MONTEREY

M20/M22

Owner's Manual

Dear Valued Customer,

Welcome to the Monterey Life!

We would like to extend to you our "Thank You" for choosing a Monterey boat!

You have made an investment in our product and we are confident you will enjoy many years of boating pleasure. Your new boat has been built to the standards set forth by the United States Coast Guard and National Marine Manufacturers Association. We are proud to have you in our "Family!"

At this time, we need you to read your owner's manual and become familiar with all systems on your boat. Make certain that you and your dealer have filled out and mailed your warranty registration card back to us here at the factory. It is very important to us and it is also a U.S. Federal Regulation.

This manual is an important aid in the operation and maintenance of your boat. The information is intended as a guide and cannot cover every question you may have about your boat and boating in general. We encourage you to contact your dealership for any additional information you might need. If there is a question about your boat that can't be answered by your dealer, please contact our factory direct by calling the Monterey Boats Customer Service Department, (352) 529-9181 or online if you prefer at: www.info@montereyboats.com.

If you are new to boating, we recommend you participate in a boating class or group to gain more knowledge and confidence. Contact your dealer, local U.S. Coast Guard or U.S. Power Squadron Organizations for information in your area.

With proper care, routine service and preventive maintenance, your Monterey boat will not only reward you with enjoyment, but with reliability, dependability and one of the higher resale values in today's boating industry.

Enjoy your new boat and please respect our environment at all times. Always remember to practice safe boating procedures for your protection as well as those around you.

Sincerely,

The M.O.S.T. (Monterey Owners Support Team)

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PROPOSITION 65

OPERATING, SERVICING AND MAINTAINING A RECREATIONAL MARINE VESSEL CAN EXPOSE YOU TO CHEMICALS INCLUDING ENGINE EXHAUST, CARBON MONOXIDE, PHTHALATES, AND LEAD, WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. TO MINIMIZE EXPOSURE, AVOID BREATHING EXHAUST, SERVICE YOUR VESSEL IN A WELL-VENTILATED AREA AND WEAR GLOVES OR WASH YOUR HANDS FREQUENTLY WHEN SERVICING THIS VESSEL. FOR MORE INFORMATION GO TO WWW.P65WARNING.CA.GOV/MARINE.

California Health & Safety Code §§ 25249.5-.13

State of California Emission Requirements

Your boat may be equipped with an engine that meets the special requirements outlined by the California Air Resources Board (CARB). If so, the engine is designed to meet strict requirements and the boat will have a special tag and one of the following labels affixed to it.

The tag and the label are required by CARB. The label has 1, 2, 3 or 4 stars and must be affixed to your boat if it is to be operated in the state of California and/or bordering waters. For more information visit: http://www.arb.ca.gov.

Safety Cautions and Warnings

Your Monterey 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:

CAUTION

HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN MINOR PERSONAL INJURY OR PRODUCT AND PROPERTY DAMAGE.

WARNING

HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

DANGER

IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

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 Monterey 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.

BOAT INFORMATION

Please fill out the following information section and leave it in your Monterey owner's manual. This information will be important for you and Monterey 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 #:
DRAFT:	WEIGHT:
BRIDGE CLEARANCE:	

ENGINE	
MAKE:	MODEL:
SERIAL #:	

OUTDRIVE	
MAKE:	MODEL:
SERIAL #:	

PROPELLERS	
MAKE:	NUMBER OF BLADES:
DIAMETER/PITCH:	MODEL:
PROP #1 PART #:	PROP #2 PART #:

TRAILER	
MAKE:	MODEL:
SERIAL #:	GVRW:

OPTIONS	

DEALER	MONTEREY
NAME:	PHONE:
PHONE:	REPRESENTATIVE:
SALESMAN:	ADDRESS:
SERVICE MANAGER:	
ADDRESS:	E-MAIL:

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

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 SEABRING MARINE INDUSTRIES, INC., d.b.a. Monterey Boats

Address 1579 SW 18th St.

Williston, FL Zip Code: 32696

Identification Numbers:

Hull Identification Number US-RGF

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*

Boat certified by IMCI (#0009) under certificate BMOHT025

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 a basic understanding of your Monterey 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 engine, 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.

Hull ID # On Starboard Side of Transom

Warranty and Warranty Registration Cards

The Monterey 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 Monterey Boats Customer Service Department

Monterey, 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 **H**ull **I**dentification **N**umber **"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.

IMPORTANT:

The terms and conditions of the Monterey 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 Monterey 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.

Notice:
Your dealer will also submit the registration electronically "on-line."

Transferring the Limited Structural Warranty

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

Product Changes

Monterey 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. Monterey 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 Monterey, please contact the Monterey Boats Customer Service Department.

Service

All warranty repairs must be performed by an authorized Monterey Dealer. Should a problem develop that is related to faulty workmanship or materials, as stated in the Limited Warranty, you should contact your Monterey dealer to arrange for the necessary repair. If you are not near your dealer or another authorized Monterey dealer or the dealer fails to remedy the cause of the problem, then contact Monterey within 15 days. ***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 visit the U.S. Coast Guard boat safety web site at www.uscgboating.org or contact your state or local authority.

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 Coast Guard Auxiliary 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 visiting Coast Guard's Directive and Publications Division web site at www.uscg.mil/mil/forms 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.

Your Monterey boat is inspected at each step of the manufacturing process. Before leaving the factory, every Monterey boat undergoes a thorough check for systems operation, fit and finish. Your Monterey Dealer also performs a Pre-Delivery inspection prior to final delivery. When the new boat is delivered to you, the customer, a final check is performed during orientation. Both the Pre-Delivery and Final Delivery inspections are documented to ensure trouble free operation and returned to Monterey Boats.

At the time of new boat delivery, your Monterey Dealer will ask you to sign the completed Inspection Report at the same time as the Warranty Registrations for the boat and other accessory equipment. By signing these documents, you acknowledge that you have reviewed and understand all information.

WARRANTY REGISTRATION AND NEW BOAT CHECKLIST FOR ALL 2011 AND NEWER MODELS

MONTEREY BOATS

1579 S.W. 18th Street
Williston, FL 32696
Tel 352-529-9181
Fax 888-922-6287
www.montereyboats.com

Boat Number (HIN): **RGF**_____ Boat Model:_____

Selling Dealer:_____ Dealer Code:_____

Engine Brand:_____ Engine Model:_____

Engine Serial #1:_____ Drive Serial #1:_____

Engine Serial #2:_____ Drive Serial #2:_____

Date of Sale:_____ Warranty Start Date:_____

Owner Name (Last, First):_____

Address:_____

City:_____ Province/ State:_____ Postal Code/ Zip:_____ Country _____

E-Mail Address:_____ (We respect your privacy and will use for internal purposes only.)

Phone:_____ 2nd Phone:_____

PLEASE, INSPECT AND CHECK OFF THE FOLLOWING OPERATIONS

Indicate Status with the following Key: √ or 1 – OK, 2 – Needs Correction, 3- Corrected, N/A – Not Applicable

BOAT

_____ Boat gel coat, striping & graphics
_____ Upholstery fit, clean and free of defects
_____ Sundeck/Sun Island/lounger operation
_____ Canvas fit, clean and free of defects
_____ Cabin Doors, port lights, hatches, cabinet & head doors, latches
_____ All thru-hull fittings, ball valves, head drain, galley drain, anchor well drain, drain plug-hull, wet bar drain are secure, no leaks
_____ Windshield fit
_____ Ladders

EQUIPMENT

_____ Running Lights (Navigation)
_____ Cabin lights, cockpit lights
_____ Toilet (Head) operation & hoses
_____ Stereo – Radio, CD, remote control
_____ Bilge Pumps – Auto float switch
_____ Air Conditioner/Heater – operation & components secure
_____ Water pressure system (let pressure stand 15 minutes to see if pump goes on) & heater
_____ Stove, coffee maker, oven, refrigerator, ice maker
_____ Generator – Operation & components secure
_____ Bilge Blower(s)
_____ Wipers & Horn
_____ Shore power (AC)
_____ Tables
_____ Plumbing Hose Clamps
_____ Battery – Polarity, Voltage, Tight Connections
_____ Battery Switch(es) - Operation

ENGINE – BEFORE STARTING

_____ Engine mounts – tight
_____ Fuel system operation - no leaks
_____ Engine compartment components not missing, disconnected, loose, kinked, pinched or could chafe
_____ Hose clamps on engine & exhaust
_____ Steering system operation, components secure, steering wheel straight
_____ Drains cooling system closed (Closed cooling coolant level)
_____ Throttle control, operation & adjustment
_____ Shifter control, operation & adjustment
_____ Stern drive oil level at full mark
_____ Crankcase & power steering oil levels at full mark
_____ Stern drive trim operation
_____ Prop Size: _____
_____ Prop installed correctly with grease, nut(s), cotter pins
_____ Prop rotation – Forward & Reverse
_____ Neutral start switch, engine will not start in gear
_____ Transom plate seal has no leaks – water, oil

COMMENTS:

_____

ENGINE - AFTER STARTING: (in water)

_____ Oil pressure
_____ Fuel line connectors – no leaks
_____ Engine has no water or oil leaks
_____ Idle speed per engine specs, in gear
_____ Ignition timing check with timing light or scan tool
_____ Gear shift works properly - forward, neutral, reverse
_____ Instruments read correctly
_____ Exhaust system - no leaks

SEA TRIAL

_____ Boat performance
_____ Port engine operation
_____ Starboard engine operation
_____ Steering –operation
_____ Stern drive trim operation
_____ Instruments register normal
_____ Maximum R.P.M. _____

Technical Check Performed by

_____
Technician Date

PRE-DELIVERY FINAL CHECK

_____ All accessory equipment operates (Mech. & Elect.)
_____ Carpets, curtains, cushions & canvas installed
_____ All boat, engine and accessory literature
_____ Boat properly cleaned, interior and exterior
_____ Trailer wiring, lights, wheels & brakes

OWNER ORIENTATION

_____ Review & familiarize Owner with operation of all features and options on boat
_____ Sea Trial with Owner
_____ Review of Owners Manual
_____ Review of Warranties
_____ Review of Owner Responsibilities
_____ Review of Service & Maintenance Procedures
_____ Review of Care & Cleaning

Owner Orientation Performed by:

_____
Dealer Personnel Date

I have read and agree with the checklist. I have read and understand the Monterey Boats Lifetime Limited Warranty as it appears on the back of this form.

_____
Signature of Boat Owner Date

1.1 General

Your boat and engine 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 and could be equipped with an optional automatic fire extinguishing system. These systems are designed to increase your boating safety by alerting you to potentially serious problems in the primary power system and the engine compartment. 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 engine and other options installed by you or your dealer.

1.2 Engine Alarm

Inboard 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 engine.

If the alarm sounds:

- Immediately throttle the engine back to idle.
- Shift the transmission 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 & Personal PFD

1.3 Neutral Safety Switch

Every control system has a neutral safety switch incorporated into it. This device prohibits the 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 or cable adjustments may be required to correct this condition should it persist. See your Monterey dealer for necessary control and cable adjustments. Refer to the Helm Control Systems chapter for more information on the neutral safety switch.

1.4 Engine Stop Switch

Single engine boats with a side mount throttle and shift control are equipped an engine stop switch and lanyard. When the lanyard is pulled, it will engage the switch and shut off the engine. We strongly recommend that the lanyard be attached to the driver and stop switch whenever the engine is running. If the 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 engine.

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

1.5 Required Safety Equipment

Besides the equipment installed on your boat by Monterey, 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 Coast Guard Auxiliary 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 Monterey 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.

Stop Switch & Lanyard

Visual Distress Signals (VDS)

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.

⚠ WARNING ⚠

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.

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

Power boats less than 26 feet are required to carry one fire extinguisher. 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 the extinguisher 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 Coast Guard Auxiliary, for information on the type and size fire extinguisher required for your boat.

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

⚠ CAUTION ⚠

INFORMATION FOR AGENT FE-241 AND FE-227 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.

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, 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.

⚠ WARNING ⚠

ALL TYPES OF FUEL 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.

1.7 Fire Port

Some inboard models are equipped with a fire port installed in the engine compartment as standard equipment. In the event of a fire in the engine compartment, do not open the hatch. This will supply more air to the fire making it more difficult to extinguish. Instead, leave the engine compartment hatch closed and insert the nozzle of the fire extinguisher into the fire port and discharge the extinguisher. Once the fire is extinguished, leave the engine compartment hatch closed until the compartment has had a chance to cool. This is particularly important when using FE-241 fire extinguishers. FE-241 is heavier than air and interferes with the combustion process. If the engine compartment hatch is opened too soon, the extinguishing agent could escape and a flash back could occur if the hot components have not cooled below a combustible temperature.

⚠ WARNING ⚠

DO NOT OPEN THE ENGINE COMPARTMENT HATCH IMMEDIATELY!! THIS FEEDS OXYGEN TO THE FIRE AND FLASH BACK COULD RESULT. ALLOW THE ENGINE COMPARTMENT TO COOL FOR AT LEAST 15 MINUTES BEFORE CAUTIOUSLY INSPECTING FOR CAUSE OR DAMAGE. HAVE AN APPROVED PORTABLE FIRE EXTINGUISHER CLOSE AT HAND AND READY FOR USE. DO NOT BREATH FUMES OR VAPORS CAUSED BY THE FIRE!

Typical Fire Port

Typical Fire Extinguisher Panel In Helm

1.8 Automatic Fire Extinguishing System

Inboard engine compartments can be equipped with an optional automatic fire extinguishing system. The equipment has been chosen and located to provide sufficient volume and coverage of the entire engine compartment area. While the system ensures excellent bilge fire protection, it does not eliminate the U.S. Coast Guard requirement for hand held fire extinguishers. The automatic fire extinguishing system is automatically activated when the temperature in the engine compartment reaches a specific temperature, usually around 165^0 F.

The boat is equipped with an indicator light at the helm. Under normal circumstances, the green indicator light will glow whenever the ignition key is turned on. This indicates that the system is operating and ready for activation if necessary. If the indicator light does not glow when the ignition switch is turned on, either the system has discharged or there is a problem that should be corrected before using the boat.

The green light on the fire extinguisher panel will go off and an alarm will sound if activation should occur during the operation of the boat. You may also hear a rushing air sound as the extinguishing agent discharges.

Typically, the extinguishing agent will shut down the engine when it discharges. If the engine continues to run, it should immediately be shut down manually, provided it is safe to do so. You should also shut off the blower and the main battery switch. The engine can be restarted once the fire extinguishing agent has dissipated from the engine compartment.

When sufficient time has elapsed for the fire to be extinguished and a flashback is no longer possible, find and fix the problem, then activate the battery switch and the engine can be restarted.

Typical Automatic Fire Extinguishing System
In The Engine Compartment

WARNING

IF ACTIVATION SHOULD OCCUR, IMMEDIATELY SHUT DOWN THE ENGINE. TURN OFF ALL ELECTRICAL SYSTEMS, POWERED VENTILATION AND EXTINGUISH ALL SMOKING MATERIALS. DO NOT OPEN THE ENGINE COMPARTMENT HATCH IMMEDIATELY!! THIS FEEDS OXYGEN TO THE FIRE AND FLASH BACK COULD RESULT. ALLOW THE EXTINGUISHING AGENT TO SOAK THE ENGINE COMPARTMENT FOR AT LEAST 15 MINUTES AND WAIT FOR HOT METALS OR FUELS TO COOL BEFORE CAUTIOUSLY INSPECTING FOR CAUSE OR DAMAGE. HAVE AN APPROVED PORTABLE FIRE EXTINGUISHER AT HAND AND READY FOR USE. DO NOT BREATH FUMES OR VAPORS CAUSED BY THE FIRE!!

WARNING

THE OWNER'S MANUAL PROVIDED BY THE FIRE EXTINGUISHING SYSTEM MANUFACTURER SHOULD BE INCLUDED WITH YOUR BOAT. IT IS ESSENTIAL THAT YOU READ THE INFORMATION CAREFULLY AND COMPLETELY UNDERSTAND THE SYSTEM IN THEORY AND OPERATION BEFORE USING YOUR BOAT. IF YOU DID NOT RECEIVE THE FIRE EXTINGUISHING SYSTEM OWNER'S MANUAL, PLEASE CONTACT YOUR DEALER OR THE MONTEREY CUSTOMER SERVICE DEPARTMENT.

Typical First Aid Kit

1.9 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 also should 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.

1.10 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 Beacons) 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 accord-

ing 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.

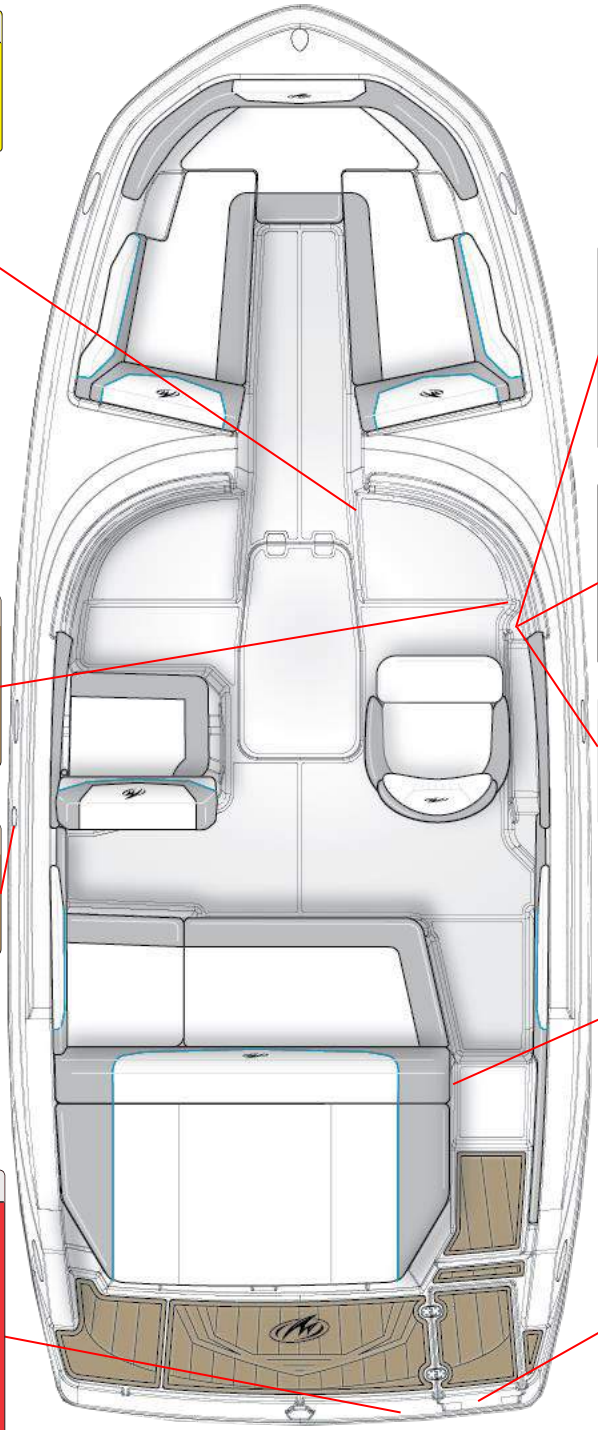
Additional Equipment to Consider:

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

1.11 Caution & 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.

Caution and warning labels must remain legible for the safety of you and your passengers. If a label becomes missing or damaged it must be replaced. Immediately contact your dealer or Monterey Customer Service for a replacement.



CAUTION

TO AVOID INJURY, GLASS DOOR MUST BE SECURED IN A CLOSED AND LOCKED POSITION WHEN BOAT IS UNDERWAY. USE BOTH TURN LOCKS TO SECURE DOOR.

WARNING

GASOLINE VAPORS CAN EXPLODE.
BEFORE STARTING ENGINE:
CHECK ENGINE COMPARTMENT FOR GASOLINE OR VAPORS.
OPERATE BLOWER FOR FOUR MINUTES.
RUN BLOWER BELOW CRUISING SPEED.

WARNING

AVOID SERIOUS INJURY OR DEATH FROM FIRE OR EXPLOSION RESULTING FROM LEAKING FUEL. INSPECT SYSTEM FOR LEAKS AT LEAST ONCE A YEAR.

DANGER

CARBON MONOXIDE (CO) CAN CAUSE BRAIN DAMAGE OR DEATH.

ENGINE AND GENERATOR EXHAUST CONTAINS ODORLESS AND COLORLESS MONOXIDE GAS.

CARBON MONOXIDE WILL BE AROUND THE BACK OF THE BOAT WHEN THE ENGINES OR GENERATORS ARE RUNNING.

MOVE TO FRESH AIR, IF YOU FEEL NAUSEA, HEADACHE, DIZZINESS, OR DROWSINESS.

DANGER

IN THE EVENT OF FIRE, DO NOT OPEN ENGINE HATCH. IMMEDIATELY SHUT DOWN ENGINE, GENERATOR, AND BLOWERS, DISCHARGE ENTIRE CONTENTS OF FIRE EXTINGUISHER THROUGH THE FIRE PORT. AVOID INHALATION OF TOXIC FUMES.

VENTILATE SPACE BEFORE ENTERING.

WARNING

VISIBILITY FROM THE SEATED POSITION AT THIS HELM STATION IS LIMITED. AVOID SERIOUS INJURY OR DEATH FROM COLLISIONS. OPERATION FROM A STANDING POSITION MAY BE NECESSARY TO MAINTAIN A LOOKOUT AS REQUIRED BY USCG NAVIGATION RULES AND COLREG.

WARNING

ROTATING PROPELLER MAY CAUSE SERIOUS INJURY OR DEATH. SHUT OFF ENGINE WHEN NEAR PERSONS IN THE WATER.

WARNING

IN THE EVENT OF A FIRE:
TO KEEP FLAMES CONTAINED, DO NOT OPEN ENGINE COMPARTMENT.
SHUT DOWN ENGINES, GENERATORS, AND BLOWERS.
CONTINUOUSLY DISCHARGE ENTIRE CONTENTS OF PORTABLE FIRE EXTINGUISHER THROUGH FIRE PORT.

WARNING

ROTATING PROPELLER MAY CAUSE SERIOUS INJURY OR DEATH.

DO NOT APPROACH OR USE LADDER WHEN ENGINE IS RUNNING.

2.1 General

Before you start the engine on your Monterey, 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 also should 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. Refer to the Occupant Seating Chart in the appendix section of this manual for the recommended passenger location for various Sport Boat models.

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.

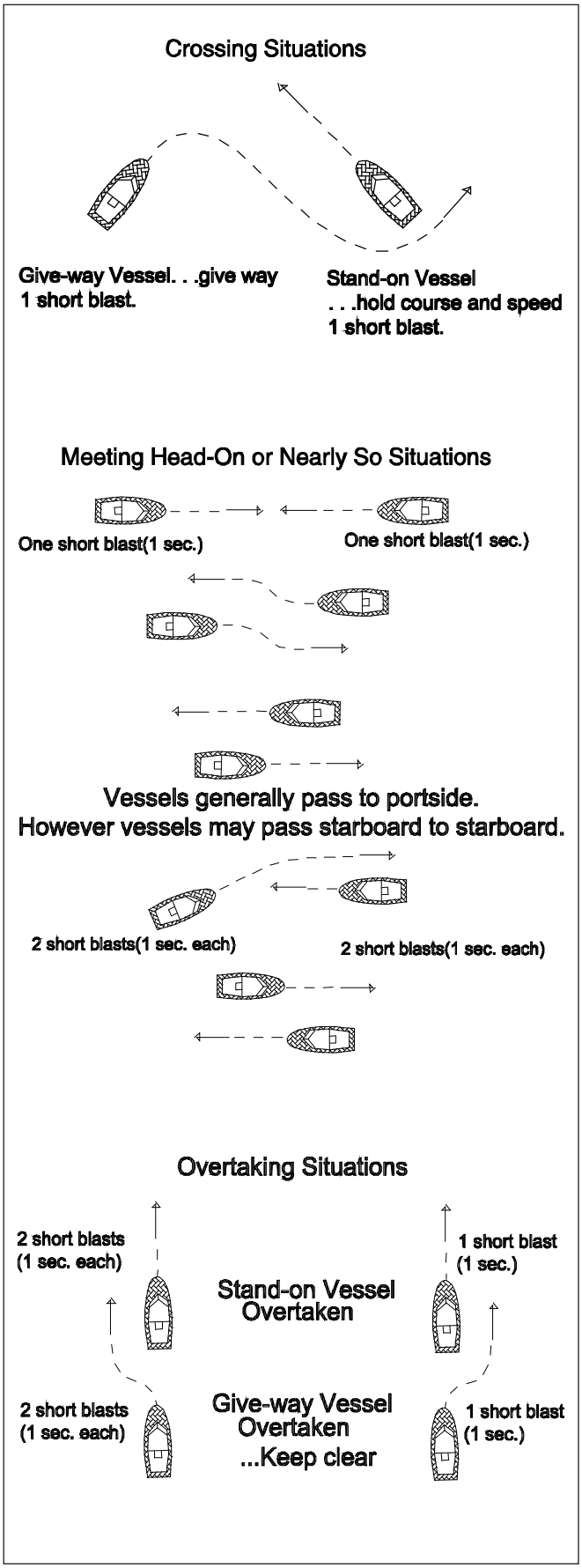
The General Prudential Rule
In obeying the Rules of the Road, due regard must be given to all dangers of navigation and collision, and to any special circumstances, including the limitations of the vessels, which may justify a departure from the rules that is necessary to avoid immediate danger or a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

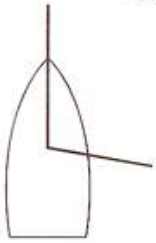


Navigational Aids Chart

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.

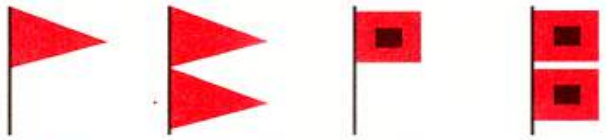
← PORT STARBOARD →



Yield right-of-way to boats in your DANGER ZONE!

