean a home interior. To preserve woodwork, use teak oil. To maintain carpeting, use a vacuum cleaner. Because air and sunlight are very good cleansers, periodically put cushions, sleeping bags, etc. on deck, in the sun and fresh air, to dry and air out. If cushions or equipment get wet with saltwater, remove and use clean, fresh water to rinse off the salt crystals. Salt retains moisture and will cause damage. Dry thoroughly and reinstall.

Vinyl headliner material should be cleaned periodically as explained in the previous section. Avoid using products containing ammonia, bleach or harsh chemicals as they can shorten the life of vinyl. Fiberglass headliners should be wiped down with a damp towel as necessary to remove dust and dirt.

If you leave the boat for a long period of time, put all cushions on their sides, open all interior cabin and locker doors and hang a commercially available mildew protector in the cabin.

**Notice:**

**Always read the label carefully on mildew protectors. Remove the protector and allow the cabin to ventilate completely before using the cabin.**

### Counter Tops - Faux Granite

A mild liquid detergent and water or disinfectant cleaners will remove most dirt and stains from

Faux Granite. Rinse with a clean cloth moistened with fresh water. Wipe dry with a clean cloth.

Never use granite cleaners, bleaches, ammonia, household cleaners, polishes or scouring pads. Harsh cleaners and scouring pads will damage the polymer surface of Faux Granite.

In most cases, Faux Granite can be repaired if accidentally damaged. Small scratches that do not penetrate the coating can be repaired using an automotive buffing compound. Deep scratches and heavy damage require a professional repair. Contact your dealer or a counter top repair professional for assistance in repairing deep scratches or other damage on your counter tops.

### Interior Woodwork

Oiled and varnished woodwork or laminated, simulated wood can be cleaned with a damp cloth. For heavy duty cleaning, use a mixture of water and Murphy's Oil Soap or a solution of 10% white vinegar and water to clean the wood and wipe it dry with a clean towel. Apply a furniture polish to add luster and help to preserve the finish.

### 13.4 Bilge, Pumps and Components

To keep the bilge clean and fresh, it is recommended that you use a commercial bilge cleaner on a regular basis. Follow the directions carefully. All exposed pumps and metal components in the bilge should be sprayed periodically with a protector to reduce the corrosive effects of the high humidity always present in these areas.

Periodically check the bilge pumps and alarms for proper operation and clean debris from the strainers and automatic switches. Inspect all hoses, clamps and thru-hulls for leaks and tightness on a regular basis. Operate all thru-hull valves at least once a month to keep them operating properly.

Frequently test the automatic switches for the bilge pumps and alarms for proper operation. This is accomplished by simultaneously holding your fingers on the two recessed discs on the side of the switch until the pump is activated. You can also use a garden hose to flood the bilge until the water level is high enough to activate the pump.

## 13.5 Drainage System

It is essential that the following items be done periodically to maintain proper drainage of your boat:

- Clean the cockpit drains with a hose to remove debris that can block water drainage.
- Clean the hardtop leg drain holes. This is especially important just before winter lay-up.
- Flush all gravity drains with fresh water to keep them clean and free flowing.

- Operate the thru-hull valves once a month and service as required.
- Run all overboard pumps briefly at least once a month to keep them operating properly.

**Notice:**

**All drains and pumps must be properly winterized before winter lay-up.**

## SEASONAL MAINTENANCE

### 14.1 Storage and Lay-up

#### Before Hauling:

- Pump out the head holding tank. Flush the holding tank using clean water, soap and a deodorizer. Pump out the cleaning solution.
- The fuel tank should be left nearly full to reduce condensation that can accumulate in the tank. Allow enough room in each tank for the fuel to expand without leaking out the vents. Moisture from condensation in the fuel tank can reach such concentrations that it becomes heavy enough to settle out of the fuel to the bottom of the tank. Since fuel pickup tubes are located near the bottom of the tank, this accumulated moisture can cause the engines to run poorly or not at all after extended storage.

Chemical changes also occur as the gasoline ages that can cause deposits and varnish in the fuel system as well as reduce the octane rating of the fuel. Severely degraded fuel can damage the engines and boat fuel tank and lines. Therefore, if your boat is not being run enough to require at least one full tank of fresh fuel a month or during winter storage, a fuel stabilizer should be added to the gasoline to help protect the fuel system from these problems. Operate the boat for at least 15

minutes after adding the stabilizer to allow the treated fuel to reach the engines. Yamaha recommends using Yamaha Fuel Conditioner and Stabilizer for their engines.

Your dealer or the engine manufacturer can provide additional information on fuel degradation and fuel stabilizers recommended for your engines. For more recommendations for your specific area, check with your local Everglades dealer.

- Drain water from the fresh water system.
- Consult the engine owner's manual for detailed information on preparing the engines for storage.

#### Lifting

It is essential that care be used when lifting your boat. Make sure the spreader bar at each sling is at least as long as the distance across the widest point of the boat that the sling will surround. Put the slings in position. Sling labels on the gunnels just above the rubrail identify the correct position for the lifting slings. The fore and aft slings should be tied together to prevent the slings from sliding on the hull.



Sling Locations

**CAUTION**

**BOATS CAN BE DAMAGED FROM IMPROPER LIFTING AND TRANSPORTING WITH FORK LIFTS. CARE AND CAUTION MUST BE EXERCISED WHEN TRANSPORTING A BOAT WITH A FORK LIFT. NEVER HOIST THE BOAT WITH A SUBSTANTIAL AMOUNT OF WATER IN THE BILGE.**

**SEVERE GEL COAT CRACKING OR MORE SERIOUS HULL DAMAGE CAN OCCUR DURING HAULING AND LAUNCHING IF PRESSURE IS CREATED ON THE GUNWALES (SHEER) BY THE SLINGS. FLAT, WIDE BELTING SLINGS AND SPREADERS LONG ENOUGH TO KEEP PRESSURE FROM THE GUNWALES ARE ESSENTIAL. DO NOT ALLOW ANYONE TO HAUL YOUR BOAT WHEN THE SPREADERS ON THE LIFT ARE NOT WIDE ENOUGH TO TAKE THE PRESSURE OFF THE GUNWALES.**

- Make sure the cradle or lift is well supported with the bow high enough to provide proper drainage of the bilge and cockpit.
- Make sure the engines are in the down position.
- The cradle or lift must be in the proper fore and aft position to properly support the hull. When the cradle or lift is in the correct location, the bunks should match the bottom of hull and should not be putting pressure on the lifting strakes.

## Supporting The Boat For Storage

A trailer, elevating lift, well-made cradle or proper blocking is the best support for your boat during storage.

### When storing the boat on a trailer for a long period:

- Make sure the trailer is large enough to properly support your boat and that it is rated to support the weight.
- Make sure the trailer is on a level surface and the bow is high enough so that water will drain from the bilge and cockpit.
- Make sure the engines are in the down position.
- The trailer must properly support the hull. The bunks and rollers should match the bottom of the hull and should not be putting pressure on the lifting strakes.
- Make sure the hitch is properly supported.
- Check the tires once each season. Add enough air for the correct amount of inflation for the tires as necessary.

### Notice:

**Read the owner's manual for the trailer for the correct amount of inflation for the tires.**

### When storing the boat on a lift or cradle:

- The cradle must be specifically for boat storage.

**CAUTION**

**BOATS HAVE BEEN DAMAGED BY TRAILERS, LIFTS AND CRADLES THAT DON'T PROPERLY SUPPORT THE HULL. ALWAYS MAKE SURE THE BUNKS AND ROLLERS ARE ADJUSTED SO THEY ARE NOT PUTTING PRESSURE ON THE LIFTING STRAKES AND ARE PROVIDING ENOUGH SUPPORT FOR THE HULL. HULL DAMAGE RESULTING FROM IMPROPER CRADLE OR TRAILER SUPPORT IS NOT COVERED BY THE EVERGLADES WARRANTY.**

### When supporting the boat with blocking:

- Make sure the boat is blocked on a level surface and the bow is high enough so that water will drain from the bilge and cockpit.
- Make sure the keel is supported with large, solid wood blocks in at least three points.
- Use at least three heavy duty jacks on each side of the hull and make sure the boat is level from side to side. The jacks must be on a solid surface like packed gravel, concrete or pavement. All of the supports must be set up properly to prevent the boat from shifting while it is in storage.

### Preparing The Boat For Storage:

- Remove the bilge drain plug, if installed.
- Thoroughly wash the fiberglass exterior, especially the antifouling portion of the bottom. Remove as much marine growth as possible. Lightly wax the exterior fiberglass components.
- Remove all oxidation from the exterior hardware and apply a light film of moisture displacing lubricant, wax or a metal protector.



