OPERATIONS MANUAL

M/V Tahoe

Welcome aboard!

We are happy you have chosen M/V Tahoe for your vacation. We are sure you will enjoy cruising the lovely islands of the Pacific Northwest aboard Tahoe.

Tahoe has an open design, allowing whoever is cooking to be a part of all activities. The forward gathering area allows visiting with the skipper in the pilothouse while enjoying the view underway.

Tahoe is equipped with many conveniences to help make your adventure in the islands more convenient – with galley amenities to make cooking as easy as at home!

While Tahoe is a 59' boat, it was built on a 55' hull, with a 4' extension added at the factory. This allows for the maneuverability of a shorter boat.

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.

TABLE OF CONTENTS

****

SYSTEMS OVERVIEW

MATHERS MOTOR CONTROLS ("MMC"):

Tahoe is equipped with Mathers Motor Controls ("MMC"), allowing single-handle control of both the throttle and transmission of each engine – facilitating twin-engine maneuvering.

Only one helm can have control at a time. To do this, control is assumed at the desired helm by placing both throttles in neutral and pressing the "TRNSF" button at that helm. A red light on the base of both throttles at that helm indicates that it has command.

Transferring "command" while underway will necessitate setting the engine to idle and the transmission to neutral until command is transferred.

STARTING: The MMC system will not allow the engines to start unless:

- The MMC System breakers have been energized.
- A helm has taken command.
- Throttles are neutral.

The motor controllers will engage transmissions by moving forward or aft to the first detent position (15º forward or aft, when a click can be felt). There is a moment of lag between this click and the transmission engaging. Be patient. Advancing the throttle levers too quickly will result in engaging transmissions at higher rpms, which can damage them.

FAST IDLE: Fast idle allows advancing the throttle while remaining neutral. Press and hold the transfer button while advancing the throttle for that engine. A flashing red light on the controller indicates that it is in fast idle mode. Repeat for the other engine, if desired. To cancel, return to neutral.

LOW SPEED IDLE: Low speed idle is useful for traveling in harbors by reducing idle from 650 RPM to 550 RPM on both engines.

SYNCHRONIZATION: Synchronization controls both engines from the port throttle. Synchronizing the throttles while cruising minimizes vibrations caused by mismatched prop speeds. Do not use it while docking. Synchronization does not affect the transmissions.

Activate by either turning the "SYNCH" switch to on or engaging both transmissions in forward by advancing both throttles at the controlling helm to the forward detent position (15º forward - which engages the transmissions at idle speed), or beyond, and switching on the "SYNCHRO" button.

Synchronization is indicated at the lower helm by a green arrow on the starboard EMS pointing port and at the upper helm by a small arrow on the display below the starboard tachometer.

Deactivate by switching "SYNCHRO" off.

ENGINE MONITORING SYSTEM (EMS):

Tahoe is equipped with a Caterpillar Engine Monitoring System (EMS) monitoring various parameters in the propulsion engines and transmissions. The displays at both helms alert with audible and visible alarms. A caution alarm (yellow) should result in immediate action to slow the vessel, consult the display, and potentially shut down the problem engine. A warning alarm (red) requires immediate shut down of that engine.

The main unit at the lower helm (above eye-level) displays gauges for (labeled):		
Engine oil pressure (PSI)	Engine coolant temperature	Engine boost pressure
Transmission oil pressure (PSI)	Transmission oil temperature	Engine boost pressure (%)
Tachometer		
Starboard are warning lights for:		
Primary speed sensor	Engine oil pressure	Engine coolant temperature
Backup speed sensor	Engine boost pressure	Engine coolant level
Throttle position sensor fault	Transmission oil pressure	Transmission oil temperature
Electronic fuel system fault	PM indicator	System fault

On the helm panel are several affiliated switches:

The “Scroll” switches (upper for starboard engine, lower for port) scroll between the parameters displayed by the 7 analog gauges to display digitally below the tachometer.

The “Alarm mute” switch silences an alarm for that panel.

The “Dim” switch controls brightness on the MMC displays.

BOW THRUSTER:

Tahoe has an electric bow thruster. It is a high current, short term use device. If overused, it can drain the dedicated batteries and could overheat - causing shutdown to protect the motor from damage.

Suggest testing the thruster before untying from the dock or while approaching to dock. The thruster controls deactivate automatically after a few minutes and need to be re-armed.

EXHAUST:

Unlike most vessels in the fleet, cooling water does not discharge from the waterline ports. The only way to confirm cooling water flow is by looking for water movement in the sea strainers after starting and closely monitoring engine temperatures.

The propulsion engines have two exhaust ports: Idle ports at the waterline and main exhausts underwater. Exhaust is diverted from the idle ports to the main exhaust ports at higher engine speeds.

The underwater exhausts reduce sooting, but does not reduce carbon monoxide, so keep the salon door closed while engines are running to prevent exhaust gases from entering the cabin.

BOAT OPERATIONS

ENGINE INSPECTIONS:

Remember your **"WOBBS"** every morning:

Water (Coolant)

Oil

Bilges (Inspect and Pump-out)

Belts and

Sea strainers (clear and seacocks open).

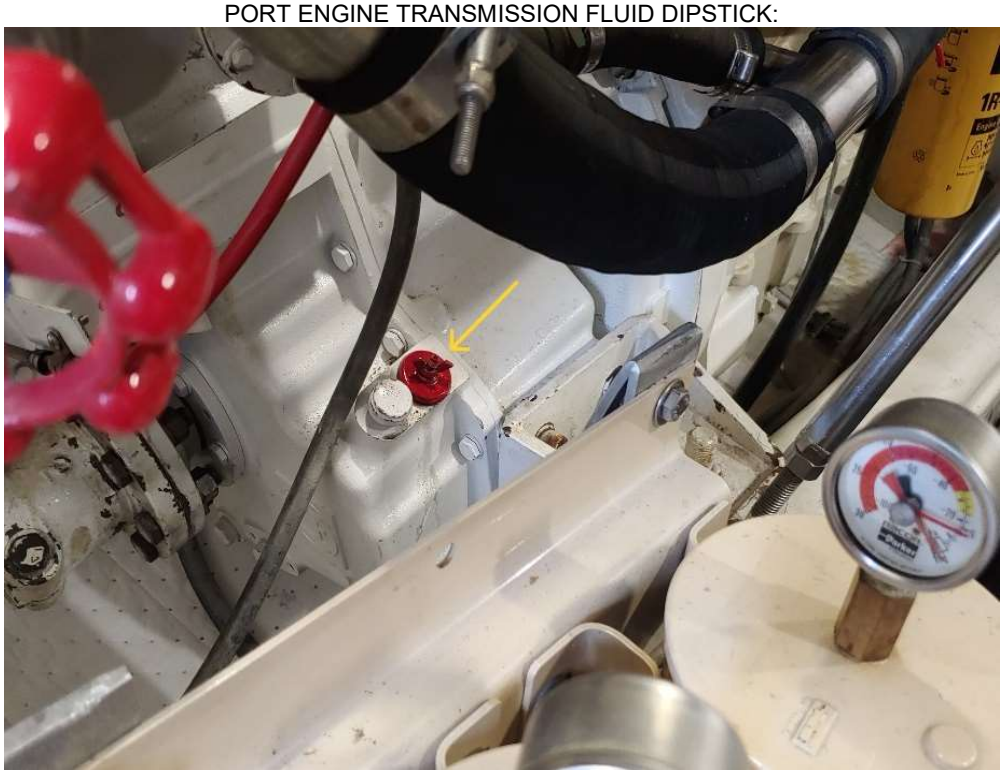
COOLANT: Check the COOLANT level in the expansion tanks: Mains: On the bulkheads forward of both mains; Generator: On the bulkhead aft of the generator. USE ONLY ETHYLENE GLYCOL ANTIFREEZE (spare fluids are in the engine room).