DANGER ZONE (Dead ahead to 2 points abaft your starboard beam)

STORM WARNINGS



RED FLAG Small craft (winds to 33 knots)

2 RED FLAGS Gale (winds up to 47 knots)

SQUARE RED FLAG BLACK BOX (Storm)

2 SQUARE RED FLAGS BLACK BOX (Hurricane)

WHISTLE SIGNALS

ONE LONG BLAST: Warning signal (Coming out of slip)

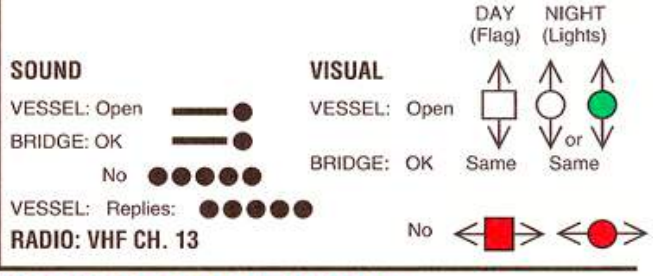
ONE SHORT BLAST: Pass on my port side

TWO SHORT BLASTS: Pass on my starboard side

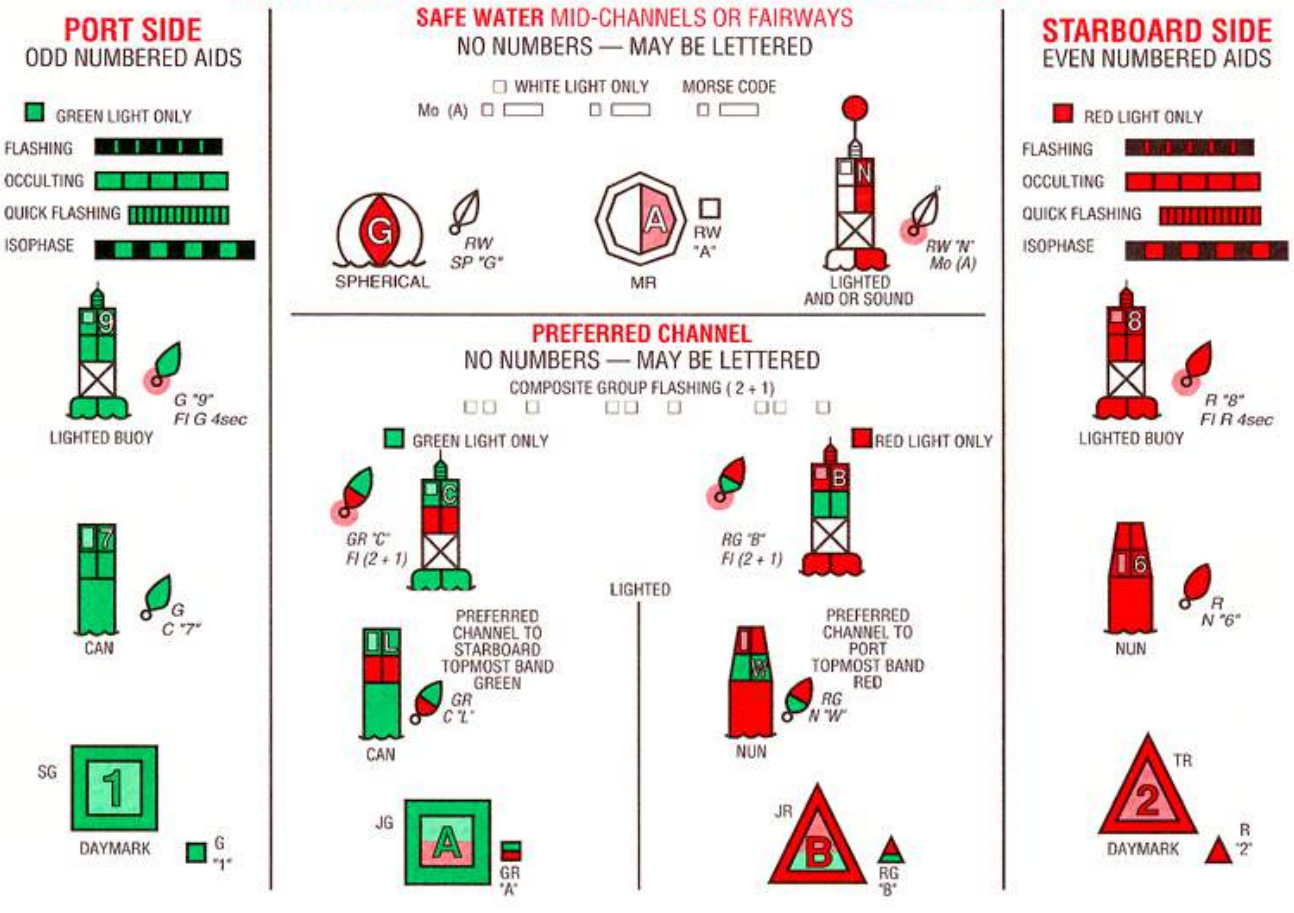
THREE SHORT BLASTS: Engine(s) in reverse

FOUR OR MORE BLASTS: Danger signal

BRIDGE SIGNALS



LATERAL AIDS AS SEEN ENTERING FROM SEAWARD



2.3 Pre-Cruise Check

Before Starting the Engine:

- 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. 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.
- The engine fuel filter should be checked for leaks or corrosion.
- Turn the battery switch 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 switch to make sure the system is working properly.
- Turn on the bilge blower. Check the blower output and operate four (4) minutes before starting the engine. The blower also should be activated when operating below cruising speed.
- Have a tool kit aboard. The kit should include the following basic tools:

Spark plug wrench	Hammer
Spark plug gap gauge	Electrician's tape
Screwdrivers	Offset screwdrivers
Lubricating oil	Pliers
Jackknife	Adjustable wrench
Basic 3/8" ratchet set	Vise grip pliers
Allen wrench 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
Transmission oil	Propellers
Propeller nuts	Fuel filters
Fuel hose and clamps	Wire ties
Engine cooling pump	Hydraulic oil
Impeller Kit	Assorted hose
Clamps	Rags
Steering fluid	Pump & alternator belts

- Make sure all fire extinguishers are in position and in good operating condition.

2.4 Operating Your Boat

After Starting the Engine:

- Check the engine gauges. Make sure they are reading normally.
- Visibly check the engine to be sure there are no apparent water, fuel or oil leaks.
- Check the operation of the engine cooling system by monitoring the temperature gauge frequently until the engine temperature stabilizes at normal operating temperature.

- Check the steering and engine controls for 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 DAMAGE IN YOUR ENGINE. MAKE SURE YOU FOLLOW THE BREAK-IN PROCEDURE EXACTLY.

- Always operate the blower when operating the boat below cruising speed to help cool the engine compartment and remove dangerous fumes.
- 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 Monterey 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 engine. 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 engine 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.

Notice:
If the running gear hits an underwater object, stop the engine. 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 engine to drop to idle speed.
- Make sure the shift lever is in the neutral position.

Notice:
If the engine has been run at high speed for a long period of time, allow the engine to cool down by running it in the idle position for 3 to 5 minutes.

- Turn the ignition key 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.
- 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 pump.
- If you are going to leave the boat for a long period of time, put the battery main switch in the "OFF" position and close all sea cocks.
- Make sure the boat is securely moored.

CAUTION

TO PREVENT DAMAGE TO THE BOAT, CLOSE ALL SEACOCKS BEFORE LEAVING THE BOAT.

2.5 Docking, Anchoring & Mooring

Docking and Dock Lines

Maneuvering the boat near the dock and securing the boat requires 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 operator 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

Approach the dock slowly at a 30 to 40 degree angle. Whenever possible, approach against the wind or current. Turn the outdrive straight & shift to neutral when you feel you have enough momentum to reach the dock. Use reverse on the engine while turning the steering wheel toward the dock to slow the boat and pull the stern toward the dock as the boat approaches. Straighten the outdrive and use the engine 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 at it

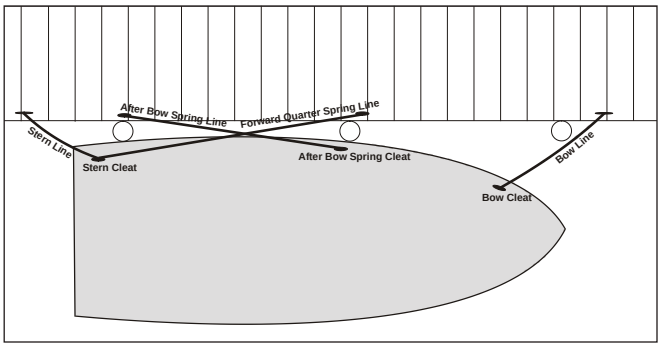
stops. Use fenders to protect the boat while it is docked. Keep the engine running until the lines are secured.

Backing into a Slip
Approach the slip with the stern against the wind or current and the outdrive straight ahead. Use the engine and turn the steering wheel to maneuver the boat into alignment with the slip. Reverse the engine 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 engine in and out of gear or turning the wheel. When nearly in the slip all the way, straighten the outdrive and shift to forward to stop. Keep the engine running until the lines are secured.

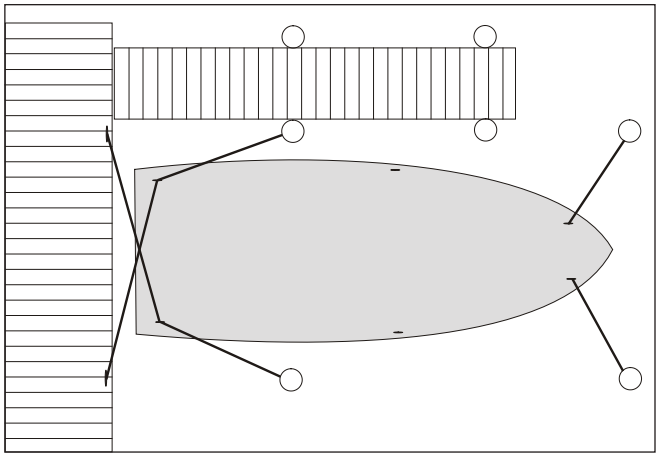
Securing Dock Lines
Securing a boat that is tied along side the dock typically requires a bow and stern line and two spring lines. The bow and stern lines are usually secured to the dock at a 40° angle aft of the stern cleat and forward of the bow cleat. The after bow spring line is secured to the dock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



Securing The Boat Along Side A Dock (Typical)


Securing The Boat In A Slip (Typical)

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 with a boat hook and secure the line. Keep the engine running until the line is secured.

Leaving a Mooring
Start the engine and let it 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 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 if your are anchoring overnight or in rough weather.

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.

WARNING

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

WARNING

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

2.6 Controls, Steering or Propulsion System Failure

If the propulsion, control or steering system fails while you are operating the boat, bring the throttle 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 going into the engine compartment to make repairs. If you are unable to correct the problem, call for help.

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.

2.8 Grounding, Towing & 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, SKI TOW FITTINGS, WAKEBOARD TOWERS AND ARCHES ON MONTEREY BOATS ARE NOT DESIGNED OR INTENDED TO BE USED FOR TOWING PURPOSES. THE CLEATS ARE SPECIFICALLY DESIGNED AS MOORING CLEATS FOR SECURING THE BOAT TO A DOCK, PIER, ETC. THE SKI TOW FITTINGS ARE SPECIFICALLY DESIGNED FOR PULLING WATER SKIERS. 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.

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.

2.9 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 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 bilge pump 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 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 the seal in the lower unit.

2.11 Water Skiing & Wakeboarding

Your boat is equipped for water skiing and wakeboarding. If you have never driven skiers before, you should spend some hours as an observer and learn 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.

Always use high quality tow ropes with attachment loops when pulling wakeboarders or skiers and only attach the tow rope to the ski tow fittings on the transom, arch or wakeboard tower. Never use mooring cleats or grab rails to pull skiers. They are not designed for towing skiers and injury to skiers or passengers and/or damage to the boat could result.

The tow rope should always be attached using the attachment loops and never tied to the ski tow or to any type of metal hook attached to the tow fitting. Tied ski ropes are very difficult to remove and metal hooks will damage the ski tow fitting and the fiberglass around it. Metal hooks also can cause injury to your skiers if the metal hook breaks under the strain of the tow.

When attaching a tow rope using the attachment loops, hold the attachment loop in one hand and pull a length of rope on the handle side of the loop through the loop, creating another 6" loop. Slide the loop just created over the ski tow fitting and pull the handle side of the rope to tighten the loop around the tow fitting. This procedure will

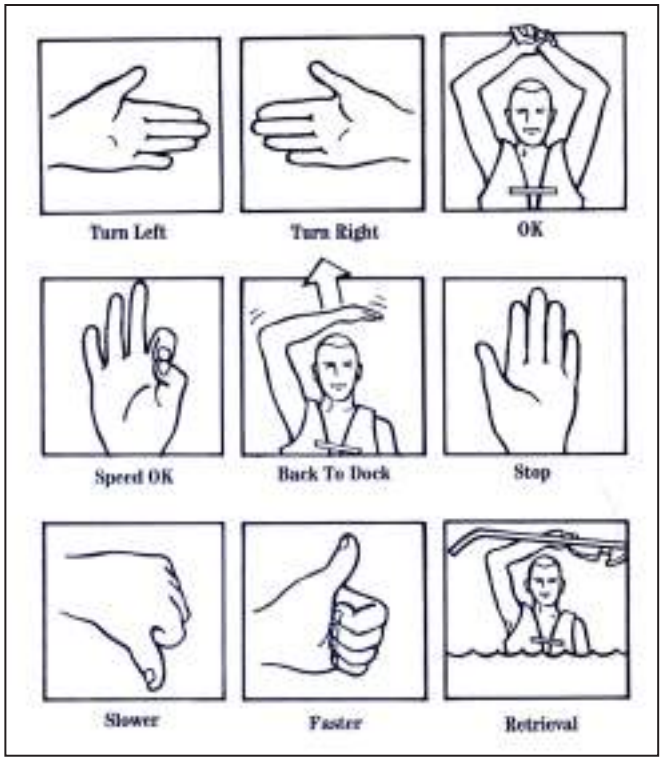
attach the rope securely to the ski tow, be easy to remove and will not come off if the skier or wakeboarder falls.

WARNING

WAKEBOARD TOWERS ARE DESIGNED FOR TOWING WATER SPORTS DEVICES ONLY. DO NOT TOW MORE THAN ONE PERSON AT A TIME FROM A TOWER OR ARCH. IMPROPER USE OR OVERLOADING THE FABRICATION MAY CAUSE DAMAGE TO THE TOWER/ARCH AND/OR BOAT AND COULD IMBALANCE THE BOAT CAUSING HANDLING DIFFICULTIES.

- **DO NOT ALLOW PASSENGERS TO SIT BEHIND THE ROPE ATTACHMENT POINT WHEN THE TOWER/ARCH IS IN USE.**
- **DO NOT ALLOW THE LOOSE END OF A TOW ROPE TO DANGLE FROM THE TOWER/ARCH DOWN INTO THE COCKPIT DURING WATER SPORTS ACTIVITIES.**

FAILURE TO ADHERE TO THESE GUIDELINES MAY CAUSE PERSONAL INJURY OR DEATH TO PASSENGERS.



Common Hand Signals for Water Sports Activities

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’ 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 on board 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 damage. Never use a ski tow line that is questionable.
- 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.
- Some lakes have an approved tow pattern for skiing. Always make sure to follow the pattern on these lakes.
- 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 length.
- 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 downwind 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.
- 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.

2.12 Wake/Teak Surfing

Wake or 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- "Wake 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 wake surfing and the carbon monoxide problem in particular, the Coast Guard has issued a safety alert that strongly advises the public not to engage in wake surfing and warns that the activity may cause carbon monoxide poisoning and even fatalities.

Wake 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 wake surfing.

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

WARNING

WAKE OR TEAK SURFING (HOLDING ONTO THE SWIM PLATFORM WHILE BOAT IS UNDERWAY) IS EXTREMELY DANGEROUS AND CAN CAUSE SEVERE INJURY OR DEATH. WAKE 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 WAKE SURF BEHIND YOUR BOAT OR TO BE IN THE WATER NEAR THE LADDER OR SWIM PLATFORM WHILE THE ENGINE IS RUNNING.

2.13 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. 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 engine 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 Equipment chapter for more information on first aid and requesting emergency medical assistance.

⚠ 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 OR SWIMMERS ARE ATTEMPTING TO BOARD. ALWAYS PROPERLY STORE THE LADDER BEFORE STARTING THE ENGINE.

Typical Capacity Plate (Boats Up To 26 Feet)
Note that the plate shown is for reference purposes only. Always refer to the capacity plate on your boat for actual maximum load capacities and persons.

2.14 Maximum Capacities Plate

Coast Guard rules require boats less than 20 feet (6 meters) to display a gross weight and person-capacity plate provided by the manufacturer.

Boat manufacturers in the National Marine Manufacturers Association (NMMA) program will display a gross weight and person-capacity plate on boats up to 26 feet (7.9 meters).

The person/load capacity is determined by the US Coast Guard. The capacity plate is usually located near the helm in clear view of the operator. The limits indicated on the capacity plate are enforceable by law. Occupant seating charts in the Appendix section show the proper seating position for you and your passengers on boats less than 26 feet (7.9 Meters).

You should never exceed the "U.S. Coast Guard Maximum Capacities" indicated on the capacity plate.

Typical Tandem Axel Trailer

2.15 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.

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

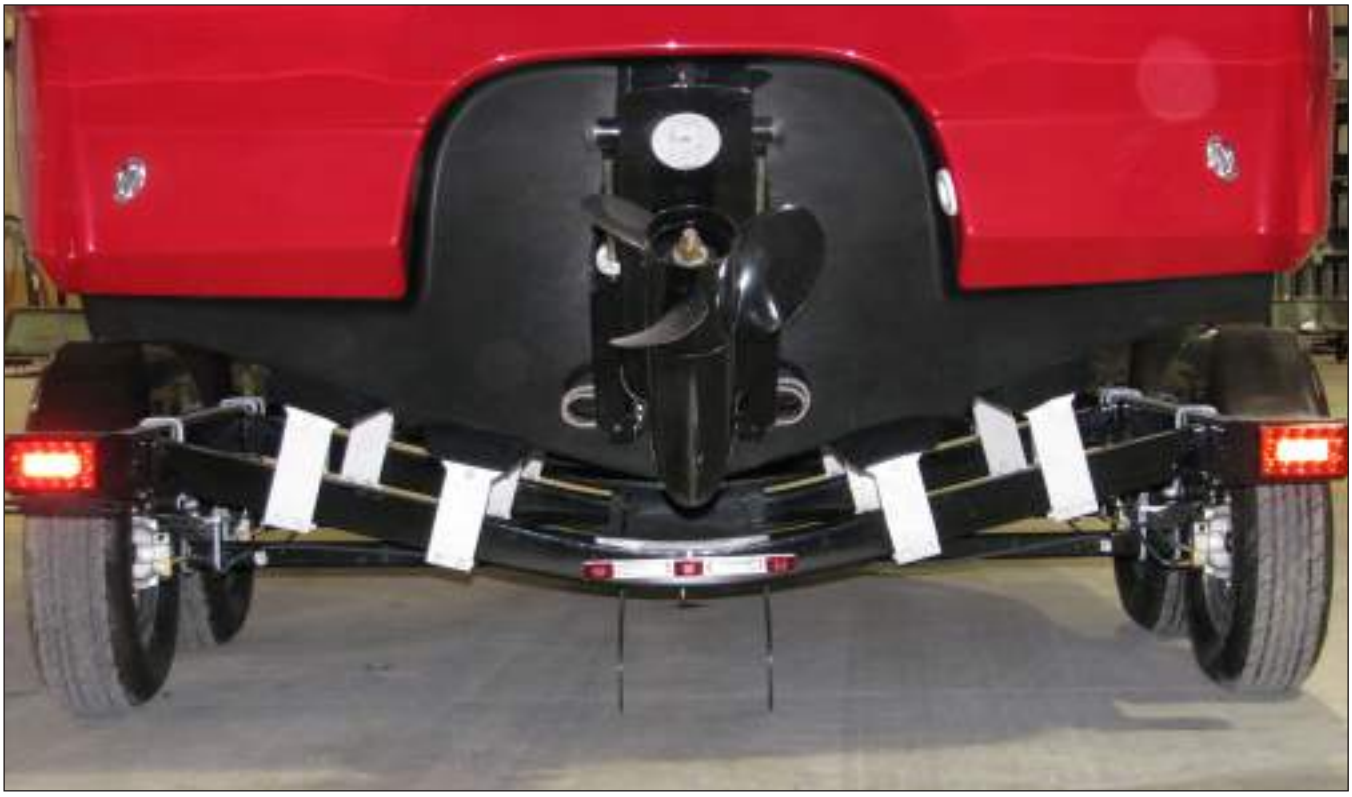
Notice:
Your Monterey is a heavy boat and care must be taken when selecting the trailer. We recommend that you use a bunk style trailer that incorporates long bunks running under and parallel to the stringers to support the hull. Large boats should have additional forward bunks on either side of the keel to support the bow.

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 Monterey Warranty.*

Notice:
Contact your boat or 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, engine and equipment.

- Make sure the trailer bunks properly support the hull and do not put pressure on the lifting strakes. The bunks must be kept in good condition to prevent scratching and gouging of the hull.



Trailer Bunks - Supporting Hull Properly

- 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, fuel and trailer is not more than the gross vehicle weight rating.

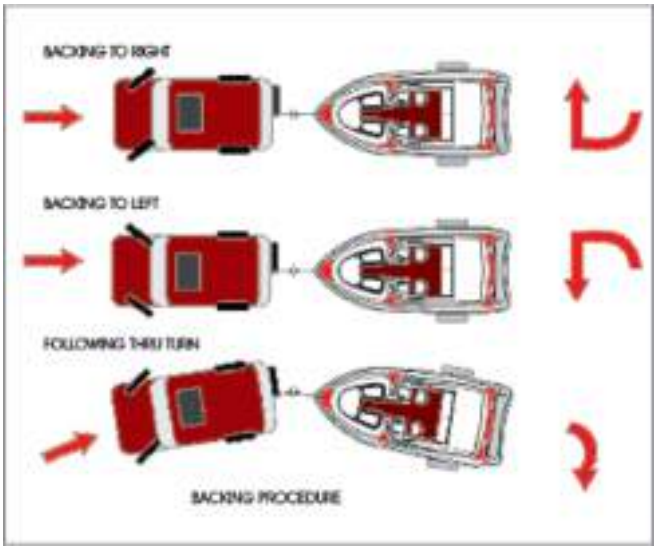
- Make sure the boat is securely fastened on the trailer to prevent movement between the boat and trailer. The bow eye on the boat should be secured to the trailer frame with a rope, chain turnbuckle or rachet strap in addition to the winch cable or strap. Additional straps may be required across the beam of the boat.

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

Bow Seated in Bow Roller with Safety Cable Attached

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 MONTEREY WARRANTY.



Before Going Out On The Highway:

- Side curtains, clear connector, back drop 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.
- If your boat is equipped with a wakeboard tower, make sure the tower is not too high to go under carports and overhangs when the boat is on your trailer. If necessary lower the tower for storage while on the trailer.
- 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. In most states all trailers with gross vehicle weight of over 1500 LBS (680kg) are required to have brakes.
- 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.

NOTES

3.1 General

Your boat is designed to be powered with a single inboard engine and outdrive system. Each manufacturer of the various drive systems 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 engine and drive system. 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, then returned to the respective engine manufacturer as soon as possible.

WARNING

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

3.2 Inboard Engine Drive Systems

The inboard engine is mounted in the stern and coupled to a transom mounted outdrive which does all shifting, steering and propulsion functions. The outdrive is supplied by the engine manufacturer and has specific lubrication and maintenance requirements.

Proper engine alignment is very important. This was done by the factory when the engine was installed and should be checked once per season with Volvo engines and once every three years with Mercruiser engines thereafter. If you experience excessive vibrations or suspect that the engine is out of alignment, please contact your Monterey dealer.

Marine growth and galvanic corrosion is a concern if the boat is to be kept in the water. 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

Typical Mercruiser Gas Engine

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. If the boat is to be left in saltwater, the hull and outdrive must be protected with antifouling paint. It is extremely important that the proper antifouling paint is used on each component. Contact your Monterey dealer for information on the proper paint to use in your area.

Drive System Corrosion

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. Outdrives are equipped with sacrificial anodes to prevent galvanic corrosion problems. The anodes must be monitored and replaced as necessary.

On some outdrives, the standard anodes may not provide an acceptable level of protection when a drive is used in fresh water and a magnesium anode must be used. A magnesium anode, when used for combined operation in both fresh and saltwater, or water with a low salt content, will deteriorate quicker and must therefore be replaced more often. For recommendations regarding cor-

rosion protection for the engine or outdrive, please refer to the engine owner's manual.

CAUTION

SOME OUTDRIVES REQUIRE SPECIAL ANODES FOR FRESH WATER AND A DIFFERENT TYPE OF ANODE FOR SALTWATER TO PROTECT THE DRIVE FROM GALVANIC CORROSION. CONTACT THE ENGINE MANUFACTURER OR YOUR MONTEREY DEALER FOR THE PROPER ANODE TO USE IN YOUR BOATING AREA.

CAUTION

MANY ANTIFOULING PAINTS DESIGNED FOR BOAT HULLS CAN CAUSE SEVERE DAMAGE TO THE OUTDRIVE. DO NOT PAINT THE OUTDRIVE OR ALLOW IT TO COME IN CONTACT WITH ANTIFOULING PAINTS DESIGNED FOR BOAT HULLS. CONTACT YOUR MONTEREY DEALER OR ENGINE MANUFACTURER FOR INFORMATION ON THE PROPER PAINTING PROCEDURES.

Inboard Engine Exhaust System

Inboard engines use the exhaust system to expel exhaust gases and cooling water. Exhaust exits the rear of the boat through the exhaust system. The system consists of engine exhaust manifolds, exhaust hoses and the outdrive.

A periodic inspection of the coolant hoses, exhaust hoses and related parts should be made to ensure that leaks, heat deterioration or damage has not resulted. Replace them as necessary. Refer to the engine owner's manual for more information on the exhaust system in your boat.

WARNING

DO NOT INHALE EXHAUST FUMES! EXHAUST CONTAINS CARBON MONOXIDE THAT IS COLORLESS AND ODORLESS. CARBON MONOXIDE IS A DANGEROUS GAS THAT IS POTENTIALLY LETHAL.

Inboard Engine Cooling System

All marine engines use surface water as a cooling medium. The cooling water enters the system through a water intake in the outdrive and is expelled through the exhaust system. Water is pumped through the water inlets, circulated through the engine block or heat exchanger, and relinquished with the exhaust gases through the outdrive or thru-hull exhaust system.

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.

CAUTION

RUNNING THE ENGINE WITHOUT WATER FLOWING TO THE WATER PUMP CAN CAUSE SERIOUS DAMAGE TO THE WATER PUMP IMPELLER OR ENGINE. NEVER RUN THE MOTOR WITHOUT WATER FLOWING TO THE WATER PUMP.

Notice:
If the boat is used in salt or badly polluted water, engines without fresh water cooling should be flushed after each use. Refer to the engine owner's manual for the proper engine flushing procedure.

Fresh Water Cooling (Optional on some Inboard engines)

Your boat could be equipped with a fresh water cooling system. Installation of a "Fresh Water" or Closed" cooling system that is cooled by a heat exchanger and the seawater cooling system provides adequate engine cooling without exposing the internal engine cooling system to the harmful effects of surface water. This system is optional with the engine on your boat. The engine owner's manual provides additional information regarding service and maintenance of this equipment.

CAUTION

A RUPTURED COOLING OR EXHAUST HOSE CAN CAUSE SEVERE ENGINE DAMAGE OR ALLOW A LARGE AMOUNT OF WATER TO FLOW INTO THE BILGE. SHOULD AN ENGINE INTAKE, EXHAUST OR COOLING HOSE RUPTURE, TURN THE ENGINE OFF IMMEDIATELY. PROCEED UNDER TOW IF NECESSARY, TO A SERVICE FACILITY FOR APPROPRIATE REPAIRS. MAINTAIN A CLOSE VISUAL WATCH ON THE PROBLEM HOSE AND THE BILGE WATER LEVEL.