- Remove propellers and grease the propeller shafts using light waterproof grease.
- Remove the batteries and store in a cool place. Clean using clear, clean water. Be sure the batteries have sufficient water and clean terminals. Keep the batteries charged and safe from freezing throughout the storage period.

**Notice:**

**Refer to the Electrical System chapter, for information on the maintenance of the AC and DC electrical systems.**

- Coat all faucets and exposed electrical components in the cabin and cockpit with a protecting oil.
- Clean out, totally drain and completely dry the fish boxes, coolers, sinks and livewells.
- Thoroughly clean the interior of the boat. Vacuum all carpets and dry clean drapes and upholstery.
- Remove cushions and open as many locker doors as possible. Leaving as many of these areas open as possible will improve the boat's ventilation during the storage period.

**Notice:**

**It is recommended that a mildew preventer be hung in the cabin before it is closed for storage.**

- Clean the exterior upholstery with a good vinyl cleaner and dry thoroughly. Spray the weather covers and boat upholstery with a spray disinfectant. Enclosed areas such as the shower basin, storage locker areas, etc. should also be sprayed with this disinfectant.

## 14.2 Winterizing Fresh Water System

The entire fresh water system must be completely drained. Disconnect all hoses, check valves, etc. and blow all the water from the system. Make sure the water heater, filters and fresh water tank are completely drained. Use only very low air pressure when doing this to prevent possible system damage. Because of the check valve mechanism built in the pump, blowing the lines will not remove the water from the fresh water pump. Remove the inlet and outlet hoses on the pump. Turn the pump on and allow it to pump out any remaining

water...about a cupful. A recommended alternative to the above-mentioned procedure is the use of commercially available non toxic, fresh water system antifreeze. After draining the fresh water tank, lines, filters and water heater, pour the antifreeze mixture into the fresh water tank, prime and operate the pump until the mixture flows from all fresh water faucets. Be sure to open all hot and cold water faucets, including the fresh water shower in the head compartment, washdown hose and the faucet in the work station. Make sure antifreeze has flowed through all of the fresh water drains.

The shower drain system must be properly winterized. Clean debris from the drain and sump and flush for several minutes with fresh clean water. After the system is clean, pump the drain sump as dry as possible. Then pour a potable water antifreeze mixture into the shower drain until antifreeze has been pumped through the entire system and out of the thru-hull.

For additional information refer to the Fresh Water System and Drainage System chapters.

### Raw Water System

Completely drain the raw water systems including the sea strainers in the systems compartment bilge. Disconnect all hoses and blow the water from the system. Use only very low air pressure when doing this to prevent possible system damage. Because of the check valve mechanism built in the raw water washdown pump, blowing the lines will not remove the water from the raw water pump. Remove the inlet and outlet hoses on the pump. Turn the pump on and allow it to pump out any remaining water...about a cupful.

A recommended alternative to the above-mentioned procedure is the use of commercially available nontoxic, potable water system antifreeze. If potable water antifreeze is used, pour the mixture into a pail and put the raw water intake lines into the solution. Run the pumps one at a time until the antifreeze solution is visible at all raw water faucets and discharge fittings and drains. Be sure antifreeze has flowed through all of the raw water drains.

Make sure all the water is removed from the fish-box and livewell. Also make sure the drains are clear and free flowing.

Install the livewell drain plug and pour potable water antifreeze in livewell. Then activate the

recirculation pump until antifreeze is visible at the discharge fitting. Remove the drain plug and wipe down the inside of the baitwell.

Refer to the Raw Water System chapter for additional information on the raw water system.

## Marine Toilet

The marine toilet must be properly winterized by following the manufacturer's winterizing instructions in the marine toilet owner's manual. Drain the intake and discharge hoses completely using low air pressure if necessary. The head holding tank and overboard discharge pump must be pumped dry and one gallon of potable water antifreeze poured into the tank through the deck waste pump out fitting. After the antifreeze has been added to the holding tank, open the overboard discharge valve and activate the overboard macerator pump until the antifreeze solution is visible at the discharge thru-hull.

### Notice:

**Make sure you follow the marine toilet manufacturer's winterizing instructions exactly.**

## Bilge

Coat all metal components, wire busses and connector plugs in the bilge with a protecting oil. It is also important to protect all strainers, seacocks and steering components. The bilge pumps and bilge pump lines must be completely free of water and dried out when the boat is laid-up for the winter in climates where freezing occurs. Compartments in the bilge that will not drain completely should be pumped out and then sponged until completely free of water. Dry the hull bilge and self-bailing cockpit troughs. Water freezing in these areas could cause damage.

## Air Conditioner

Disconnect and drain the seawater pump intake and discharge hoses. Remove all water from the sea strainer and thru-hull fitting. Blow the water from the system. Use only very low air pressure when doing this to prevent possible system damage.

The air conditioner components must be properly winterized by following winterizing procedure in the manufacturer's owner's manual.

### Notice:

**The air conditioning, marine head and steering systems have specific lay up require-**

**ments. Please refer to their owner's manuals for recommended winterizing procedures.**

## Outboard Engines

The engines should be flushed with fresh water for at least 15 minutes prior to winter storage. This will remove salt, sand and other contaminants that can damage the engine. It is also important to "Fog" the cylinders, change the gear oil and change the oil. Coat each engine with a protector, wax the exterior and properly store and charge the batteries. You should refer to the engine owner's manual or contact your dealer for specific instructions on winterizing your engines.

## Generator Raw Water System

Drain the sea strainer, heat exchanger and raw water supply and discharge lines for the generator seawater supply pump. Make sure all seawater has drained from the exhaust system. The generator muffler has a drain plug that must be removed to properly drain the muffler. Once this is accomplished, pour a non toxic marine engine antifreeze mixture into a large pail and put the seawater intake line into the solution. Run the generator until the antifreeze solution is visible at the exhaust port, then shut the engine off. You should refer to the generator owner's manual or contact your dealer for specific instructions on winterizing your generator.

### Notice:

**Properly winterize the engines, generator and fuel system by following the engine manufacturer's winterizing procedures located in your engine owner's manuals or contact an Everglades dealer.**

## Hardtop



It is imperative that all drain holes in the legs are open and that the legs are completely free of water. Remove the canvas and thoroughly clean and store in a safe, dry place. Remove all electronics. Coat all wire connectors and bus bars in the helm compartment with a protecting oil.

Clean the aluminum frame with soap and water and dry thoroughly. Apply an aluminum metal protector to the entire frame on anodized aluminum to reduce corrosion and pitting. Apply an automotive or boat wax to powder coated aluminum to protect it during storage periods.

## Towers and Upper Helm Station

It is imperative that all drain holes in the tower and hardtop legs are open and completely free of water. Remove the tower sunshade, if installed and belly band or removable cushions. Then thoroughly clean and store in a safe, dry place. Remove all electronics. Coat all wire connectors and bus bars in the helm compartment with a protecting oil. Cover the Upper helm station with a tarp and secure it properly.

Clean the aluminum frame with soap and water and dry thoroughly. Apply an aluminum metal protector to anodized aluminum to reduce corrosion and pitting. Apply an automotive or boat wax to powder coated aluminum to protect it during storage periods.



 **CAUTION** 

**ALWAYS MAKE SURE THE LEG DRAIN HOLES ARE CLEAR WHEN THE BOAT IS LAID UP FOR THE WINTER. WATER TRAPPED INSIDE THE HARDTOP OR TOWER LEGS COULD FREEZE AND CAUSE THE LEGS TO SPLIT.**

## Special Notes Prior To Winter Storage

If the boat will be in outside storage, properly support a storage cover and secure it over the boat. It is best to have a frame built over the boat to support the canvas. It should be a few inches wider than the boat so the canvas will clear the rails and allow passage of air. If this cover is fastened too tightly there will be inadequate ventilation and this can lead to mildew, moisture accumulation, etc. It is essential to fasten the canvas down securely so that the wind cannot remove it or cause chafing of the hull superstructure. Do not store the boat in a damp storage enclosure. Excessive dampness can cause electrical problems, corrosion and excessive mildew.

Whenever possible, do not use the Weather Enclosure or sunshade in place of the winter storage cover. The life of these canvases may be significantly shortened if exposed to harsh weather elements for long periods.

 **CAUTION** 

**PLACING AN ELECTRIC OR FUEL BURNING HEATING UNIT IN THE BILGE AREA CAN BE POTENTIALLY HAZARDOUS AND IS NOT RECOMMENDED.**

Proper storage is very important to prevent serious damage to the boat. If the boat is to be stored indoors, make sure the building has enough ventilation. It is very important that there is enough ventilation both inside the boat and around the boat.