OIL: Check the level of MOTOR OIL in the engines with the dipsticks (painted red): Mains: Inboard, midpoint; Generator, behind a removable panel covering the generator.

The etch marks on each dipstick indicate the proper oil level. **DO NOT OVERFILL!** 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 dish towels!

Transmission oil level is checked before check-out, so it only needs to be checked for extended rentals. If so, check the transmission oil levels weekly, with the engines off.

PORT ENGINE TRANSMISSION FLUID DIPSTICK:



BILGES: Check for excess water.

BELTS: Check the general condition of the BELTS, HOSES, and FUEL LINES.

SEA STRAINER: Ensure the seacock on each RAW WATER THRU-HULL is open (lever in-line with valve). Using a flashlight, look for debris in each RAW WATER STRAINER. If obstructed, close the seacock, open the strainer cover, clean the strainer, reassemble, and reopen the seacock.

Check the Racor fuel/water separators (aft, inboard of both engines).

The fuel gauges are inaccurate, so check the fuel levels on both tanks via the clear tubes at the stern of each tank. Briefly open the yellow, spring-loaded handle to equalize the tube level with the tank level.

START-UP:

Activate the depth sounder/anemometer early to provide wind speed and direction for planning. Confirm sufficient depth.

Assign crew positions (lines, calling out distances, roving fender, etc.).

Close portholes and salon doors.

Engine room clear and hatch secured.

Gear secured.

Shift to boat power:

Deactivate dock breaker.

Disconnect shore power cord.

Reel in shore power cord, feeding the line – not using the device to forcibly pull the cord.

For most cruising, inverter power (see below) is sufficient to power most needs (the refrigerator/freezer).

Energize breakers (indicated by orange dots):

Low-voltage panel:

PORT MMC
STBD MMC
(An alarm will sound, as no helm has yet assumed command. Pressing a “Transfer” button will silence the alarm)
TRIM TABS
HORN
RADAR
RADAR/CHART PLOTTER
GPS (as back up, if desired)
BOW THRUSTER
VHF LOWER
VHF UPPER
DEPTHSOUNDER (for wind and speed indications)

24-volt panel in the engine room:

ENG. RM. FANS (Activate fans while there)

The engines can be started from either helm (once the keys are turned on). Take command at a helm by pressing the "TRANSFER" button.

Lower helm starting: Turn the keys fully to "start."

Upper helm starting: Turn keys at the lower helm just to "on." Press the green start buttons at the upper helm to start.

Confirm oil pressure level, good supply of water through the sea strainers, and batteries are charging.

FAILURE TO START:

If the starter does not engage:

Confirm that that helm has command.

Move the respective throttle slightly to confirm in neutral and repeat.

Try starting at the other helm. If unsuccessful, check that the engine kill switches in the engine room are not engaged.

If the engine cranks slowly:

Check the condition of the battery on the electrical panel. If the battery is low, press the "Battery parallel switch" (found on both helms) to connect both starting batteries momentarily.

If still unsuccessful, there are starter switches on each engine. Do not depart unless certain that the helms have control of the throttles.

AFTER STARTING: Start-up and initial running of the diesel engines is when most wear occurs. Allow the engines to reach normal operating temperatures before putting them under heavy load to ensure long engine life and reduced engine problems.

To warm the engines faster, engage the fast idle mode:

Press and hold the transfer button while advancing the throttle for that engine. A flashing red light on the controller indicates that it is in fast idle mode. Repeat for the other engine, if desired. To cancel, return to neutral.

If oil pressure is low, immediately shut down the engine.

If an engine is overheating or there is lack of raw water circulating through the sea strainer, stop the engine immediately. Ensure the seacock is open (handle in-line with valve) and the sea strainer is clear of debris. (Clean per above instructions). Restart the engine and re-check water flow through the sea strainer. If water is still not flowing properly, the impeller may need servicing. Call for assistance.

Maintain 750 RPM for a few minutes.
Maintain <1,000 RPM until engine temp. reaches 135 degrees (5 bars).
Maintain <1,300 RPM until engine temp. reaches 155 degrees (6 bars).

GETTING UNDERWAY:

ACTIVATE ELECTRONICS:

LOWER HELM:

VHF Radio: Press the volume button.
Radar: Press the “Power” button and the “ST BY/XMIT” button.
GPS: Press “PWR.”
Autopilot: Press “MENU/OFF.”
CHART PLOTTER XXX

UPPER HELM:

VHF Radio: Press the volume button.
Radar: Press the “Power” button and the “ST BY/XMIT” button.
Autopilot: Press “MENU/OFF.”

Rudder neutral.

Engage low idle to allow slower speeds in the harbor.

All present or accounted for.

Crew in position.

Secure all drawers and cabinets by depressing the buttons. Secure the refrigerator and freezer drawers by sliding the latch on the aft, bottom of each drawer to the right. Suggest keeping all in latched position except when using frequently.

Gear secured.

Before removing the lines, confirm the engines and thruster are working in all directions by giving them a quick test. The thruster disengages after a few minutes and may need to be re-armed.

Close quarter maneuvering should take place at the flybridge helm (with better visibility.

***Shift gears only at idle RPM. Allow a brief pause when shifting. ***

When ready, cast off the lines.

CRUISING:

Optimum RPM for high-speed cruise efficiency is 1800 RPM – producing 14 kts. Do not exceed 1800 RPMs. Higher engine speeds cause higher engine temperature, possible damage, and higher fuel consumption.

Cruise speeds at RPM:
1000 8.5 kts.
1300 11 kts.
1500 12 kts.
1800 12.6 – 13.5 kts. THIS IS THE OPTIMAL SPEED
2000 16 kts.
2100 18 kts.

TRIM TABS can be adjusted for comfort and visibility by putting in the “bow down” position. Trim Tabs are only effective above 8 Kts.

The analog engine temperature gauges normally indicate close to red line. This is a calibration error. The digital temperatures read accuraetlnormal.

DOCKING:

Use the upper helm for greater visibility.

Engage low idle for slower maneuvering in the harbor.

Rudder neutral. Use only the throttles and thruster to maneuver.

Set TRIM TAB switches to the 'bow up' position to make backing and turning easier.

Have the crew make ready the lines and fenders and give clear instructions on how you will be docking.

Confirm adequate depth at low tide.

A crew member should step from the swim platform with the stern line. Another crew member will need to be at the bow or mid-ships to hand over the next lines. Use the thrusters, in short bursts, to hold the vessel while lines are secured.

SHUT DOWN:

Before shutting down, allow the engines to idle for about 5 minutes to cool gradually. The time docking is usually sufficient.

Dock lines secured.

Throttles neutral.

Stop engines by: At lower helm: Turning the keys off; At upper helm: Pressing the "STOP" button for both engines and turning the ignition keys "off."