3.3 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 recommended range, the propeller or dual propellers (some outdrive models) must be changed to prevent loss of performance and possible engine damage.

The engine can be damaged and the warranty voided if the boat is not propped correctly. Always consult your Monterey or authorized engine service dealer when making changes to the propeller(s) or if the boat does not run near the top recommended RPM.

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

Notice:
Before changing a propeller or 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.

- The addition of heavy equipment like excessive gear, additional coolers, etc., will cause additional load on the engine. Consequently, a different propeller or dual propellers may be required.
- 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 propeller, there is a good chance the propeller or propellers is not the problem.
- Boats operated at high altitudes (above 2000 feet). Engines operated at high altitudes will not be able to develop as much horse power as they do at or near sea level. Consequently, a different propeller or propellers may be required.

Typical Mercruiser Bravo III Dual SS Propellers

Typical Mercruiser Aluminum Propeller

3.4 Propellers

Inboard outdrives can be equipped with a single propeller or dual, counter rotating propellers that convert the engine's power into thrust, depending on engine and outdrive selected for your boat.

Propellers come in a variety of styles, diameters and pitches. Pitch is the theoretical distance traveled by the propeller in each revolution.

The propeller(s) that will best suit the normal needs of your boat will depend somewhat on your application and expected average load. Propeller sizes are identified by a number or code stamped on the prop. 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 drive gear assembly.

Refer to the outdrive owner's manual for specific information on propellers and the proper installation procedure.

3.5 Helm and Engine Instrumentation

The helm station is equipped with a set of engine instruments and alarms. These instruments allow the operator to monitor the engine operational conditions. Close observation of these instruments allows the operator to operate the engine at the most efficient level and could save the engine from serious costly damage. The instrumentation is unique to the boat model and type of engine installed in your boat.

Some or all of the following gauges and instruments may be present.

Tachometer

The tachometer displays the speed of the engine in revolutions per minute (RPM). This speed is not the boat speed nor necessarily the speed of the propeller(s). The tachometer may not register zero with the key in the "OFF" position.

Most tachometers have an LCD screen that digitally displays data for specific engine systems and for functions of some optional equipment. Keys on each side of the display allow the operator to scroll through the available data monitored by the display. The functions monitored will vary depending on the engine model and other optional equipment installed on your boat.

Tachometer features are unique to the tachometer and engine installed in your boat. A quick reference guide that provides information and instructions for most tachometer and engine applications used in sport boat models is located in the Appendix section of this manual.

Contact your dealer if you need assistance with the operation and features for the tachometer in your boat.

Digital LED Display Screen In Tachometer

Some or all of the following data could be available on the tachometer LCD display:

- Time of day
- Total engine hours
- Engine speed (RPM)
- Vessel speed
- Oil pressure
- Engine coolant temperature
- Engine water pressure
- Battery voltage
- Fuel level in tank
- Fuel consumption
- Outdrive trim position
- Outdrive steering position
- Depth
- Air temperature
- Water temperature
- Compass heading

Notice:
On some tachometers, Mercruiser inboard engines broadcast a "SERVICE ENGINE SOON" message on the digital display when the ignition is turned to the "ON" position. This message is required as part of the EPA emissions check routines. This is normal operation for Mercruiser engines and does not indicate a problem with the tachometer. Volvo engines do not display this message on the tachometer because this function is covered by the Volvo 2.5" display. Contact your dealer for additional information on tachometer or other digital displays and messages.

Speedometer

CAUTION

MAINTAINING MAXIMUM, OR CLOSE TO MAXIMUM RPM FOR EXTENDED PERIODS CAN REDUCE THE LIFE OF THE ENGINE. NEVER EXCEED THE MAXIMUM RECOMMENDED OPERATION RPM OF THE ENGINE.

Speedometer

The speedometer indicates the speed of the boat in miles per hour. Most speedometers measure the water pressure against a small hole in a pickup tube located in the outdrive lower unit.

Temperature Gauge
The temperature gauge indicates the temperature of the engine cooling system. A sudden increase in the temperature could signal a blocked cooling passage or a water pump malfunction

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.

Oil Pressure Gauge
The oil pressure gauge monitors engine lubrication system pressure. The oil pressure indicated when the engine is new is usually the reference for normal oil pressure for that engine. A drop in oil pressure is a possible indication of oil pump problems, a leak or fuel diluted oil.

Fuel Gauge
The fuel gauge indicates the amount of fuel in the fuel tank. This gauge is merely a relative indication of the available fuel supply and not a calibrated instrument.

Voltmeter
The voltmeter displays the voltage for the battery and the charging system. The normal voltage is 11 to 12.5 volts with the engine off, and 13 to 14.5 volts with the engine running.

Hour Meter
The hour meter keeps a record of the operating time for the engine. The hour meter is normally located in the tachometer.

Tilt/Trim Gauge
The tilt/trim gauge monitors the position of the outdrive. 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. Please refer to the Helm Control Systems chapter and the engine owner's manual for more information on the operation of the power tilt and trim.

Typical Backlit Multi Gauge
Fuel Level, Engine Temperature, Voltage & Oil Pressure

Tilt/Trim Gauge

Depth Gauge (Optional)
The Depth gauge indicates the depth of the water below the bottom of the boat. The gauge is equipped with a shallow water alarm. The alarm will sound at a depth preset by the operator.

Depth Gauge

Fuel Management (Optional)
Fuel management systems are optional and could be installed on your boat as part of the engine monitoring system. On most engines, the fuel management gauge is built into the tachometer digital 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, refer to the engine or fuel management manual for information on that system.

Engine Alarm
Inboard 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 engine.

If an engine alarm sounds, immediately shut off the engine, if safe to do so, until the problem is found and corrected.

Compass
The compass is on top of the console. To adjust the compass for your area, read the instructions on "Compass Compensation" given to you in the literature packet. The compass cannot be adjusted accurately at the factory because 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 are installed and before operating the boat.

Typical Compass

Instrument Maintenance
Electrical protection for the engine instruments and ignition circuitry is provided by circuit breakers located on the engine. The navigational electronics are protected by the electronics breaker in helm breaker panel. The ignition switch and instrument wire connectors should be sprayed periodically with a contact cleaner/lubricant. The ignition switch 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.

NOTES

4.1 General

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

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 engine and options selected. The following description is typical of most cable and electronic remote controls. Refer to the engine or control manual for specific information on the controls installed on your Boat.

Cable Engine Controls

Cable engine throttle and shift control systems consists of three major components: the control handle, the throttle cable, and the shift cable. The cables are all the push-pull type. Two cables are required for each engine and control. One connects the remote throttle control to the engine and the other connects the remote shift control to the drive shift linkage.

The helm is designed for a side mount control with a single lever that operates as a gear shift and a throttle. General operation will include a position for neutral (straight up and down), 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.

Typical Mercruiser Side Mount
Cable Control & Stop Switch

Typical Volvo Side Mount
Cable Control & Stop Switch

Electronic Engine Controls

Electronic engine controls are optional on most single engine boats. The shift and throttle control features may vary depending on the engine used. The following control description is typical of most side mount electronic control installations.

The helm is designed for a side mount control with a single lever that operates as a gear shift and a throttle. The electronic control system consists of three major components: the electronic control head, the control processors and applicable wire harnesses. Controls are completely electronic and there are no cables.

Movement of the control handle sends a signal to the control processor in the engine compartment that operates the engine throttle and shift control servos. General operation will include a position for neutral (straight up and down or slightly aft of vertical), 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 lever is equipped with adjustable control head detent and friction settings.

Switches built into the control or control handle are used by the operator to select available features. The most common features activated by control switches are:

- Starter lockout, which prevents the engine from being started in gear.
- Gear lockout (throttle only), which allows the engine RPM to be advanced in neutral safely.
- Engine Start/Stop button that can be used to start or stop the engine.
- Battery voltage warning indicator that warns the operator of high or low voltage supplied to the system (audible alarm)

Typical Mercruiser Side Mount
Electronic Control & Stop Switch

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 engine, drive system and other options installed on your boat. ***It is essential that you read the owner's manual for the control system and be completely familiar with its operation before using your boat.***

CAUTION

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

4.3 Engine Stop Switch

Most boats are equipped with an engine stop switch and lanyard at the helm. When the lanyard is pulled it will engage the switch and shut off the engine. We strongly recommend that the lanyard be attached to the driver whenever the engine is running. If the 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 engine.

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

Mercruiser Control,
Emergency Stop Switch & Lanyard

4.4 Neutral Safety Switch

Every control system has a neutral safety switch. This device prohibits the engine from being started while the control lever is in any position other than the neutral position. If the engine will not start, slight movement of the control lever may be necessary to locate the neutral position and disengage the safety cutout switch. Control system adjustments may be required to correct this condition, should it persist. See your Monterey dealer for necessary control and cable adjustments.

Neutral safety switches should be tested periodically to ensure that they are operating properly. To test the neutral safety switch, make sure the outdrive is tilted down and move the control lever to the forward position with the engine off. ***Make sure the control lever and throttle are set to the idle position.*** Activate the starter switch just long enough to briefly engage the starter. ***Do not hold the starter switch in the start position long enough to start the engine.***

Notice
Mercury DTS and Volvo EVC systems are equipped with a computer controlled start feature that will keep the starter engaged until the engine starts if the neutral safety switch fails and allows the starter to engage.

The starter should not engage. Repeat this test with the control lever in reverse and the engine throttle at idle. Again, the starter should not engage. If the starter engages with the control lever 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 technician before using your boat. If the 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 ENGINE IN GEAR WITH THE THROTTLE ABOVE IDLE IF THE NEUTRAL SAFETY SWITCH IS NOT OPERATING PROPERLY. THIS WILL 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.

4.5 Outdrive Power Tilt and Trim

All inboard/outboard drive systems have a tilt and trim feature for the engine or outdrive. This allows the operator to control the position of each drive unit from the helm. Moving the outdrive or engine closer to the boat transom is called trimming "in" or "down." Moving the outdrive or engine further away from the boat transom is called trimming "out" or "up." In most cases, the boat will run best with the drive unit adjusted so the hull runs at a 3 to 5 degree angle to the water.

Typically, a switch on the control lever grip activates the tilt/trim. The term "trim" generally refers to the adjustment of the outdrive 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 outdrive 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.

The maximum trim angle for the outdrive is preset at the factory. If necessary, the maximum trim angle can be adjusted by your Monterey dealer.

⚠ WARNING ⚠

EXCESSIVE TRIM FOR THE OPERATING CONDITIONS, EITHER TRIM UP OR DOWN, CAN CAUSE BOAT INSTABILITY, PROPELLER CAVITATION, OR MAKE STEERING THE BOAT MORE DIFFICULT. IF THE BOAT BEGINS TO FEEL UNSTABLE OR IS HARD TO STEER, SLOW DOWN AND ADJUST THE TRIM ANGLE.

Mercruiser Single Engine Electronic Control Tilt/Trim Switch

4.6 Steering System

Inboard powered boats are equipped with power assisted cable steering. All steering systems are equipped with a tilt steering wheel at the helm. The steering wheel can be tilted to five different positions by activating the tilt lock lever located on the bottom side of the steering wheel mounting bezel. When the lever is released, it automatically locks the steering wheel at or close to the selected angle.

Inboard Engine Hydraulic Assist Steering

Power assisted cable steering is standard equipment on single engine boats powered by Mercruiser and Volvo engines. Turning the steering wheel moves the gears in the helm, pushing or pulling the cable assembly and turning the outdrive. An

Typical Tilt Steering Wheel & Tilt Release Lever

engine driven hydraulic power steering pump and cylinder assist the cable steering, which reduces the effort required to turn the boat.

An oil reservoir near the engine hydraulic pump allows for easy system fluid check and fill. It is important that the fluid level in the reservoir be checked frequently and maintained at or near the maximum level. Only use hydraulic fluid recommended by the engine manufacturer.

Refer to the engine manufacturer owner's manuals for specific information on the operation and maintenance for the steering system.

4.7 Control Systems Maintenance

Cable Engine Control Maintenance

Periodic inspection of the control systems and all connections should be made. Signs of rust, corrosion, wear, or other deterioration should be serviced immediately. 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 adjustment becomes necessary, see your Monterey dealer.

WARNING

IMPROPERLY ADJUSTED ENGINE CONTROLS CAN CAUSE LOSS OF CONTROL AND SEVERE ENGINE OR DRIVE UNIT DAMAGE. DO NOT ATTEMPT CONTROL SYSTEM ADJUSTMENTS UNLESS YOU ARE FAMILIAR WITH CONTROL SYSTEM SERVICING PROCEDURES.

Power Assisted Steering System Maintenance

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

The transom area in the engine compartment should be checked for leakage around the outdrive. Also check for wires, hoses and cables that may be rubbing against the steering cylinder or tiller arm.

It is also important make sure there are no wires or cables secured to the steering cable near the power steering cylinder. The cable is attached to the power steering cylinder control valve and must be free to move slightly to activate the valve. Hard or erratic steering is an indication that the steering cable is not moving freely.

Generally, periodic lubrication of all moving parts and connections with a light waterproof grease is in order. Failure to do so could lead to steering system failure that would result in loss of control.

Inboard engine driven power assist steering systems have specific fluid and maintenance requirements. The fluid level and belt tension should be checked frequently. Refer to the engine manufacturer's owner's manual for fluid specifications and maintenance instructions for hydraulic assisted steering systems.

Outdrive Lubrication

Please refer to the engine owner's manual for maintenance and lubrication instructions for the outdrive.

NOTES

5.1 Fuel System

General

The Gasoline fuel system used in Monterey boats sold in the United States is designed to meet or exceed the emission control standards of the Environmental Protection Agency (EPA) and 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.

Notice:
This boat is equipped with an EPA compliant fuel system. Do not alter or bypass any of the components that are installed. See your dealer for any fuel related service.

Boats sold internationally (all countries other than the United States and Canada) are equipped with fuel systems that are not equipped with U.S. EPA required emission controls but do 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.

Notice:
Beginning with 2016 models, all boats sold in Canada will be equipped with fuel systems designed to meet or exceed emission control standards of the USA EPA. These boats are certified for use in Canadian waters by the Canadian government.

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.

Typical Keyless Fuel Fill

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 NOTICED, SHUT OFF ALL ENGINE 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.

Fuel Withdrawal Tube

The fuel withdrawal tube is 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 withdrawal.

Fuel Gauge

This indicates the amount of fuel in the tank. Due to the mechanical nature of the fuel sender and fuel tank shapes, 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 and Vent System - U.S. Fuel Systems

In order to comply with U.S. EPA emission regulations, boats sold in the United States are equipped with special fuel systems that do not vent directly to the atmosphere. The system is equipped with a "keyless" fuel cap located on the port gunnel that is marked with a fuel pump insignia. The fill cap is not vented and the fill system is completely sealed when the cap is closed.

There is a fuel tank vent built into the fuel fill. Another vent equipped with vapor emission control components in the hull side provides ventilation for the tank when the fuel fill system is sealed. While the tank is being filled, most air displaced by the fuel escapes through the fuel fill vent. The fuel fill and vent system are designed such that an automatic shutoff valve in the marina fuel pump will stop the flow before fuel can be ejected into the vent system when the tank is full. You should never attempt to "top off" the tank after the pump shutoff valve has activated. This could force fuel into the vent system and damage emission control components.

The fuel fill cap is opened by turning the cap counter clockwise until it can be removed. After refueling, replace the fill cap and tighten until it clicks, indicating that the cap has been properly closed and the fill system is sealed. Wash the areas around the fuel fill if any fuel splashed on the deck or hull during filling operations. Residual fuel left on the deck and hull sides can be dangerous and will yellow the fiberglass or damage the striping.

Be sure to use the proper type and grade fuel. Refer to the engine owner's manual for additional information.

Fuel Fill - International Fuel Systems

Boats sold in countries other than the United States are not equipped with sealed fuel fill systems or vapor emission control components. The fuel tank is vented through the fill fitting and cap. A "keyless" fuel cap is located on the port gunnel that is marked with a fuel pump insignia. The fuel fill cap is designed to seal out water and allow the fuel tank to vent to the atmosphere when the cap is installed and tight.

The fuel fill is opened by turning the cap counter clockwise until it can be removed. After fueling, install the fuel cap and tighten. Be sure to use the proper type and grade fuel. Refer to the engine owner's manual for additional information.

Notice:
Do not overtighten the fuel cap on boats with international fuel systems. If the cap is overtightened, the O-ring seal could be damaged allowing water to contaminate the fuel system.

WARNING

DO NOT CONFUSE FUEL FILL DECK PLATES WITH THE WATER OR WASTE FILL DECK PLATES. THESE PLATES ARE ALSO 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 MONTEREY CUSTOMER SERVICE DEPARTMENT FOR ASSISTANCE IN HAVING THE FUEL PROFESSIONALLY REMOVED.

Fuel Vent - U.S. Fuel Systems

In order to comply with U.S. EPA regulations, the fuel tank is equipped with a special vent located on the hull side and vent system emission control components. A carbon filled canister in the vent hose between the fuel tank and the vent absorbs fuel vapors before they can escape to the atmosphere and returns them to the fuel tank.

Carbon canisters can be damaged if they are repeatedly exposed to liquid fuel. Special valves in the vent system and the automatic shutoff valve on marina fuel pumps prevent the tank from being overfilled and forcing fuel into the vent system. You should never attempt to "top off" the tank after the pump shutoff has activated. This could force fuel into the vent system that can damage the carbon canister or other components.

Fuel Vent - International Fuel Systems

Boats sold in countries other than the United States are equipped with fuel tank vent systems incorporated into the fuel fill. The fuel fill cap is designed seal out water and allow the fuel tank to

vent to the atmosphere when the cap is installed and tight.

While the tank is being filled, the air displaced by the fuel escapes through the vent and fuel fill. When the tank is full, a small amount of fuel could be ejected from the fuel fill/vent.

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

5.2 Engine Fuel Delivery System

The fuel system on your boat has one fuel tank. The Fuel withdrawal line is equipped with an anti-siphon valve where the line attaches to the fuel tank. This valve prevents gasoline from siphoning out of the fuel tank should a line rupture.

WARNING

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

Fuel Filter

Each gasoline engine is equipped with a fuel filter on the engine. Some engines are equipped with a spin on, water separator type fuel filter located on the engine. Other engines are equipped with fuel filters that are integrated into the fuel injection pump system.

Spin on fuel filters should be checked frequently and changed as recommended by the engine manufacturer to assure an adequate supply of clean, dry fuel to the engine.

Typical Inboard Spin On Engine Fuel Filter

Filters integrated into the fuel injection pump system require special service procedures. These filters must be serviced at regular intervals by a qualified technician.

Always refer to the engine manufacturer owner's manual for service intervals and instructions for servicing or replacing the fuel filters.

WARNING

BEFORE STARTING THE ENGINE, ALWAYS OPEN ALL HATCHES, WINDOWS, AND DOORS AND RUN THE BLOWER FOR AT LEAST FOUR (4) MINUTES TO COMPLETELY VENTILATE THE BOAT AFTER SERVICING THE FUEL SYSTEM.

5.3 Fueling Instructions

Boats sold in the United States are built with fuel systems designed to meet emission control standards established by the U.S. Environmental Protection Agency. Boat sold internationally (all countries other than the United States) are built with fuel system that are not equipped with U.S. EPA required emission controls.

The fueling procedure is somewhat different for each fuel system design. Consequently, fueling instructions in this section that are specific to each type of fuel system are identified as being for either boats with U.S. fuel systems or boats with international fuel systems. Procedures for preparing the boat for fueling at a marina and preparing the boat for operation when fueling is completed are the same for both fuel systems. Make sure to the follow the correct fueling procedure for the system installed in your boat.

DANGER

FUEL IS VERY FLAMMABLE AND THE VAPORS CAN EXPLODE. 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 TANK NEAR OPEN FLAMES.

WARNING

TO PREVENT DAMAGE TO THE FUEL SYSTEM, USE ONLY A GOOD GRADE OF GASOLINE. DO NOT USE A FUEL THAT CONTAINS HARSH ADDITIVES OR MORE THAN A 10% ETHANOL ALCOHOL BLEND. ANY DAMAGE DONE TO THE FUEL SYSTEM THAT IS THE RESULT OF USE OF A HIGHER ALCOHOL BLEND IS NOT COVERED BY THE MONTEREY WARRANTY. REFER TO THE ENGINE MANUFACTURER OWNER'S MANUAL REGARDING FUEL REQUIREMENTS FOR YOUR ENGINE.

Preparing the Boat for Fueling - All Boats

Use the following procedure to prepare the boat for fueling at a marina fuel pump:

- Make sure the boat is securely moored and all engines are off.
- Make sure all switches are in the OFF position.
- Make sure all passengers leave the boat.
- Close all doors and hatches and make sure the blower is off to prevent fuel fumes from entering the engine compartment.

WARNING

GASOLINE FUEL VAPORS THAT ACCUMULATE IN THE BILGE OR ENGINE COMPARTMENT WHILE FUELING CAN EXPLODE!! FUEL VAPORS ARE HEAVIER THAN AIR AND CAN ACCUMULATE IF THEY ARE CARRIED BY THE WIND INTO THE BILGE AND ENGINE COMPARTMENT THROUGH OPEN DOORS, HATCHES OR VENTS. VAPORS CAN ALSO BE DRAWN INTO THE ENGINE COMPARTMENT BY THE BLOWER. ALWAYS TURN THE BILGE BLOWER OFF AND CLOSE DOORS AND HATCHES BEFORE FUELING.

- Estimate how much fuel is needed and avoid overfilling the fuel tank.

WARNING

STATIC ELECTRICITY GENERATED BY FLOWING FUEL CAN CAUSE A FIRE OR EXPLOSION. TO PREVENT STATIC SPARKS WHEN FILLING THE TANK, MAKE SURE THE NOZZLE IS ALWAYS IN CONTACT WITH THE FUEL FILL OPENING.

Fueling Boats Instructions For Boats Sold in the United States.

In order to comply with U.S. EPA emission regulations, boats sold in the United States are equipped with special fuel systems that prevent fuel vapors from entering the atmosphere when fueling operations are complete.

These fuel systems meet U.S. EPA emission standards and are designed to maintain a specific air space at the top of the fuel tank that provides proper tank ventilation and protection for emission control components. Special valves in the fuel tank vent system, the fuel fill and a shutoff valve in marina fuel pump nozzles are designed to automatically stop the fuel flow when the tank is full and maintain this air space.

Notice
When the fuel tank is full, the shutoff valve in the marina fuel pump will activate and automatically shut off the flow, indicating that the tank is filled to the maximum level. You should stop filling the tank at this point and never attempt to "top off" the tank. Attempting to "top off" the tank could damage fuel level control valves or force fuel into the vent system which could damage vapor emission control components.

To fill the fuel tank on boats with vapor emission control systems, follow this procedure:

- The fuel cap is designed to be opened by hand and does not require a key. Turn the cap counterclockwise to remove it for fueling.
- Make sure the nozzle is equipped with an automatic shutoff valve. Then put the nozzle in the fuel fill opening and make sure it stays in contact with the fuel fill fitting during the entire fueling operation.
- Fill the tank until the shutoff valve clicks and automatically stops the fuel flow.
- Remove the nozzle.
- Install the fuel cap and tighten until the cap clicks, indicating that the cap is tight and the system is sealed.

Fueling Boats with International Fuel Systems

Boats sold in countries other than the United States are not equipped with sealed fuel fill systems or vapor emission control components. The fuel tank is vented to the atmosphere through the fill fitting and cap. Consequently, the fueling process for boats equipped with international fuel systems is somewhat different than for boats sold in the United States.

Notice:
When the fuel tank is full, some fuel will surge out through the fuel fill/vent. The fuel tank vent is built into the fuel fill fitting located on the gunnel. Monitor the vent/fill closely while fueling to prevent fuel from spilling into the water.

To fill the fuel tank on boats with international fuel systems, follow this procedure:

- The fuel cap is designed to be opened by hand and does not require a key. Turn the cap counterclockwise to remove it for fueling.
- Put the nozzle in the fuel fill opening and make sure it stays in contact with the fuel fill fitting during the entire fueling operation.
- Fill the tank slightly less than the rated capacity to avoid spilling fuel out of the vent/ fuel fill and to allow for expansion.
- Remove the nozzle.
- Install and tighten the fuel cap. Make sure you don't overtighten the fuel cap and damage the O-ring seal.

WARNING

SPILLED FUEL CAN CAUSE A FIRE OR AN EXPLOSION. MAKE SURE YOU DO NOT SPILL ANY FUEL. IF A SMALL AMOUNT OF FUEL IS SPILLED ON THE FIBERGLASS, USE A CLOTH TO REMOVE THE FUEL AND PROPERLY DISPOSE OF THE CONTAMINATED CLOTH. IF FUEL IS SPILLED ON THE WATER, EXERCISE EXTREME CAUTION. FUEL FLOATS ON THE SURFACE OF THE WATER AND CAN IGNITE. IF FUEL IS SPILLED INTO THE WATER, IMMEDIATELY EVACUATE THE AREA AND NOTIFY THE MARINA AND THE PROPER OFFICIALS.

Preparing the Boat for Operation - All Boats

Use the following procedure to prepare the boat for operation when fuel operations are complete:

- Open all hatches, windows and doors. **Run the blower for at least four minutes to completely ventilate the boat.**
- Check the fuel compartment and below the deck for fuel odors. If you smell fuel, do not start the engine.

DANGER

GASOLINE FUEL VAPORS THAT ACCUMULATE IN COCKPIT COMPARTMENTS OR THE ENGINE COMPARTMENT WHILE FUELING CAN EXPLODE!! TO REDUCE THE RISK OF A FIRE AND/OR EXPLOSION AFTER FILLING THE FUEL SYSTEM, ALWAYS RUN THE BLOWER FOR AT LEAST FOUR (4) MINUTES AND OPEN ALL HATCHES, WINDOWS, AND DOORS TO COMPLETELY VENTILATE THE BOAT BEFORE STARTING THE ENGINE.

5.4 Fuel System Maintenance

Periodically inspect all connections, clamps and hoses for leakage and damage or deterioration. Replace as necessary. Spray the valves, tank fuel gauge sender 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 should be replaced immediately if there is any sign of damage or deterioration.

Contaminated fuel may cause serious damage to your engine. The filters must be checked for water and other contamination frequently. Gasoline engine filters must be changed at least once each year or more frequently depending on the type of engine and the quality of the fuel. Refer to the engine manufacturer's instructions for information on servicing and replacing the fuel filter elements.

The age of gasoline can affect 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.

WARNING

LEAKING FUEL IS DANGEROUS AND CAN CAUSE A FIRE AND/OR EXPLOSION. DO NOT DRAIN ANY FUEL INTO THE BILGE.

AFTER THE FILTER ELEMENT HAS BEEN CHANGED, PRIME THE FUEL SYSTEM AND CHECK ALL FITTINGS FOR LEAKS BEFORE AND AFTER STARTING THE ENGINE FOLLOWING ANY FUEL SYSTEM SERVICE.

WARNING

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

WARNING

BEFORE STARTING THE ENGINE, ALWAYS OPEN ALL HATCHES AND DOORS. THEN RUN THE BLOWER FOR AT LEAST FOUR (4) MINUTES TO COMPLETELY VENTILATE THE BOAT AFTER SERVICING THE FUEL SYSTEM.