### Notice:

**If the boat is to be stored indoors or outdoors, open all interior drawers, clothes lockers, cabinets and doors a little. If possible, remove the upholstery, mattresses, clothing and rugs. Then hang a commercially available mildew protector in the interior compartments.**

## 14.3 Recommissioning

**WARNING**

DO NOT OPERATE THE BOAT UNLESS IT IS COMPLETELY ASSEMBLED. KEEP ALL FASTENERS TIGHT. KEEP ADJUSTMENTS ACCORDING TO SPECIFICATIONS.

**Notice:**

**It is important and recommended that the fitting out procedure for the marine gear be done by a qualified service person. Read the engine owner's manual for the recommended procedure.**

**CAUTION**

BEFORE LAUNCHING THE BOAT, MAKE SURE THE HULL DRAIN PLUG IS INSTALLED.

**WARNING**

MAKE SURE THE GENERATOR MUFFLER HAS NOT BEEN DAMAGED DURING WINTER STORAGE AND THAT THE DRAIN PLUG IS INSTALLED AND PROPERLY TIGHTENED. LOOSE OR MISSING DRAIN PLUGS AND DAMAGED OR LEAKING MUFFLERS OR EXHAUST HOSES WILL ALLOW CARBON MONOXIDE, ENGINE GASES AND WATER INTO THE BILGE CREATING A POTENTIALLY HAZARDOUS CONDITION.

### Reactivating The Boat After Storage:

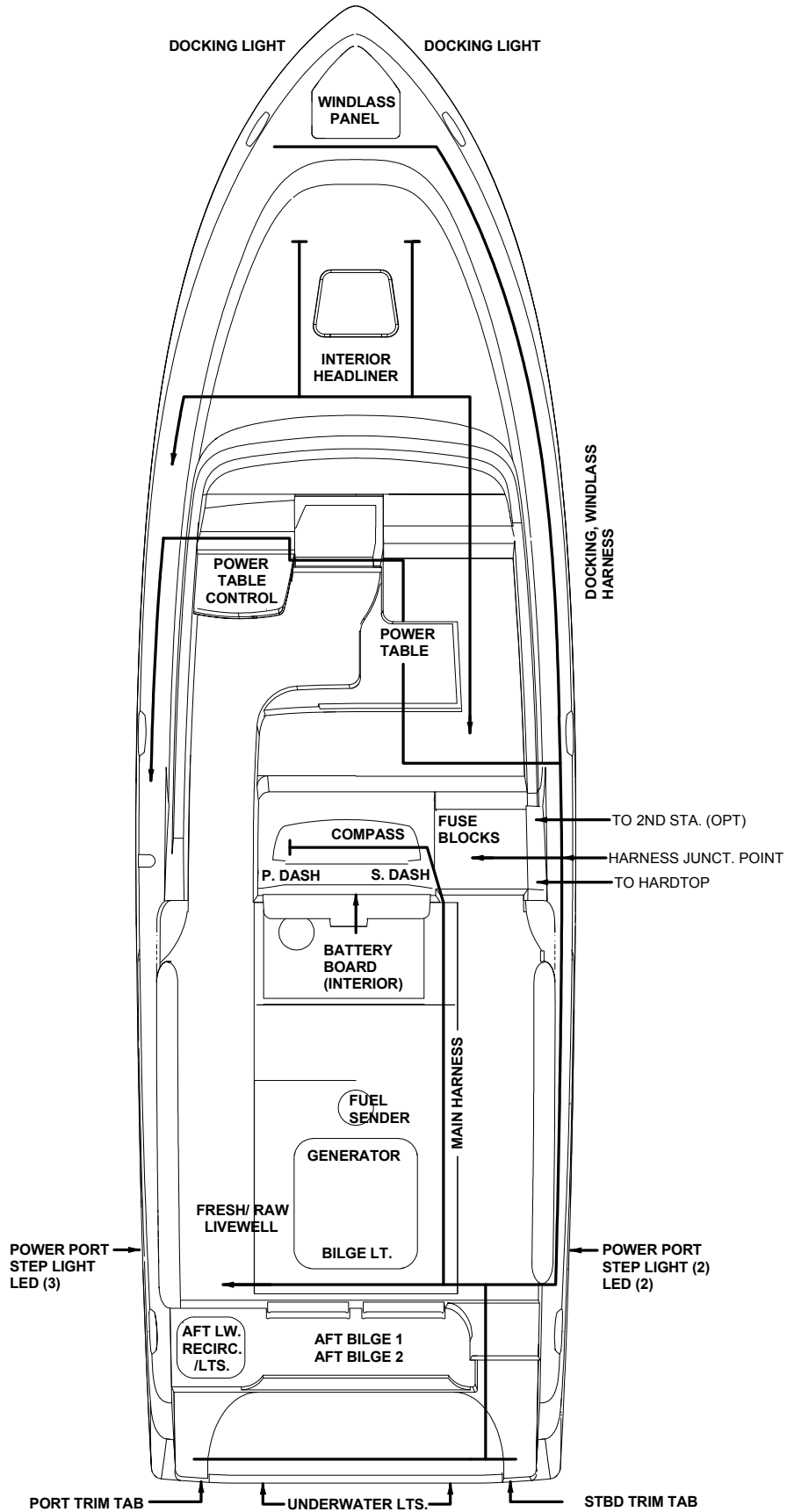
- Charge and install the batteries.
- Install the drain plug in the hull.
- Check the engines for damage and follow the manufacturer's instructions for recommissioning.
- Check the mounting bolts for the engines to make sure they are tight.
- Perform all routine maintenance.
- Check all hose clamps for tightness.
- Pump the antifreeze from the fresh and raw water systems and flush several times with fresh water. Make sure all antifreeze is flushed from the water heater and it is filled with fresh water before it is activated.
- Check and lubricate the steering system.

- Clean and wash the boat.
- Install all upholstery, cushions and canvas.

### After Launching:

- Carefully check all water systems and the engine bolts for leaks. Operate each system one at a time checking for leaks and proper operation.
- Check the bilge pump manual and automatic switches.
- When each engine starts, check the cooling system port below the engine cowling for a strong stream of water. This ensures that the cooling pump is operating.
- Carefully monitor the gauges and check for leakage and abnormal noises.
- Operate the boat at slow speeds until the engine temperature stabilizes and all systems are operating normally.
- Start the generator and monitor the exhaust port for a steady stream of water. It may take 20 or 30 seconds for the muffler to fill and for water to appear at the port. This ensures that the cooling pump is operating. Carefully inspect the generator and all hoses for leaks, paying particular attention to the muffler and exhaust hoses. Any leak, no matter how minor must be corrected immediately.
- Once the generator is started and operating normally, activate the air conditioner and monitor the outlet port for a steady stream of water. It may take 20 or 30 seconds for the sea strainer and system to fill and for water to appear at the port. This ensures that the cooling pump is properly primed and operating. Carefully inspect the generator all hoses for leaks, paying particular attention to the hoses below the waterline and those connected to the air conditioning system.
- If the pump runs but no water is visible at the outlet port after 45 seconds the air conditioning cooling pump may be air locked. The intake for the raw water manifold is equipped with a scoop and ball valve. Make sure the valve is open and run the boat at or above 15 M.P.H. for several minutes. The water pressure from the scoop will force the trapped air through the pump and allow it to prime. If this procedure doesn't work, contact your Everglades dealer.

**SCHEMATICS**





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## GLOSSARY OF TERMS

**Aft:** In, near or toward the stern of a boat.

**Aground:** A boat stuck on the bottom.

**Amidships:** In or toward the part of a boat midway between the bow and stern.

**Anchor:** A specially shaped heavy metal device designed to dig efficiently into the bottom under a body of water and hold a boat in place.

**Anchorage:** An area specifically designated by governmental authorities in which boats may anchor.

**Ashore:** On shore.

**Astern:** Behind the boat, to move backwards.

**Athwartship:** At right angles to the center line of the boat.

**Barnacles:** Small, hard-shelled marine animals which are found in salt water attached to pilings, docks and bottoms of boats.

**Beam:** The breadth of a boat usually measured at its widest part.

**Bearing:** The direction of an object from the boat, either relative to the boat's direction or to compass degrees.

**Berth:** A bunk or a bed on a boat.

**Bilge:** The bottom of the boat below the flooring.

**Bilge Pump:** A pump that removes water that collects in the bilge.

**Boarding:** Entering or climbing into a boat.

**Boarding Ladder:** Set of steps temporarily fitted over the side of a boat to assist persons coming aboard.

**Boat Hook:** Short shaft of wood or metal with a hook fitting at one end shaped to aid in extending one's reach from the side of the boat.

**Bow:** The front end of a boat's hull

**Bow Line:** A line that leads forward from the bow of the boat.

**Bow Rail:** Knee high rails of solid tubing to aid in preventing people from falling overboard.

**Bridge:** The area from which a boat is steered and controlled.

**Bridge Deck:** A deck forward and usually above the cockpit deck.

**Broach:** When the boat is sideways to the seas and in danger of capsizing; a very dangerous situation that should be avoided.