"Underway" breakers (as indicated by orange dots) off:

Low-voltage panel:

- PORT MMC
- STBD MMC
- TRIM TABS
- HORN
- RADAR
- RADAR/CHART PLOTTER
- GPS (if activated)
- BOW THRUSTER
- VHF LOWER
- VHF UPPER
- DEPTHSOUNDER

24-volt panel in the engine room:

- ENG. RM. FANS (Fan off)

FUELING:

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

Filling with the wrong fuel can cost several thousand dollars. Caution is worth it!

Filler caps are on the cockpit deck, port and starboard, amidship.

Place sorbs downhill from the filler hole and over the vent to absorb spilled fuel. Pay attention to the tank overflow vent on the outside of the hull near and below the filler cap.

Tahoe holds 525-gallons per tank.

Tahoe has fuel sight tubes at the stern- of both tanks (more reliable than the gauges). Sighting these tubes will give a better estimate of the fuel needed and allows monitoring the fueling progress.

Place the DIESEL nozzle into the tank opening and pump slowly and evenly. Pumping too fast may not allow enough time for air to escape, which may result in spouting from the tank opening.

Monitor the sound of the fuel flow – which will alert when nearly full by a change in pitch.

Fuel both tanks individually.

Top off carefully and be prepared to catch spilled fuel.

Replace each tank cap. Activate blower before starting engines.

> Spillage may result in a nasty fine from law enforcement. Tahoe carries sorbs and a small fuel/oil spill capture boom. In the event of a spill of fuel or oil, immediately deploy this boom and the sorbs to absorb the spill. The boom can be drained where permitted and reused.
>
> Tahoe is outfitted with Racor Lifeguard fuel/air separators to hinder fuel from overflowing thru the vents. However, no system is foolproof: If enough fuel is poured into a vessel, it must go somewhere! This just reduces the possibility of inadvertent overflows through the fuel vents. This just reduces fuel escaping with vented air.

ELECTRICAL

HIGH-VOLTAGE SYSTEM (120/240-VOLT AC):

The high-voltage system is fed by shore power, generator, or inverter and is controlled by 4 breaker panels:

The main AC panel (high-voltage panel) is in the pilothouse. Two interlocked breakers limit the sources of electricity that can feed the vessel: Shore/generator or inverter. Slide the interlock to switch between shore power/generator and the inverter. Only either the “Shore power” or “Generator” buttons should be pressed at any time.

Downstream from that is a subpanel hidden in the chase between the galley and the pilothouse, which feeds the range and oven. This is normally unchanged.

A 240-volt panel in the engine room controls the feed to the barbecue, water maker, and small AC subpanel above that, which controls some rarely used outlets in the lazarette.

A circuit breaker for shore power inflow is in the lazarette, starboard on the bulkhead. This is kept on and used only as overcurrent protection.

Normally, when first boarding the boat, it will be connected to shore power, with the “Shore power” selector button selected, with most breakers turned off (except for a few circuits). Energize needed breakers. Watch the ammeter for load.

Most breakers are labeled by colored dots: Green signifies normally on when the boat is occupied; Pink signifies “always on” (bilge pumps and alarms); Orange signifies needed when underway. No dots signify use when needed, irregular use, or use with discretion.

The 30-Amp 120-volt switch in the high-voltage panel and the

breakers in breaker panel in the engine room are inoperative.

GENERATOR: For operation, check oil and coolant levels and that the seacock is open. The generator controls are on the high-voltage panel in the pilothouse and at the generator. The generator has automatic shutoffs for high coolant temperature, high exhaust gas temperature, or low oil pressure. This, however, is unreliable and does not replace the need for pre-use inspection (WOBBS).

Unlike the mains, the generator cooling water discharges at water level. Check to ensure cooling water is discharging when operating.

Exceeding 3,600 watts on the outlets while operating on the generator will trip the SHORE POWER breaker.

INVERTER: The inverter provides 5,000 watts at 120-volt AC. It powers only: All outlets (except one outlet in the lazarette, port side), freezer, refrigerator, microwave, garbage disposal, and icemaker. The inverter panel is in the lazarette, on the forward bulkhead, starboard of the engine room hatch. The inverter is in the engine room, port, aft.

The inverter has a “Low Battery Cut Out” set to shut off the inverter if the batteries reach a low voltage.

Extended use at high loads can cause overheating. If so, allow it to cool before reusing.

Slow power drain will provide greater ampacity. A 1,500-watt device could run for 6 hours before reaching 50% drainage and shutting off the system.

SHORE POWER SUPPLY: Tahoe has a Cablemaster reel starboard with a 50’ shore power cord with 50A/250V capacity, a 25’ extension cord, and 3 different adapters in the lazarette. Stow after use.

Press the switch on the Cablemaster reel up to pay out and down to reel in.

Feed the cord by hand – not by using the motor to pull the cord in, as this will overload the motor and strain the cable – damaging them.

Do not step on the cable or roll carts or other equipment over the cords.

> ***When connecting the shore power cord, deactivate the dock pedestal breaker to prevent arcing – damaging the electronics.

TO DISCONNECT FROM SHORE POWER:

Deactivate the breaker on the dock pedestal.

Disconnect the shore power cable and reel it in.

Stow the extension cord and/or adapter.

TO CONNECT TO SHORE POWER:

Pay out the cable.

Deactivate the dock breaker.

Connect the shore power cord.

ENSURE THAT THERE IS NO TENSION PULLING ON THE CORD AT THE DOCK BOX – WHICH COULD CAUSE A POOR CONNECTION – DAMAGING THE PLUG AND RECEPTACLE AND CAUSING A FIRE.

Activate the dock breaker. Cords should be secured using the large twist ties in the pilothouse cabinet or wrapped loosely around the rail.

Check for reverse polarity on the indicator box in the lazarette, on the bulkhead, starboard.

Confirm receiving 240-volts on the high-voltage panel.

TO SWITCH FROM SHORE POWER TO GENERATOR:

De-energize the shore power breaker.

De-energize individual AC breakers.

Release the “Shore power” button (Yellow button on left).

Start the generator by pressing the start switch up.

The white “Generator” button should light up once generating power. Press to switch input to the generator.

Energize the shore power breaker.

Confirm receiving 240-volts.

Energize AC breakers one at a time.

Ensure water and exhaust is exiting from the starboard exhaust.

If generator started, but no voltage, confirm the AC circuit breaker on the generator panel behind the generator is activated.

TO SWITCH FROM GENERATOR TO SHORE POWER:

De-energize the shore power breaker.

Release the “Generator” button.

Shut off the generator.

Press the “Shore power” button.

Energize the shore power breaker.

Check the meter to ensure receiving 240-volts.

Check for a reverse polarity alert on the entrance service box in the lazarette, starboard upper, forward.

TO SWITCH FROM SHORE POWER/GENERATOR TO INVERTER:

On the high-voltage panel:

Deactivate the “Shore power” breaker on the panel.

Slide the lock up and activate the “Inverter” breaker below.

Disengage the generator or shore power button above.

Check the voltage meter on the high-voltage panel to ensure receiving 120-volts.

If no voltage: Check the meter on the low-voltage panel to confirm sufficient battery charge.