DANGER

AVOID SERIOUS INJURY OR DEATH FROM FIRE OR EXPLOSION RESULTING FROM LEAKING FUEL, INSPECT SYSTEM FOR LEAKS AT LEAST ONCE A YEAR. DO NOT DRAIN ANY FUEL INTO THE BILGE.

6.1 General

Your Monterey is equipped with a 12 volt DC electrical system. M22 models could also be equipped with an optional 120 volt AC battery charging system. The battery charger draws 120 volt AC current directly from a shore power outlet at dockside. The DC system draws current from on board batteries.

Most boat and engine charging systems are designed for 12 volt, lead acid wet cell, absorbed glass mat (AGM) or gel cell marine batteries. Most wet cell batteries will require similar maintenance as those in automobiles. AGM, gel cell and some wet cell batteries are sealed and require no maintenance except to periodically clean battery tops, terminal posts and connections.

All wires in the electrical system 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.

Battery Location In Storage Compartment

6.2 12 Volt DC Battery Systems

The 12 volt electrical system is a standard marine system. One battery with an ON/OFF switch is standard equipment. The battery is located in the rear of the stern storage compartment and charged by the engine or optional battery charger when hooked to shore power. Power to the boat is controlled by an ON/OFF battery switch in the battery switch panel located below the stern seat.

Circuit Protection

All 12 volt power is distributed to the 12 volt accessories through individual circuit breakers located in the 12 volt breaker panels. A main circuit breaker, located in the battery switch panel, protects the system from an overload. Other circuit breakers in the battery switch panel protect the circuits for the bilge pump, optional amplifier and ignition. Most 12 volt accessories are operated directly by switches in the helm accessory switch panels or separate accessory switch panels.

Main breakers located on the engine protect the ignition, engine charging system and gauges. Some 12 volt accessories are operated directly by a circuit breaker in the breaker panels while others are operated by a switch fed by the panel breakers. Most of the 12 volt accessories on the deck and in the cockpit are operated by switches in the helm switch panel.

Batteries and Battery Switch

The DC electrical system on your boat is designed for wet cell, absorbed glass mat (AGM) or gel cell marine batteries supplied by your dealer. It is important that you know the type of battery in your boat and that the engine charging system and optional battery charger are set to recharge this battery. Charging systems not set to the proper battery type could cause unusually short battery life, engine starting problems and damage to the DC charging systems.

Your boat has provision for one battery. It should be of the size and capacity recommended by the manufacturer of your engine. See the engine owner's manual for more information on battery requirements. These specifications should be considered to be the minimum size battery required. The battery was installed by your dealer. Always consult your dealer before changing the type of battery in your boat or if you have questions regarding the battery and charging system.

Battery Switch & Circuit Breakers

Battery Switch
The battery switch feeds the engine and the 12 volt accessory panels. It has two positions, OFF & ON. When the battery switch is ON, the engine and accessory circuits are activated simultaneously and current flows from the battery to the engine, accessories and electronics. When the switch is OFF, the engine and all DC circuits are deactivated except for the automatic bilge pump switch, which remains activated.

The battery switch should be turned to the OFF position when leaving the boat unattended.

Notice:
Current is supplied to the automatic switch for the bilge pump, optional electronic corrosion controller, electronic engine control memory and stereo memory when the battery is connected and the battery switch is OFF.

Typical Helm Rocker Switches

6.3 12 volt Accessory Switch Panels

The main accessory switch panels and the engine start switch are located at the helm. The panels are equipped with rocker switches that are labeled for the accessories they control. An LED light built into most switches indicates that the circuit is activated. Each circuit is protected by individual "push to reset" circuit breakers located in a panel in the helm below the switches.

Helm Switch Activated Accessories

The following is a description of the accessories typically controlled by the helm switch panels. Some of the accessories described in this section are model specific or optional equipment on some models and may not be installed or available on your boat.

Ignition Switch

The ignition switch is a key activated switch located in the helm near the steering wheel which starts and stops the engine. The switch has OFF-ON and momentary START positions. To start the engine, make sure the outdrive is down and your hand is on the engine control handle in the neutral position. Turn the ignition key to the START position. When the engine starts, release the key and the switch will automatically go to the run position. Stop the engine by turning the key to the OFF position. The ignition circuits are protected by a breaker located in the battery switch circuit breaker panel and main breakers located on the engine.

Nav/Anchor Lights

The switch is a three-position switch. 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.

Typical Ignition Switch

Blower

This switch supplies electrical current to the blower that provides ventilation to the engine compartment.

WARNING

GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING THE INBOARD ENGINE, OPERATE THE BLOWER ON FOR FOUR (4) MINUTES. OPEN THE ENGINE COMPARTMENT HATCH, INSPECT THE FUEL SYSTEM AND CHECK FOR THE ODOR OF GASOLINE VAPORS. ALWAYS OPERATE THE BLOWER WHILE THE ENGINE IS OPERATING BELOW CRUISE SPEED. UNDER NO CIRCUMSTANCES SHOULD THIS PROCEDURE BE OVERLOOKED.

Bilge Pump
Manually activates the aft bilge pump which is installed in the bilge just forward of the engine. The pump moves water out through the thru-hull fitting in the hull. To start the pump, place the switch in the ON position.

Notice:
The bilge pump will start automatically when there is sufficient water in the bilge to activate the electronic water level switch built into the pump. The automatic switch is protected by a circuit breaker located in the battery switch panel and is always supplied current when the battery is connected. Refer to the Drainage Systems chapter for more information on the bilge pump system.

Engine Data
A momentary switch that toggles through available engine data that displays on the tachometer LCD data screen on some models.

Cockpit Lights
Activates the lights that illuminate the cockpit and bow seating area.

Docking Lights
Activates the docking lights in the bow.

Water System
Reserved for additional 12 volt equipment.

Horn
Activates the boat horn.

Typical Stern Engine Trim & Tilt Switch

6.4 Additional Accessory Switches, Switch Panels & Control Panels

Additional switch panels are located in various locations in the helm, cockpit and head compartment. The following is a description of additional panels that may be on your boat and the accessories they control. Some of the accessories described in this section are model specific or optional equipment on some models and may not be installed or available on your boat.

Engine Trim and Tilt Switch
Located in the helm. This switch is usually installed in the engine control handle. It controls the trimming and tilting of the outdrive. 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 switch.

Stern Engine Trim and Tilt Switch (Optional)
Located on starboard side near the swim platform. It allows the operator to tilt the outdrive at the rear of the boat for trailering and shallow water situations. It controls the tilting of the outdrive or engine only when the engine is shutdown. It will not operate while the engine is running or when the ignition switch is ON.

WARNING

KEEP HANDS AND FEET AWAY FROM DRIVE UNIT WHEN TILTING.

Helm Stereo Control Pad
Located in the helm. Controls the stereo. Refer to the stereo owner's manual for details on operating the stereo control pad.

Stern Mount Stereo Control Pad (Optional)
Located in the stern above the swim platform near the aft seat. Controls the stereo. Refer to the stereo owner's manual for details on operating the stereo control pad.

Automatic Fire Extinguisher Indicator Panel
The panel is equipped with a light that indicates the status of the automatic fire extinguishing system that is optional on inboard powered boats. When the green light is lit, it indicates the system is charged and ready. If the green light is not lit, the system has discharged.

If the system discharges, the fire extinguishing agent will shut down the engine, which can be restarted once the fire extinguishing agent has dissipated from the engine compartment. Refer to the Automatic Fire Extinguishing System in the Safety Equipment chapter and the manufacturer's owner's manual for more information on the operation of the automatic fire extinguishing system.

12 volt Receptacle
Provides electrical current for portable 12 volt equipment. Some models are equipped with two 12 volt accessory plugs. One in the helm panel near the accessory switches and one in the rear of the cockpit.

MP3 Connection
Provides an input for MP3 players to connect to the boat stereo system. Some models are equipped with more than one 12 volt accessory plug. One is usually in the helm panel near the accessory switches and others could be located in the cockpit or in the cabin.

Helm Stereo Control Pad

Typical Fire Extinguisher Panel In Helm

Battery Switch Panel & Circuit Breakers

6.5 Circuit Breaker Panels

Power is distributed to most of the 12 volt accessories through individual circuit breakers located in the DC breaker panels. The following is a description of circuit breaker panels and the accessories they control. Some accessory circuit protection described in this section is optional equipment.

Circuit Breaker Panels

There are two DC breaker panels, the battery switch breaker panel and the accessory breaker panel located below the helm. A main breaker located in the battery switch panel protects the system from an overload. Some 12 volt accessories are operated directly by the circuit breaker in the panels while others are operated by switches fed by the panel breakers.

Battery Switch Panel Circuit Breakers

The following is a description of the accessories controlled by the "push to reset" breakers in the battery switch panel.

Main
The primary circuit for the helm circuit breaker panel is protected and powered by this circuit breaker. Other circuit breakers located in the helm DC breaker panel protect the individual DC circuits. This "push to reset" breaker is supplied current when the battery switch is activated.

Amplifier (Optional)
A "push to reset" circuit breaker that provides protection and power for the stereo amplifier for the boat speaker system. This breaker is supplied current when the battery switch is activated.

Bilge Pump
Provides protection and power for the bilge pump. This "push to reset" breaker is always supplied current when the battery is connected. Another breaker in the helm DC breaker panel provides circuit protection for the manual switch.

Ignition
Provides protection and continuous power for the computer memory for the engine. This "push to reset" breaker is always supplied current when the battery is connected.

Helm Accessory Circuit Breaker Panel

The accessory breaker panel is located below the helm. The following is a description of the accessories protected by the "push to reset" breakers in the accessory breaker panel:

Horn
Provides protection and electrical current to the switch that activates the horn.

12V Recept
Provides protection and electrical current directly to the 12 volt accessory plugs in the cockpit.

Blower
Provides protection and electrical current to the switch that activates the bilge blower in the engine compartment.

Nav/Anc
Provides protection and electrical current to the switch that activates the navigation lights.

Cockpit Lights
Provides protection and electrical current to the switch that activates the cockpit lights.

Stereo
Provides protection and electrical current to the stereo located in the compartment on the starboard side of the cockpit.

Docking Lights
Provides protection and electrical current to the switch that activates the docking lights.

Water System
Reserved for additional 12 volt equipment.

ACCY
Reserved for additional 12 volt equipment.

Helm Circuit Breaker Panel

Circuit Breakers

6.6 Additional Circuit Breakers & Fuses

Engine Main Breakers
The primary circuits for the engine are protected by heavy duty, "push to reset" breakers on the engine. They are supplied power whenever the engine battery switch is on. Refer to the engine owner's manual for information on the location and operation of the engine circuit breakers.

6.7 AC Battery Charging System

General

A 120 volt AC battery charging system is an available option on M22 models.

The battery charging system is fed 120 volt AC current by a power cable connected to a shore side outlet and the shore power inlet located in the stern above the swim platform. It is wired totally separate from the 12 volt DC system and automatically charges the battery when connected.

Notice:
The power cord used for the battery charger is not equipped with lock rings on the shore side or boat connector plugs. The battery charger has integrated reverse polarity protection and the circuit is not equipped with a reverse polarity light.

DANGER

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 AND THE SHORE POWER INLET 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 SHORE POWER SHOULD BE DISCONNECTED UNTIL THE NECESSARY REPAIRS ARE COMPLETED.

ELECTRICAL SHOCKS FROM 120 VOLT CIRCUITS CAN CAUSE SEVERE INJURY OR DEATH. 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.

Recommended Procedure For Making a Shore Connection

If the dockside outlet includes a circuit breaker, turn it to the OFF position. To avoid strain on the cable make sure it has more slack than the mooring lines. Dress the cable so that it cannot be damaged by chafing between the boat and the dock. Make sure the cable does not come in contact with the water. Then connect the cable in the plug inlet making sure the connection plug includes a three-prong plug with a ground wire. Turn the dockside circuit breaker on and check that the battery charger is operating properly. If the battery charger is not working, turn off the shore breaker and remove the cable. Contact your dealer or a qualified electrician to find and correct the problem.

WARNING

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

KEEP CHILDREN AWAY FROM ANY ELECTRICAL CABLES OR EQUIPMENT.

WARNING

UNDETECTED FAULTS IN THE AC BATTERY CHARGING 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 BATTERY CHARGING SYSTEM IS ACTIVATED BY THE SHORE POWER CONNECTION.

Disconnecting procedure for shore power connection

Turn the circuit 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 inlet cap. Store cable.

Battery Charger

A battery charger mounted in the engine or battery compartment is optional equipment on M22 models. AC electrical current is supplied directly to the battery charger by the shore power cable. The battery charger automatically charges and maintains the 12 volt battery when activated. It is equipped with led lights to indicate the state of charge for each battery.

Charging for the battery also can be monitored by using the voltmeter in the engine gauge cluster. With the charger activated, turn the ignition key switch for the engine to the ON position. DO NOT START THE ENGINE. Then read the voltage on the volt meter. If the battery is in good condition and charging properly, the voltmeter 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 switch OFF immediately after monitoring is complete.

The wire that supplies DC charging current to the battery is protected by an internal fuse in the battery charger and an external fuse on the output wire near the battery. The external fuses protects the DC charging circuit from the battery to the charger. The internal fuse in the charger protects the DC charging circuit from the charger to the battery. See the battery charger manual for more information.

6.8 Bonding System

Your outdrive is equipped with a bonding system that interconnects all underwater metal hardware to ensure that they are of the same electrical potential. Anodes are attached to outdrive components that are below the waterline.

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 the anodes when they have deteriorated to 50-75% of their original size.

6.9 Electrical System Maintenance

At least once a year, spray all exposed electrical components behind the helm, in the stern bilge area and in plugs with a protector. Removable 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.

Notice:
Most LED light fixtures are sealed and not serviceable.

CAUTION

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.

Check all below deck wiring to be sure it is properly supported, that the insulation is in good condition 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 a battery that was supplied by your dealer. Some batteries are sealed, AGM or maintenance free wet cell batteries that do not require inspection or service. However, if your boat is equipped with a standard wet cell type battery that is not maintenance free, it will require the following inspection and service.

Check the electrolyte level in the battery regularly and add distilled water as necessary. If the battery is frequently charged by an automatic battery charger, the electrolyte level will have to be checked more often. The correct fluid level in the cells is approximately 1/4 to 1/2 inch above the plates. If fluid is needed, fill to the proper level with distilled water. Do not over fill and only use distilled water.

Keep all 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 on all batteries 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 engine.

WARNING

NEVER USE AN OPEN FLAME IN THE BATTERY STORAGE AREA. AVOID STRIKING SPARKS NEAR THE BATTERY. A BATTERY CAN EXPLODE IF A FLAME OR SPARK IGNITES THE HYDROGEN GAS THE BATTERY EMITS WHILE BEING CHARGED.

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.

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.

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.

WARNING

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.

7.1 General

Most water in the cockpit area is drained by gravity to the bilge and where it is pumped overboard by the bilge pump. The rear drain rails for the engine hatch and rear compartments drain by gravity to overboard thru-hull fittings in the hull sides. You should 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.

7.2 Bilge Drainage

Bilge Pump

The stern bilge pump is activated both manually by a switch in the helm switch panel and automatically by an electronic water level switch built into the pump. The automatic switch remains activated when the battery switch is in the "OFF" position and the batteries are connected. The circuit is protected by a "push to reset" circuit breaker in the battery switch panel. The manual switch in the helm switch panel is supplied current when the battery switch is activated.

The bilge pump pumps water out of a thru-hull fitting located above the waterline in the rear hull side. See Electrical Systems for additional information on bilge pump operation.

The manual bilge pump switch should be activated briefly each time the boat is used. This will ensure that the pump is operating properly and increase the service life of the pump. The automatic switch should be manually activated periodically by touching and holding the test button on the side of the pump for five seconds to verify operation. This is particularly important before operating the boat offshore.

Typical Automatic Bilge Pump

Automatic Bilge Pump Test Button
Hold for 5 Seconds or until Pump Activates

Bilge Drain Plug Fitting

When the boat is out of the water, the bilge can be drained by a thru-hull drain located in the hull in the transom. 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.

WARNING

A LOOSE DRAIN PLUG WILL ALLOW SEAWATER TO ENTER THE BILGE AND COULD CAUSE THE BOAT TO SINK. IT IS VERY IMPORTANT TO CHECK THE DRAIN PLUG FREQUENTLY TO ENSURE IT IS PROPERLY TIGHTENED.

Notice:
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.

CAUTION

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.

Bilge Drain Plug Fitting

Cockpit Drain Fittings

7.3 Cockpit and Deck Drains

Cockpit and Engine Compartment

Water is drained from the cockpit to the bilge by drains fittings located in the rear of the cockpit.

Water is channeled away from all hatches by a gutter or drain rail system. The water then drains to the bilge where it is pumped overboard by the bilge pump system.

Above Deck Cockpit Storage Compartments

The storage box located below the cockpit lounge seat is drained by gravity to the cockpit deck or to the bilge.

Bow Seat Storage Compartments

The bow seat storage compartments are equipped with drain fittings that drain by gravity to the bilge.

Below Deck Cockpit Storage compartment

The storage compartment below the cockpit drains to the bilge.

Rope Locker Drain

The rope locker drains to the bilge. It is important to inspect the drain frequently to remove any accumulated debris.

Platform Ladder Compartment Drain

The storage compartment for the ladder drains overboard through a fitting in the transom.

7.4 Drainage System Maintenance

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

- Clean the engine compartment and cockpit deck drain rails with a hose to remove debris that can block water drainage.
- Clean the bilge pump strainer of debris and check the bilge for foreign material that can cause the automatic switch to malfunction.
- Frequently test the automatic bilge pump switch for proper operation. This is accomplished by touching and holding the test button on the side of the pump for five seconds to verify operation. You can also use a garden hose to raise the water level in the bilge until the it is high enough to activate the pump.
- Flush all gravity drains with fresh water to keep them clean and free flowing.

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

Notice:
Never use harsh chemical drain cleaners in marine drain systems. Permanent damage to the hoses and fittings may result.

Notice:
See Electrical Systems for additional information on bilge pump operation.

NOTES

8.1 Windshield & Cockpit Ventilation

Ventilation to the cockpit and access to the bow seating area is provided by the opening center windshield panel. The windshield center section is opened by releasing the twist lock latches on the inside of the windshield. A magnetic stop on the deck automatically secures the windshield section in the open position. To close the windshield panel, pull on the bottom of the panel until the magnetic latch releases. Then close the panel and secure it with the twist locks. Make sure the center section is properly secured in the open or closed position before cruising.

Opening Windshield Panel

CAUTION

USE CAUTION WHEN OPENING CENTER WINDSHIELD PANEL. THE MAGNET THAT HOLDS THE PANEL OPEN IS VERY POWERFUL AND COULD CAUSE INJURY OR DAMAGE TO VESSEL.

TO AVOID INJURY, THE CENTER WINDSHIELD SECTION MUST BE SECURED IN THE OPEN OR CLOSED POSITION WHEN THE VESSEL IS IN MOTION. MAKE SURE TO USE BOTH LOCKS WHEN SECURING THE WINDSHIELD SECTION IN THE CLOSED POSITION.

Opening Windshield Panel Twist Lock Latches

8.2 Engine Compartment Ventilation

All Monterey inboard boats are equipped with an engine compartment ventilation system consisting of intake ducts, exhaust ducts and an exhaust blower. The ventilation system is designed to meet or exceed the requirements of the United States Coast Guard in effect at the time of manufacture and removes fuel vapors and excess heat from the engine compartment.

Free Air System

A flow of air into the engine compartment is provided by two vents located in the stern below the sun pad and just forward of the swim platform. Exhaust ventilation designed into the vents provides a flow of air out of the compartment. The exhaust areas of the vents have ducts that reach to the lower part of the engine compartment. This provides adequate air movement while operating at or near cruise speeds.

Engine Compartment Vents

The vents are designed with special baffles that prevent seawater or spray from entering the engine compartment while providing adequate air movement for the engine.

Forced Ventilation

An electric blower provides ventilation to the engine compartment prior to start up and while operating below cruise speed. The blower is activated by a switch at the helm. The blower is located in the engine compartment exhaust vent hose. When activated, it will remove bilge fumes through the exhaust vent. Refer to the Electrical Systems chapter for more information on blower operation.

Bilge Blower

DANGER

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

WARNING

ALWAYS RUN THE EXHAUST BLOWER WHEN OPERATING THE BOAT BELOW CRUISE SPEEDS TO ENSURE ADEQUATE VENTILATION AND COOLING OF THE ENGINE COMPARTMENT.

WARNING

OBSTRUCTING THE VENTILATION SYSTEM WILL RESTRICT AIR IN AND OUT OF THE ENGINE COMPARTMENT. DO NOT OBSTRUCT OR MODIFY THE VENTILATION SYSTEM.

8.3 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.
- Periodic inspection and cleaning of the engine compartment ventilation ducts is necessary to ensure adequate air circulation. A buildup of leaves, twigs, or other debris can severely reduce ventilation. It also is important to be sure that the drains in the vent baffles are open to prevent excessive sea water from accumulating in the vents and overflowing into the engine compartment.
- Bilge blowers are permanently lubricated and require no maintenance. Blower operation can and should be tested by placing a hand over the exhaust vents. Do not rely on the sound of the blowers. A substantial amount of air should be exhausted by the blower. Frequently check the intake vents for obstructions, preferably before each cruise.

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

9.1 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. 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.

Retractable cleats are optional. They are 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.

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

WARNING

MONTEREY 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.

Retractable Cleat

Anchor/Rope Locker

Anchor/Rope Locker

The anchor/rope locker is in the bow of the boat and accessed through a hatch in the deck. The anchor line is always stored in the locker and there is an eye fitting to secure the bitter end of the line. Always make sure the rope locker and deck hatch are closed and properly latched before getting underway.

If the anchor is stored in the anchor/rope locker, it must be properly secured to prevent it from bouncing in the locker and causing damage to the hull or anchor locker. The anchor locker is designed for one fluke style anchor that is properly secured in the locker. Do not store additional anchors or any heavy object in the anchor locker. Spare anchors and heavy objects will bounce and damage the hull or locker if they are stored in the anchor/rope locker. Always store and secure additional anchors and heavy objects in a storage compartment in the cockpit, as far aft as possible.

CAUTION

A LOOSE ANCHOR IN THE ANCHOR/ROPE LOCKER WILL BOUNCE AND CAN DAMAGE THE BOAT. THE ANCHOR MUST BE POSITIONED SO IT DOES NOT REST DIRECTLY AGAINST THE HULL SIDES AND BE PROPERLY SECURED AT ALL TIMES WHEN IT IS STORED IN THE LOCKER. DAMAGE RESULTING FROM THE ANCHOR BOUNCING IN THE ANCHOR/ROPE LOCKER IS NOT COVERED BY THE MONTEREY WARRANTY.

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

Windshield

Your boat is equipped with a heavy duty aluminum windshield with tinted glass. The center windshield section opens to provide ventilation and access to the bow seating area.

Opening Windshield Panel

The section is opened by releasing the twist lock latches on the inside of the windshield. A magnetic stop on the deck automatically secures the windshield section in the open position. To close the windshield panel, pull on the bottom of the panel until the magnetic stop releases. Then close the panel and secure it with the latches. Make sure the center section is properly secured in the open or closed position before cruising.

Opening Windshield Panel Twist Lock Latches

CAUTION

USE CAUTION WHEN OPENING WINDSHIELD WALKTHROUGH. THIS MAGNET IS VERY POWERFUL AND COULD CAUSE INJURY OR DAMAGE TO VESSEL

TO AVOID INJURY, THE CENTER WINDSHIELD SECTION MUST BE SECURED IN THE OPEN OR CLOSED POSITION WHEN THE VESSEL IS IN MOTION. MAKE SURE TO USE BOTH LATCHES WHEN SECURING THE WINDSHIELD SECTION IN THE CLOSED POSITION.

If the boat is operated in saltwater, the windshield should be washed after each use with soap and water to keep it clean. Saltwater allowed to remain on the windshield frame will eventually begin to attack the aluminum and cause corrosion, usually around fasteners and hardware mounted to the windshield. Snaps or any hardware mounted to the windshield must be properly sealed and isolated with caulk or Teflon sealer to prevent salty moisture and galvanic corrosion from damaging the frame. Poor maintenance or improperly mounted hardware and snaps can void the warranty on the windshield.

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

9.2 Hull

Swim Platform and Stern Ladder

Your boat is equipped with an integral, fiberglass swim platform located in the stern of the boat. The standard swim platform is equipped with a gelcoat non-skid surface. A synthetic teak (SeaDek) inlay is optional. The synthetic teak surface is maintenance free other than routine cleaning.

Swim Platform

A telescoping boarding ladder is recessed into a compartment in the swim platform below a hatch. The compartment is drained overboard to a thru-hull fitting below the platform. To use the ladder, make sure the engine is off and the steering wheel is turned straight ahead or slightly to port to move the propeller as far away from the ladder location as possible. Open the hatch and rotate the ladder out of the recess to the down position. Release the strap securing the steps and pull the bottom step to extend the ladder. The ladder must be retracted and folded into the recess before starting the engine.

⚠ WARNING ⚠

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

Boarding Ladder In Compartment

Unassisted Boarding Situations

When using the swim platform ladder in an unassisted boarding situation in deep water, hold the swim platform and brace your feet against the transom for stability. Then open the ladder hatch and rotate the ladder out of the recess to the down position with your free hand. Hold the side rail of the ladder for stability, then release the strap securing the ladder in the retracted position. Use your free hand and feet to extend the ladder. Use the ladder side rails for stability while boarding. Remember to retract the ladder and fold it into the recess before starting the engine.

Boarding Ladder Deployed

Transom Ski Tow

A stainless steel ski tow fitting is mounted to the center of the swim platform above the outdrive. The tow fitting is designed for pulling one or two averaged sized skiers or wakeboarders.

Always use high quality tow ropes with attachment loops when pulling wakeboarders or skiers. The tow rope should always be attached using the attachment loops and never tied to the ski tow or to any type of metal hook. Tied ski ropes are very difficult to remove and metal hooks will damage the ski tow and the fiberglass around it. Metal hooks can also cause injury to your skiers if the hook breaks under the strain of the tow.

When attaching a tow rope using the attachment loops, hold the attachment loop in one hand and pull a length of rope on the handle side of the loop through the loop, creating another 6” loop. Slide the loop just created over the ski tow fitting and pull the handle side of the rope to tighten the loop around the tow fitting. This procedure will attach the rope securely to the ski tow, be easy to remove and will not come off if the skier or wakeboarder falls.

Refer to Water Skiing in the Operation chapter for safety information on operating the boat with a skier.

Transom Ski Tow

Ski Tow Pylon (Optional)

A removable ski tow pylon that mounts in a flush base in the center of the swim platform is available as optional equipment. The pylon is stored in special brackets located in the stern storage compartment when it is not being used.

To use the ski tow pylon, insert it into the base. Then push down firmly and rotate clockwise to secure the pylon to the base. When skiing or wakeboarding operations are completed, remove and properly stow the pylon.