**Bulkhead:** Vertical partition or wall separating compartments of a boat.

**Cabin:** Enclosed superstructure above the main deck level.

**Capsize:** When a boat lays on its side or turns over.

**Chock:** A deck fitting, usually of metal, with inward curving arms through which mooring or anchor lines are passed so as to lead them in the proper direction both on board and off the boat.

**Cleat:** A deck fitting, usually of metal with projecting arms used for securing anchor and mooring lines.

**Closed Cooling System:** A separate supply of fresh water that is used to cool the engine and circulates only within the engine.

**Coaming:** A vertical piece around the edges of cockpit, hatches, etc. to stop water on deck from running below.

**Cockpit:** An open space, usually in the aft deck, outside of the cabin.

**Companionway:** Opening in the deck of a boat to provide access below.

**Compartment:** The interior of a boat divided off by bulkheads.

**Cradle:** A framework designed to support a boat as she is hauled out or stored.

**Cutlass Bearing:** A rubber bearing in the strut that supports the propeller shaft.

**D**eck: The floor-like platform of a boat that covers the hull.

**Displacement:** The volume of water displaced by the hull. The displacement weight is the weight of this volume of water.

**Draft:** The depth of water a boat needs to float.

**Dry Rot:** A fungus attack on wood areas.

**Dry-dock:** A dock that can be pumped dry during boat construction or repair.

**E**lectrical Ground: A connection between an electrical connector and the earth.

**Engine Beds:** Sturdy structural members running fore and aft on which the inboard engines are mounted.

**EPIRB:** Emergency Position Indicating Radio Beacon. Operates as a part of a worldwide satellite distress system.

**Even Keel:** When a boat floats properly as designed.

**F**athom: A measure of depth. One Fathom = 6 feet.

**Fender:** A soft object of rubber or plastic used to protect the topsides from scarring and rubbing against a dock or another vessel.

**Fend off:** To push or hold the boat off from the dock or another boat.

**Flying Bridge:** A control station above the level of the deck or cabin.

**Flukes:** The broad portions of an anchor which dig into the ground.

**Fore:** Applies to the forward portions of a boat near the bow.

**Foundering:** When a boat fills with water and sinks.

**Freeboard:** The height from the waterline to the lowest part of the deck.

**G**alley: The kitchen of a boat.

**Grab Rail:** Hand-hold fittings mounted on cabin tops or sides for personal safety when moving around the boat, both on deck and below.

**Ground Tackle:** A general term including anchors, lines and other gear used in anchoring.

**Grounds:** A boat touches the bottom.

**Gunwale:** The upper edge of a boat's side.

**H**and Rail: Rail mounted on the boat, for grabbing with your hand, to steady you while walking about the boat.

**Harbor:** An anchorage which provides reasonably good protection for a boat, with shelter from wind and sea.

**Hatch:** An opening in the deck with a door or lid to allow for access down into a compartment of a boat.

**Head:** A toilet on a boat.

**Heat Exchanger:** Used to transfer the heat that is picked up by the closed cooling system to the raw cooling water.

**Helm:** The steering and control area of a boat.

**Hull:** The part of the boat from the deck down.

**I**nboard: A boat with the engine mounted within the hull of the boat. Also refers to the center of the boat away from the sides.

**Inboard/outboard:** Also stern drive or I/O. A boat with an inboard engine attached to an outboard drive unit.

**K**eel: A plate or timber plate running lengthwise along the center of the bottom of a boat.

**Knot:** Unit of speed indicating nautical miles per hour. 1 knot = 1 nautical mile per hour (1.15 miles per hour). A nautical mile is equal to one minute of latitude: 6076 feet. Knots times 1.15 equals miles per hour. Miles per hour times .87 equals knots.

**L**ay-up: To decommission a boat for the winter (usually in northern climates).

**Leeward:** The direction toward which the wind is blowing.

**Length On The Waterline (l.w.l.):** A length measurement of a boat at the waterline from the stern to where the hull breaks the water near the bow.

**Limber Hole:** A passage cut into the lower edges of floors and frames next to the keel to allow bilge water to flow to the lowest point of the hull where it can be pumped overboard.

**Line:** The term used to describe a rope when it is on a boat.

**Lists:** A boat that inclines to port or starboard while afloat.

**L.O.A.:** Boat length overall.

**Locker:** A closet, chest or box aboard a boat.

**Loran:** An electronic navigational instrument which monitors the boat's position using signals emitted from pairs of transmitting stations.

**Lunch hook:** A small light weight anchor typically used instead of the working anchor. Normally used in calm waters with the boat attended.

**Midships:** The center of the boat.

**Marina:** A protected facility primarily for recreational small craft.

**Marine Ways or Railways:** Inclined planes at the water's edge onto which boats are hauled.

**Moored:** A boat secured with cables, lines or anchors.

**Mooring:** An anchor permanently embedded in the bottom of a harbor that is used to secure a boat.

**Nautical Mile:** A unit of measure equal to one minute of latitude. (6076 feet)

**Nun Buoy:** A red or red-striped buoy of conical shape.

**Outboard:** A boat designed for an engine to be mounted on the transom. Also a term that refers to objects away from the center line or beyond the hull sides of a boat.

**Pad Eye:** A deck fitting consisting of a metal eye permanently secured to the boat.

**Pier:** A structure which projects out from the shoreline.

**Pile or Piling:** A long column driven into the bottom to which a boat can be tied.

**Pitching:** The fore and aft rocking motion of a boat as the bow rises and falls.

**Pitch:** The measure of the angle of a propeller blade. Refers to the theoretical distance the boat travels with each revolution of the propeller.

**P.F.D.:** Personal Flotation Device.

**Port:** The left side of the boat when facing the bow.

**Porthole (port):** The opening in the side of a boat to allow the admittance of light and air.

**Propeller:** A device having two or more blades that is attached to the engine and used for propelling a boat.

**Propeller Shaft:** Shaft which runs from the back of the engine gear box, aft, through the stuffing box, shaft log, struts and onto which the propeller is attached.

**Pyrotechnic Distress Signals:** Distress signals that resemble the brilliant display of flares or fireworks.

**Raw Water Cooled:** Refers to an engine cooling system that draws seawater in through a hull fitting or engine drive unit, circulates the water in the engine and then discharges it overboard.

**Reduction Gear:** Often combined with the reverse gear so that the propeller turns at a slower rate than the engine.

**Reverse Gear:** Changes the direction of rotation of the propeller to provide thrust in the opposite direction for stopping the boat or giving it sternway.

**Roll:** A boat's sideways rotational motion in rough water.

**Rope Locker:** A locker, usually located in the bow of a boat, used for stowing the anchor line or chain.

**Rubrail:** Railing (often rubber or hard plastic) that runs along the boat's sheer to protect the hull when coming alongside docks, piers or other boats.

**Rudder:** A moveable flat surface that is attached vertically at or near the stern for steering.

**Sea anchor:** An anchor that does not touch the bottom. Provides drag to hold the bow in the most favorable position in heavy seas.

**Scupper:** An opening in the hull side or transom of the boat through which water on deck or in the cockpit is drained overboard.

**Seacock:** Safety valves installed just inside the thru-hull fittings and ahead of the piping or hose running from the fittings.

**Shaft Log:** Pipe through which the propeller shaft passes.

**Sheer:** The uppermost edge of the hull.

**Sling:** A strap which will hold the boat securely while being lifted, lowered or carried.

**Slip:** A boat's berth between two pilings or piers.

**Sole:** The deck of a cockpit or interior cabin.

**Spring Line:** A line that leads from the bow aft or from the stern forward to prevent the boat from moving ahead or astern.

**Starboard:** The right side of a boat when facing the bow.

**Steerageway:** Sufficient speed to keep the boat responding to the rudder or drive unit.

**Stem:** The vertical portion of the hull at the bow.

**Stern:** The rear end of a boat.

**Stow:** To pack away neatly.

**Stringer:** Longitudinal members fastened inside the hull for additional structural strength.

**Strut:** Mounted to the hull which supports the propeller shaft in place.

**Strut Bearing:** See "cutlass bearing."

**Stuffing Box:** Prevents water from entering at the point where the propeller shaft passes through the shaft log.

**Superstructure:** Something built above the main deck level.

**Swamps:** When a boat fills with water from over the side.

**Swimming Ladder:** Much the same as the boarding ladder except that it extends down into the water.

**Taffrail:** Rail around the rear of the cockpit.

**Thru-hull:** A fitting used to pass fluids (usually water) through the hull surface, either above or below the waterline.