TO SWITCH FROM INVERTER TO SHORE POWER/GENERATOR:

On the high-voltage panel:

Deactivate the “Inverter” breaker on the high-voltage panel.

Activate the “Shore power” breaker just above that.

Press either the “Shore power” or “Generator” button on the high-voltage panel.

Check the meter on the high-voltage panel to ensure receiving 240-volts.

30A, 125-VOLT: When dock supply is only 30A, 120-volt:

Power off all high voltage devices.

Use the adapter found in the lazarette.

On the high voltage panel:

Keep the shore breaker energized.

Release the 50A shorepower button (top, left).

Pull out the red button labeled, “120 VOLT SHOREPOWER – 30 AMP.” The indicator in the button should light.

The voltmeter should indicate 108-135 volts. If not, do not energize any electrical devices until rectified, as a low voltage can harm devices.

On the 30A, 120-volt switch in the engine room (see photo):

Ensure that the reverse polarity warning is not activated.

Ensure the breaker is energized.

If there is no voltage, ensure the breakers on the dock panel are energized and connections are secure.

30A is very little amperage, so it is easy to trip the breakers. None of the 230-volt devices will work.

LOW-VOLTAGE SYSTEMS (12/24-VOLT DC):

Five battery banks supply 12 and 24-volt DC power:

1) Propulsion engines starting batteries: Charged by the engine alternators, with a master switch port of the 24-volt panel, aft of the engine.

2) Generator starting battery: With a dedicated charger and a master switch port of the generator.

3) House batteries: Charged by the inverter-charger, with a master switch on the 24-volt panel, starboard, bottom.

4) Bow thruster battery: Charged by the main engine alternators. The master switch is in the forward bilge above the battery bank.

5) Flybridge battery: With a dedicated charger, but no master switch.

The master switches are normally left on.

Do not disconnect the house batteries while the inverter is operating.

There are 3 low-voltage panels:

In the pilothouse, just forward of the high-voltage panel,

In the engine room, port, and

In the forward bilge, controlling the feed from the bow thruster batteries.

The HOUSE BATTERY BANK provides power for the inverter and all DC systems, except engine starting, the windlass, and the bow thruster. Monitor resting or charging battery levels with the voltmeter and power usage with the ammeter on the low-voltage panel. This can be selected between batteries. Turn off unneeded electrical devices.

This bank feeds the panels in the pilothouse and the engine room. All breakers are 24-volt, except for 7 on the lower starboard in the main panel, which are 12-volt. Energizing these breakers requires turning on the "DC/DC CONVERTER" breaker just above them.

When a battery bank is being charged, the voltage will read from about 26.2 to 28.8 volts depending upon the state-of-charge of the battery bank. When the battery bank is not being charged, the voltmeter can give a rough indication of the state-of-charge of the battery bank.

Engine start batteries are charged by the engine ALTERNATORS while underway. The house batteries are charged by the INVERTER/BATTERY CHARGER when connected to shore power or the generator. Keep the Battery Charger breakers ON.

Bilge pumps should always be left on.

Breakers for the range, oven, barbecue, and clothes dryer should be turned off after every use.

SANITATION SYSTEM

MARINE TOILET:

Tahoe uses Tecma heads, which are very reliable and very efficient. Despite that, it is important that all are trained 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 RESONSIBILITY! Always flush the head for children, to ensure nothing foreign is flushed.

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.

There is a control panel near each toilet. For solid waste, press the left button before use to fill the bowl. For solid or liquid waste, press the right button after use to flush. It will flush twice, so do not be surprised!

Flushing a few ounces of AYC-provided deodorizer will reduce odors.

The water supply for the aft toilet is in a panel behind the head and for the forward head, in the bilge below the forward stateroom.

If a foreign object falls into the toilet, retrieve it before flushing, else it could damage the macerator pump in the toilet – a costly and messy repair.

HOLDING TANK:

The HOLDING TANK (below the aft stateroom bunk) holds approximately 85 gallons. There is a Tankwatch monitor panel on the wall between the galley and the pilothouse (activated by turning on the "WASTE MASTER" breaker on the DC panel): The green light indicates on, the yellow light indicates 50% full, and the red light indicates it is full. Continued use WILL overflow. Monitor the Wastemaster closely, but do not rely on this, alone, as they often get clogged. To avoid this problem, empty the tank EVERY OTHER DAY and monitor the total flushes.

An overfilled tank will overflow through the holding tank vent filter and overboard – necessitating costly replacement of the vent filter and possible fines for dumping raw sewage overboard and could overflow beneath the aft stateroom bunk (creating a horrible smell in the boat) and damage hoses – all creating an extensive and expensive clean-up and repair effort.

To prevent inadvertent flushing, causing an overflow, when the red light activates, de-energize the circuit breakers for both heads until the tank can be emptied.

EMPTYING: The holding tank is emptied in one of two ways:

PUMPING OUT: At a pump-out station, remove the WASTE CAP (port midship). ***THE AFT WASTE CAP IS NOT CONNECTED.

Insert the pump-out nozzle into the waste opening, holding firmly against the deck fitting to ensure a tight seal.

Activate pump and open valve on handle.

When finished pumping, close valve on handle and deactivate pump.

Remove nozzle from deck fitting.

Replace deck fitting.

To reduce head odors, if there is a freshwater hose on the dock, add fresh water into the tank for 2 minutes and re-pump.

OVERBOARD: Effluent is controlled by 2 Y-valves and 3 seacocks (1 Y-Valve under the aft stateroom bunk and the other valves beneath the forward stateroom hatch). The Y-valves direct effluent from the head nearby to either the holding tank or overboard. The 3 discharge seacocks beneath the forward stateroom hatch control discharge from the macerator and heads.

Either the holding tank contents or the discharge from each flush can be discharged overboard. This can only be done legally in Canadian waters, in areas of open, flowing current (no bays or marinas).

Per Coast Guard regulations, tie wire secures the handles to direct effluent to the holding tank. Please leave intact unless overboard discharge is allowed and intended. Be familiar with the applicable laws concerning dumping sewage directly overboard.

To empty the holding tank: Enter the bilge below the forward stateroom, cut the tie wire securing the macerator discharge valve (middle) closed, and open it.

Energize the “Holding tank pump” breaker on the low-voltage electrical panel. Effluent should emit from starboard.

Listen to the macerator’s sound. When the tank is emptied, the sound changes and visible discharge ceases. It should only take a few minutes to empty the tank.

Close the discharge valve after.

For direct discharge: Turn the Y-valves for the respective head counterclockwise to overboard and open its seacock. Remember to reset when done, else it will discharge overboard each flush.

WATER SYSTEM

FRESH WATER TANKS:

The water tanks hold 325 gallons between 6 tanks on either side of the lazarette. The water level is visible thru the viewing slits for each tank. Gallons are marked, but can estimate at 15 gallons/inch at the lower tanks and 7.5 gallons/inch at the upper tanks. Due to uneven water tank installation, the tanks are full when the upper port tank is only about 2/3 full (marked on port sight gauge as 325 gallons).

Fill the tanks either through the deck ports aft (port and starboard) or by connecting directly to the street water supply inlet on the swim deck. When using the street connection, locate the yellow-handled valve just inside the lazarette to starboard. To allow for direct connection – alleviating the need to run the freshwater pump – place the valve to starboard. To just fill the tanks, place the valve up. Monitor for water flowing overboard when full. When using direct connection, shut off the freshwater pump – which will run needlessly.