Optional Ski Tow Pylon

Ski Tow Pylon & Base

The tow pylon is designed for pulling one or two averaged sized skiers or wakeboarders. Refer to the Transom Ski Tow in this section for additional information on ski tow ropes and attaching them to the pylon.

Ski Tow Pylon Stored

Docking Lights (Optional)

Located at the bow. These lights provide lighting forward of the bow while docking or maneuvering in tight quarters at night. They are activated by the Docking Lights switch in the helm switch panel and should only be used during docking, mooring or anchoring situations. Never use docking lights while cruising. They are not legal for night navigation and may obstruct the visibility of the bow navigation lights to oncoming vessels.

9.3 Cockpit

General

Some of the hatches and doors in the cockpit are secured with special flush mounted, twist lock latches with handles that store flush in the latch. Others are secured with push to close latches. Gas charged springs are used on some hatches that help raise the hatches and hold them in the open position.

The latch handles on the twist lock latches can be stored in the open or secured positions. There is a red dot in the handle that indicates that the latch is in the open position and the hatch is not secure. Always make sure the hatches are closed with the latches in the secured position before operating the boat above idle speed.

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. MOST DOORS AND HATCHES ARE EQUIPPED WITH SPECIAL FASTENERS, HATCH LIFTERS, OR SNAPS AND/OR 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.

Unlatched

Latched


M20 Engine Access Hatch & Storage Compartment

Seat Cushion Friction Latches

Some seat cushions and other components are secured with special friction latches. These latches are equipped with a notched male fitting that seats in a rubber female receiver. These latches require a firm upward pull to release and a firm downward push to latch.

Cockpit Carpet (Optional)

Cockpit carpet is an available option. The carpet is custom made to each model and includes snaps in the carpet and cockpit sole. For the safety of your passengers, always make sure the carpet is secured with the snaps. Carpet that is not secured with the snaps can slide unexpectedly.

Engine Access

The engine hatch is raised manually by releasing the push to close latch at the front of the engine hatch. Two gas springs assist in lifting the hatch and hold it in the open position.

To raise the hatch, release the latch located in the center of the stern bench seat between the seat and backrest cushions. Then slowly raise


Typical Engine Compartment Fire Port

the hatch to the full up position. Close the hatch by placing enough down pressure on the hatch to overpower the lifting force of the gas springs. When the hatch is completely closed, press down firmly to latch it in the closed position.

There is a large storage compartment on the port side of the engine compartment that is accessed by opening the engine hatch. The battery, optional tow pylon and seat filler cushions are among the equipment mounted or that could be stowed in this compartment.

A fire port is located in the starboard side of the engine compartment. Refer to the Safety Equipment chapter for information on using the fire port.

Aft Bench Seat/Lounge Seat

The aft bench seat provides passenger seating in rear of the cockpit. The center and port side backrest cushion raises with engine hatch when it is opened. The starboard backrest and seat cushions can be removed and stored to provide a walkway from the cockpit to the swim platform. The port seat cushion can be removed to provide access to the port side storage compartment. Removable cushions on the port and starboard side convert the bench seat to an aft lounge.

A cooler and the battery switch panel are in the compartment below the center seat cushion. The cushion is hinged at the rear and the cooler is accessed by lifting the front of the cushion. A removable panel in the cockpit sole below the cooler provides access to the fuel gauge sender and fuel lines on the fuel tank.

The cooler is secured in the compartment by special brackets and a stretch cord on each side. Water from the cooler drains to the compartment floor, then to the bilge through the cockpit drain system. Always make sure the cooler is properly secured with the stretch straps and that the seat cushion is down before operating the boat.

M22 Aft Bench Seat

Cooler & Battery Switch Below Bench Seat Cushion

Cooler Stretch Cord & Brackets

M22 Sunpad

M22 Starboard Aft Storage Compartment

Sunpad
Cushions on the top of the engine hatch make a comfortable sun pad that can be used when the boat is moored or at anchor with the engine shutdown.

For the safety of your passengers, always make sure that no one is on the sunpad whenever the engine is running and/or the boat is underway. Never allow someone to be on the sunpad when the engine is running.

Starboard Aft Storage Compartment
M22 models are equipped with a below deck storage compartment below the swim platform walkway. The hatch is hinged and secured with a push to close latch. The compartment drains by gravity to the bilge.

Fwd/Aft Facing Lounge Seat In Forward Facing Position

Fwd/Aft Facing Lounge Seat
The passenger seat is equipped with an adjustable backrest that converts it to a forward or aft facing seat. A removable insert cushion connects the lounge seat to the aft bench seat. There is also a storage below the seat cushion.

The backrest has three positions. In the aft position, it is a back rest cushion for the forward facing passenger seat. In the forward position, it makes a rear facing lounge seat that connects to the port side of the aft bench seat. The center position provides an upright, aft facing backrest.

Fwd/Aft Facing Lounge Seat In Aft Facing Position

Fwd/Aft Facing Lounge Seat With Removable Insert Cushion Installed

Helm Seat With Bolster Down

The backrest is moved by lifting the center of the back rest and moving it toward the desired position. When the backrest reaches the desired position it will drop slightly and lock. Make sure the backrest is locked in the aft, center or forward position before operating the boat.

Helm Seat With Bolster Raised

Helm Seat

The helm seat is equipped with a flip up bolster to provide more room between the seat and helm area. The bolster converts the seat to a raised seating position and allows the operator to select the standard seating height or a higher position for better visibility when needed. To convert the seat to the raised cushion position, lift the front of the seat cushion to raise the bolster and push it back above the seat cushion.

The seat is a pedestal style seat that swivels and adjusts fore and aft. There are two levers and a tension knob on the seat base. Lifting the lever located at the port front of the seat base allows the seat to be adjusted fore and aft. Lifting the lever on the starboard side of the seat base releases the pivot lock and allows the helm seat to be swiveled on the pedestal. The seat will automatically lock when it is swiveled back to the operating position. The friction knob adjusts the seat base tension on the pedestal. It should be adjusted to allow the seat to be swiveled when the swivel lock is released and tight enough to eliminate play between the seat base and the pedestal. The friction knob also can be tightened to secure the seat in position and prevent it from swiveling if desired.

Helm Seat Adjustment Levers & Friction Knobs

Check slider and tension knob mechanisms annually. Slider should lock into position correctly and tension knob should prevent seat rotation during boat operation. Contact your Monterey dealer for replacement parts.

Helm

The steering, engine controls, engine instruments and switches for exterior equipment and navigation lights are located on the helm station. The helm station is designed to provide good visibility and a functional control station.

The steering wheel is located on the rear of the helm console. The engine shift and throttle control is on the side of the cockpit, next to the helm. The helm switch panels are just forward of the steering wheel and the engine ignition switch is located on the helm below the steering wheel.

Helm

The circuit breakers for accessories activated by the helm switch panels are located in a panel below the steering wheel and switch panels. The panel is removable to provide access to service helm components. Additional access is provided by removing the storage box behind the starboard forward facing bow seat backrest.

Removable Circuit Breaker Panel

In-Floor Storage Compartment

There is a large storage compartment located below the cockpit floor between the helm and passenger seats. The compartment drains to the bilge and is equipped with "dry deck" padding to allow for better drainage and air circulation in the compartment. A drain rail around the hatch channels water away from the compartment to the bilge. The stern nav/anchor light and/or the optional ski tow pylon are among the equipment that could be stowed in this compartment.

A gas spring holds the hatch in the open position and a flush twist latch holds it closed. The latch handle can be stored in the open or secured 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 the hatch is closed with the latch in the secured position before operating the boat above idle speed.

In-Floor Storage Compartment

Bow Seats

Bow Seats With Optional Sunpad Filler Cushion

Bow Seats and Storage Compartments

The bow area is equipped with seats, a grab rail and built in drink holders that drain to the bilge. The anchor/rope locker is located just forward of the aft facing bench seat at the front of the bow seating area. The area is illuminated by LED lights recessed into the seat bases. The lights are activated by the Cockpit Lts switch in the helm switch panel.

The bow seat area is accessed by releasing the two latches on the center windshield panel and opening it. A magnetic stop on the deck automatically secures the windshield section in the open position. Use caution when opening the windshield walkthrough. The magnet is very powerful and could cause injury or damage to the deck or windshield if the window is allowed to slam against the stop. To close the windshield panel, pull on the bottom of the panel until the magnetic stop releases. Then close the panel and secure it with the locks. Make sure the center section is properly secured in the open or closed position before cruising.

Always make sure the center windshield panel is secured in the open or closed position and that passengers in the bow seating area are properly seated before operating the boat above idle speed. The passengers also should not be restricting the forward visibility of the operator.

The molded bow seats area are equipped with storage below the cushions. There are also forward facing backrests and storage behind the backrest cushions. The side seat cushions are secured with special friction latches that require a firm upward pull to release and a firm downward push to latch the seat. Always make sure the seats are installed and latched before operating the boat.

Storage Behind Forward Facing Backrest Cushions

An optional filler cushion that rests on molded fiberglass supports built into the seat bases, converts the seating area to a sunpad. The filler cushion is stored in special brackets in the aft storage compartment when not being used.

WARNING

PASSENGERS RIDING IN THE BOW SEATING AREA WHILE CRUISING COULD RESTRICT THE OPERATOR'S VISIBILITY. THIS IS A FREQUENT CAUSE OF ACCIDENTS. POSITION PASSENGERS SO THEY DON'T BLOCK THE OPERATOR'S VISIBILITY OR MOVE THEM TO SEATS IN THE MAIN COCKPIT WHILE THE BOAT IS CRUISING.

Typical Bimini Top

9.4 Bimini Top & Canvas

Canvas is optional and is custom fit to each boat. The bimini top and boot are designed with a relatively flat profile and a snug fit. The canvas is fit to the boat at the factory and the bimini top must be installed properly in order for the optional clear connector and side curtains to fit.

To install the bimini top, attach the main leg ball ends to the deck hinge sockets. Secure them with the quick release pins and leave the rear stanchions loose. Next, open the bimini and attach the front straps to the metal eye straps on the top of the windshield frame. Attach the rear stanchion ball ends, one at a time, to the rear deck hinge sockets located aft of the windshield. Use your body weight on the rear corner of the bimini to pull down and stretch the fabric until the stanchion ball end aligns with the socket in the deck hinge. Insert the stanchion ball end in the socket and secure it with the quick release pin. Repeat for the other side. If the top is still adjusted to factory specifications, the top will be level and the canvas tight.

Bimini Top Folded On Rear Stanchions W/ Boot Installed

Notice:
The front straps of the bimini must be secured to the windshield before the rear stanchions are secured to the deck. If the rear stanchions are secured first, it will be very difficult to secure the front straps without loosening them. If the front straps are loosened, the bimini top will be too loose and the clear connector and side curtains will not fit properly and appear to be too short.

Side Curtains and Clear Connector
Side curtains and a clear connector are optional. To install the curtains, close the center windshield section and attach the clear connector to the zipper at the front of the top and snap it to the top of the windshield frame beginning with the center snaps. If the bimini top is adjusted properly, the clear connector will have to be stretched just enough to pull out the wrinkles and reach the snaps on the windshield. The front straps will continue to bear the main load of the top.

Once the clear connector is completely installed, the side curtains can be put on. Attach the side curtains to the zippers on the sides of the bimini and to the front connector. Snap the curtains to the windshield and the deck beginning with the forward snaps on the windshield. If the bimini is adjusted properly, the side curtains will have to be stretched slightly to pull out the wrinkles and reach the snaps. The main load for the top should remain on the front straps and the rear stanchions. If you have the optional drop curtain, attach it to the zipper on the back of the top and to the rear of the side curtains. Snap the drop curtain to the deck and cockpit.

There is a panel in the clear connector that can be rolled up and secured by straps near the top of the bimini. This roll up panel allows the walkthrough feature of the cockpit and windshield to be used when the bimini and clear connector are installed.

The side curtains and clear connector 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:
Cold weather can make the clear vinyl material on the curtains stiff and difficult to stretch to the snaps. This can 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.


Wakeboard Tower Base

9.5 Wakeboard Tower

An aluminum tower with a ski tow is an available option. The tower is powder coated aluminum and designed to accommodate the canvas top, radio antennas and navigation lights. It is also equipped with a ski tow designed for towing one average sized person.

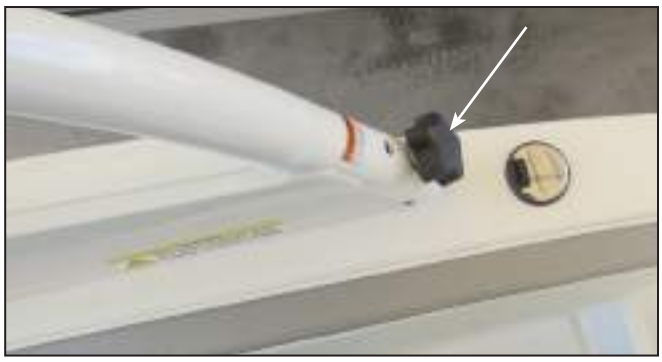
Special care must be taken when mounting additional hardware on the tower, particularly in saltwater. Fasteners will require fiber washers and sealing with caulk or Tef gel to isolate the fastener from the aluminum and prevent damage to the powder coating when the fastener is installed. Periodically applying automotive or boat wax will provide additional protection from the harsh effects of saltwater and ultraviolet rays

The tower should be washed with soap and freshwater after each day of boating in saltwater. Refer to Powder Coated and Painted Aluminum in the Routine Maintenance chapter for additional information on maintaining aluminum fabrications.

The tower is mounted to a base bolted to the deck and designed to rotate forward to reduce the clearance height if required for covered storage. A stainless steel, gas charged strut hidden inside the each side of the base prevents it from rotating too far and damaging the windshield and/or tower.

To lower the tower, remove the rear hand bolts. Have someone support the tower as the last bolt is being removed to take the strain off the bolt and prevent the tower from dropping suddenly when the bolt is removed. Once the bolt is removed, slowly lower the tower until it is supported by the strut in the down position. Reverse this process to raise the tower and tighten the hand bolts securely.

Only hand tighten the bolts and never use pliers or tools. The bolts are stainless steel and the threads will be damaged and lock up if the they are overtightened.



Wakeboard Tower

CAUTION

DO NOT TRAILER WITH THE TOWER FOLDED DOWN. TRAILERING THE BOAT WITH THE TOWER DOWN WILL CAUSED DAMAGE TO THE BOAT AND TOWER.

It is important to remember that the tower ski tow is designed for pulling one average sized skier or wakeboarder. Towing more than one skier will put too much strain on the fabrication and could cause damage to the tower and deck. Refer to the Transom Ski Tow section in this chapter for more information on using the tower ski tow fitting.

The warranty for the tower will be void if it is modified in any way or overloaded by towing too many skiers or wakeboarders. Additionally, if items like antennas, spotlights and other accessories are mounted improperly or in the wrong location, the warranty could be void. If you intend to add equipment or make modifications to the tower, you should contact your dealer or Monterey Customer Service to make sure the equipment you would like to add or the intended modification will not void the warranty on the tower.

Tower Convertible Top Enclosure

The canvas for Monterey boats is custom fit to each boat. The convertible top is designed with a relatively flat profile and a snug fit. The canvas is fit to the boat at the factory and the top must be installed properly in order for the optional clear connector and side curtains to fit.

The front and rear sections of the top are folded against the tower and covered with storage boots when the top is in the folded or down position. To open the rear top, remove the boot on the rear portion of the top and zip the top to the zipper on the rear of the tower. Open the top by pulling the main bow towards the rear of the boat until it stops. Remove the quick release pins on the deck hinges for the stanchions that are mounted on the tower and release the Velcro straps securing the stanchions to the main bows. Then attach the adjustable stanchions to the deck hinges. Secure each stanchion socket to the deck hinge with the quick release pins. Use your body weight on each rear corner of the top to pull down and stretch the fabric until the spring loaded button in the inner stanchion tube lines up with the hole in the outer tube and locks into place. The top canvas should be stretched tight when both stanchions are locked in the out position.

To open the front top, remove the boot on the front portion of the top and zip the top to the zipper on the front of the tower. Release the stanchions from the lower deck hinges and open the top it by pulling the main bow towards the front of the boat until it stops. Use your body weight on each side of the top bow to pull down and stretch the fabric until the stanchion socket will fit into the upper deck hinge on the forward side of the tower. Repeat on the other side and secure each stanchion socket to the deck hinge with the quick release pins. The top canvas should be stretched tight when both stanchions are secured in the upper deck hinge.

Close the center section of the windshield and attach the clear connector to the zipper at the front of the top and snap it to the top of the windshield frame beginning with the center snaps. If the top is adjusted properly, the clear connector will have to be stretched just enough to pull out the wrinkles and reach the snaps on the windshield. The front bow will continue to bear the main load of the top.

Once the clear connector is completely installed, the side curtains can be put on. Attach the forward side curtains to the zippers on the sides of the top and to the front connector. Snap the curtains to the windshield, deck and tower beginning with the forward snaps on the windshield. If the top is adjusted properly, the side curtains will have to be stretched slightly to pull out the wrinkles and reach the snaps. The main load for the top should remain on the bows and the tower.

If you have the optional drop curtain and rear enclosure, attach it to the zippers on the rear of the top and side curtains. Then snap the drop curtain to the tower and deck beginning with the forward snaps on the tower.

There is a panel in the clear connector that can be rolled up and secured by straps on the forward top. This roll up panel allows the walkthrough feature of the cockpit and windshield to be used when the top and clear connector are installed.

The side curtains and clear connector 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:
Cold weather can make the clear vinyl material on the curtains stiff and difficult to stretch to the 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.

Typical Cockpit & Bow Covers Installed

9.6 Cockpit & Bow Covers

Cockpit and bow covers are optional on most bow rider models. Bow covers fasten to snaps in the deck and are secured to the cockpit cover at the windshield base with Velcro. A support pole in the middle of the cover provides support to prevent puddling.

Cockpit covers fasten over the windshield to snaps on the deck and to hook and loop fasteners at the rear of the cockpit. A support pole in the middle of the cover provides support to prevent puddling.

Bow Cover Installation

To install the canvas, start with the bow cover and work toward the back of the boat. Snap the bow cover to the deck beginning with the snaps at the bow and work toward the windshield. When all the bow cover snaps are fastened, install the support pole and make sure it is adjusted to make the canvas snug and raise the center enough for proper water drainage.

Typical Cockpit Cover

Cockpit Cover Installation

Close and latch the opening windshield panel. Find the front of the cockpit cover and place it over the windshield. Snap the cover to the snaps on each side of the forward windshield base. Secure the Velcro flap on the cockpit cover to the flap on the bow cover.

Insert the support pole in the center of the cockpit cover and make sure it is adjusted slightly higher than the windshield. Continue fastening the snaps on the port and starboard sides of the cover as you work your way to the rear of the boat. When you get near the aft seat, double check the support pole. Make sure it is vertical and adjusted to snug the canvas and provide proper water drainage. Adjust the pole if necessary.

Step onto the swim platform and fasten the rear of the cover to the deck.

9.7 Aftermarket Hardtop, Tower or Arch

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

Refer to the Routine Maintenance section for more information on maintaining aluminum fabrications and precautions for adding additional equipment and fasteners.

NOTES

10.1 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.

Marine Growth, Bottom Paint and Osmosis Blistering

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.

Your Monterey hull is manufactured using state-of-the-art materials and processes. A layer of super tough, Ashland "AME" Resin with high density and superior adhesion properties provides an exceptionally effective barrier to osmotic blistering. Osmosis is caused by a chemical reaction between water and substances in the hull laminate below the waterline. If water breaches the exterior gelcoat and barrier layer, it can react with the chemical components in the laminate creating acidic substances. These substances create pressure behind the gelcoat which causes blisters.

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 MANUFACTURES SUCH AS INTERLUX AND PETTIT.

CAUTION

DO NOT ALLOW THE HULL ANTIFOULING PAINT TO CONTACT THE OUTDRIVE. MOST ANTIFOULING PAINTS DESIGNED FOR HULL BOTTOMS CONTAIN COPPER AND CAN CAUSE SEVERE GALVANIC CORROSION DAMAGE TO THE DRIVE UNIT. USE ONLY ANTIFOULING PAINT DESIGNED FOR OUTDRIVES. ALWAYS LEAVE A ONE INCH BARRIER BETWEEN THE HULL BOTTOM PAINT AND OUTDRIVE.

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 for the recommended maintenance procedures.

Sacrificial Anodes

Sacrificial anodes are installed on the inboard engine's fresh water cooling system, catalytic converter raw water exhaust manifold and the outdrive. Additional anodes are installed on the trim tab planes.

The anodes are less noble than copper based alloys, aluminum, cast iron and stainless steel. They will deteriorate first, protecting the more noble engine and underwater hardware against galvanic corrosion. Anodes should be checked monthly and changed when they are 75% of their original size. Additionally, anodes that are subjected to frequent wetting and drying require periodic scraping with sandpaper to remove scale and oxidation to maintain their effectiveness.

When replacing the anodes, make sure the contact surfaces are clean, shiny metal and free of paint and corrosion. Never paint over the anode. The bonding system should be inspected by a qualified marine electrician once a year to make sure all connections are sound and there is continuity throughout the system.

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. There could also be a problem in the bonding system. Contact your dealer for the proper size and type of anodes to be used and the specific installation procedure.

Notice:
Your Volvo Penta or Mercruiser power system has been shipped with Aluminum anodes. Aluminum is effective in both saltwater and in fresh water. If you will be boating in saltwater exclusively, we recommend switching the anodes to Zinc. If you will be boating in fresh water exclusively, we recommend switching the anodes to Magnesium. Using the recommended anode is more critical when stainless steel propellers are installed. Consult your dealer or the engine manufacturer for information on the proper anode for your boating area.

Fiberglass Gelcoat Surfaces

- Keep the gelcoat surface out of direct sunlight or covered when it is not in use.
- Wash gelcoat frequently (daily in salt or polluted environments) with mild detergent and plenty of fresh water. Remove any stains quickly. Gelcoat is microscopically porous, so long term staining may become permanent.
- Regularly wax gelcoat surfaces with marine grade wax recommended for fiberglass finishes in the spring and fall. (Monthly in salt or polluted environments) 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 gelcoat.

Outdrive Anodes

DON'TS

- 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, harsh detergents or highly alkaline (high PH) cleaners. See your dealer for special marine formulations. Harsh abrasive and chemical cleaners are not recommended because they can damage, stain 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.
- Do not attempt to remove stains and scratches. Chalking, stains, and minor scratches can be removed in most cases with careful rubbing and polishing with appropriate chemicals and is best done by a professional - see your dealer.

After the boat is exposed to the direct sunlight for a period of time, the color in the gelcoat tends to

GEMLUX MAINTENANCE INSTRUCTIONS

Job	Cleaning Agents	Method	Comments
Routine Cleaning	Soap and Water	Apply with a sponge or soft cloth. Dry area completely.	Once your stainless is free of discoloration and/or bleeding, spray GEMLUX Passivation Solution directly onto stainless. Allow to cure for 30-60 seconds. Rinse with fresh water and dry the area. This solution will help re-passivate the stainless steel.
Stubborn stains, discoloration or bleeding	GEMLUX Cleaning Wax	Apply with soft, dry cloth.	

fade, dull or chalk. A heavier buffing is required to bring the gelcoat 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.

If the fiberglass should become damaged and need repair, contact your dealer for an authorized repair person to make the repairs.

Stainless Steel Hardware

Marine grade stainless steel components such as hardware, cleats, eyes and rails offer superior corrosion resistance. When properly maintained, stainless steel will not rust or stain, even in harsh saltwater environments. However, if not maintained, stainless steel can rust, discolor or even corrode. The following guidelines will help keep stainless steel looking good for years to come.

DO'S

- 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.
- Protect stainless with waxes or polishes suitable for marine use.

DON'TS

- 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.

Gemlux Stainless Steel Hardware

Most of the stainless steel hardware on your boat is made of Gemlux, polished stainless steel. In order to ensure that your Gemlux stainless steel maintains its beautiful finish, it is critical that you care for it properly.

CAUTION

YOUR STAINLESS STEEL CAN BE DAMAGED BY EXPOSURE TO ACIDS AND OTHER CORROSIVE AGENTS FOUND IN MANY CLEANING PRODUCTS. A PARTIAL LIST OF ADDITIVES THAT MAY CAUSE STAINING AND A WEAKENING OF THE FINISH IS PROVIDED BELOW. USE OF THESE AND OTHER SIMILAR SOLUTIONS TO CLEAN YOUR BOAT CAN CAUSE YOUR STAINLESS STEEL TO BLEED AND WILL VOID YOUR WARRANTY.

Chlorsuphonic Acid	Sodium Hypochlorite
Ferrous Lodide	Sulphuric Acid
Hydrobromic Acid	Muriatic Acid
Iodine	On & Off Cleaner
Sodium Chlorite	Rust StainsAway
Sulphur Chloride	Ferrous Chloride
Bleach	Hydrochloric Acid
Comet	Hydrofluoric Acid
EZ-ON EZ-OFF Cleaner	Sodium Bifluoride
Ferric Chloride	Stannic Chloride
Fluorine	SnoBol
Hydrofluosilicic Acid	Soft Scrub
Silver Chloride	Marine Spray Nine

When using the boat in saltwater, the hardware should be washed with soap and water after each use. Frequent cleaning of your stainless steel with soap, water and Gemlux Cleaning Wax will help maintain the finish. Always rinse the metal thoroughly with clean water and dry completely. Clean soft cloths or pads should be used. The use of steel wool pads or other highly abrasive brushes or sponges are not recommended and will damage the surface.

Contamination of the surface by chemicals, dirt or other material hinders the passivation process and traps corrosive agents, thus reducing corrosion protection. If your stainless is exposed to such chemicals it should be re-passivated with Gemlux Passivation solution.
For purchase information on the Gemlux Cleaning Wax or Gemlux Passivation Solution, please contact Gemlux at: Phone: 888-436-5891 Fax: 904-269-5905 or on the web at www.gemlux.com.

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.

If your boat is used in saltwater and equipped with a wakeboard tower and fiberglass hardtop, it will 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 contacts 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, METAL PROTECTORS SHOULD NOT BE USED ON TOWER LADDERS, STEERING WHEELS AND OTHER AREAS WHERE A GOOD GRIP AND SURE FOOTING IS IMPORTANT.

Stains can be removed from anodized aluminum with a metal polish or fine polishing compound. To minimize corrosion, use a caulking compound or Teflon based sealer to bed hardware and fasteners mounted to aluminum fabrications. If the anodized coating is badly scratched it can be touched up with paint. With proper care, anodized aluminum will provide many years of service.

Powder Coated or Painted Aluminum

Powder coated or painted 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 or painted aluminum will penetrate the coating and attack the aluminum, usually around fasteners and hardware mounted to the aluminum.

If your boat is used in saltwater and equipped with a wakeboard tower and fiberglass hardtop, it will require special attention to the 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 contacts the frame.

Once a month check for damage, scratches and corrosion, particularly around fasteners and hardware. Nicked or badly scratched paint and powder coating can be sanded and touched up with enamel paint. Corrosion around fasteners will have to be sanded, then touched up with paint. The fasteners will require fiber washers and sealing with caulk or a Teflon based sealer to isolate the fastener from the aluminum and prevent damage to the paint or powder coating when the fastener is installed. Periodically applying automotive or boat wax to the surface will provide additional protection from the harsh effects of saltwater.

