

# OPERATION MANUAL



Welcome aboard!

We are happy you have chosen “PIPÉRADE“ for your vacation. We are sure you will enjoy cruising the lovely islands of the Pacific Northwest.

Pipérade is pronounced (pip-eh-rod). It is a tomato and onion stew from the Basque region of France and Northern Spain. It's great with any seafood. The spelling is a play on my last name (Piper). I've been in the food business forever, so we thought it would be an appropriate name for our boat.

Pipérade is a 1997 Ocean Alexander 423 Classico. She is powered by Twin Caterpillar 3208 naturally aspirated diesel engines.

We trust this manual will help you become familiar with the boat. If you have questions about the boat or about places to visit, please do not hesitate to ask the AYC staff.

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# BOAT OPERATION

## Engine Inspection

Remember your “**WOBBS**” every morning: **W**ater (Coolant), **O**il, **B**ilges (Inspect and Pump-out), **B**elts and **S**ea Strainer.

Check the level of COOLANT in the expansion tanks located forward of the engines. Check the level of OIL in each engine by checking your dipsticks located in each engine. Look at the etch marks on each dipstick that indicate the proper oil level. **DO NOT OVERFILL OIL!** Only fill if oil levels are below the ½ way mark. Ask your fleet captain at checkout if you have any questions about the markings on dipsticks. Please use a paper towel or oil rag, not the dish towels! Check the general condition of the BELTS, HOSES, and FUEL LINES.

Ensure the valve on each RAW WATER THRU-HULL is in the ‘open’ position (lever in-line with valve). Observe the glass of each RAW WATER STRAINER for debris. Shining a flashlight thru the strainer often helps see debris. If necessary, close the seacock, open the strainer cover, clean the strainer, and reassemble. Remember to reopen the seacock. Confirm water flow from exhaust(s) Check your generator fluids as well.

## Start-Up

Before starting the engines, do your inspection. The engines should be started from the lower helm station.

Ensure GEARSHIFTS are in ‘neutral’, or else the engines cannot be started because of the “neutral lockout”. THROTTLES should be run up and down and then brought almost back to the idle position. Turn on “Engine Start” breaker(s) on electrical panel. Insert both keys into the IGNITION SWITCHES or press “START” button to engage starter. Normally, plan to start the port engine first.

Turn the key clockwise partially until the ENGINE ALARM sounds and pre-heat the engine (if applicable). Turn the key fully clockwise to engage the engine. If the starter does not engage when the key is turned, move the gearshift lever slightly until you find neutral and try again while turning key.

If the engine cranks slowly or fails to turn over, check the condition of the battery on the ELECTRICAL PANEL. If the battery is low, try the BATTERY PARALLEL SWITCH or turn main power switch to BOTH. This switch is located on the aft engine room wall to connect the other engine battery. Turn off after using.

Move the THROTTLE to raise the engine speed to 1000 rpm on the TACHOMETER. Warm the engine for about 5 minutes before engaging transmission. Observe the readings of the gauges. The engine temperature should rise slowly.

*Note -- If oil pressure is low, shut down engine, and inspect engine compartment and look for possible cause (for example, loss of oil.) Caution -- If an engine is overheating or there is lack of raw water expelled in the engine exhaust, stop the engine immediately. Recheck the raw water-cooling system to ensure the seacock is ‘open’ (handle in-line with valve). Next, check the raw water strainer for debris. Remove the strainer, clean, re-assemble, and reopen the raw water intake valve (seacock). Restart the engine and re-check water flow from the exhaust. If water is not flowing properly, the RAW WATER PUMP may need to be serviced. Seek help.*

## Shut-Down

Before shutting down, allow the engines to 'idle' for about 5 minutes to cool them gradually and uniformly. The time engaged in preparing to dock the boat is usually sufficient. Ensure each GEARSHIFT is in the 'neutral' position and each THROTTLE is in the 'idle' position. Turn off engines by turning each ignition key counterclockwise.