**Topsides:** The side skin of a boat between the waterline or chine and deck.

**Transom:** A flat stern at right angles to the keel.

**Travel Lift:** A machine used at boat yards to hoist boats out of and back into the water.

**Trim:** Refers to the boat's angle or the way it is balanced.

**Trough:** The area of water between the crests of waves and parallel to them.

**Twin-Screw Craft:** A boat with two propellers on two separate shafts.

**Underway:** When a boat moves through the water.

**Wake:** Disrupted water that a boat leaves astern as a result of its motion.

**Wash:** The flow of water that results from the action of the propeller or propellers.

**Waterline:** The plane of a boat where the surface of the water touches the hull when it is afloat on even keel.

**Watertight Bulkhead:** Bulkheads secured so tightly so as not to let water pass.

**Wharf:** A structure generally parallel to the shore.

**Working Anchor:** An anchor carried on a boat for most normal uses. Refers to the anchor used in typical anchoring situations.

**Windlass:** A winch used to raise and lower the anchor.

**Windward:** Toward the direction from which the wind is coming.

**Yacht Basin:** A protected facility primarily for recreational small craft.

**Yaw:** When a boat runs off her course to either side.

















DEPARTMENT OF TRANSPORTATION U.S. COAST GUARD CG-3865 (Rev. 9/95)		<b>BOATING ACCIDENT REPORT</b>		FORM APPROVED OMB NO. 2115-0010	
				STATE ASSIGNED CASE NO. _____	
THE OPERATOR/OWNER OF A VESSEL USED FOR RECREATIONAL PURPOSES IS REQUIRED TO FILE A REPORT IN WRITING WHENEVER AN ACCIDENT RESULTS IN: LOSS OF LIFE OR DISAPPEARANCE FROM A VESSEL; AN INJURY WHICH REQUIRES MEDICAL TREATMENT BEYOND FIRST AID; OR PROPERTY DAMAGE IN EXCESS OF \$2000 OR COMPLETE LOSS OF THE VESSEL. REPORTS IN DEATH AND INJURY CASES MUST BE SUBMITTED WITHIN 48 HOURS. REPORTS IN OTHER CASES MUST BE SUBMITTED WITHIN 10 DAYS. REPORTS MUST BE SUBMITTED TO THE REPORTING AUTHORITY IN THE STATE WHERE THE ACCIDENT OCCURRED. THIS FORM IS PROVIDED TO ASSIST THE OPERATOR IN FILING THE REQUIRED WRITTEN REPORT.					
<b>COMPLETE ALL BLOCKS (INDICATE THOSE NOT APPLICABLE BY "NA")</b>					
<b>ACCIDENT DATA</b>					
DATE OF ACCIDENT	TIME	AM PM	NAME OF BODY OF WATER	LOCATION (GIVE LOCATION PRECISELY)	
NUMBER OF VESSELS INVOLVED	NEAREST CITY OR TOWN		COUNTY	STATE	ZIP CODE
WEATHER (CHECK ALL APPLICABLE) [ ] CLEAR [ ] RAIN [ ] CLOUDY [ ] SNOW [ ] FOG [ ] HAZY	WATER CONDITIONS [ ] CALM (WAVES LESS THAN 6") [ ] CHOPPY (WAVES 6" TO 2') [ ] ROUGH (WAVES 2' TO 6') [ ] VERY ROUGH (GREATER THAN 6') [ ] STRONG CURRENT		TEMPERATURE (ESTIMATE) AIR _____ °F WATER _____ °F	WIND [ ] NONE [ ] LIGHT (0-6 MPH) [ ] MODERATE (7-14 MPH) [ ] STRONG (15-25 MPH) [ ] STORM (OVER 25 MPH)	
VISIBILITY DAY NIGHT [ ] GOOD [ ] [ ] FAIR [ ] [ ] POOR [ ]			NAME OF OPERATOR		
OPERATOR TELEPHONE NUMBER ( )			OPERATOR ADDRESS		
OPERATOR TELEPHONE NUMBER ( )		DATE OF BIRTH MO DAY YR	OPERATOR'S EXPERIENCE [ ] NONE [ ] UNDER 100 HOURS [ ] > 100 HOURS	INSTRUCTION IN BOATING SAFETY [ ] STATE COURSE [ ] U.S. POWER SQUADRON [ ] USCG AUXILIARY [ ] AMERICAN RED CROSS [ ] NONE	
[ ] MALE [ ] FEMALE		NAME OF OWNER			
		OWNER ADDRESS			
OWNER TELEPHONE NUMBER ( )	NUMBER OF PEOPLE ON BOARD	NUMBER OF PEOPLE BEING TOWED	RENTED BOAT? [ ] YES [ ] NO		
<b>BOAT NO. 1 (THIS VESSEL)</b>					
BOAT REGISTRATION OR DOCUMENTATION NUMBER		STATE	HULL IDENTIFICATION NUMBER	BOAT NAME	
BOAT MANUFACTURER		LENGTH	MODEL	YEAR BUILT	
TYPE OF BOAT [ ] OPEN MOTORBOAT [ ] CABIN MOTORBOAT [ ] AUXILIARY SAIL [ ] SAIL (ONLY) [ ] ROWBOAT [ ] CANOE/KAYAK [ ] PERSONAL WATERCRAFT [ ] PONTOON BOAT [ ] HOUSEBOAT [ ] OTHER (SPECIFY)	HULL MATERIAL [ ] WOOD [ ] ALUMINUM [ ] STEEL [ ] FIBERGLASS [ ] RUBBER/VINYL/CANVAS [ ] RIGID HULL INFLATABLE [ ] OTHER (SPECIFY)	ENGINE [ ] OUTBOARD [ ] INBOARD [ ] INBOARD-STERNDRIVE (I/O) [ ] AIRBOAT	PROPULSION [ ] PROPELLER [ ] WATER JET [ ] AIR THRUST [ ] MANUAL [ ] SAIL	PERSONAL FLOTATION DEVICES (PFDS): WAS BOAT ADEQUATELY EQUIPPED WITH COAST GUARD APPROVED PFDS? [ ] YES [ ] NO WERE PFDS ACCESSIBLE? [ ] YES [ ] NO	
		FUEL [ ] GASOLINE [ ] DIESEL [ ] ELECTRIC	NUMBER OF ENGINES TOTAL HORSEPOWER	FIRE EXTINGUISHERS ON BOARD? [ ] YES [ ] NO USED? [ ] YES [ ] NO	
OPERATION AT TIME OF ACCIDENT (CHECK ALL APPLICABLE) [ ] CRUISING [ ] CHANGING DIRECTION [ ] CHANGING SPEED [ ] DRIFTING [ ] TOWING [ ] BEING TOWED [ ] ROWING/PADDLING [ ] SAILING [ ] LAUNCHING [ ] DOCKING/UNDOCKING [ ] AT ANCHOR [ ] TIED TO DOCK/MOORED [ ] OTHER (SPECIFY)		ACTIVITY AT TIME OF ACCIDENT (CHECK ANY IF APPLICABLE) [ ] FISHING [ ] TOURNAMENT [ ] HUNTING [ ] SWIMMING/DIVING [ ] MAKING REPAIRS [ ] WATERSKIING/TUBING/ETC. [ ] RACING [ ] WHITEWATER SPORTS [ ] FUELING [ ] STARTING ENGINE [ ] NON-RECREATIONAL [ ] OTHER (SPECIFY)	TYPE OF ACCIDENT [ ] GROUNDING [ ] CAPSIZING [ ] FLOODING/SWAMPING [ ] SINKING [ ] FIRE OR EXPLOSION (FUEL) [ ] FIRE OR EXPLOSION (OTHER) [ ] SKIER MISHAP [ ] COLLISION WITH VESSEL [ ] COLLISION WITH FIXED OBJECT [ ] COLLISION WITH FLOATING OBJ. [ ] FALLS OVERBOARD [ ] FALLS IN BOAT [ ] STRUCK BY BOAT [ ] STRUCK BY MOTOR/PROPELLER [ ] STRUCK SUBMERGED OBJECT [ ] OTHER (SPECIFY)	WHAT CONTRIBUTED TO ACCIDENT? (CHECK ALL APPLICABLE) [ ] WEATHER [ ] EXCESSIVE SPEED [ ] IMPROPER LOOKOUT [ ] RESTRICTED VISION [ ] OVERLOADING [ ] IMPROPER LOADING [ ] HAZARDOUS WATERS [ ] ALCOHOL USE [ ] DRUG USE [ ] HULL FAILURE [ ] MACHINERY FAILURE [ ] EQUIPMENT FAILURE [ ] OPERATOR INEXPERIENCE [ ] OPERATOR INATTENTION [ ] CONGESTED WATERS [ ] PASSENGER/SKIER BEHAVIOR [ ] DAM/LOCK [ ] OTHER (SPECIFY)	
ESTIMATED SPEED [ ] NONE [ ] UNDER 10 MPH [ ] 10 - 20 MPH [ ] 21 - 40 MPH [ ] OVER 40 MPH	[ ] HIT AND RUN				