Always repair scratches, nicks and corroded areas as soon as possible. Corrosion left unaddressed will lift the paint or powder coating, allowing moisture to travel between the 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 Monterey Boats 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 eventually penetrate and damage the surface of anodized, painted 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.

Chrome Hardware

Use a good chrome cleaner and polish on all chrome hardware.

Acrylic Plastic Glass

Acrylics and Plexiglas have properties that make them ideal for the marine environment. Components such as cabin doors and deck hatches need special care to prevent scratches and other damage. The following guidelines will help keep acrylics and Plexiglas looking good for years to come.

DO'S

- Wash your hatches, windshield connector, side curtains and other clear plastic pieces, as well as other acrylic components on your boat with a mild soap and plenty of lukewarm water.
- Use a clean, soft cloth, applying only light pressure.
- Rinse with clear water and dry by blotting with a damp cloth or chamois.
- Grease, oil or tar may be removed with a good grade of hexane, aliphatic naphtha or kerosene. These solvents may be obtained at a paint or hardware store and should be used in accordance with the manufacturer's recommendations.
- To maintain a high-luster finish on your acrylics, we recommend that after properly cleaning, apply Meguiar's™ Mirror Glaze #10 with a soft towel. Note: If slight scratches appear on acrylics, use Meguiar's™ Mirror Glaze #17

Notice:
Clear plastic (Isinglass) is subject to ultraviolet (sunlight) degradation over time. It may turn yellow-brown (a burnt appearance) and get brittle.

Two things that can accelerate this degradation are:

1. Direct contact with aluminum or stainless steel frames. Use "Standoffs."
2. In salt water areas, dried salt crystals on the plastic will amplify sunlight. Wash after each use and/or windy days.

DON'T'S

- Do not subject acrylic material to high temperatures when polishing.
- Do not use glass cleaning sprays, cleaners containing ammonia, scouring compounds, or solvents like acetone, alcohol, gasoline, benzene, carbon tetrachloride or lacquer thinner.

- Do not use masking tapes, duct tapes or packing tapes on your acrylic materials.
- Do not drill holes in your acrylic materials without proper drill bits (special bits are used in acrylic material to avoid damage).

10.2 Upholstery, Canvas and Enclosures

Marine Interior Vinyl Upholstery

The vinyl upholstery used on the seats, cushions, bolsters and headliners 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 vinyl.

The following are typical stains and cleaning Tips for marine vinyl:

- For normal cleaning – In general most common stains can be cleaned using warm, soapy water and clear water rinses. Moderate scrubbing with a medium bristle nylon brush will help to loosen soiling material from the depressions of embossed surfaces. For stubborn stains, use commercially available mild detergents in accordance with manufacturers instructions.
- Full strength rubbing alcohol or mineral spirits may be tried cautiously as a last resort on very stubborn stains, if the above suggestions do not work. Indiscriminate use of any solvent or solvent containing cleaner can severely damage or discolor vinyl.

Notice:
Certain stains may become permanently set unless they are removed immediately. The procedure for the removal of more severe staining agents are outlined below:

- Ballpoint Ink, Permanent Marker – Ink spots will stain vinyl permanently. Immediate wiping with rubbing alcohol in a well-ventilated area will remove much of the stain.
- Oil based paint – The use of turpentine in a well ventilated area will remove any fresh paint. Dried paint must be moistened carefully with a semisolid gel-type stripper so that the softened paint can be gently scraped away. Rinse with soap and water.

CAUTION

DIRECT CONTACT WITH PAINT STRIPPERS WILL REMOVE THE PRINT PATTERN FROM VINYL. PAINT STRIPPERS ARE VERY CORROSIVE. TAKE CARE TO AVOID SKIN CONTACT BY WEARING PROTECTION.

- Latex paint – Fresh paint can be wiped off with a damp cloth. Hot soapy water will normally remove dried latex.
- Tar, Asphalt – Remove immediately as prolonged contact will result in a permanent stain. Use a cloth lightly dampened with mineral spirits and rub the stain gently, working from the outer edge of the stain towards the center in order to prevent spreading. Rinse with soap and water.
- Crayon, mustard, ketchup – Sponge with mild soap and water. For stubborn stains that may have set, use a cloth soaked in diluted mild detergent with gentle rubbing. Any remaining stain should be washed with diluted bleach. Rinse repeatedly with clean water.
- Chewing gum – Scrape off as much as possible with a dull knife. Rubbing with an ice cube will assist and make it easier to remove when scraping. The remaining gum should then be removed in a well ventilated area using a cloth saturated with mineral spirits. Use light rubbing. Rinse thoroughly with clean water.
- Lipstick, grease, oil, eye shadow, shoe polish – Apply a small quantity of mineral spirits by means of a cloth with gentle rubbing. Take care not to spread the stain by smearing it beyond its original source. No time should be lost in removing shoe polish as it contains a dye that will cause permanent staining. Rinse thoroughly with water.

- Candy, ice cream, coffee, tea, fruit stains, liquor, wine, suntan lotion, soft drinks. - Use clear lukewarm water and a sponge repeatedly. Any loose material should be gently scraped with a dull knife. Any soiled area remaining after drying should be gently rubbed with a cloth spotted with a mild detergent solution. Rinse thoroughly with clean water.
- Blood, leaf residue - Sponge the area with a clean cloth soaked in cool water. If stubborn stains remain, use household ammonia and rinse repeatedly with a clean, wet cloth. Do not use hot water or soapsuds, as this will set the stain.
- Bird excreta, nausea stains - Sponge the area with soapy water containing diluted bleach until the stain is removed. Rinse thoroughly with water.
- Urine Stains – Sponge with soapy water containing a small amount of household ammonia. Rinse thoroughly with clean water.
- Surface mildew – Wash with diluted bleach using a soft nylon brush for stubborn growth. Rinse repeatedly with clean cold water.

The following are typical stains and cleaning tips for interior marine vinyl:

- Dry soil, dust and dirt, dried on dirt - Remove with a soft cloth. Wash with a soft cloth or nylon brush 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 or soft nylon brush dampened with Ivory Soap® and water. Rinse with clean water.
- Stubborn spots and stains - Spray with Tannery Car Care Cleaner® 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® or Tannery Car Care Cleaner®, wiping with a soft cloth. Take care not to extend the area of contamination beyond its original boundary. Rinse with clean water.

Additional Warnings for Vinyl Fabrics

- Detergents should not be used on a regular or repeated basis for normal cleaning.
- Powdered abrasives, cleaners containing abrasives, steel wool and industrial strength cleaners are not recommended for vinyl.
- Any lacquer solvent will cause immediate, irreparable damage to the vinyl.
- Wax should never be used on any vinyl upholstery, as it will cause premature embrittlement and cracking.
- Dilute chlorine bleach before using. Never use at full strength.
- If flammable solvents such as alcohol, turpentine or varsol are used for cleaning, then only small quantities should be employed in a well ventilated area. Exercise proper care by advising any personnel in the area and keep away from any ignition source. Always wear protective gloves.

Marine Interior Fabrics

Spot clean only with water based shampoo or foam upholstery cleaner. Pretest a small, inconspicuous area before proceeding. Do not over wet. Do not use solvents to spot clean. Pile fabrics may require brushing with a nonmetallic, stiff bristle brush to restore appearance.

Notice:
Water extraction or steam cleaning is not a recommended cleaning method. Cushion covers should not be removed and laundered.

To prevent overall soiling, frequent vacuuming or light brushing with a nonmetallic, stiff bristle brush to remove dust and grime is recommended. When cleaning a spill, blot immediately to remove spilled material. Clean spot or stains from the outside to the middle of the affected area to prevent circling.

Use a professional furniture cleaning service when an overall soiled condition has been reached.

Care and Cleaning Instructions For NBT™ Nano Block Technology Topcoat Vinyl Only

Step 1 - Most common everyday light soiling can be easily removed by using a solution of 10% liquid household dish soap and 90% warm water, applied with a clean dampened cloth. Rinse with a clean cloth dampened with water and allow to dry. Moderate scrubbing with a soft bristle brush will help loosen dirt and grime embedded in the grain of the vinyl.

Step 2 - For more stubborn stains and heavy soiling, dampen a soft white cloth with NBT V-Clean® or a mild detergent. Rub gently and rinse with a clean cloth and water.

Step 3 - For the most difficult stains including ball point pens, Sharpie, and blue jean dye, use NBT-Clean wipes or a solution of 70% alcohol and 30% water applied to a clean white cloth. Rub gently and rinse with a clean cloth and water.

Step 4 - For surface mildew, if none of the above solutions provide the desired results, clean with a solution of 20% household bleach and 80% water. Rinse with a clean cloth and water.

Notice:
This information is a guideline and not a guarantee; it does not relieve the user from the responsibility of proper care, cleaning and use of the Product and all cleaning agents. Syntec/CMI cannot be responsible when unknown changes are made by the manufacturer of the cleaner to their formulations. The use of certain cleaning agents, including but not limited to powdered abrasives, solvents, industrial strength cleaners and power washing are not recommended and can be harmful to the surface appearance and the lifespan of the Product. The Supplier, its agents and assigns assume no responsibility resulting from the use of such cleaning agents or procedures to the vinyl and use of such will void the warranty.

V-Clean and NBT-Clean are registered trademarks of CMI Enterprises, Inc. Formula 409 is a registered trademark of the Clorox Company. Fantastik is a registered trademark of The Dow Chemical Company.

⚠ WARNING ⚠

SOME SOLVENTS ARE HIGHLY FLAMMABLE. EXERCISE PROPER CARE IN CLEANING AND NOTIFY PERSONNEL IN AREA OF DANGER. WEAR RUBBER GLOVES DURING ALL CLEANING ACTIVITIES. USE CAUTION IN CLEANING AROUND BUTTONS, STITCHING AND WOODEN OR DECORATIVE TRIM, SINCE THESE SOLVENTS COULD SERIOUSLY DAMAGE SUCH AREAS.

⚠ CAUTION ⚠

TO REDUCE THE POSSIBILITY FOR MILDEW AND UPHOLSTERY DAMAGE, THE FOLLOWING PRECAUTIONS APPLY:

- DO NOT SATURATE EXTERIOR SEAT CUSHIONS OR BOLSTERS WITH A HOSE WHEN WASHING THE BOAT.
- ONLY USE A CLEAN CLOTH DAMPENED WITH AN APPROVED CLEANING SOLUTION TO CLEAN UPHOLSTERY AND RINSE WITH ANOTHER CLEAN CLOTH DAMPENED WITH WATER.
- ALWAYS DRY UPHOLSTERY WITH A CLEAN CHAMOIS OR TOWEL AFTER CLEANING.
- REMOVABLE CUSHIONS SHOULD BE REMOVED AND PROPERLY STORED OUT OF THE WEATHER IN A DRY COMPARTMENT WITH GOOD VENTILATION.
- SEAT CUSHIONS THAT ARE NOT REMOVABLE SHOULD BE PROTECTED BY STORAGE OR COCKPIT COVERS.

UPHOLSTERY DAMAGE AND MILDEW CAUSED BY WATER SATURATION AND/OR IMPROPER CLEANING AND STORAGE WILL NOT BE COVERED BY THE MONTEREY LIMITED WARRANTY.

CARPET STAIN REMOVAL INSTRUCTIONS

Miscellaneous Stains	Removal Process
Coffee, Tea, Coke, Dye, Fruit Juice, Ice Cream, Motor Oil, Clay, Grease, Blood, Catsup, Chocolate, Milk, Rust, Latex Paint, Water Colors, Berry Stains, Egg, Salad Dressing, Wine, Furniture Polish, Fish Formula, Mayonnaise or urine.	Apply warm water and household detergent in minimal amounts to the stained area. Sponge or scrape until stain is removed and wash thoroughly with clean water.
Persistent Stains	**Removal Process**
Chewing Gum, Crayon, Ink, Wax, Lipstick, Tar Polish or Oil Paint.	Apply warm water and household detergent. Work well into the stained area, then flush with warm water.

Exterior Carpet

Exterior carpet manufactured by Syntec® Industries is produced with a special blend of resilient fibers to withstand traffic and retain its beauty.

Carpets manufactured by Syntec are inherently stain-resistant. To keep your carpet at its best, we recommend regular vacuuming for general cleaning, soap and water for hard-to-remove spots and an approved cleaner for deep cleansing and to revitalize the carpet.

Stain Removal

If a spill does occur, it can easily be removed by following the stain removal chart. All stains should be removed as soon as possible, as this enhances the ability to remove the stain.

Notice:

Most stains should be removed easily from Olefin fibers. If the stain persists, the cleaning procedure should be repeated to ensure stain removal. Remember, the sooner the stain removal process begins, the easier the stain will be to remove. Under no circumstances should any solvent normally associated with the dry cleaning of apparel (perchlorethylene), carbon tetrachloride, etc,) be utilized, as permanent damage to the fiber will result.

Canvas and Side Curtains

Acrylic (Sunbrella) canvas should be rinsed frequently with clear, fresh water and cleaned periodically by using a mild soap and water. Scrub lightly and rinse thoroughly to remove the soap. Do not use detergents. The water should be cold or luke warm, never hot. Scrub with a soft brush and rinse thoroughly. Allow to air dry.

The top or accessories should never be folded or stored wet.

After several years, the acrylic canvas may lose some of its ability to shed water. If this occurs, wash the fabric and treat it with a commercially available water proofing designed for this purpose. Monterey recommends 303 High Tech Fabric Guard.

To apply waterproofing, wash the canvas and allow it to dry completely. Then apply a thin, even coat of waterproofing, allowing the first coat to air dry. Apply a second coat for increased protection.

Notice:

Some leakage at the seams is normal and unavoidable with acrylic enclosures.

Notice:

Some boats are equipped with acrylic (Sunbrella) canvas that is coated with a permanent water proofing called Sea Mark. Canvas treated with Sea Mark will not lose its ability to shed water and never needs to be retreated.

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. Zippers should be lubricated with silicone spray, paraffin or a product designed to lubricate zippers in marine canvas.

The bimini top, side curtains, clear connector, back drop 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.

Notice:
Your Monterey boat is basically an open vehicle. Therefore, in spite of well-designed and well-fitting canvas enclosures, your boat is not waterproof. We have made every effort to design these enclosures to conform with the boat, but a certain amount of leakage may occur, especially at the seam lines. After cleaning with soap and water, allow seams to thoroughly dry. A sealant can be applied on the seams to somewhat close the needle holes according to the manufacturer's instructions.

WARNING

DO NOT OPERATE THE ENGINE, FUEL CONSUMING HEATERS OR BURNERS WITH THE CANVAS ENCLOSURES CLOSED. THE COCKPIT MUST BE OPEN FOR LEGAL VENTILATION AND TO PREVENT THE POSSIBLE ACCUMULATION OF CARBON MONOXIDE FUMES, WHICH COULD BE LETHAL.

WARNING

CARBON MONOXIDE IS A LETHAL, TOXIC GAS THAT IS COLORLESS AND ODORLESS. IT IS A DANGEROUS GAS THAT WILL CAUSE DEATH IN CERTAIN LEVELS.

CAUTION

NEVER TRAILER YOUR BOAT WITH THE CANVAS ENCLOSURE (INCLUDING SIDE CURTAINS, AFT CURTAIN, WINDSHIELD CONNECTOR, BOW COVER AND COCKPIT COVER) UP. MONTEREY BOATS' CANVAS IS NOT DESIGNED TO WITHSTAND THE HIGH WIND LOADS OF TRAILERING. SEVERE WIND DAMAGE CAN OCCUR SUCH AS TORN MATERIAL, FASTENER PULL-OUT AND FRAME DISTORTION. DAMAGE CAUSED BY TRAILERING IS NOT COVERED UNDER THE LIMITED WARRANTY.

10.3 Cabin Interior

The cabin interior can be cleaned just like you would clean a home interior. The wood floors and steps can be vacuumed and cleaned with a mixture of water and Murphy's Oil Soap or white vinegar and water. Wipe the wood dry with a clean towel. To preserve the cherry and teak woodwork, use furniture polish with wax. To maintain the 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.

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.

CAUTION

ALWAYS READ THE LABEL CAREFULLY ON MILDEW PROTECTORS. REMOVE THE PROTECTOR AND ALLOW THE CABIN TO VENTILATE COMPLETELY BEFORE USING THE CABIN.

Karadon Surfaces

A mild liquid detergent and water or ammonia-based cleaners will remove most dirt and stains from Karadon. For heavy cleaning, oil, and grease, use Fantastik® spray cleaner. Rinse with a clean cloth moistened with fresh water. Wipe dry with a clean cloth.

In most cases, Karadon can be repaired if accidentally damaged. Minor damage, including scratches, general or chemical stains, scorches or burns, and minor impact marks, can be repaired with a light abrasive cleanser and a Scotch-Brite® pad. For heavier damage, light sanding and machine buffing may be necessary so contact your dealer or a professional.

- Avoid exposing Karadon to strong chemicals, such as paint removers, oven cleaners, etc. If contact occurs, quickly flush the surface with water.
- Remove nail polish with a non acetone-based polish remover and flush with water.
- Do not cut directly on Karadon counter tops.

10.4 Bilge and Engine Compartment

To keep the bilge clean and fresh, use a commercial bilge cleaner regularly. Follow the directions carefully. The engine and engine compartment should be kept clean and free of oil accumulation and debris. All exposed pumps and metal components, including the engine and drive gear, should be sprayed periodically with a protector to reduce the corrosive effects of the high humidity always present in these areas.

Maintenance intervals are outlined in the engine owner's manuals. Their recommendations should be followed exactly.

Periodically check the bilge pump for proper operation and clean debris from the strainers and float switch. Inspect all hoses, clamps and thru-hulls for leaks and tightness on a regular basis and operate all thru-hull valves at least once a month to keep them operating properly.

A flow of air into the bilge is provided by vents located in the deck near the engine compartment. Periodic inspection and cleaning of the ventilation ducts is necessary to ensure adequate air circulation.

Engine

Proper engine maintenance is essential to the proper performance and reliability of your inboard engine. Maintenance schedules and procedures are outlined in your engine owner's manual. They should be followed exactly.

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 cetane or 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.

10.5 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.
- Frequently test the automatic bilge pump switch for proper operation. This is accomplished by touching and holding the test button on the side of the pump for five seconds to verify operation. You can also use a garden hose to raise the water level in the bilge until the it is high enough to activate the pump.
- 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.

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

CAUTION

NEVER USE HARSH CHEMICAL DRAIN CLEANERS IN MARINE DRAIN SYSTEMS. PERMANENT DAMAGE TO THE HOSES AND FITTINGS MAY RESULT.

11.1 Lay-up and Storage

Before Hauling:

- The fuel tank should be nearly full to reduce condensation that can accumulate in the tank. Allow enough room in the tank for the fuel to expand without leaking out the vent.
- 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. Operate the boat for at least 15 minutes after adding the additive to allow the treated fuel to reach the engine.
- Your dealer or the engine manufacturer can provide additional information on fuel degradation and fuel additives recommended for your engine. For more recommendations for your specific area, check with your dealer.
- Consult the engine owner's manual for detailed information on preparing the engine 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. The fore and aft slings should be tied together to prevent the slings from sliding on the hull.

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.

Typical Sling Locations

Supporting The Boat For Storage

A trailer, elevating lift, or a well-made cradle 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 on a level surface and the bow is high enough so that water will drain from the bilge and cockpit.
- Make sure the outdrive is 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.

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.
- Make sure the cradle or lift is well supported with the bow high enough to provide proper drainage of the bilge.
- Make sure the outdrive is 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.

⚠ 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 MONTEREY WARRANTY.

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 shaft 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 cockpit with a protecting oil.
- Clean out, totally drain and completely dry the storage compartments and sinks.
- Remove cushions, open as many hatches as possible. Leaving as many of these areas open as possible will improve the boat's ventilation during the storage period.
- 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 in-floor compartments, storage locker areas, etc. should also be sprayed with this disinfectant.

11.2 Winterizing

Wakeboard Tower

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. 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. Powder Coated and painted aluminum should be waxed.

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 enclosure curtains in place of the winter storage cover. The life of these curtains 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 lockers and hatches a little. If possible, remove the upholstery, cushions, and carpets.

11.3 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 marine technician. Read the engine owner's manual for the recommended procedure.

Reactivating The Boat After Storage:

- If your boat is bottom painted, apply a fresh coat of bottom paint on the hull and outdrive
- Inspect outdrive and thru-hull fittings.
- Install the propellers. Refer to the outdrive owner's manual for information on installing propellers.
- Install the drain plug in the hull.
- Charge and install the batteries.
- Check the engine and drives for damage and follow the manufacturer's instructions for recommissioning.
- Check the engine mounting bolts to make sure they are tight.
- Perform all routine maintenance.
- Check all hose clamps for tightness.
- Check and lubricate the steering system.
- Clean and wash the boat.
- Install all upholstery, cushions and canvas.
- Check the fluid levels in the engine and outdrive or lower unit.

After Launching:

- Carefully check the engine cooling systems for leaks.
- Check the bilge pump automatic and manual switch.
- Prime the fuel system and start the engine.
- Carefully monitor the gauges and check for leakage and abnormal noises. Monitor the temperature gauge closely until it stabilizes at normal operating temperature to ensure that the cooling pump is operating properly.
- Operate the boat at slow speeds until the engine temperature stabilizes and all systems are operating normally.

Maintenance Log

Date	Hours	Dealer	Service/Repairs

Date	Hours	Dealer	Service/Repairs

Date	Hours	Dealer	Service/Repairs

Date	Hours	Dealer	Service/Repairs

Appendix B:
FLOAT PLAN

Monterey Boats recommends filling out a float plan each time you use your boat for an offshore 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)*

☐ *PFDS*	☐ *Flares*	☐ *Mirror*
☐ *Smoke Signals*	☐ *Flashlight*	☐ *Food*
☐ *Paddles*	☐ *Water*	☐ *Others*
☐ *Anchor*	☐ *Raft or Dinghy*	☐ *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.*

    _____ _____

    _____ _____

    _____ _____

    _____ _____

NOTES

BOATING ACCIDENT REPORT

DEPARTMENT OF TRANSPORTATION **U.S. COAST GUARD** CG-3865 (Rev. 9/95)	**BOATING ACCIDENT REPORT** STATE ASSIGNED CASE NO._____	FORM APPROVED OMB NO. 2115-0010

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.

COMPLETE ALL BLOCKS (INDICATE THOSE NOT APPLICABLE BY "NA")

ACCIDENT DATA

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)	WATER CONDITIONS	TEMPERATURE (ESTIMATE)	WIND	VISIBILITY
[ ] CLEAR [ ] RAIN [ ] CLOUDY [ ] SNOW [ ] FOG [ ] HAZY	[ ] CALM (WAVES LESS THAN 6") [ ] CHOPPY (WAVES 6" TO 2') [ ] ROUGH (WAVES 2' TO 6') [ ] VERY ROUGH (GREATER THAN 6') [ ] STRONG CURRENT	AIR_____°F WATER_____°F	[ ] NONE [ ] LIGHT (0-6 MPH) [ ] MODERATE (7-14 MPH) [ ] STRONG (15-25 MPH) [ ] STORM (OVER 25 MPH)	DAY NIGHT [ ] GOOD [ ] [ ] FAIR [ ] [ ] POOR [ ]

NAME OF OPERATOR	OPERATOR ADDRESS

OPERATOR TELEPHONE NUMBER ( )	DATE OF BIRTH MO DAY YR	OPERATOR'S EXPERIENCE	INSTRUCTION IN BOATING SAFETY
[ ] MALE [ ] FEMALE		[ ] NONE [ ] UNDER 100 HOURS [ ] > 100 HOURS	[ ] STATE COURSE [ ] U.S. POWER SQUADRON [ ] USCG AUXILIARY [ ] AMERICAN RED CROSS [ ] NONE

NAME OF OWNER	OWNER ADDRESS

OWNER TELEPHONE NUMBER ( )	NUMBER OF PEOPLE ON BOARD	NUMBER OF PEOPLE BEING TOWED	RENTED BOAT?
			[ ] YES [ ] NO

BOAT NO. 1 (THIS VESSEL)

BOAT REGISTRATION OR DOCUMENTATION NUMBER	STATE	HULL IDENTIFICATION NUMBER	BOAT NAME

BOAT MANUFACTURER	LENGTH	MODEL	YEAR BUILT

TYPE OF BOAT	HULL MATERIAL	ENGINE	PROPULSION	PERSONAL FLOTATION DEVICES (PFDS): WAS BOAT ADEQUATELY EQUIPPED WITH COAST GUARD APPROVED PFDS?
[ ] OPEN MOTORBOAT [ ] CABIN MOTORBOAT [ ] AUXILIARY SAIL [ ] SAIL (ONLY) [ ] ROWBOAT [ ] CANOE/KAYAK [ ] PERSONAL WATERCRAFT [ ] PONTOON BOAT [ ] HOUSEBOAT [ ] OTHER (SPECIFY)	[ ] WOOD [ ] ALUMINUM [ ] STEEL [ ] FIBERGLASS [ ] RUBBER/VINYL/CANVAS [ ] RIGID HULL INFLATABLE [ ] OTHER (SPECIFY)	[ ] OUTBOARD [ ] INBOARD [ ] INBOARD-STERNDRIVE (I/O) [ ] AIRBOAT	[ ] PROPELLER [ ] WATER JET [ ] AIR THRUST [ ] MANUAL [ ] SAIL	[ ] YES [ ] NO WERE PFDS ACCESSIBLE? [ ] YES [ ] NO

FUEL	NUMBER OF ENGINES	FIRE EXTINGUISHERS
[ ] GASOLINE [ ] DIESEL [ ] ELECTRIC	TOTAL HORSEPOWER	ON BOARD? [ ] YES [ ] NO USED? [ ] YES [ ] NO

OPERATION AT TIME OF ACCIDENT (CHECK ALL APPLICABLE)	ACTIVITY AT TIME OF ACCIDENT (CHECK ANY IF APPLICABLE)	TYPE OF ACCIDENT	WHAT CONTRIBUTED TO 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)	[ ] FISHING [ ] TOURNAMENT [ ] HUNTING [ ] SWIMMING/DIVING [ ] MAKING REPAIRS [ ] WATERSKIING/TUBING/ETC. [ ] RACING [ ] WHITEWATER SPORTS [ ] FUELING [ ] STARTING ENGINE [ ] NON-RECREATIONAL [ ] OTHER (SPECIFY)	[ ] 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) [ ] HIT AND RUN	[ ] 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		
[ ] 10 - 20 MPH	[ ] 21 - 40 MPH	[ ] OVER 40 MPH
[ ] NONE	[ ] UNDER 10 MPH	

DECEASED (IF MORE THAN 2 FATALITIES, ATTACH ADDITIONAL FORMS)

NAME OF VICTIM		ADDRESS OF VICTIM	WAS PFD WORN? [ ] YES [ ] NO
DATE OF BIRTH	[ ] MALE [ ] FEMALE	DEATH CAUSED BY [ ] DROWNING [ ] OTHER	[ ] DISAPPEARANCE
NAME OF VICTIM		ADDRESS OF VICTIM	WAS PFD WORN? [ ] YES [ ] NO
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 WAS IT INFLATABLE? [ ] YES [ ] NO	PRIOR TO ACCIDENT? [ ] YES [ ] NO	AS A RESULT OF ACCIDENT? [ ] 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 WAS IT INFLATABLE? [ ] YES [ ] NO	PRIOR TO ACCIDENT? [ ] YES [ ] NO	AS A RESULT OF ACCIDENT? [ ] 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 ADDITIONALIDENTIFYING 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 [ ] COMMERCIAL [ ]
PRIMARY CAUSE		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.)