## Getting Underway

DISCONNECT the shore power cord (see 110-Volt next page). Close the PORTHOLES, WINDOWS, and FORWARD HATCH. Turn on your VHF and electronics. ASSIGN crew members their various positions. Once outside the marina, idle the engines while crew brings in fenders and lines. If your vessel is equipped with a bow thruster, this is often helpful to hold the bow to the dock while the bowline is removed.

## Cruising

All close quarters maneuvering should always take place at the flybridge helm.

Engage the GEARSHIFTS. Ensure the throttles are in the 'idle' position before engaging the gearshifts to avoid transmission damage. Cruising speed is a maximum of about 2000 RPMS. If you run at 1800 RPMS you will cruise at approximately 9 knots and use only 6 - 8 gallons of diesel per hour. Your speed will vary depending upon the weight and load and weather conditions. TRIM TABS can be adjusted for comfort and visibility by putting in the "bow down" position. Trim tab breakers are located on the DC Electrical Panel.

*Note -- Avoid higher engine speeds as it causes higher engine temperature, possible damage, and higher fuel consumption. In general, lower RPMs result in much improved fuel economy.*

## Docking

During docking, use the FLYBRIDGE HELM for greater visibility to the stern. Have your crew make ready the lines and fenders and give clear instructions on how you will be docking. Often times your crew will need to step off from the swim step with the stern line. Another crew member will need to be at the bow or mid-ships to hand over the next lines. Pipérade has bow and stern thrusters, these may be engaged in **SHORT BURSTS** to hold the vessel while lines are put on the dock.

Prior to docking, rock TRIM TAB switches to the 'bow up' position (8 to 10 seconds) to make slow-speed backing and turning easier. While moving slowly to the dock or mooring location, center the WHEEL (e.g. rudders straight) and use only the GEARSHIFTS and THROTTLES to maneuver the boat.

BOW THRUSTER/STERN THRUSTER may be used for fine adjustments to you position.

## Fueling Up

OPEN DIESEL FILLER CAP(S) located on the side decks with a DECK FITTING KEY which is kept in the drawer on the aft side of the salon settee next to the stairs to the aft stateroom.

**MAKE SURE YOU HAVE THE RIGHT FUEL! DIESEL! DIESEL! DIESEL! MAKE SURE IT IS GOING INTO THE RIGHT DECK FILL! DOUBLE-CHECK!**

Before pumping, have oil/fuel sorbs handy to soak up spilled fuel. Locate fuel vents if possible to listen for tank becoming full and to know where sorbs may be needed. You should have a rough idea of the number of gallons you will need by the engine hour indicator. Also periodically have someone turn on the key to watch the fuel gauge or station a person by tank sight glasses to watch fueling progress.

Place the DIESEL nozzle into the tank opening, pump slowly and evenly, and note the sound of the fuel flow. Pumping too fast may not allow enough time for air to escape, which may result in spouting from the tank opening. As the tank fills, the sound will rise in pitch or gurgle. Pay attention to the TANK OVERFLOW VENT on the outside of the hull near the tank opening. The sound may indicate that the tank is nearly full. Top off carefully, and be prepared to catch spilled fuel. Spillage may result in a nasty fine from law enforcement.

Replace each tank cap. Turn on blower before starting engines. *Caution -- Clean up splatter and spillage immediately for environmental and health reasons. Wash hands with soap and water thoroughly.*

## **BOAT ELECTRICAL**

The electrical system is divided into two distribution systems: 110-volt AC and 12-volt DC.

The systems are controlled from the AC ELECTRICAL PANEL located next to the lower helm. The DC AUXILIARY PANEL is located next to the lower helm, and the BATTERY SWITCHES. When not connected to shore power, batteries are providing all power. Therefore, monitor the use of battery levels carefully with your Magnum remote panel volt meter located inboard of the pilothouse helm. How much electricity is being drawn from the batteries can be monitored on the inverter meter located on the electrical panel. Turn off electrical devices that are not needed.

### **110-Volt AC System**

SHORE POWER supports all AC equipment and receptacles on board, as well as the battery chargers.

To connect to shore power, plug the 30-amp POWER CORD into the receptacle marked "Shore", do not use the receptacle marked "Heater". CHECK TO MAKE SURE THE DOCK BREAKER IS OFF. Place plug into the boat receptacle nearest dock receptacle (that is 50-amp, 30-amp, 20 amp, or 15 amp). If necessary, add a CORD ADAPTER located in the aft deck storage box. Turn the dock power on. Cords coming off the bow can be wrapped loosely around the bow line or bow rail.