# Boating Accident Report



DECEASED (IF MORE THAN 2 FATALITIES, ATTACH ADDITIONAL FORMS)			
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	[ ] MALE [ ] FEMALE	DEATH CAUSED BY	[ ] DROWNING [ ] OTHER [ ] DISAPPEARANCE
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	[ ] MALE [ ] FEMALE	DEATH CAUSED BY	[ ] DROWNING [ ] OTHER [ ] DISAPPEARANCE
INJURED (IF MORE THAN 2 INJURIES, ATTACH ADDITIONAL FORMS)			
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	MEDICAL TREATMENT BEYOND FIRST AID? [ ] YES [ ] NO ADMITTED TO HOSPITAL? [ ] YES [ ] NO	DESCRIBE INJURY	
WAS PFD WORN? [ ] YES [ ] NO	PRIOR TO ACCIDENT? [ ] YES [ ] NO	AS A RESULT OF ACCIDENT? [ ] YES [ ] NO	
WAS IT INFLATABLE? [ ] YES [ ] NO			
NAME OF VICTIM		ADDRESS OF VICTIM	
DATE OF BIRTH	MEDICAL TREATMENT BEYOND FIRST AID? [ ] YES [ ] NO ADMITTED TO HOSPITAL? [ ] YES [ ] NO	DESCRIBE INJURY	
WAS PFD WORN? [ ] YES [ ] NO	PRIOR TO ACCIDENT? [ ] YES [ ] NO	AS A RESULT OF ACCIDENT? [ ] YES [ ] NO	
WAS IT INFLATABLE? [ ] YES [ ] NO			
OTHER PEOPLE ABOARD THIS BOAT (IF MORE THAN 2 PEOPLE, ATTACH ADDITIONAL FORMS)			
NAME		ADDRESS	
DATE OF BIRTH	WAS PFD WORN? [ ] YES [ ] NO AS A RESULT OF ACCIDENT [ ] YES [ ] NO	PRIOR TO ACCIDENT? [ ] YES [ ] NO	WAS IT INFLATABLE? [ ] YES [ ] NO
NAME		ADDRESS	
DATE OF BIRTH	WAS PFD WORN? [ ] YES [ ] NO AS A RESULT OF ACCIDENT [ ] YES [ ] NO	PRIOR TO ACCIDENT? [ ] YES [ ] NO	WAS IT INFLATABLE? [ ] YES [ ] NO
BOAT NO. 2 (IF MORE THAN 2 VESSELS, ATTACH ADDITIONAL IDENTIFYING INFORMATION)			
NAME OF OPERATOR		OPERATOR ADDRESS	
OPERATOR TELEPHONE NUMBER ( )	BOAT REGISTRATION OR DOCUMENTATION NUMBER		STATE
NAME OF OWNER		OWNER ADDRESS	
OWNER TELEPHONE NUMBER ( )			
PROPERTY DAMAGE			
ESTIMATED AMOUNT: THIS BOAT AND CONTENTS:	OTHER BOAT(S) AND CONTENTS:	OTHER PROPERTY:	
\$	\$	\$	
DESCRIBE PROPERTY DAMAGED			
WITNESSES NOT ON THIS VESSEL			
NAME	ADDRESS	TELEPHONE NUMBER ( )	
NAME	ADDRESS	TELEPHONE NUMBER ( )	
PERSON COMPLETING REPORT			
NAME	ADDRESS	TELEPHONE NUMBER ( )	
SIGNATURE	QUALIFICATION [ ] OPERATOR [ ] OWNER [ ] INVESTIGATOR [ ] OTHER	DATE SUBMITTED	
FOR AGENCY USE ONLY			
CAUSES BASED ON (CHECK ONE): [ ] THIS REPORT [ ] INVESTIGATION [ ] INVESTIGATION AND THIS REPORT [ ] OTHER			
NAME OF REVIEWING OFFICE	DATE RECEIVED	RECREATIONAL [ ]	NON-REPORTABLE [ ]
PRIMARY CAUSE	COMMERCIAL [ ] SECONDARY CAUSE		

Call the Coast Guard Infoline 1-800-368-5647 for information on **Federal Requirements for Recreational Boats**

## ACCIDENT DESCRIPTION

DESCRIBE WHAT HAPPENED (SEQUENCE OF EVENTS. INCLUDE FAILURE OF EQUIPMENT. INCLUDE A DIAGRAM IF NEEDED. CONTINUE ON ADDITIONAL SHEETS IF NECESSARY. INCLUDE ANY INFORMATION REGARDING THE INVOLVEMENT OF ALCOHOL AN/OR DRUGS IN CAUSING OR CONTRIBUTING TO THE ACCIDENT. INCLUDE ANY DESCRIPTIVE INFORMATION ABOUT THE USE OF PFD'S.)

An agency may not conduct or sponsor and a person is not required to respond to an information collection, unless it displays a currently valid OMB Control Number. The Coast Guard estimates that the average burden for this report form is 30 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant (G-OPB-1), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (2115-0010), Washington, DC 20503.

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## FLOAT PLAN

Everglades recommends filling out a float plan each time you use your boat for an off-shore day trip or a long cruise. Leave this information with a responsible person ashore, like a close friend or relative that you know well.

1. Name of person reporting and telephone number.  
\_\_\_\_\_
  
2. Description of boat.  
 Type \_\_\_\_\_ Color \_\_\_\_\_ Trim \_\_\_\_\_  
 Registration No. \_\_\_\_\_ Length \_\_\_\_\_  
 Name \_\_\_\_\_ Make \_\_\_\_\_ Other Info \_\_\_\_\_
  
3. Engine type \_\_\_\_\_ H.P. \_\_\_\_\_  
 No. of Engines \_\_\_\_\_ Fuel Capacity \_\_\_\_\_
  
4. Survival equipment: (Check as appropriate)
 

<input type="checkbox"/> PFDS	<input type="checkbox"/> Flares	<input type="checkbox"/> Mirror
<input type="checkbox"/> Smoke Signals	<input type="checkbox"/> Flashlight	<input type="checkbox"/> Food
<input type="checkbox"/> Paddles	<input type="checkbox"/> Water	<input type="checkbox"/> Others
<input type="checkbox"/> Anchor	<input type="checkbox"/> Raft or Dinghy	<input type="checkbox"/> EPIRB
  
5. Radio     Yes     No                      Type \_\_\_\_\_
  
6. Automobile license \_\_\_\_\_  
 Type \_\_\_\_\_ Trailer License \_\_\_\_\_  
 Color \_\_\_\_\_ and make of auto \_\_\_\_\_
  
7. Persons aboard \_\_\_\_\_  
 Name \_\_\_\_\_ Age \_\_\_\_\_ Address & telephone No. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  
8. Do any of the persons aboard have a medical problem?  
 Yes                       No                      If yes, what? \_\_\_\_\_
  
9. Trip Expectations: Leave at \_\_\_\_\_  
 From \_\_\_\_\_ Going to \_\_\_\_\_  
 Expect to return by \_\_\_\_\_ (time)  
 and no later than \_\_\_\_\_
  
10. Any other pertinent info. \_\_\_\_\_
  
11. If not returned by \_\_\_\_\_ (time)  
 call the COAST GUARD or (Local authority) \_\_\_\_\_
  
12. Telephone Numbers.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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## TROUBLESHOOTING GUIDE