These tanks are slow to equalize. When filling, it is better to fill slowly, allowing more even filling of the tanks, else water will overflow before all tanks are full. Faster to fill both tanks via their respective fill caps.

When filling the tanks via the WATER CAPS, avoid flushing debris from the deck into the tank opening. NEVER remove water, wastewater, and/or diesel caps simultaneously to prevent spillage from one contaminating another tank or misplacing the caps.

FRESH WATER PUMP:

The FRESH WATER PUMP is in the stern, port. Activate the pump at the DC panel by energizing the breaker. If the water pump continues to run, it is either out of water or might have an air lock and system needs bleeding by opening a faucet. If out of water, SHUT OFF THE WATER HEATER on the AC panel. Serious damage can occur!

Suggest shutting off the pump breaker when away from the boat for extended periods in case a leak develops – to avoid losing water.

WATER HEATER:

The WATER HEATER (port of the lazarette) holds 20-gallons and uses 240-volt AC. Do not use it if the water tank level is low. The water heats in less than an hour and will keep water hot for 5-6 hours (with no usage).

SHOWER:

To conserve water, take only short "boat" showers (turning water off between soaping up and rinsing). To keep the showers tidy, wipe down the shower door, stall, and floor. Check for accumulation of hair in the shower and sink drains. Ensure that the faucets and nozzle are completely off after use.

The breaker for the graywater pump should remain energized when the boat is occupied, so the pump can start automatically. If it does not start, a switch on the lower helm can override the float switch. If not, shower water will overflow into the bilge, where a bilge pump will drain it.

RAW WATER WASHDOWN:

RAW WATER WASHDOWN spigots are at the windlass and aft (port of the salon door, UPPER) (a freshwater spigot is below that.

To activate the RAW WATER WASHDOWN PUMP, energize the SWITCH in the bilge below the forward stateroom (accessible via a hatch (is on the aft bulkhead, center). The pump is pressure controlled, so it can be left on between frequent uses, best to deactivate after use. Set a timer as a reminder.

GALLEY

The galley appliances operate conventionally. The microwave, garbage disposal, and freezer/refrigerator can operate off the inverter. Breakers should be off when not in use.

REFRIGERATOR/FREEZER: The refrigerator and freezer are SubZero drawer-style. The two forward drawers are the refrigerator and the two aft are the freezer. Temperatures are set at 36° F and 4° F, respectively. While the temperatures can be set individually for each drawer, please do not change the settings.

Each refrigerator/freezer drawer has a locking latch on the bottom right for rough seas.

STOVE/OVEN: The stove and oven are electric and use 240-volts. Energize the breaker to the "RANGE SUBPANEL." Do not leave them unattended when cooking. The oven has four settings: Conventional oven, conventional broil, convection oven, and convection roast.

If the power supply to the oven is interrupted (such as when switching power sources), the oven will need to be reset.

MICROWAVE: The microwave can function normally, as a convection oven, a convection microwave, or a convection broiler. It can run from the inverter. If intending to use it for a long period, run the generator or use shore power to minimize drain on the DC battery systems.

As a convection microwave, it uses much less energy to cook than a conventional oven.

After turning the power back on, the microwave resets. Press “Clear” to operate. No need to set the clock.

Select the function desired (microwave, convection, etc.). Select the time and adjust the power settings (if desired). Press “Start.”

TRASH COMPACTOR: Turn switch and hold briefly.

To empty, fully open slide unit. Disengage the catch on the right side of the slide unit and fully open the door. If needed, use the handles on the lifting cradle to lift the bag out of the slide unit. Replace bag and re-engage latch.

Use only bags designed for use with trash compactors. Replacement bags are inside the compactor, at the top, behind a panel.

GARBAGE DISPOSER: The garbage disposer discharges waste directly into the sea (under the water line) as “gray water,” which is permissible in both U.S. and Canadian waters. Run tap water while running the disposal.

DISHWASHER: The dishwasher door requires firm pressure to latch so it will operate. Soap pods are under the sink.

ICEMAKER: The icemaker is on the flybridge. To operate, energize the breaker and the switch on the front, behind a panel (marked). Open the feed water valve by turning counterclockwise. It is very fast.

BARBECUE: The barbecue is on the swim deck, in an enclosure, and uses 240-volt AC. Energize the breaker in the engine room, port, forward of the bulkhead. De-energize when finished. Utensils are in the locked cabinet below the BBQ. The key and a spare are in the utility drawer in the galley.

In the bottom of the aft cabinet in the galley are glass grill covers (for heating pots or pans - not for placing food).

DRYING DISHES: A roll-up dish drainer and a cloth dish drying mat are under the sink. Take care to dry dishes and flatware thoroughly before putting them away. The dishwasher is a handy option If more space is needed for stacking dishes for drying.

COUNTERTOPS: The countertops are very durable, but please do not chop food on them or place hot items directly on them. Cutting boards and heat-proof trivets are in the galley cabinet, starboard.

If cooking creates a lot of steam (such as when cooking crab), please open the pilothouse and salon doors to encourage air flow or use a fan to reduce buildup on upper cabinets and ceiling in the galley.

CLIMATE CONTROL

WEBASTO DIESEL HEATER:

The Webasto diesel heater sends heated water to four individual units, controlled by individual thermostats and fan switches. It creates 45,000 BTU/H, with a fuel consumption rate of 0.045 GPH.

To operate, energize the "Heater" breaker on the 24-volt panel in the Engine Room and the "Boiler/heater" and "Cabin fans" breakers on the low-voltage panel in the pilothouse. The engine room breaker can be left on for the duration of the cruise if needed. The system has a master switch in the lazarette, port side, forward, high on the bulkhead, which is normally on (out position) – controlling it via the breakers and thermostats.

Prior to operation, check the heater exhaust port (port, aft) for any obstruction such as fenders or lines, which will be damaged by the hot exhaust. Do not block this opening when operating the heater. If needed, there is an exhaust diverter pipe in the lazarette starboard drawer (marked). Remember to return it before departing.

Activate the "Boiler/heater" breaker on the low-voltage panel in the pilothouse. Set the thermostats to "heat," desired setting, and activate the fan switches near the thermostats. Thermostats and cabin fan switches are in the salon (port, aft), pilothouse (next to the galley), and in both staterooms, next to the bunks. Remember that the unit's exhaust is hot and smelly and could damage items or aggravate neighbors.

It takes a while to produce heat.

> *The Webasto unit uses little electricity and operates from 24-volts, thus, it is available when operating from the inverter.*
>
> *After the system shuts down, there is residual hot water circulating until cold. This is "free heat" – run the fans to exploit this.*
>
> *The system runs most efficiently when all 4 fans are operating.*
>
> *With the breaker activated, the system will cycle to keep the water hot. To avoid wasting fuel, deactivate the "Boiler/heater" breaker when not running the heaters.*
>
> *The reservoir under the galley sink is hot when the system is running, so use caution around it.*

REVERSE CYCLE HEATING/AC:

Tahoe is equipped with an Aqua-Air heat pump-style reverse cycle heating/air conditioner. There are independent systems in the salon, pilot house, forward stateroom (feeding the bunkroom), and aft stateroom, controlled by individual thermostats and fed by a central pump. The thermostat for the aft stateroom is in the starboard closet.