At the ELECTRICAL PANEL, flip the SHORE CIRCUIT BREAKER on. Check for reverse polarity. Then turn on appropriate breakers for battery charger, refrigeration, water heater, etc. Watch you amp meter for load. If the load exceeds amperage, you will pop your breaker. If this occurs, turn off some items (e.g. water heater) and wait to turn on one of your systems until your use of electricity drops.

If your outlets fail to work, check your GFIs to make sure that they have not been tripped. Be aware that one GFI breaker may supply plug-ins in several areas.

### **Inverter Power**

The INVERTER provides AC power to the 110-volt receptacle plugs (i.e. the microwave oven) when the boat is disconnected from shore power. The inverter does not provide power to the water heater or the battery charger. Your inverter panel is located below the lower helm wheel with an on/off switch. Make certain that it is on. The actual inverter is located under the galley floor.

The inverter's power source is the DC house or inverter batteries located below the galley floor. The quantity of DC power is limited to the capacity of these batteries. Therefore, running hair dryers, toaster, coffeepots, space heater, etc. and will quickly discharge the house/inverter batteries. Use these items VERY SPARINGLY! Monitor your battery usage very carefully! If anticipated power usage is heavy, start your generator or engines to keep batteries charged.

When connected to shore power, the inverter automatically becomes a battery charger for the 12-volt HOUSE BATTERIES. Should you detect the inverter failing to charge the house batteries, check the circuit breaker in the AC Panel and the inverter control panel. Also, there is usually a circuit breaker located on top of the inverter box.

### **Generator**

To start your GENERATOR, first check that your generator's fluids are topped off and the raw water intake is open. The generator controls are located on the electrical panel. First pre-heat the generator for about 20 seconds. Then while still pre-heating turn the switch to start. Hold the switch in that position while the generator catches. (About 5-10 seconds). Make sure water and exhaust is exiting the generator exhaust.

Prior to starting, make sure all individual AC breakers are turned off. After generator is running, turn your AC distribution switch to generator (or ship). Then turn on AC systems as you would on shore power one system at a time.

To turn the generator off, first take off the load by turning off AC breakers. Then turn off main AC distribution switch. Lastly kill the generator by switching generator switch to "off" until it dies.

## **House (12-volt) System**

Six battery banks support the 12-volt DC power: 1) port engine battery 2) starboard engine battery 3) house battery bank 4) Generator battery 5) Bow thruster battery and 6/ Stern thuster.

The "Inverter/House" BATTERY SWITCHES are located under the galley floor. Normally, leave the ENGINE/ GENERATOR and HOUSE SWITCHES in the 'ON' position. *Note -- Do not change the position of the switches while the engines are running or the alternator diodes will be damaged. Change positions with the engines off.*

Your 12 volt panel shows all the systems supported by your batteries. Primarily you will be turning on the breakers for your lights, water pressure, electronics, toilets etc. Bilge pumps should always be left on. Your breakers such as propane and windlass control should always be turned off after every use.

### **House Battery Bank & Switch**

The HOUSE BATTERY BANK provides power for all DC systems, except the engines and automatic bilge pumps. When disconnected from shore power, all 12-volt devices drain the house battery. Use devices as needed. The DC voltmeter on the DC panel can be switched between Port, Starboard, and House Battery banks to measure charging or resting battery voltages.

When a battery bank is being charged, the voltage will read from about 13.1 volts to 14.4 volts depending upon state-of-charge of the battery bank. When the battery bank is at rest, (that is, not being charged), the voltmeter can give a rough indication of the state-of-charge of the battery bank.