PROBLEM	CAUSE AND SOLUTION
<b>CONTROL SYSTEMS</b>	
Hydraulic Steering is slow to respond & erratic and/or the steering wheel feels bumpy.	<ul style="list-style-type: none"> <li>• Steering system is low on fluid. Fill and bleed system.</li> <li>• Steering system has air in it. Fill and bleed system.</li> <li>• A component in the steering system is binding. Check and adjust or repair binding component.</li> <li>• Engine steering spindle is binding. Grease spindle.</li> </ul>
The boat wanders and will not hold a course at cruise speeds.	<ul style="list-style-type: none"> <li>• There could be air in the steering system. Fill &amp; bleed the system.</li> <li>• The engines are not aligned properly. Align engines.</li> <li>• Engine steering spindle is binding. Grease spindle.</li> </ul>
Steering is unusually hard.	<ul style="list-style-type: none"> <li>• The fuse for the power steering circuit has blown. Replace the fuse.</li> <li>• An internal fuse in the power steering pump system has blown. Refer to the steering owners manual for fuse location and replace the fuse or contact your dealer for assistance.</li> <li>• A steering line is kinked or collapsed. Replace kinked or collapsed line.</li> </ul>
An engine will not start with the shift control lever in neutral.	<ul style="list-style-type: none"> <li>• The shift control lever is not in the neutral detent. Try moving the shift lever slightly.</li> <li>• There is a loose wire on the neutral safety switch in the control. Inspect wires and repair loose connections.</li> <li>• The starter or ignition switch is bad.</li> <li>• There is a problem with the electronic control system at the helm control, module or at the engine. Have the system serviced by a qualified marine technician.</li> </ul>
<b>PERFORMANCE PROBLEMS</b>	
Boat is sluggish and has lost speed & RPM.	<ul style="list-style-type: none"> <li>• The boat may be need to have marine growth cleaned from hull and running gear.</li> <li>• Propellers may be damaged &amp; need repair.</li> <li>• Weeds or line around the propellers. Clean propellers.</li> <li>• Boat is overloaded. Reduce load.</li> <li>• Check for excessive water in the bilge. Pump out bilge &amp; find &amp; correct the problem.</li> <li>• One of the throttles is not responding properly and the engine is not getting full throttle. Have the throttle control system checked by a qualified marine technician.</li> </ul>
The boat vibrates at cruising speeds.	<ul style="list-style-type: none"> <li>• Propellers may be damaged &amp; need repair.</li> <li>• A propeller or propeller shaft is bent. Repair or replace damaged components.</li> <li>• The running gear is fouled by marine growth or rope. Clean running gear.</li> <li>• The engines are not trimmed properly. Trim engines.</li> </ul>

PROBLEM	CAUSE AND SOLUTION
<b>ENGINE PROBLEMS</b>	
<p><b>An engine is running too hot.</b></p>	<ul style="list-style-type: none"> <li>• The engine raw water pick up strainer is clogged with marine growth. Clean pick up.</li> <li>• The engine raw water pump impeller is worn or damaged. Repair the pump.</li> <li>• The engine thermostat is faulty and needs to be replaced.</li> </ul>
<p><b>An engine alternator is not charging properly.</b></p>	<ul style="list-style-type: none"> <li>• The battery cable is loose or corroded. Clean and tighten battery cables.</li> <li>• The alternator is not charging and must be replaced.</li> <li>• The battery is defective. Replace the battery.</li> <li>• A Voltage Sensitive Relay in the charging system is not working properly. Replace defective VSR.</li> </ul>
<p><b>An engine suddenly will not operate over 2000 RPM.</b></p>	<ul style="list-style-type: none"> <li>• The engine emergency system has been activated. The on board computer has sensed a problem and has limited the RPM to protect the engine. Find &amp; correct the problem.</li> <li>• The tachometer is bad and needs to be replaced.</li> <li>• A throttle control is not responding properly. Have the throttle setting checked by a qualified technician.</li> </ul>
<p><b>An engine is losing RPM. The boat is not overloaded and the hull bottom and running gear are clean and in good condition.</b></p>	<ul style="list-style-type: none"> <li>• The engine may be having a problem with a sticky Anti-siphon valve, located in the fuel line near the fuel tank, that is restricting the fuel flow. Remove &amp; clean or replace the Anti-siphon valve.</li> <li>• The remote gasoline fuel filter could be dirty. Inspect and replace the fuel filter.</li> <li>• The primary fuel filter on the engine may be dirty. Inspect and replace the fuel filter.</li> <li>• The electronic engine control system on the engine is malfunctioning. Repair the engine control system.</li> <li>• The fuel injection system on the engine is malfunctioning. Repair the fuel injection system.</li> </ul>

PROBLEM	CAUSE AND SOLUTION
<b>ACCESSORY PROBLEMS</b>	
<b>The livewell pump runs, but does not pump water.</b>	<ul style="list-style-type: none"> <li>• The intake scoop strainer for the raw water system is clogged with weeds or debris. Back down the boat to clear debris or clean the scoop strainer.</li> <li>• There is an air lock in the system. Prime the system.</li> <li>• The thru-hull valve is not open. Open valve.</li> </ul>
<b>The fresh water pump runs, but will not pump water.</b>	<ul style="list-style-type: none"> <li>• The water tank is empty. Fill the tank.</li> <li>• The intake hose is damaged and sucking air. Replace or repair the hose.</li> <li>• The pump is defective. Repair or replace the pump.</li> </ul>
<b>The fresh water pump fails to turn off after all outlets are closed.</b>	<ul style="list-style-type: none"> <li>• There is a leak in a pressure line or outlet. Repair the leak.</li> <li>• There is an air leak in the intake line. Repair the air leak.</li> <li>• The pressure switch is defective. Replace the pressure switch.</li> <li>• The voltage to the pump is low. Check for corroded or loose wiring connections or low battery.</li> <li>• The strainer is clogged. Clean strainer.</li> <li>• The pump is defective. Repair or replace the pump.</li> </ul>
<b>The washdown pump runs, but the pump will not pump water.</b>	<ul style="list-style-type: none"> <li>• The thru-hull valve is not open. Open valve.</li> <li>• There is an air leak in the intake line. Repair the air leak.</li> <li>• The intake scoop strainer for the raw water system is clogged with weeds or debris. Back down the boat to clear debris or clean the scoop strainer.</li> <li>• The in-line sea strainer for the pump is clogged. Clean the sea strainer.</li> </ul>
<b>The washdown or fresh water pump fails to turn off after all outlets are closed.</b>	<ul style="list-style-type: none"> <li>• The intake hose is damaged and sucking air. Replace hose.</li> <li>• The pump is defective. Repair or replace the pump.</li> <li>• There is a leak in a pressure line or outlet. Repair the leak.</li> <li>• There is an air leak in the intake line. Repair the air leak.</li> <li>• The pressure switch is defective. Replace the pressure switch.</li> <li>• The voltage to the pump is low. Check for corroded or loose wiring connections or low battery.</li> </ul>
<b>Reduction in water flow from the bilge pump.</b>	<ul style="list-style-type: none"> <li>• The strainer is clogged. Clean strainer.</li> <li>• The pump is defective. Repair or replace the pump.</li> <li>• Impeller screen plugged with debris. Clean screen at the base of the pump.</li> <li>• The discharge hose is pinched or clogged. Check discharge hose and clean or repair.</li> <li>• Low voltage to the pump. Check the battery and wire connections.</li> </ul>



PROBLEM	CAUSE AND SOLUTION
<b>ACCESSORY PROBLEMS</b>	
<p><b>The automatic switch on the bilge pump does not activate the pump .</b></p>	<ul style="list-style-type: none"> <li>• The fuse or circuit breaker for the automatic switch has tripped or blown. Replace the fuse or reset the circuit breaker.</li> <li>• The battery is dead. Charge or replace the battery.</li> <li>• The pump impeller is jammed by debris. Clean pump impeller housing.</li> <li>• The wire connections in the bilge have corroded. Replace connectors and secure above the bilge waterline.</li> <li>• The automatic switch is defective. Replace the switch.</li> <li>• The pump is defective. Replace pump.</li> </ul>
<p><b>The bilge pump will not run when the manual switch is activated.</b></p>	<ul style="list-style-type: none"> <li>• The circuit breaker supplying the switch has tripped. Reset the circuit breaker. Replace if defective.</li> <li>• The battery switch is off. Turn on the battery switch.</li> <li>• The pump impeller is jammed by debris. Clean pump impeller housing.</li> <li>• The wire connections in the bilge have corroded. Replace connectors and secure above the bilge waterline.</li> <li>• The switch is defective. Replace the switch.</li> <li>• The pump is defective. Replace pump.</li> </ul>
<p><b>Head will not flush.</b></p>	<ul style="list-style-type: none"> <li>• The fuse for the head circuit is blown. Replace the fuse.</li> <li>• The holding tank is full. Pump out the holding tank.</li> <li>• There is bad connection at the head pump or the switch. Repair the connection.</li> <li>• The head pump is defective. Replace the pump.</li> </ul>
<p><b>Excessive odor from marine head.</b></p>	<ul style="list-style-type: none"> <li>• Back pressure in the holding tank. Pump out holding tank and clean the vent and vent hose.</li> <li>• No deodorizer in the holding tank. Add deodorizer to the holding tank each time it is pumped out.</li> <li>• The waste in the tank is over two weeks old. Pump the holding tank if it has contained waste for two weeks or more.</li> </ul>
<p><b>Holding tank will not empty.</b></p>	<ul style="list-style-type: none"> <li>• Holding tank vent is clogged. Clean the vent and vent hose.</li> <li>• There is a vacuum leak in the hose from the holding tank to the deck pump out fitting. Tighten loose fittings or replace damaged hoses.</li> </ul>
<p><b>The air conditioner runs for a short time &amp; then cuts out.</b></p>	<ul style="list-style-type: none"> <li>• The intake scoop strainer for the raw water system is clogged with weeds or debris. Back down the boat to clear debris or clean the scoop strainer.</li> <li>• The air conditioner pump sea strainer is clogged. Clean the strainer.</li> <li>• The raw water supply thru hull valve is closed. Open the valve.</li> <li>• The raw water system is air-bound. Make sure the thru hull valve is open and run the boat above 15 m.p.h. The speed scoop on the thru hull fitting will force the air lock out of the system.</li> <li>• The air conditioner raw water pump is not pumping and needs to be repaired or replaced.</li> </ul>