Each system can operate in fan-only mode.

To operate, energize the breaker for that unit and the master "Air conditioner" switch (on the high-voltage panel). Set the thermostat by pressing the top-right button until the desired mode lights. Set the temperature.

When operating, water discharges from the sides of the boat. Ensure water flows out the discharges. Running a centrifugal pump dry can damage the pump – causing a costly repair and rendering the unit useless until it can be repaired. The discharging water can be heard – providing constant, passive monitoring of water flow. If no discharge, turn off immediately. Check the sea strainer located in the lazarette (center aft hatch, aft of the stairs). If clogged, clean and reprime.

Reprime by disconnecting the discharge hose from the seawater pump (located in the port, aft hatch in the lazarette) until water flows through it from the strainer.

For extended cruising, check the sea strainer in the lazarette (below the steps) weekly.

Recommend using the reverse cycle units only for air conditioning. The Webasto diesel heaters are more efficient and easier to operate for heating.

Both systems can be run simultaneously for faster heating.

PORTABLE SPACE HEATERS:

Tahoe has four portable space heaters, which use much electricity.

WINDSHIELD DEFROSTER:

Defrosters: Cabin temperature air circulates to defrost the windshield by pressing the "Defrost" switch on the helm.

ELECTRONICS

All electronics manuals are in the pilothouse cabinet.

RUDDER POSITION INDICATOR: Rudder position is indicated by an indicator on both helms and an analog/digital display on the autopilot (bottom of the screen).

VHF RADIOS: There are VHF RADIOS at both helms, controlled by breakers on the low-voltage panel. Always monitor channel 16 while underway and when at anchor.

If channels do not change, press "INT/USA."

OPERATION (PILOTHOUSE):
To activate, press the volume button. Adjust the volume. It should automatically be on channel 16.
HL/IC: The hailer/intercom function, using the radio microphone.
A FOG: The automatic foghorn feature.
DUAL: To communicate on another channel while monitoring Ch. 16.
SCAN: To scan between all non-locked out channels
WX: To scan all weather channels.
WX ALERT: When scanning weather channels, switches to a weather channel if a weather alert broadcast is issued.

INT/USA: Toggles between international and US radio channels. If channels do not change using the dial, press this button.
SCRM: Inoperative
EMER: Inoperative
F: Selects the secondary function
HI/LO: Toggles between high and low power.
LOCK OUT: Locks out the selected channel during scanning.
MR: Memorized channel recall.
MW: To program memorized channels.
CALL: Switches immediately to channel 9.
DIMMER: Dims the display.
CH. 16: Switches immediately to channel 16.
DSC: Inoperative

OPERATION (FLYBRIDGE):
To activate, press the volume button. Adjust the volume. It should automatically be on channel 16.
EMER: Inoperative
INDV: Inoperative
NAME, ALL: Inoperative
HL/IC, A FOG: The automatic foghorn feature. Press and hold to toggle between horn modes. The hailer/intercom function, using the radio microphone.
16, POS: Switches immediately to channel 16. POS inoperative.
9, SCRM: Switch to ch. 9. SCRM inoperative.
CH/WX, U/I/C: Toggles between weather and regular channels. Pressing for 1 second selects channel groups.
DUAL, TRI: Selects scan mode.
SCAN: Scan mode.
HI/LOW, DIM: Hi/low toggles between transmit power. Dim controls display.

LOUD HAILER: The radios have a loud hailer/microphone function. At the upper helm is a toggle switch marked "FB" (Flybridge), "Off," and "PH" (Pilot house). Set to the desired helm to use. At that helm, press "HL/IC" and press transmit to speak via the loudspeaker. Press again to enable listening mode.

CHARTPLOTTER:

Tahoe has a 2024 Garmin GPSMAP 943xsv chartplotter/fish finder on the flybridge helm. Press the power button, then, after start up, click, "I agree," then select your desired mode. A quick start manual is included in the operations manual or you can access the Owner's Manual by selecting "INFO," then "OWNER'S MANUAL." It is also available online at garmin.com/manuals /GPSMAP7x3-9x3-12x3 or watch a video at garmin.com /ActiveCaptainVideo.

Captains can download the Garmin ActiveCaptain app and link to the device using Wi-Fi name "TAHOE" and password "anacortes." With this app, most functions of the chartplotter will be available on your smart phone or tablet.

Please do not change any settings. If you find you need to, please reset them after your cruise.

Remember to **ALWAYS** consult your charts for depth!

RADAR: To operate, energize the breakers for the upper and lower radars in the low-voltage panel. Press the POWER button. To deactivate, press and hold the POWER button. Travel is not allowed in fog or serious wind conditions.

Radar's primary use is to sense objects and land masses that are within a 10–15-mile radius of the vessel. When used properly, it provides a useful tool in monitoring the performance of the navigation and AIS systems by providing independent 'painted' images of other vessels, navigation aids and land masses that should be depicted already.

GPS: A Northstar GPS is port, aft, upper as a backup to the Garmin system. If needed, energize the “GPS” breaker and press “PWR.”

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

To identify your position, if the Garmin device is unavailable, press “Position,” which will return your bearings.

AUTOPILOT: Tahoe is equipped with a Robertson autopilot, which can be controlled from the pilothouse (port, lower) and the flybridge. Autopilots should not be used, as a watch is still required while underway.

DEPTH SOUNDERS: Ther depth sounders at both helms are disabled, replaced by the chartplotter at the flybridge helm. The related vessel speed, wind direction, and wind speed gauges at both helms are activated by the “DEPTHFINDER” breaker on the low voltage panel..

INTERCOM SYSTEM: Tahoe has a local intercom telephone system for calling room-to-room.

PORTABLE RADIOS: Tahoe has 3 portable radios to communicate during docking.

ENTERTAINMENT SYSTEMS

The salon and all staterooms have separate sound systems (typical home or car systems). The tuner in the salon delivers sound to: Speaker “A” (The salon and the pilothouse (with its own volume control)) and Speaker “B” (the flybridge, with its own volume control).

The salon TV has a DVD player. All TVs can be fed from your devices via USB or HDMI to the back of the TV.

STARLINK: This vessel is equipped with Starlink. The network name is Tahoelink and the password is anacortes2024.

BLUETOOTH SOUNDBAR: To pair the soundbar, Activate soundbar. On Bluetooth settings on your device, search for “Visio SB3831.”

ANCHORING

The primary WORKING ANCHOR is a 66 pound/30kg anchor and is attached to a 280 ft. chain stored in the anchor locker, which can be accessed from under the forward stateroom bunk. A 43 pound secondary anchor with a 100 foot rode is stored in the aft swim deck.

LOWERING:

Survey the intended anchorage area, paying heed to the other vessels already at anchor, being aware of boat swing.

Identify a fixed point to determine whether the anchor is dragging. Apps can help monitor for anchor drag.

Determine how much chain to deploy.

Energize the “Windlass” breaker at the low-voltage panel. The windlass can be controlled by the foot switches at the windlass or from switches on either helm. Release the anchor keeper. Turn the clutch lock mechanism clockwise (to “free”). Lift the cover for the foot switch. Step on the “down” button momentarily to lower the anchor. Lower the first 10’ in short bursts, while guiding the anchor over the roller, to prevent the anchor from swinging wildly. Watch for pinch points. Once hanging safely below, promptly deploy it to the bottom.