The Starter batteries are charged by the engine ALTERNATORS while underway. The engine/house batteries are charged by the BATTERY CHARGER when connected to shore power. Ensure the Battery Charger and Inverter circuit breakers at the electrical panel are ON. The GENERATOR will also charge the batteries

<b>Voltage (Wet Cell Battery)</b>	<b>Battery State</b>
12.65 volts	100%
12.47 volts	75%
12.25 volts	50%
11.95 volts	25%
11.70 volts	0%

### **Battery Parallel Switch**

Each ENGINE BATTERY is connected to its corresponding engine. However, should one engine battery be insufficiently charged to start its engine, the other engine battery may be momentarily connected to provide a boost. Turn the BATTERY PARALLEL SWITCH located on the aft engine room bulkhead. Turn off after the engines start up..

### **Bow/Stern Thruster Breaker**

The breaker for the bow thruster is located in the forward cabin, the stern thruster breaker is located in the lazarette. It is wise to always test your thruster before untying from the dock or while approaching a moorage. If they fail to turn on at the helm station, check the breaker(s). Be aware that some thruster controls turn off automatically after 7-10 minutes and need to be re-armed on the helm control.

## **SANITATION SYSTEM**

### **Marine Toilet**

It is important that every member of the crew be informed on the proper use of the MARINE TOILET. The valves, openings, and pumps are small and may clog easily. If the toilet clogs, it is YOUR RESPONSIBILITY! Instructions are posted on the wall in both heads.

Always pump the head for children, so you can make sure nothing foreign is being flushed.

*Caution – **Never** put paper towels, tampons, Kleenex, sanitary napkins, household toilet paper, or food into the marine toilet. Use only the special dissolving marine toilet tissue provided by AYC.*

To use the toilet, move the SELECTOR SWITCH to the ‘left’ (wet bowl). Lift the PUMP HANDLE 3 to 5 times to wet the bowl. After using the toilet, lift the PUMP HANDLE to wet the bowl again. Then, move the PUMP LEVER to the ‘right’ (dry bowl). Pump to remove water from the bowl. Flush sufficiently to move effluent in the hoses; heavy effluent may clog hoses. Clean the toilet as necessary.

Should the toilet pump handle squeak or stick, it needs to be lubricated. Put a couple of squirts of ‘pump lube’, salad oil, or dish soap into the toilet. Pump the toilet dry slowly, to draw the lube into the handle unit.

## **Holding Tank**

The sanitation HOLDING TANK holds approximately 60 gallons. Be aware of the rate of waste production. (About 1 gallon per flush) With an overfilled tank, it is possible to break a hose, clog a vent, or burst the tank. The result will be indescribable catastrophe and an EXPENSIVE FIX to you. Empty the tank EVERY OTHER DAY to avoid this problem. Flushing a few ounces of AYC provided deodorizer will help eliminate odors.

The HOLDING TANK is an integral tank located in the midship bilge of the engine room. There is a tank watch warning light located above the electrical panel at the lower helm, but do not rely upon this only as they often get clogged. Paying attention to the general number of flushes is best.

The holding tank is emptied in one of two ways:

#1 At the Marine Pump-Out Station, remove the WASTE CAP located **midship port**. Insert the pump-out nozzle into the waste opening. Hold nozzle firmly against the deck fitting to ensure a tight seal. Turn on pump and open valve located on handle. When pumping is finished, close lever on handle and turn off pump. Remove from deck fitting.

If there is a fresh water hose on the dock, rinse the tank by adding 2 minutes of water into tank. Then re-pump to leave the tank rinsed for the next charter. This also eliminates head odors.

#2 The tank’s contents can be discharged with the holding tank pump only in Canadian waters.

To operate the holding tank pump, turn on the switch at the electrical panel until the “Tank Watch Indicator green light comes on. It should only take a few minutes to empty the tank

## **Y-Valve**

The Y-VALVE directs waste effluent into the sanitation-holding tank or flushes the effluent ‘directly overboard’. A plastic strap keeps the handle pointed to the holding tank – the normal position. *Y-valves are usually wire-tied to the holding tank position in respect to Coast Guard regulations. Please leave it “as is” unless there is an emergency. Be familiar with the applicable laws concerning dumping sewage directly overboard.*

## WATER SYSTEM

### **Fresh Water Tank(s)**

The FRESH WATER TANK(S) holds 180 gallons. Observe the water level by indicator meter on the Port side wall. The Waste water from the sinks and showers drains overboard through various thru-hulls usually located under the sinks.