NOTES

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.

Deck: 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.

Electrical 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.

Fathom: 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.

Galley: 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.

Hand 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.

Inboard: 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.

Keel: 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.

Lay-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.

Sea cock: 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.

NOTES

Troubleshooting Guide

PROBLEM	CAUSE & SOLUTION
CONTROL PROBLEMS	
Outdrive power steering over steers or does not respond properly.	• The steering cable housing is bound near the transom. Free the cable and make sure no cables or wire harnesses are attached to it. • The steering cable is kinked, corroded or worn. Replace cable. • The power steering sensor valve is corroded or sticking. Service sensor valve. • The outdrive steering spindle is binding. Grease outdrive.
Outdrive power steering is slow and jerks while turning the wheel.	• The power steering pump belt on the engine is loose. Tighten or replace the belt. • The power steering pump is low on fluid. Fill the pump and check for leaks. • The outdrive steering spindle is binding. Grease outdrive.
The engine will not start with the shift control lever in neutral.	• The control is out of adjustment & not activating the neutral safety cut out switch. • The shift control lever is not in the neutral detent. Try moving the shift lever slightly. • There is a loose wire on the neutral safety switch. Inspect wires and repair loose connections. • The starter, ignition switch or neutral safety switch is defective. Replace the defective switch.
The throttle lever is hard to move.	• The cable is worn or corroded. Replace cable • The fuel injector linkage is corroded and stiff. Lubricate the linkage. • The throttle control in the helm control is corroded and binding. Lubricate the control. • The throttle control linkage at the helm is binding against something. Check and adjust or repair binding component.
CONTROL PROBLEMS	
The shift lever is hard to move.	• The cable worn or corroded. Replace cable • The outdrive linkage is corroded and stiff. Lubricate the linkage. • The cable is routed incorrectly and has tight bends or is kinked. Reroute or replace the cable. • The shift control in the helm control is corroded and binding. Lubricate the control. • The shift control linkage at the helm is binding against something. Check and adjust or repair binding component.

PROBLEM	CAUSE & SOLUTION
PERFORMANCE PROBLEMS	
Boat is sluggish and has lost speed & RPM.	• The boat may be need to have marine growth cleaned from hull and running gear. • Propeller may be damaged & need repair. • Weeds or line around the propeller. Clean propeller. • Boat is overloaded. Reduce load. • Check for excessive water in the bilge. Pump out bilge & find & correct the problem. • The throttle is not responding properly and the engine is not getting full throttle. Have the throttle control system checked by a qualified marine technician.
The boat vibrates at cruising speeds.	• Propeller may be damaged & need repair. • The propeller or propeller shaft is bent. Repair or replace damaged components. • The running gear is fouled by marine growth or rope. Clean running gear. • The outdrive is not trimmed properly. Trim outdrive.
ENGINE PROBLEMS	
Inboard engine is running too hot.	• The raw water supply line to the pump is kinked. Replace hose. • The engine raw water pump belt is loose or worn. Tighten or replace the belt. (Mercruiser Engines) • The engine raw water pump impeller is worn or damaged. Repair the pump. • The engine thermostat is faulty and needs to be replaced. • The fresh water cooling heat exchanger is clogged and needs to be cleaned. • The exhaust manifolds or riser water ports are clogged and need to be cleaned or the manifold or riser replaced.
Inboard engine alternator is not charging properly.	• The engine alternator belt is loose or worn. Tighten or replace the belt. • The alternator is not charging and must be replaced. • A battery is defective and not accepting a charge.
ENGINE PROBLEMS	
Inboard engine suddenly shuts down and won't restart.	• The optional automatic fire extinguisher in the engine compartment has activated and the engine was shut down by the extinguishing agent. Check the monitor panel for no green light. If the green light is out, wait 15 minutes, if safe to do so, to ensure a possible fire is out. Then inspect the engine compartment. Correct any problems found and then ventilate the engine compartment and start the engine.

PROBLEM	CAUSE & SOLUTION
ENGINE PROBLEMS	
The engine suddenly will not operate at or above cruise RPM.	• 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 and correct the problem. • The tachometer is bad and needs to be replaced. • The throttle control is out of adjustment. Check the throttle adjustment or cable.
The engine is loosing RPM. The boat is not overloaded and the hull bottom and running gear are clean and in good condition.	• The fuel filter could be dirty. Inspect and replace the fuel filter. • The electronic engine control system on the engine is malfunctioning. Repair the engine control system.
The engine runs too cold.	• The thermostat is faulty. Replace thermostat. • The temperature gauge is not reading properly. Replace the temperature gauge or sender.
The engine starter will not operate.	• The battery switch is off. Turn on switch. • The shift control is not fully engaged in neutral. Move shifter from forward to neutral and try again. • The fuse or circuit breaker for the starting circuit is blown. Reset the breaker or replace the fuse. Repair circuit if necessary • The battery is weak or low. Charge or replace battery. • Corroded or loose battery connections. Tighten, clean and protect connections.
ACCESSORY PROBLEMS	
Reduction in water flow from the bilge pump.	• Impeller screen plugged with debris. Clean screen at the base of the pump. • The discharge hose is pinched or clogged. Check discharge hose and clean or repair. • Discharge hose is sagging below the pump and creating an airlock. Reroute hose so it runs uphill from the pump to the thru-hull fitting. • Low voltage to the pump. Check the battery and wire connections.
The automatic switch on the bilge pump does not activate the pump.	• The circuit breaker near the battery switch has blown. Reset the circuit breaker. • The battery is dead. Charge or replace the battery. • The pump impeller is jammed by debris. Clean pump impeller housing. • The wire connections in the bilge have corroded. Replace connectors and secure above the bilge waterline. • The pump is defective. Replace pump.

PROBLEM	CAUSE & SOLUTION
ACCESSORY PROBLEMS	
The bilge pump will not run when the manual switch is activated.	• The circuit breaker supplying the switch has tripped. Replace or reset the circuit breaker. • The battery switch is off. Turn on the battery switch and bilge pump breaker. • The pump impeller is jammed by debris. Clean pump impeller housing. • The wire connections in the bilge have corroded. Replace connectors and secure above the bilge waterline. • The switch is defective. Replace the switch. • The pump is defective. Replace pump.

Medallion Gauges Quick Reference Guide

Overview:

Medallion gauges are digital instruments that use CAN data to deliver extremely accurate engine information. They are connected directly to the engine's computer using one of the following data streams:

- J1939 Volvo mechanical engines (Non-EVC)
- NMEA 2000 Volvo EVC engines
- SmartCraft Mercury DTS and mechanical engines

Each set of gauges has a harness that connects all of the gauges together and to the incoming data. The tachometer is the "brain" of the system. It processes all of the incoming information and then distributes specific data downstream to the other gauges.

Backlighting is controlled from either the Nav/Anchor light switch or the Panel Lights switch.

Some of the data does not come from the engine.

- Pitot speed comes from the pitot tube connected at the outdrive up to a pitot sensor mounted to the engine (Mercury DTS) or to the gauge harness (all others). This does not apply to boats without speedometers.
- Fuel level – Non-DTS/EVC Engines: Comes directly from the fuel tank sender to an input wire on the gauge harness.
- Fuel level – DTS/EVC Engines: A unique Mercury or Volvo harness plugs into the back of the engine and runs to the fuel sender (pink signal wire ONLY…ground for sender goes to boat ground). Fuel level is processed by engine computer with the other CAN data.
- Fuel level calibration – Volvo EVC only: If the fuel level calibration is missing on a Volvo EVC engine, the 2.5" display will show dashed lines (- - -) for fuel level. Fuel levels will not work in the Medallion system until the Volvo fuel system has been calibrated. If the fuel tank calibration has been lost, it will be necessary to go into Settings and set the empty tank level, the fuel tank capacity and perform a multi-point fuel calibration. In some installations, it may be easier to connect an extra fuel sender to the sender wires rather than remove the sender. Note that all Monterey fuel tanks are either rectangular in cross section or very close to rectangular which means that all fuel senders read linearly. The calibration process will ask for 20/40/60/80/100% increments which can be measured along the length of any fuel sender regardless of length.
- Air temperature comes from a sensor connected to the gauge harness
- Depth and water temperature come from the transducer (if equipped).
- Voltage is detected from power delivered at the helm and connected to the harness.

The balance of the information listed below is delivered via CAN data stream.

- RPM
- Coolant Temp
- Block Pressure (Mercury only)
- Trim Position
- Engine Hours
- Oil Pressure
- Fuel Rate
- Fuel Level (DTS/EVC only)
- Engine or Helm (Engine Helm Computer) Faults

Gauge Operation:

There are 2 types of tachometers: Graphical and Segmented. The segmented tach has no buttons on the face and the graphical tach has two black buttons on either side near the bottom.

Segmented Tach:

This tach is operated by a momentary switch on the dash with the label "Engine Data". When the key is turned on, the gauges will power on. Simply press the Engine Data switch to scroll through each item in the display of the tachometer. The display on the tachometer will show the engine hours for 3 seconds and then return to the last screen used each time the key is turned on.
The following screens are displayed on the segmented tachometer:

- Hours
- Coolant Temp
- Block Pressure (Mercury only)
- Oil Pressure (150HP and up)
- Depth
- Fuel Rate (Fuel symbol + "R")
- Fuel Level (Fuel symbol + "L")
- Voltage
- Air Temp ("A")
- Water Temp ("W")
- RPM

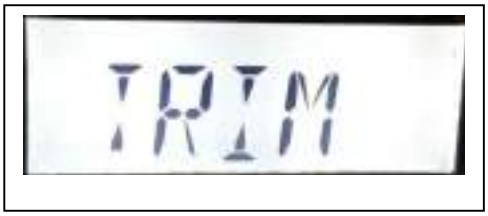
Calibrating Trim on the Segmented Tach:

1. To calibrate drive/outboard trim on the segmented tach:

2. Toggle to the Trim display using the “Engine Data” switch

3. Hold the “Engine Data” switch down for 5 seconds. The display will show “Down”.

4. Trim the drive all the way down. Press the “Engine Data” switch. The display will show “Trim”.



5. Trim the drive to the max desired trim point. Press the “Engine Data” switch. The display will show “Trailr”.

6. Trim the drive all the way up. Press the “Engine Data” switch. The display will show “Done”.

7. Calibration Complete!

Graphical Tach:

This tach is operated using the buttons on the front of the gauge. Pressing the left button will scroll data to the left, pressing the right button will scroll data to the right.

Startup:

Note that on Mercury engines equipped with the graphical tachometer, a "Service Soon" message will flash when the key is first turned on. This is the required EPA emissions check function and is normal. Volvo engines do not flash this message because this function is covered by the 2.5" display.

Setup Mode:

Press and hold both buttons to enter setup mode.
This will allow you to adjust the settings in the tach.
The following items can be adjusted and their appropriate settings are detailed below.

- Units — English/Metric
- Engine — Can be assigned either as port, stbd, or single
- LCD Animation — Turns the scrolling Monterey emblem on or off between data screens
- LCD Screens — Enable/Disable data screens (See below for screen details)
- LCD Backlight — Adjust brightness of display (Customer to set)
- LCD Contrast — Adjust contrast of display (Customer to set)
- Calibrate Trim — Calibrates trim needle and digital trim position by setting marker points at Full Down, Max Trim, and Full Up/Trailer. NOTE: Max trim is the highest level of trim the boat would normally be operated at.
- Gauge Information — Software revision
- Diagnostics — Troubleshooting (Medallion technician only)
- Restore Defaults — Resets gauge to defaults
- Exit Setup — Return to normal operation

Graphical Trim Calibration:

***Note that if configuring with dual engines, both drives should be calibrated at the same time.**

1. Toggle to SETUP menu by pressing and holding both buttons on the tachometer.

2. Toggle to the TRIM CALIBRATION option by pressing the left button. Enter by pressing the right button.

3. The display will show “FULL DOWN”. Trim the drive all the way down. Press either button.

4. The display will show “Max Trim”. Trim the drive to the max desired trim point. Press either button.

5. The display will show “UP/TRAILER”. Trim the drive all the way up. Press either button.

6. Calibration Complete!

LCD Screens:

The following grid shows how each data screen should be set for single and twin engine boats.

		Twin Engines	
Screen	**Single**	**Port**	**Starboard**
Clock	Disabled	Disabled	Disabled
Engine Speed	Enabled	Enabled	Enabled
Vessel Speed	Enabled	Disabled	Disabled (Enabled 328SS)
Oil Pressure	Enabled	Enabled	Enabled
Engine Temperature	Enabled	Enabled	Enabled
Block Pressure	Enabled-Mercury Disabled-Volvo	Enabled-Mercury Disabled-Volvo	Enabled-Mercury Disabled-Volvo
Battery Voltage	Enabled	Enabled	Enabled
Fuel Level and Rate	Enabled	Enabled 328SS –Volvo: Enabled 328SS – Mercury: Enabled	Enabled 328SS – Volvo: Disabled 328SS-Mercury: Disabled
Trim	Enabled	Enabled	Enabled
Rudder	Disabled	Disabled	Disabled
Depth	Enabled	Disabled	Disabled (Enabled 328SS)
Air Temperature	Enabled	Disabled	Enabled
Lake Temperature	Enabled	Disabled	Disabled (Enabled 328SS)
Heading	Disabled	Disabled	Disabled
LCD Animation	Disabled	Disabled	Disabled

Troubleshooting:

Problem: Digital display and other gauges do not show correct information. Coolant temp reads “32 F”.
Issue: There is no data moving from the engine to the gauge.

- Check power to NMEA 2000 devices (if equipped).
- Check connections on NMEA 2000 tees (if equipped).
- Check plugs on engine and at gauge harness.
- Make sure battery switch is turned on.
- Listen for fuel pump when key is turned on. If fuel pump does not start, the engine computer is not powered up and no data will be broadcast to gauges.

Problem: Port gauges show starboard engine data (or vice versa), Single engine gauges do not show correct engine data.
Issue: Gauge may be set to port, starboard, or single.

- Verify in “Setup Mode” that gauge is set to the correct engine.

Problem: Speedometer reading 10 to 40mph while at rest.
Issue: Replace the Medallion 5550-12071-05 pitot sensor with the Mercury sensor and replace the 8633-00020-29 GDIG tachometer with Medallion part number 8633-00099-29

Problem: Trim menu not showing in tachometer display
Issue: Trim function may be disabled.

- Verify in “Setup Mode” that the trim option is enabled.
  - Press and hold both buttons on front of GDIG tachometer.
  - Scroll down to “LCD SCREENS”.
  - Ensure that the trim option is enabled.

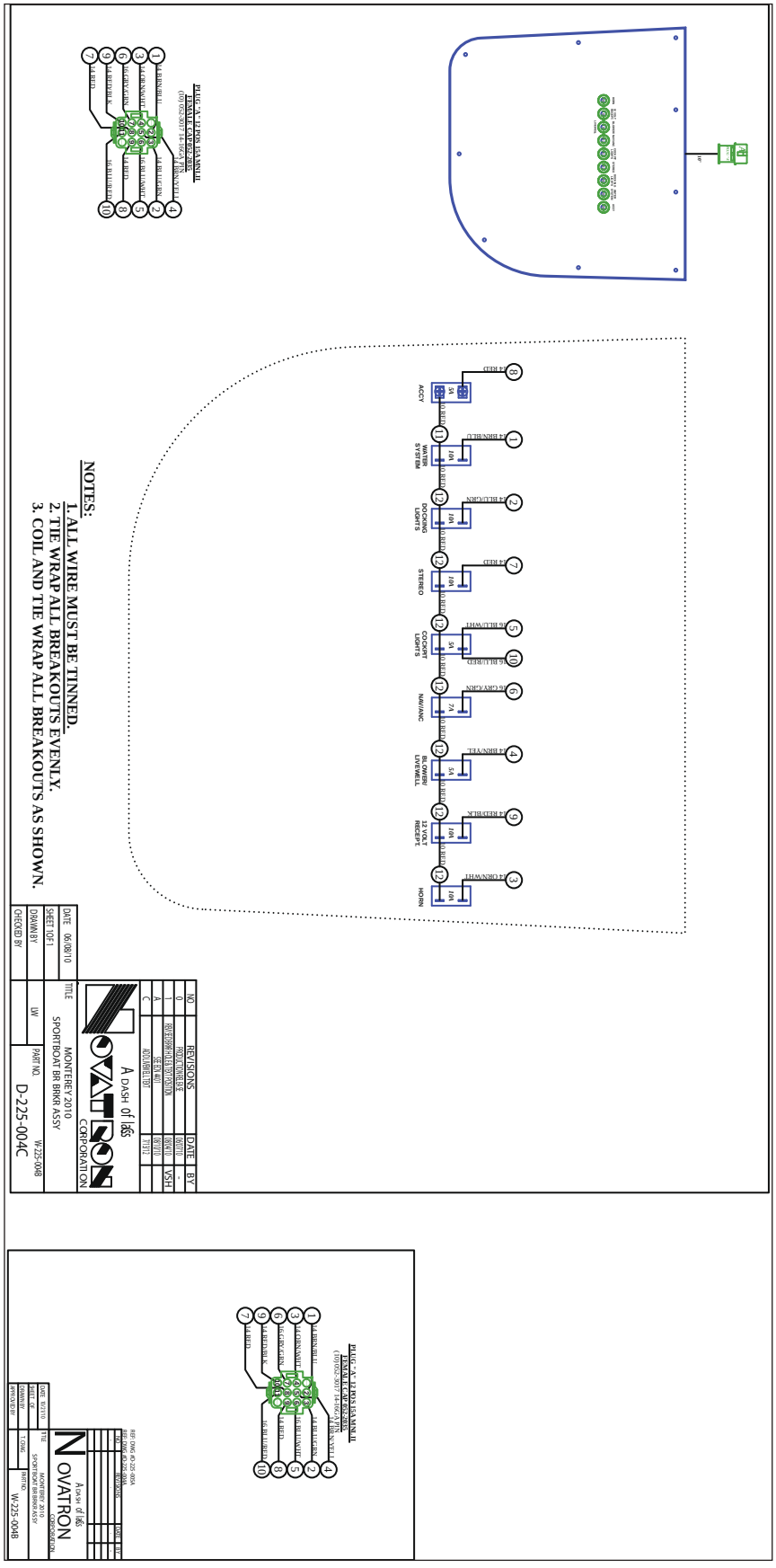
Problem: Incorrect display of fuel level on dual engine, dual tank boats.
Issue: Fuel level not accurate.

- Replace 8633-00020-29 GDIG tachometer with Medallion part number 8633-00099-29.

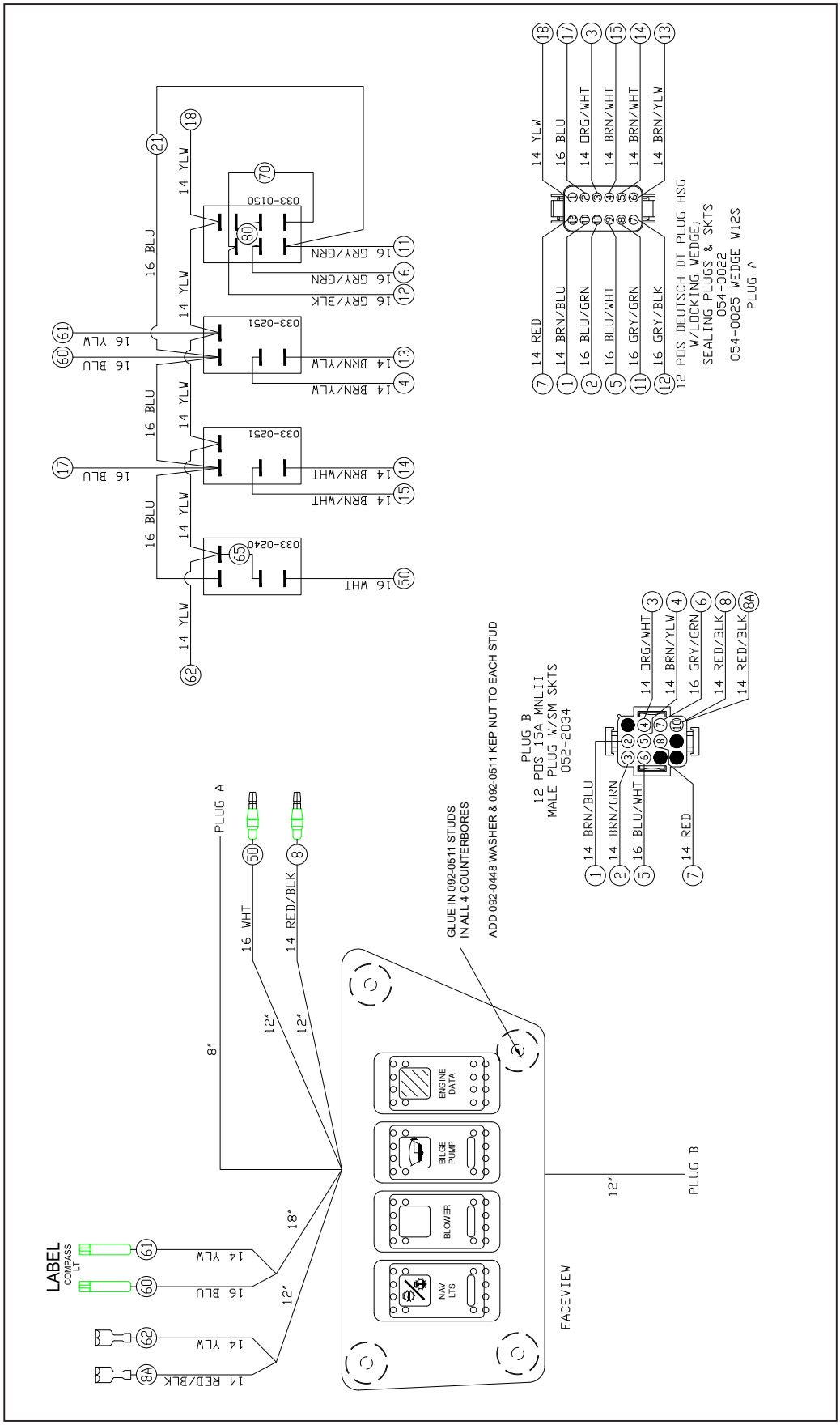
Problem: Needles “fluttering” when key switch is first turned on.
Issue: This is caused by the stepper motor in the gauge resetting itself upon startup.

- This is a function of the gauge, no action is required.