The chain is marked with white Zip Ties every 25’ and a black Zip Tie every 100’.

Deploy the estimated length to reach bottom. Continue to pay out the anchor chain as the helmsman begins to slowly back down the vessel.

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. Let out additional scope dependent upon conditions.

Once enough chain has been released, turn the clutch lock mechanism counterclockwise to “Lock.” Retract the chain a few “clicks” to secure the clutch lock mechanism.

Deactivate the windlass breaker.

Occasionally check for drift and that the anchor is secure.

Set the anchor drag alarm on the chart plotter as an aid.

RAISING:

Before raising the anchor, start the engines as the windlass uses large amounts of power and to enable advancing the vessel to keep the anchor chain slack. Do not use the windlass to advance the vessel as it strains the windlass motor.

Energize the WINDLASS breaker, start the washdown pump (the switch is in the bilge under the forward stateroom), and attach the 6’ washdown hose and nozzle.

Advance the boat if needed to create slack to remove pressure on the chain bridle. Remove the bridle.

Uncover the starboard “up” button and press to raise the anchor, periodically advancing the throttle to maintain slack in the anchor chain. Give the windlass short rests while retracting.

Maintain vessel alignment with the anchor chain while retracting to avoid side load on the bow pulpit.

Wash the chain as it retracts.

As the anchor rises, be careful not to allow it to swing against the hull. Position someone to guide the anchor onto the roller.

Reconnect the keeper between the anchor and the windlass. Close the plastic covers on the FOOT PEDAL CONTROLS. Confirm the clutch lock is in "Lock" position. Turn 'off' the WINDLASS POWER SWITCH.

OTHER CONDITIONS:

If the anchor chain needs to be freed, it is secured at the rear of the anchor locker (below the forward stateroom) and can be manually detached.

Topside, secure a fender to the bitter end of the chain and mark its position using the "MOB" function on the GPS to aid later retrieval.

AT ANCHOR AT NIGHT:

Anchor light on.

Egress routes clear.

AFTER ANCHORING OVER NIGHT:

Anchor light off.

MANUAL RAISING:
Two anchor handles are in the pilothouse cabinet (tagged).

To use the crank, unscrew the knurled screw on the top of the clutch cover and remove.

Place the crank handle in the slot and turn to raise the anchor.

For the two-handed handle, simply secure over the notched ring at the top of the windlass and turn.

MOORING:

Tahoe is equipped with 4, 25-ft., 2, 30-ft., and 1, 35-ft. dock lines.

Tahoe is bigger than State rules allow for mooring to Washington Parks buoys, but is permitted to use the linear moorage lines, docks, or anchor.

DINGHY

The dinghy is a Novurania, 11', with a 15-HP engine, with 670 pounds capacity.

LAUNCHING:

When launching or recovering the dinghy, run the generator or engines, as the davit consumes much electricity. If the davit does not function, ensure the master switch in the engine room (port, aft) is energized.

Attach the davit controller (kept under the flybridge sink) to the davit cable.

Remove the dinghy cover.

Check fuel and oil levels.

Ensure that the 3 lifting straps are secured to the dinghy and the lifting ring.

Ensure that both bilge plugs are in place.

Position the davit over the center of the dinghy.

Attach the davit hook to the lifting ring.

Make ready the mooring line.

Disconnect the straps securing the dinghy to the deck.

Raise the dinghy. When clear of obstructions, swing the boom to the side.

Position crew on the side deck to keep the dinghy away from the boat.

Lower the dinghy to the water. Pay out enough cable to allow the dinghy to be pulled to the swim deck.

Secure the mooring line.

Release the bridle hooks from the dinghy. Retract the cable and resecure it to the deck plate to avoid swinging. Stow the lifting bridle.

Coast Guard regulations state that any child 14 and under must wear a life jacket in a dinghy. ALL should follow that rule.

STARTING THE DINGHY:

Attach the safety switch to the pilot and the switch.

Lower the motor into the water.

Loosen the vent cap on the gas tank.

Turn the key to start.

After starting, ensure water is flowing from the discharge port starboard, from the engine cover.

Adjust the idle throttle with the lower lever.

If it doesn't start, check that the safety clip is in place and the vent cap is loosened.

Keep oars, the anchor, and rode in the dinghy.

Take a torch, flares, whistle, and air horn.

Wear PFDs.

RECOVERY:

Ensure the generator or engines are ON.

Raise the dinghy motor.

Connect the lifting bridle to the hook.

Lower the davit cable and connect it to dinghy lift points (with straps connected correctly: Forward, Port, Starboard).

Raise the dinghy to the flybridge, position it over the mounting brackets, and lower it.

Reconnect the straps securing the dinghy to the deck.

Reposition the davit arm. Reattach the hook to the deck plate.

Drain any water in the bilge.

Reinsert the bilge plug.

Flush the engine of salt water (see below).

Stow the davit control.

Cover the dinghy.

The motor is a 4-stroke and uses straight gas. DO NOT USE GAS WITH OIL IN IT. Please refuel at the end of your trip.

Towing the dinghy is discouraged. If needed, assign someone to monitor the tow line to ensure it does not wrap in the propeller.

FLUSHING THE DINGHY:

After daily use, the outboard motor needs to be flushed of salt water. This is easiest on the flybridge. Fill the flushing device with Salt Away. Attach a water hose to the FRESH WATER wash down on the aft deck (the bottom faucet). Attach the “earmuffs,” then place on the engine water intake. Turn on the water (with the selector turned to water, only).

Once the water is flowing, start the engine. Be sure water exits the engine discharge port. If not, shut down the engine and adjust the muffs.

Once the discharge water is warm, switch to solution. Run until the container is empty. Run for another minute to flush out the Salt Away and shut off the engine.

CRABBING & FISHING

Always check the fishing and crabbing requirements before departing. Licenses are required. Many areas are CLOSED to crabbing and fishing on certain months.

Crab Fishing and Cooking Equipment: A collapsing crab cage is stowed in the lazarette, along with line, a buoy, and a bait box.

CRAB AWAY FROM THE BOAT! Lines can get wrapped around props. Great baits are fish-flavored cat food with pop-up ringed lids or frozen chicken. After 15-20 minutes, retrieve the crab line and ring quickly. Check the water depth before lowering crab rings or pots: Ensure the buoy line is long enough for the depth. Measure the crabs using the CRAB MEASURING GAUGE kept in the lazarette, with the crab rig. Keep the male crabs of at least 6 ¼ inches across the carapace. Boil crabs for about 12 minutes to cook.

After using, wash equipment thoroughly with fresh water. Please do not store wet rings and gear inside the boat.

SAFETY

SAFETY should be paramount in your daily cruising. A MAN OVERBOARD DRILL should be discussed and practiced with an empty life vest. 6 adult and 2 child life vests are stowed in the port closet in the lazarette. A few should always be out and ready. Throwable life rings are on either side of the flybridge.

In case of pending evacuation, gather on the swim deck, near the life vests. Promptly don life vests.

SIGNALING DEVICES are in the salon, forward of the TV (near a likely evacuation point):

Aerial flares and launcher
Handheld flares: Some of the flares are expired – which is allowed if sufficient current devices are provided.
Whistles.
Signal mirrors.
Air horns (2).
A ship's bell is on the flybridge, starboard.