To refill the tank, remove the WATER CAP(S) located on the side decks. Avoid flushing debris from the deck into the tank opening. DO NOT fill water and diesel at the same time!

A MANIFOLD to switch tanks is located in the aft lazarette.

### **Fresh Water Pressure Pump**

The WATER PRESSURE PUMP is located **in the aft lazarette**. Activate pump at the DC panel by turning on the breaker. If the water pump continues to run, you are either out of water or might have an air lock and need to bleed the system by opening up a faucet. If you run out of water SHUT OFF YOUR HOT WATER HEATER on the AC panel. Serious damage can occur!

### **Hot Water Tank**

The HOT WATER HEATER has an 30 gallon capacity tank and is available when connected to shore power or via a heat exchanger underway. To use on shore power, flip on the water heater circuit breaker on the AC electrical panel. Do not use the water heater if the water tank level is very low. The water heater is located on the starboard side on the engine room.

### **Shower**

Before taking a SHOWER, make sure water pressure and shower sump breakers are on. Take only very short “boat” showers (turning off water between soaping up and rinsing). To keep shower tidy wipe down the shower stall and floor. Check for accumulation of hair in the shower and sink drains. An additional FRESH WATER SHOWER is located next to the stern ladder. Ensure that the faucets and nozzle are completely off after use.

A pressured RAW WATER WASHDOWN is available from a hose spigot on the bow. To activate, flip the PUMP ROCKER SWITCH located electrical panel. After use, turn the switch off to prevent pump burn out, and ensure no object leans on the switch to turn it on accidentally.

## GALLEY

### **Stove/oven**

**Some boats will obviously be electric. Delete this part and write appropriate instructions.**

The stove and oven is propane. Turn on the “stove” breaker on the AC panel.

Your propane stove is activated by the following steps:

- #1 Turn on the propane tank located under the port settee on the fly bridge
- #2 Turn on the DC breaker labeled stove and the solenoid switch located above the stove
- #3 Turn on the gas at the stove (Press in knob) and light burner. You might need to hold knob in

for a few seconds while the thermo coupler warms up. The same applies to lighting the oven. When finished cooking turn off the switches and the bottle.

### **Refrigerator**

The REFRIGERATOR is dual voltage (12-volt and 110-volt power). It will automatically use 110-volt power when the shore power is connected; otherwise, it will operate on 12-volt power. Monitor the use of the refrigerator when the engines are not charging the 12-volt battery system.

## **HEATING SYSTEM**

### **Diesel Heater ( DC)**

The DIESEL FORCED-AIR FURNACE located in the lazarette provides heat in the same way as a household furnace. Turn on the TOGGLE SWITCH located electrical panel. Set the THERMOSTAT to the desired temperature.

Check The furnace EXHAUST PORT located under the swim step, for any obstruction such as fenders or lines. Do not block this opening when operating the furnace. Heat will damage fiberglass or rubber. Once it is on, allow it to run for at least 15 minutes before turning it off. Turn 'off' the furnace heater by turning switch back off.

### **Built-in Cabin Heat (AC)**

ELECTRIC HEATERS are available when connected to shore power. One is located in the aft stateroom, one is in the forward stateroom, and also in the salon. Make sure the heater breaker on the AC panel is on.

## **ELECTRONICS**

All electronic manuals are located media cabinet.

### **VHF Radio**

There are Two VHF RADIOS. The first is located in the lower helm. Make sure the VHF breaker is on located at the electrical panel. There is a second VHF RADIO located **on the flybridge**. Always monitor channel 16 while underway.

### **Depth Sounder**

There are 2 DEPTH SOUNDERS, one on the Garmin system and the other on the Dataline instrument panel. To activate the upper DEPTH SOUNDER, press the switch bridge instrument panel. Set the scale, shallow alarm, and deep alarm as desired. The sounder should provide reliable readings in shallow waters. If in doubt, switch it off, then turn it back on to reset sounder. If your reading is blinking, it is a FALSE reading. False readings can occur in depths of more than 200 feet or in areas of strong currents or tides.