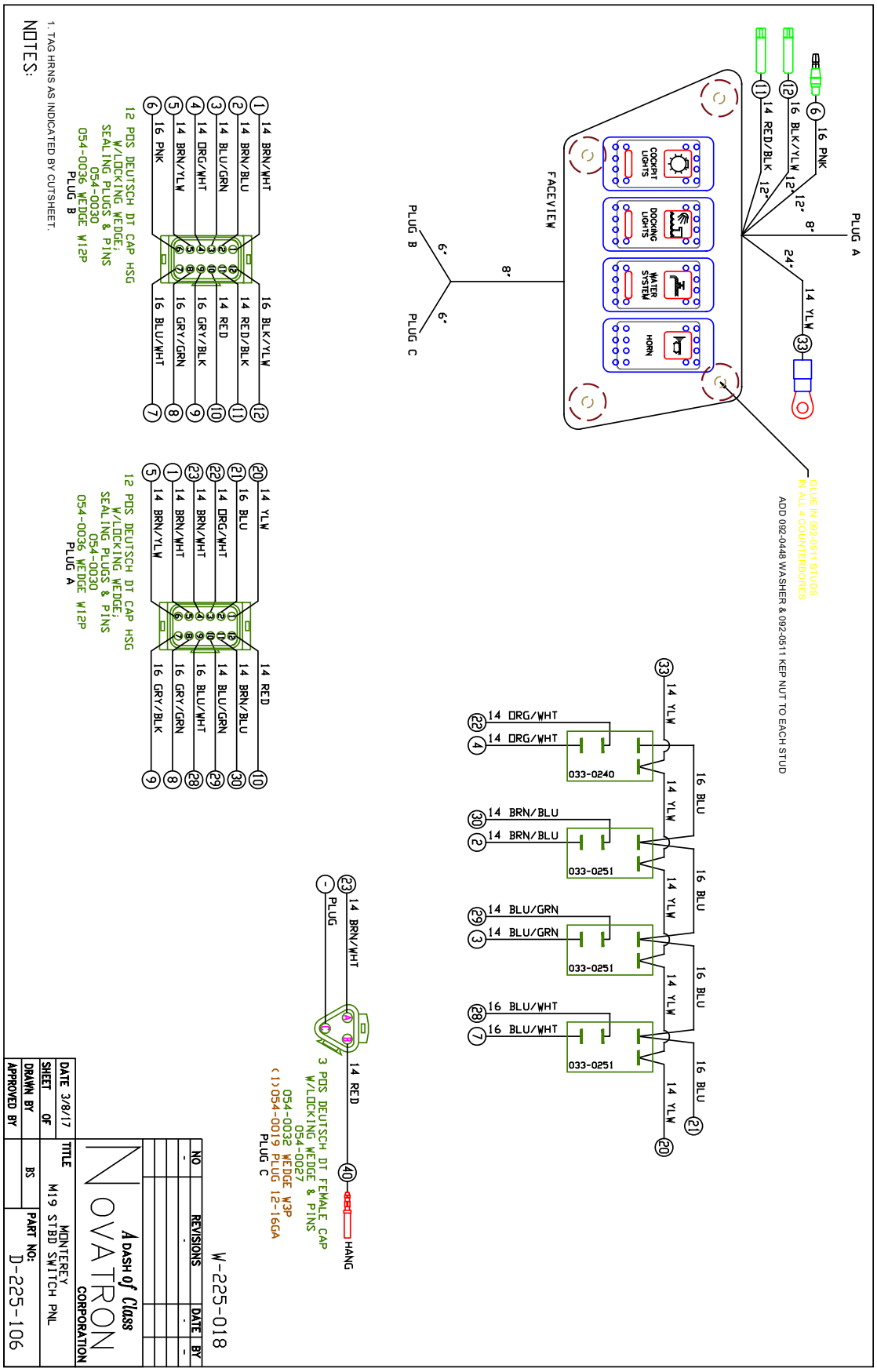
NOTES



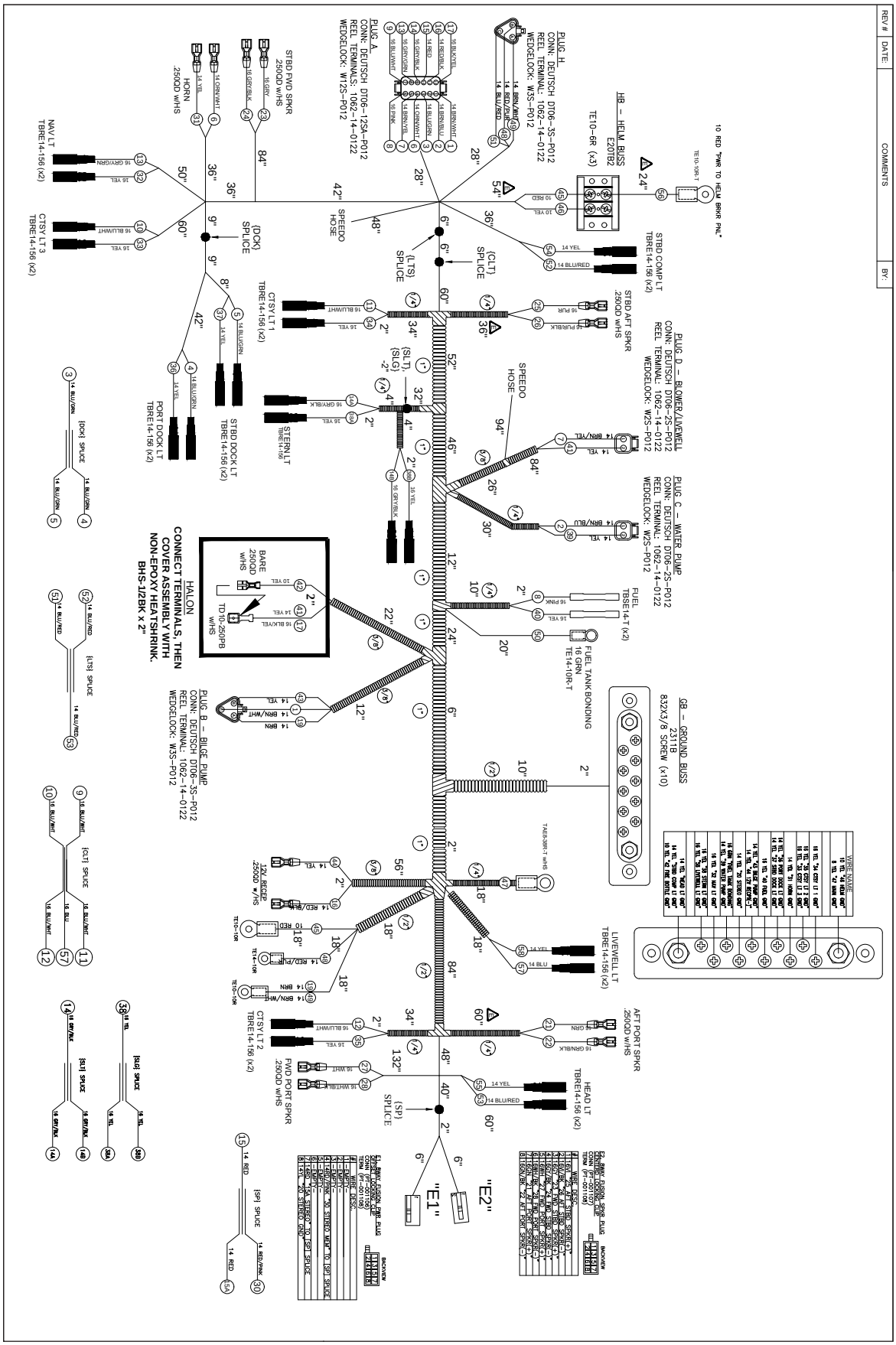
Circuit Breaker Panel



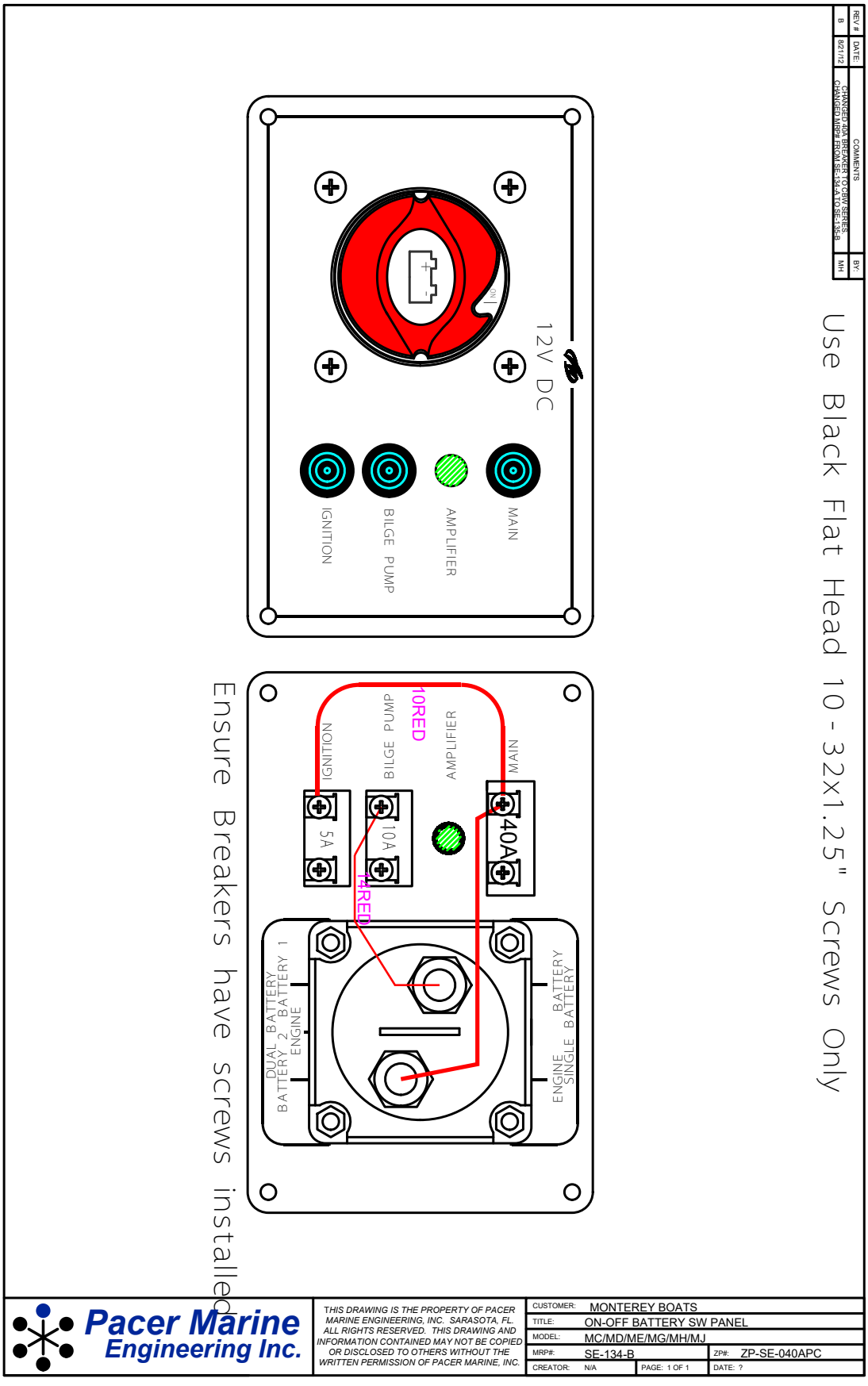
Port Switch Panel



Starboard Switch Panel



Hull Harness

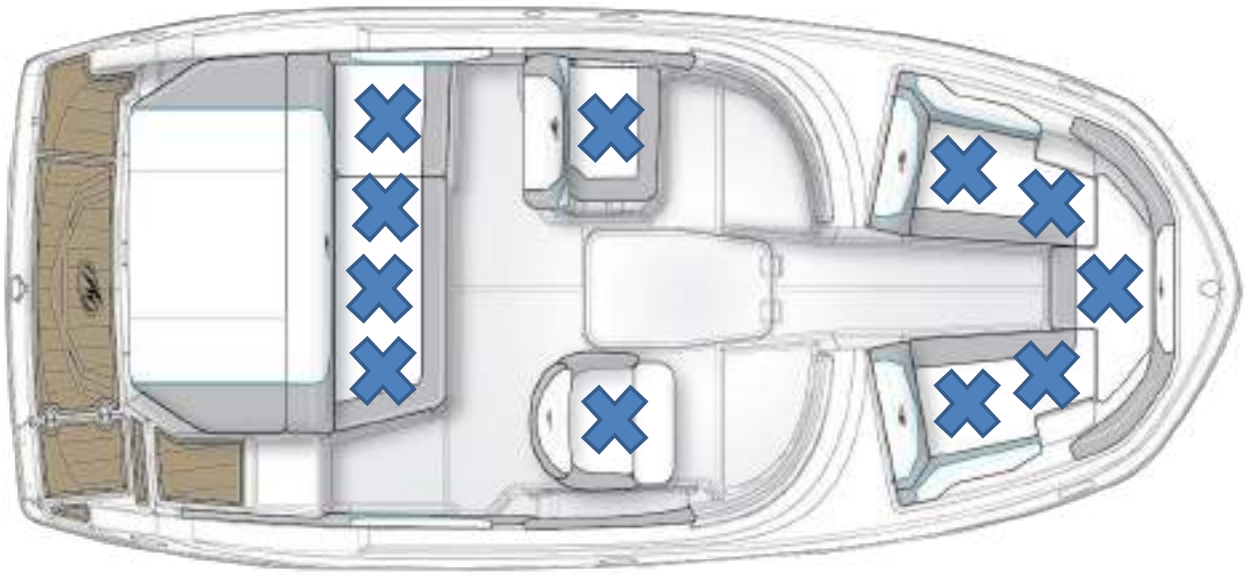


Single Battery Switch Panel

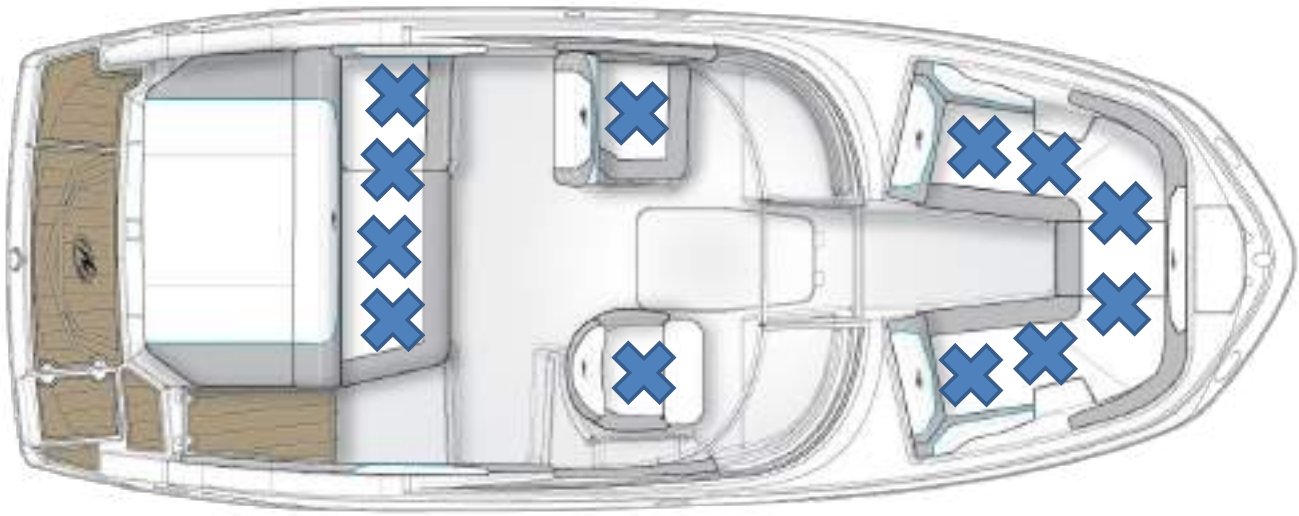
NOTES

Occupant Seating

M20 DESIGNATED OCCUPANT POSITIONS



M22 DESIGNATED OCCUPANT POSITIONS



NOTES

M20 Specifications

SPECIFICATION ITEM	US UNIT	METRIC UNIT
LOA W/SWIM PLATFORM	19’10”	6.0 M
BEAM	8’4”	2.5 M
DEADRISE	19^0	19^0
DRAFT - OUTDRIVE UP	19”	48.3 CM
DRAFT - OUTDRIVE DOWN	37”	94 CM
BRIDGE CLEARANCE W/O TOWER	58”	1.47 M
BRIDGE CLEARANCE W/ TOWER	89”	2.26 M
FUEL CAPACITY	36 GAL	136 L
DRY WEIGHT	3400 LBS	1542 KG
MAX PERSONS WEIGHT	1650 LBS	675 KG
MAX PERSONS W/ GEAR WEIGHT	1655 LBS	755 KG
MAX PERSONS	11	NA
MAX POWER	250 HP	187 KW

M22 Specifications

SPECIFICATION ITEM	US UNIT	METRIC UNIT
LOA W/SWIM PLATFORM	21’10”	6.65 M
BEAM	8’6”	2.59 M
DEADRISE	19^0	19^0
DRAFT - OUTDRIVE UP	19”	48.3 CM
DRAFT - OUTDRIVE DOWN	37”	94 CM
BRIDGE CLEARANCE W/O TOWER	60”	1.5 M
BRIDGE CLEARANCE W/ TOWER	91”	2.3 M
FUEL CAPACITY	52 GAL	151.41 L
DRY WEIGHT	3750 LBS	1710 KG
MAX PERSONS WEIGHT	1980 LBS	750 KG
MAX PERSONS W/ GEAR WEIGHT	2000 LBS	900 KG
MAX PERSONS	12	NA
MAX POWER	350 HP	261.8 KW

Monterey Boats Lifetime Limited Warranty

MONTEREY BOATS warrants to the original retail purchaser of its product beginning with the 2018 models that it will repair or replace defects in materials and workmanship found to exist in its product during the applicable warranty periods defined below if purchased from an authorized MONTEREY BOATS dealer, subject to the exclusions, limitations, conditions and provisions noted below. All repairs and replacements under the following warranties will be performed by MONTEREY BOATS or an authorized MONTEREY BOATS dealer or representative selected by MONTEREY BOATS at its sole discretion.

LIFETIME LIMITED STRUCTURAL HULL AND DECK WARRANTY:

MONTEREY BOATS warrants to the original retail purchaser of its product that MONTEREY BOATS will repair or replace the fiberglass hull or deck of its product if it is found to be structurally defective in materials or workmanship for as long as the original retail purchaser owns the product. For purposes of this limited warranty: (1) a structural defect is defined as a defect that causes the hull or deck to be unsafe or unfit for use under normal operating conditions; (2) the fiberglass hull is defined as the single fiberglass molded shell and integral fiberglass structural components including stringers, transom and related structural components which are below the hull flange; and (3) the deck is defined as the single fiberglass molded shell and integral fiberglass structural components attached to the hull flange. This warranty is further subject to the exclusions, limitations, conditions and provisions noted below.

TEN-YEAR TRANSFERABLE LIMITED STRUCTURAL HULL AND DECK WARRANTY:

Beginning with the 2017 models, MONTEREY BOATS also offers a Ten-Year Transferable Limited Structural Hull and Deck Warranty. Under this warranty, MONTEREY BOATS will repair or replace the fiberglass hull or deck if it is found to be structurally defective in materials or workmanship within the first ten (10) years after the warranty commencement date. For purposes of this warranty: (1) a structural defect is defined as a defect that causes the hull or deck to be unsafe or unfit for use under normal operating conditions; (2) the fiberglass hull is defined as the single fiberglass molded shell and integral fiberglass structural components including stringers, transom and related structural components which are below the hull flange; and (3) the deck is defined as the single fiberglass molded shell and integral fiberglass structural components attached to the hull flange. This warranty may be transferred to subsequent purchasers (hereinafter "new owner") provided the new owner registers the transfer and pays the transfer fee in accordance with the requirements set forth below. This transfer will only apply to the balance of any warranty period left during the ten (10) year period commencing on the warranty commencement date.

1. The request for transfer must be made in writing by the new owner and sent within thirty (30) days of the date of his/her purchase of the boat to:

MONTEREY BOATS
1579 SW 18th Street
Williston, Florida 32696

2. The request must include: A copy of the bill of sale with the Hull ID number, the new owner's name and address and a Certified Check or Money Order for the correct transfer fee amount.

3. The transfer fee is $300.00 for boats with hull lengths under 27', $500.00 for boats with hull lengths from 27' but under 33', and $700.00 for boats with hull lengths 33' and over.

In the event fiberglass hull or deck work is required, the new owner must return the boat to the original selling dealer or to a dealer authorized to service MONTEREY BOATS products. The cost of returning the boat to and from MONTEREY BOATS or an authorized MONTEREY BOATS dealer or representative will be the sole responsibility of the new owner. This warranty is further subject to the exclusions, limitations, conditions and provisions noted below.

FIVE-YEAR LIMITED HULL BLISTER WARRANTY:

MONTEREY BOATS warrants to the original retail purchaser of its product that MONTEREY BOATS will repair any osmotic blisters which occur on the underwater gelcoated surfaces of the hull as a result of defects in materials or workmanship within five (5) years from the warranty commencement date according to the following prorated schedule provided that the original factory gelcoat surface has not been altered in any way:

1. Up to two (2) years from the warranty commencement date, MONTEREY BOATS will pay 100% of the repair costs.
2. After two (2) years but up to three (3) years from the warranty commencement date, MONTEREY BOATS will pay 85% of the repair costs.
3. After three (3) years but up to four (4) years from the warranty commencement date, MONTEREY BOATS will pay 65% of the repair costs.
4. After four (4) years but up to five (5) years from the warranty commencement date, MONTEREY BOATS will pay 35% of the repair costs.
5. After five (5) years from the warranty commencement date, MONTEREY BOATS will pay 0% of the repair costs.

Alterations which will void this warranty include, without limitation, damage, accident repair, sanding, scraping, sandblasting, or improper surface preparation for application of a marine barrier coating or bottom paint. A marine barrier coating must be properly applied to the hull bottom if the boat is to be moored in water for periods of more than sixty (60) days in any ninety (90) day period and a marine barrier coating is also required if the boat is to be bottom painted. This warranty is further subject to the exclusions, limitations, conditions and provisions noted below.

THREE-YEAR EXTERIOR COSMETIC GELCOAT LIMITED WARRANTY:

MONTEREY BOATS warrants to the original retail purchaser of its product that MONTEREY BOATS will correct or repair any cracking or crazing of, and any air voids in, the exterior gelcoat surface of the boat as a result of defects in materials or workmanship within three (3) years from the warranty commencement date according to the following prorated schedule provided that the original factory gelcoat surface has not been altered in any way:

1. Up to one (1) year from the warranty commencement date, MONTEREY BOATS will pay 100% of the repair costs.
2. After one (1) year but up to two (2) years from the warranty commencement date, MONTEREY BOATS will pay 50% of the repair costs.

3. After two (2) years but up to three (3) years from the warranty commencement date, MONTEREY BOATS will pay 25% of the repair costs.

4. After three (3) years from the warranty commencement date, MONTEREY BOATS will pay 0% of the repair costs.

Alterations which will void this warranty include, without limitation, damage, accident repair, sanding, scraping, sandblasting, improper surface preparation for application of a marine barrier coating or paint, or if damage to the exterior gelcoat surface results from or is attributable to the addition of items not installed by MONTEREY BOATS. This warranty expressly excludes from coverage blushing of colored gelcoat below the waterline and is further subject to the exclusions, limitations, conditions and provisions noted below.

LIMITED WARRANTY FOR NON-STRUCTURAL PARTS AND COMPONENTS:

MONTEREY BOATS warrants to the original retail purchaser of its product that MONTEREY BOATS will repair or replace the following described non-structural parts and components for the reasons and during the periods indicated below measured from the warranty commencement date whether or not separately warranted by the part or component manufacturer:

1. Canvas: if it fades or dry rots within five (5) years or if it is found to be defective in materials or workmanship within two (2) years.

2. Upholstery: if it is found to be defective in materials or workmanship within three (3) years.

3. All other non-structural parts and components: if they are found to be defective in materials or workmanship within one (1) year.

WHAT IS NOT COVERED:

The limited warranties set forth above do not cover:

1. Engines, outdrives, generators, air conditioners, and trim tabs;

2. Any boat that has been repaired or altered by persons other than MONTEREY BOATS or an authorized MONTEREY BOATS dealer or representative or modified in any way so as to affect its use and operation;

3. Any boat used for racing or for rental or commercial purposes or that has been subject to misuse, neglect, accident or structural modification;

4. Normal wear, tear, deterioration (including rust) of hardware, vinyl coverings, vinyl and fabric upholstery, plastic, stainless steel, other metal, wood, and trim tape;

5. Any defect caused by the failure of the owner to provide reasonable care and maintenance;

6. Installation of engines, generators, air conditioners, wake board towers, parts or other aftermarket accessories produced, installed or attached by anyone other than MONTEREY BOATS;

7. Loss of time, inconvenience, loss of the use of the boat or other matters not specifically covered hereunder;

8. Any boat purchased from an authorized MONTEREY BOATS dealer located in the United States or Canada that is registered and/or operated outside the United States or Canada; and

9. Any boat which has previously been repossessed from an authorized MONTEREY BOATS dealer. However, this exclusion shall not affect the Lifetime Limited Structural Hull and Deck Warranty set forth above.

GENERAL PROVISIONS:

ALL GENERAL, SPECIAL, INDIRECT, INCIDENTAL AND/OR CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM THIS WARRANTY AND ARE TOTALLY DISCLAIMED BY MONTEREY BOATS. IT IS THE INTENT OF THE PARTIES THAT THE OWNER'S SOLE AND EXCLUSIVE REMEDY IS THE REPAIR OR REPLACEMENT OF THE PRODUCT OR ITS ALLEGEDLY DEFECTIVE COMPONENT PARTS AND THAT NO OTHER LEGAL OR EQUITABLE REMEDIES SHALL BE AVAILABLE TO SAID OWNER. SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE INCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES MAY NOT APPLY TO YOU. THIS IS A LIMITED WARRANTY. MONTEREY BOATS MAKES NO WARRANTY OTHER THAN CONTAINED HEREIN. TO THE EXTENT ALLOWED BY LAW ANY WARRANTIES OF **MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE** ARISING IN STATE LAW ARE EXPRESSLY EXCLUDED. TO THE EXTENT ALLOWED BY LAW, ANY IMPLIED WARRANTY OF **MERCHANTABILITY** IS LIMITED TO THE DURATION OF THE LIMITED WARRANTY APPLICABLE TO THE PARTICULAR WARRANTED PART, COMPONENT, OR DEFECT. ALL OBLIGATIONS OF MONTEREY BOATS ARE SPECIFICALLY SET FORTH HEREIN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. MONTEREY BOATS' OBLIGATION WITH RESPECT TO THIS WARRANTY IS LIMITED TO MAKING REPAIRS TO OR REPLACING THE DEFECTIVE PARTS AND NO CLAIM FOR BREACH OF WARRANTY SHALL BE CAUSE FOR CANCELLATION OR RESCISSION OF THE CONTRACT OR SALE FOR ANY BOAT MANUFACTURED BY MONTEREY BOATS.

This Lifetime Limited Warranty commences on the date of delivery to the original retail purchaser or when the boat has been operated for twenty-five (25) hours or on the first day of the twenty-fifth (25^{th}) month from the date of shipment from MONTEREY BOATS to an authorized MONTEREY BOATS dealer, which ever occurs first.

MONTEREY BOATS will discharge its obligations under this Lifetime Limited Warranty as rapidly as possible, but cannot guarantee any specific completion date due to the different nature of claims which may be made and services which may be required. This Lifetime Limited Warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. No person, including a MONTEREY BOATS dealer, is authorized to make any repairs or replacements under this Lifetime Limited Warranty without the prior written approval of MONTEREY BOATS. MONTEREY BOATS shall in no way be responsible for any repairs not PRE-AUTHORIZED by a MONTEREY BOATS Customer Service Manager or repairs performed by a repair shop not PRE-AUTHORIZED by a MONTEREY BOATS Customer Service Manager.

MONTEREY BOATS does not authorize any person to create or assume for it any other obligation or liability with respect to its products. The sales personnel or other employees of MONTEREY BOATS dealers are not authorized to make warranties concerning MONTEREY BOATS products. No brochure,

pamphlet or other written or pictorial presentation constitutes a warranty or representation as to any aspect of MONTEREY BOATS products.

MONTEREY BOATS shall have no obligation under this Lifetime Limited Warranty unless and until each of the following conditions are met:

1. The original retail purchaser of its product or the MONTEREY BOATS dealer either completes and returns the Warranty Registration to MONTEREY BOATS by mail or facsimile or the MONTEREY BOATS dealer registers the Warranty electronically "online" within fifteen (15) days from the date the product is delivered to the original retail purchaser;
2. Notice of each warranty claim is given to the MONTEREY BOATS dealer within a reasonable period of time after discovery of any claimed defect;
3. Notice of each warranty claim is made in writing to MONTEREY BOATS within the applicable time periods identified in the respective warranties as measured from the date of purchase by the original retail purchaser; and
4. All transportation charges incurred in transporting the boat for warranty work are paid for by the owner.

MONTEREY BOATS reserves the right to make changes at any time, without notice, in prices or to make changes in design, colors, specifications, equipment, options, materials, etc., and MONTEREY BOATS shall be under no obligation to equip or modify product built prior to such changes.

IMPORTANT: Proper registration of the Warranty with MONTEREY BOATS is important for purposes of recording customer information for notification and correction of product defects under the Federal Boat Safety Act.

MONTEREY BOATS is the registered tradename and trademark of SEABRING MARINE INDUSTRIES, INC., a Florida corporation, the warrantor herein.

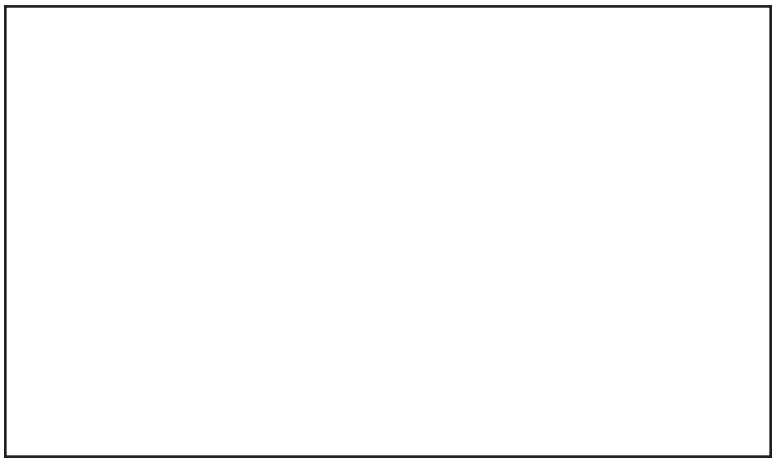
SEABRING MARINE INDUSTRIES, INC.

d.b.a. MONTEREY BOATS

1579 SW 18th Street – Williston, Florida 32696- Phone (352) 528-2628 / Fax (352) 529-2628

MONTEREY

more than a boat ...a way of life



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