FIRE: Fire extinguishers are located:

a) Galley (starboard).

b) Laundry room (above the washing machine).

c) Lazarette (at the entrance, starboard).

d) Flybridge (port).

The Engine Room has a fixed, automatic thermal release extinguisher. This device acts by flooding the entire engine room with Halon to suppress the flames. Thus, the engine room hatch needs to be kept secured, whenever unoccupied, to confine the flames and the extinguishing agent to be effective.

If activated:

If anyone is present in the engine room, they must evacuate immediately and close the hatch behind them.

Immediately shut off all engines, if safe to access the shut offs.

Shut off the exhaust fan breaker in the pilothouse, if safe to access.

Do not enter the engine room until cleared by Coast Guard or the fire department, as Halon creates a toxic gas.

Do not restart the engines until advised by AYC staff, as Halon ingested into a diesel engine can damage the engines.

SMOKE DETECTORS: There are smoke detectors in the pilothouse and each cabin and a

carbon monoxide detector in the salon.

Tahoe is equipped with 5 automatic bilge pumps, with manual overrides. The four forward pumps can be overridden at the lower helm. The pump for the stern extension is controlled at the 24-volt electrical panel in the engine room, port. It is normally in the AUTO position. Pumps occasionally operate due to condensation and water from the shaft log accumulating in the bilge.

ENGINE SPARES (fluids, oil filters, fuel filters, fuel/water separators, raw water impellers, drive belts, and other small parts) are stowed in the engine room and port of the lazarette.

A swim ladder is stowed in the starboard of the lazarette.

When working on the engines, engage the kill switches (the red buttons on either engine). Remember to re-engage after.

A first aid kit is mounted on the center wall in the port of the lazarette,

FLASHLIGHT: A flashlight is kept in the galley drawer.

BOAT HOOK: In the hatch under the swim deck.

TOOLS: A toolbox is in the lazarette.

THRU-HULL PLUGS are provided. They are in a clear tote labeled “Damage Control.”

To open the forward cabin skylight, press the blue buttons, then turn.

THRU-HULL LOCATIONS

Under the forward cabin:

Raw water washdown (port). Normally open.

Wastewater direct discharges (3, starboard). Normally closed.

Engine Room:

Cooling water thru-hulls for the main engines (forward, center) and the generator (aft, center), normally open.

A disconnected thru-hull (port), normally closed.

Lazarette (aft, center hatch, behind stairs):

Reverse cycle air conditioning pump (including the bait well inflow pump): Normally open. Water maker.

WATER MAKER

Tahoe is equipped with a water maker capable of producing about 35 GPH of fresh water. Do not operate it in a harbor, as the contaminants found in harbors will clog the system. As it requires 240-volts, it will require generator power.

OPERATION:

Loosen high pressure regulating valve (located in the engine room, starboard, aft bulkhead, center of unit).

Turn “feed pump” on control panel, lazarette, forward, starboard, by pressing start button for 5-10 seconds.

Verify raw water supplied to unit in engine room for proper flow and pressure (low pressure = 15-18 PSI, flow 1 GPM until high pressure pump Is started).
Turn “HP pump” on. Flow should increase to 2.4 GPM.
When the flow through reject discharge flow meter is free of air, slowly tighten high pressure regulating valve until the high-pressure gauge reads 800 PSI.
Open the sampling valve to discard the first 2 minutes of production.

To stop: Press the HP pump off button.

MISC.

LIGHTING: The switch for the spreader lights on the flybridge is on the upper helm.

The 2 switches for cockpit lighting are between the pilothouse and the galley, closest to the helm, allowing red night lighting.

NAVIGATION AND ANCHOR LIGHTS: Controls are on the right switch panel. Midpoint is nav lights and top is anchor. The breaker is on the low-voltage panel.

FLAGS: U.S. and Canadian flags are stowed in the salon, port. It is safest to place them from the aft deck, rather than from the flybridge. The Canadian flag is displayed when in Canadian waters – after clearing Canadian customs.

PILOTHOUSE SETTEE: The pilothouse settee is a distinctive element of Tahoe. From here, is a broad view of the surrounding landscape. Enjoy! For added seating, inserts for a table extension and a seat extension (bottom and back) are found under the settee (aft) and in the pilothouse closet. The seat bottom is a very tight fit, so please handle carefully. Do not place excessive weight on the seat insert.

CLEANING: Cleaning supplies are stowed under the galley sink, in the forward head, and in the lazarette.

VACUUM CLEANER: Tahoe has a built-in vacuum cleaner. The hose and devices are stored in the forward hull, accessible via the carpeted hatch in the forward stateroom (by the door). The hose and one wand are starboard. A carpet wand is stored port. The device is set to start automatically by inserting the hose in the inlet at the top of the stairs and turning on the switch on the hand wand. If it does not start, ensure that the switch on the unit (below the forward stateroom) is set to “AUTO.”

WASHER AND DRYER: Tahoe has a washer and dryer between the staterooms. The boat must be on shore power or the generator. These will only handle small loads and the dryer will take much longer than a household unit. If weather is conducive, dry outside on a makeshift clothesline. Clean the filter dryer after every use. Occasionally, the dryer will trip the breaker on startup. Merely reset it and restart. To prevent this, press the button firmly for until running.

WINDSHIELD WIPERS: Controls for the individual windshield wipers and washers are at the center of the helm. Turn the switches for the wipers and press down for washers.

BAIT WELL: The bait well (starboard hatch on the swim deck) can be filled with raw water and drained by pumps controlled by switches in the lazarette (starboard). Be sure to turn them off when finished.

KEYS: You were issued a salon key. Additional keys available on the boat are: Ignition keys (2 in place in both switches and 1 spare); dinghy ignition key (in place); barbecue locker (2); and engine room key. These keys are kept in the drawer immediately forward of the refrigerator.

SAFE: There is a small safe in the aft stateroom. The combination is 2160B. Press the keys carefully. If a key beeps more than once, start over. Once the display shows green, turn the inner handle to open. Please do not reset the combination.

"FIREPLACE:" In the aft stateroom is a decorative fireplace, turned on by a switch on the starboard leg inside the fireplace.

SPECIFICATIONS:

Queenship 59
Built: 1996
USCG documentation #: 1045576
Hull #: QCWED002M95J-96
length: 59' 0" (17.98 M)
Draft 5' 3" (1.52 M)
Beam: 17' 2" (5.23 M)
Weight: 61,000#
Anchor rode: 300' (91.4 M)
Cruising speed: 16 kts. Max. speed: 23 kts.
Sleeps 7 (with one in the lazarette crew quarters).
Fresh water capacity: 325 gal. (1,230 L)
Fuel capacity: 1,050 gallons (3,975 L)
Holding tank capacity: 85 gals.
Engines: Twin Caterpillar 3176B, turbocharged, 600 HP each
Generator: Kohler 18.5 KVA
Dinghy: 11' Novurania, with 15 HP Nissan motor

FLUID REQUIREMENTS:

Antifreeze: Mains and generator: Cat. Ethylene glycol (red) or universal.
Webasto: Ethylene glycol (green) or universal.

Oil: Mains: 10-40W
Transmission: 30W
Generator: 10-40W