## **Radar**

To operate the RADAR press activate on the Garmin system Refer to the Garmin Manual located in the media cabinet. Remember you are not allowed to travel in FOG or in serious wind conditions.

## **Global Positioning System (GPS)**

The Garmin GPS is on the the Flybridge and at the lower helm. Ascertain that your breaker is on and then press the red color 'on/off/light' button to activate. Refer to the manual normally found in the media cabinet.

*Note -- GPS is considered a navigation aid. Do not rely on it. Compasses, charts, and dividers are the tools to plot position, course, and speed.*

# **ENTERTAINMENT SYSTEMS**

## **AM/FM Stereo Radio**

The Panasonic brand stereo unit is located in the media cabinet It operates like a normal car radio. There are --- speakers (stereo) in the salon and two (stereo) on the bridge. The FADER controls the distribution of the salon and bridge speakers. The BALANCE controls the sound distribution in the left and right speakers.

## **TV/VCR**

A TV/VCR is stored on the media cabinet. Remote controls are in the cabinet.

# **ANCHORING**

The primary WORKING ANCHOR is a plow anchor and is attached to 300ft chain passed through the deck from the ANCHOR LOCKER. The locker can be accessed through the forward cabin.

The WINDLASS POWER SWITCH is located below the wheel at the lower helm. At the bow, tap gently on the 'down' foot control to provide a small amount of slack in the chain. Tip the anchor just over center and gently begin lowering the anchor. If necessary, guide the anchor over the anchor roller to prevent binding on the pulpit. Be careful of pinch points.

Let out sufficient ANCHOR RODE (chain and nylon line) before setting the anchor. Colored markers are placed every ---feet on the chain and nylon rode, indicated amount of rode. If the anchorage is crowded put down at least a 3 to 1 scope (60 feet for 20 feet of water), back the anchor in with a short burst from the engine. Then let out additional scope dependent upon conditions. Install anchor chain bridle from bow cleats to chain, slack a loop in the windlass side of the chain.

Before raising the anchor, ALWAYS start the engines as the windlass uses large amounts of power. Turn 'on' the WINDLASS SWITCH and take up slack to remove pressure on chain bridle. Remove the bridle from the chain. As the boat moves toward the anchor, press the 'up' control to take up slack line. Give the windlass short rests as you are pulling it up. If necessary, idle the boat forward with then engines by placing briefly in gear to put slack in chain. Place yourself in position to guide the anchor onto the roller. As the anchor rises, be careful not to allow it to swing against the hull. Wash it down if you have a wash down pump before it goes into anchor locker.

Close the plastic covers on the FOOT PEDAL CONTROLS. Turn 'off' the WINDLASS POWER SWITCH.

A SPARE ANCHOR is normally stowed **under the flybridge seating**. Attach the rode securely to the chain shackle.

## **Mooring Cans**

The State Park Sticker on your vessel allows you to pick up the MOORING CANS in the parks for free. You only need to register at the kiosk usually located at the heads of the docks. Mooring cans have a metal triangle at the top upon which is a metal ring. The metal ring is attached to the chain which secures your boat. IT IS VERY HEAVY. The strongest member of your crew should be picked for this job.

Come up to the CAN into the wind or current as you would for anchoring. Have crew members on the bow, one with a boat hook and one with a mooring line secured like a bow line. As you are coming slowly up to the can have the crew holding the boat hook point at the can with the hook so the skipper always knows where it is. Hook the can and bring the ring up to the boat to allow the second crew to thread the ring with the line. Release the hold with the boat hook. If your mooring line is led out the starboard chock bring the end of the line back through the port chock. You will essentially create a bridle with about 10 feet of slack from the chalk to the can.

## **BARBECUE**

The BARBECUE is mounted to the rail on the aft deck .

Attach a PROPANE BOTTLE to the REGULATOR found in the deck box. Carefully light the unit, preferably with a long-stem butane lighter. The barbecue generates a lot of heat and cooks hot and fast. Please wipe with a paper towel before storing to prevent grease and dirt soiling the boat..