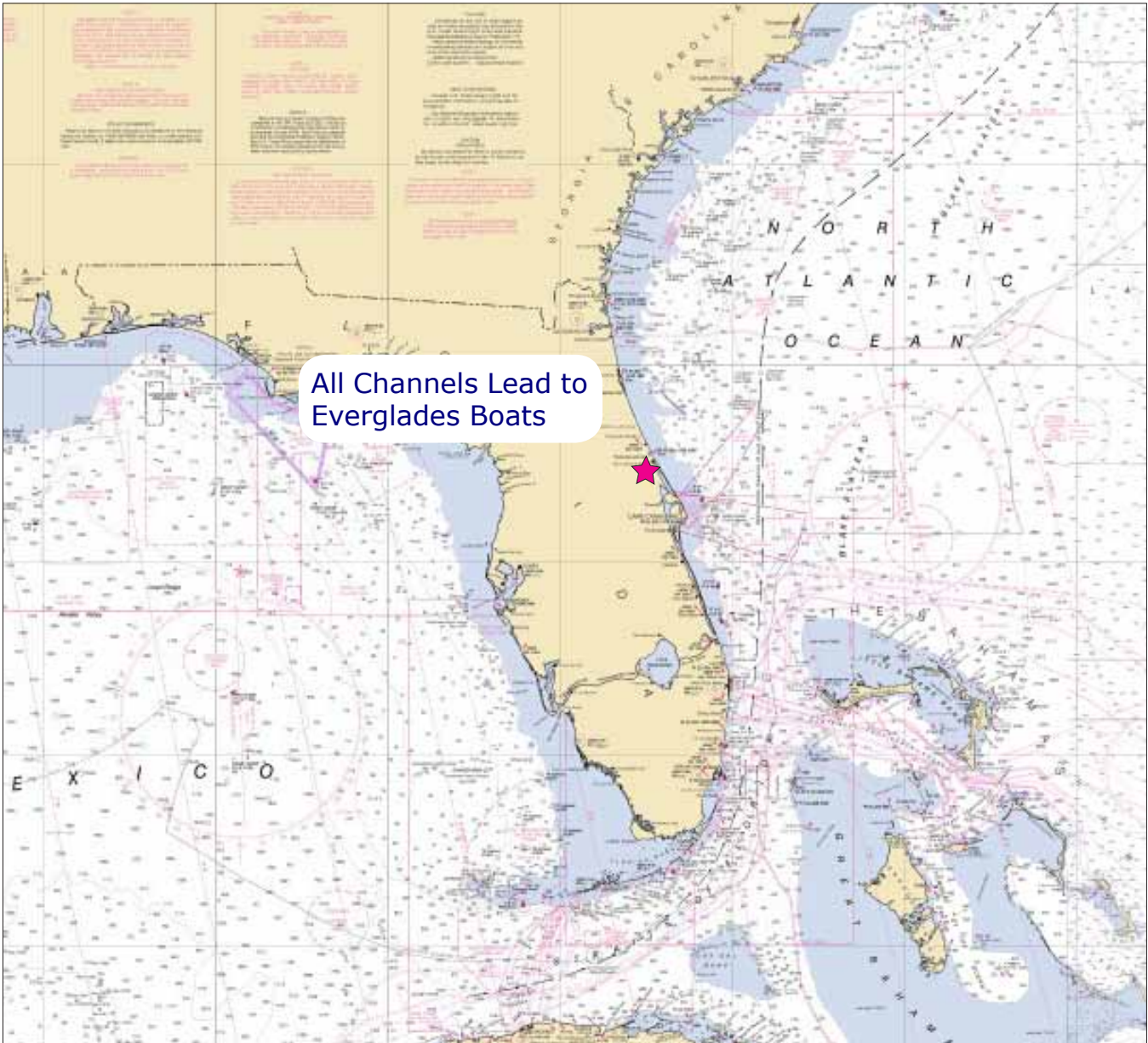
PROBLEM	CAUSE AND SOLUTION
<b>ACCESSORY PROBLEMS</b>	
<p><b>The refrigerator compressor runs frequently and the house battery life seems shorter than it should be whenever the refrigerator is operating on DC power.</b></p>	<ul style="list-style-type: none"> <li>• The thermostat in the refrigerator is set too cold. Check the temperature in the refrigerator and set the thermostat to a warmer setting if necessary.</li> <li>• The door gasket is dirty or moldy and not sealing properly. Clean or replace the door seal.</li> <li>• The battery is weak and not providing the proper voltage to the refrigerator compressor. Replace the battery.</li> <li>• The refrigerator is defective. Replace the refrigerator.</li> </ul>
<p><b>The carbon monoxide detector sounds the alarm when the engines or generator are running.</b></p>	<ul style="list-style-type: none"> <li>• The canvas curtains are up and none of the forward facing vents are open, allowing carbon monoxide to accumulate in the cockpit and cabin. Open the deck hatch, clear connector and side curtains to provide proper ventilation.</li> <li>• The boat is operating at slow speed and the wind is on the stern pushing CO into the cockpit and cabin. Increase boat speed or change heading if possible.</li> <li>• The carbon monoxide detector is defective and needs to be calibrated by the manufacturer or replaced. Have the boat checked by a professional before condemning the CO monitor.</li> </ul>
<p><b>No AC power to cabin breaker panel and shore cord is properly connected.</b></p>	<ul style="list-style-type: none"> <li>• The breaker at the shore outlet is off. Activate breaker.</li> <li>• The shore power cord is damaged or defective. Replace the cord.</li> <li>• The ELCI at the inlet connection has detected a fault in the electrical system and the breaker has tripped. Contact a qualified marine electrician to find and correct the problem.</li> </ul>
<p><b>The cabin Main Breaker for AC Power trips when activating the system from shore power.</b></p>	<ul style="list-style-type: none"> <li>• The AC accessory breakers are on and the power surge is tripping the breaker. Turn off all AC accessory breakers and reactivate main breaker.</li> <li>• The main breaker is defective. Contact a qualified marine electrician to replace the breaker.</li> </ul>
<p><b>The cabin AC main breaker activates the panel but trips while using accessories.</b></p>	<ul style="list-style-type: none"> <li>• There are too many AC accessories activated causing excess amperage draw. Manage AC accessory use to reduce excess amperage draw.</li> <li>• Voltage supplied from the shore outlet is low or high. Check the voltage. Contact the marina operator or qualified marine electrician to correct the problem.</li> <li>• The main breaker is defective. Contact a qualified marine electrician to replace the breaker.</li> </ul>
<p><b>No AC power at cabin outlets</b></p>	<ul style="list-style-type: none"> <li>• Outlet breaker in cabin AC panel is off. Activate breaker.</li> <li>• Ground fault interrupter has tripped. Push reset button on outlet to reset.</li> <li>• Accessory powered by the outlet has a fault that is tripping the interrupter. Turn the breaker in the cabin AC panel off and contact a qualified marine electrician to repair the defective accessory. Replace defective accessory.</li> <li>• The GFI outlet is defective. Contact a qualified marine electrician to replace the outlet.</li> </ul>

PROBLEM	CAUSE AND SOLUTION
<b>ACCESSORY PROBLEMS</b>	
<p><b>The optional generator will not start.</b></p>	<ul style="list-style-type: none"> <li>• House battery is not charged. Charge or replace battery.</li> <li>• The generator fuel supply valve is off. Turn on fuel supply valve.</li> <li>• The fuel level is too low in the fuel tank. Fill the fuel tank.</li> </ul>
<p><b>The generator runs for a short time and shuts down.</b></p>	<ul style="list-style-type: none"> <li>• There is a problem with the generator and the emergency shut down system has activated to shut down the generator. Find and correct the problem, then restart the generator.</li> <li>• The fuel level is too low in the fuel tank that supplies the generator. Fill the fuel tank.</li> <li>• The generator is overloaded. Manage AC accessory use to reduce excess amperage draw.</li> </ul> <p><b>Note: The fuel withdrawal tube for the generator is shorter than the main engine tubes. Therefore, the generator will run out of fuel before the boat engines. This is to prevent the generator from consuming reserve fuel.</b></p>



# Everglades™

*by Dougherty*



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