*Note: Propane bottles are provided by AYC. If you anticipate needing an additional bottle, please ask AYC staff. Caution -- For safety reasons, do not store an opened propane bottle within the salon or engine compartment. Chances are these will leak slightly once opened and propane gas could settle into low spaces. **Store these bottles in the cockpit cabinet.** Ensure gasoline and flammable materials are not near the barbecue.*

## **DINGHY & OUTBOARD MOTOR**

Your Rendova DINGHY with a 25hp Yamaha engine is stored on the stern davit. It has a capacity of about 750 pounds (motor, equipment, and 4 people).

To deploy the dinghy, clip the snap clip of the DINGHY ROPE to the top of the rail near the oarlock, and route the line through the pulley block on the bridge ladder, then the pulley block on the line. Holding the dinghy and the line, detach the STANDOFF BAR, and lower the dinghy with the line into the water, noting that the dinghy gets heavier as it nears the water.

When towing your dinghy, always keep it tight to the boat any time that you slow down or stop, Assign one of your crew members as the “dinghy” person to be responsible for taking up slack. You don’t want to wrap a propeller. Towing a dingy for long periods or in exposed (and potentially rough) water is **STRONGLY DISCOURAGED**.

Coast Guard regulations state that any child 14 and under must wear a life jacket in a dinghy. It is a good idea for **EVERYONE** to follow this rule.

## **CRABBING & FISHING**

Always check the fishing and crabbing requirements before you leave on your cruise. You will need a license. Many areas are **CLOSED** to crabbing and fishing on certain months.

**CRAB AWAY FROM THE BOAT!** Lines can get wrapped around props. Fish-flavored cat food or with the pop-up ringed lids or frozen chicken backs work the best for a nice neat way to bait the ring. After 15-20 minutes, retrieve the crab line and ring quickly. Be certain of water depth before lowering crab rings or pots; make certain the buoy line is long enough for the depth. Measure the crabs using a **CRAB MEASURING GAUGE**. Keep the male crabs of proper size (usually 6 ¼ inches across the carapace). Boil crabs about 12 minutes to cook.

After using, wash equipment thoroughly with fresh water (available from the cockpit shower faucet).  
*Note -- Please do not store wet rings and gear inside the boat.*

## **OTHER: Safety & Bilge Pumps**

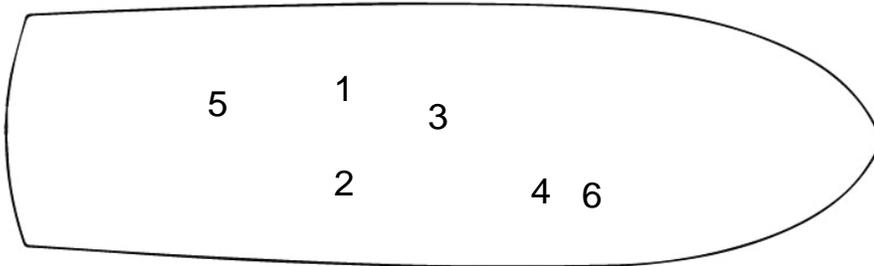
**SAFETY** should be paramount in your daily cruising. A **MAN OVERBOARD DRILL** should be discussed and perhaps even practiced with a life jacket. Remember you lifejackets are stowed under the portside settee on the Flybridge. A few should always be out and ready. Your flares and safety equipment are located media cabinet.

Pipérade is equipped with an **AUTOMATIC BILGE PUMP**. The master switch is located on the electrical panel. Normally, the switch will be left in the **AUTO** position. You may occasionally hear the pump operate due to condensation and water from the shaft log accumulating in the bilge.

An **AUXILIARY HAND OPERATED BILGE PUMP** is operated cubby in the step next to the lower helm. There is also a manual portable pump in the engine room. This is used only in emergency situations.

The **ENGINE SPARES BOX** is stowed Engine room. This includes oil filter, raw water impeller, pump parts, injectors, and other small parts.

## THRU-HULL LOCATIONS



- 1 - PORT Engine Seawater Intake
- 2 - STBD Engine Seawater Intake
- 3 - GenSet Seawater Intake
- 4 - Washdown Pump Seawater Intake
- 5 - Water Maker System Seawater Intake
- 6 - Blackwater Pump Discharge Overboard