# OPERATIONAL CHECKLISTS



### INTRODUCTION

The operational checklists contained within this document are designed to guide the competent sailor in how to operate the systems aboard Escape. The companion document, to these Operational Checklists, explaining how a system operates, is the Owner's Notes. For ease of cross reference, the chapters in the Operational Checklists correspond to the same chapter in the Owner's Notes. Our hope is you find these checklists a useful tool to make your time aboard more stress free, efficient, and safe.

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### 1. ANCHORS

- TO DEPLOY THE ANCHOR:
  - o CHECK weather report.
  - CHECK tide tables.
  - o DETERMINE current water depth.
    - CAUTION: Anchoring in water less than 15 feet is not recommended.
  - o DETERMINE the amount of increased tide height during the time anchored.
  - DETERMINE the amount of scope.
    - NOTE: In the Pacific Northwest, a 4-to-1 scope is standard.
    - NOTE: Escape's Freeboard is 5'.
    - NOTE: Simple formula for determining scope:
      - Scope = (Current water depth + increase in tide height during stay + freeboard) x 4.
      - Example Current water depth is 25', Increase in tide height is 10', Freeboard is 5'. Scope is (25' + 10' + 5') x 4 = 160'.
  - o START the engines.
    - NOTE: Section 10P. ENGINE has the ENGINE START procedure.
  - o MANEUVER the boat so the bow is directly into the wind.

When at the spot where the anchor is dropped:

- o STOP forward boat speed.
- o REMOVE the anchor chain from the cleat.
- o MANUALLY lower the anchor over the roller.
- o LOWER the anchor to the seabed bottom.
  - USE the wired windlass controller.
    - LOCATION: The wired windlass controller is located within the anchor locker.
    - CAUTION: Keep fingers, hands, and loose clothing away from the windlass during operation. Failure to do so could cause severe injury.
    - NOTE: Deployed anchor chain length is read at the chain counter located at the starboard helm station.
- o MOVE the throttles to the REVERSE IDLE position.
- MANEUVER the boat in idle reverse.
- o DEPLOY the anchor chain until the desired length is reached.
  - NOTE: Anchor chain markings are identified on the underside of the anchor locker hatch.
  - CAUTION: It is easy for the boat, in idle reverse, to overrun the chain as the chain is deploying. Ensure the anchor chain is always hanging vertically when deploying the anchor. This prevents the anchor chain from dragging along either hull.

# After reaching the desired scope:

- VERIFY the anchor is set and the boat is no longer moving in reverse for one minute.
- ATTACH the bridle.
  - NOTE: Attach the bridle hook with the pointed end facing up.
- o DEPLOY additional anchor chain until the bridle takes the load from the chain and anchor.

### If winds above 20 knots are forecast:

- Test the anchor's holding capacity with the engines at 1000 reverse rpm.
- Increase scope to 5:1 or 6:1 as room allows.
- Deploy the second anchor.
  - LOCATION: The second anchor is located in the port cockpit settee locker.
  - NOTE: The second anchor should be deployed utilizing the dinghy.

### If winds above 30 knots are forecast:

- Test the anchor's holding capacity with the engines at 1500 reverse rpm.
- Deploy the second anchor.
  - LOCATION: The second anchor is located in the port cockpit settee locker.
  - NOTE: The second anchor should be deployed utilizing the dinghy.

### If a storm is forecast:

- Increase the scope of the primary anchor. And/Or:
- Deploy the secondary anchor.
  - NOTE: The secondary anchor is best deployed before the storm reaches your location.

# • TO RETRIEVE THE ANCHOR:

- START the engines.
  - NOTE: Section 10. ENGINE has the ENGINE START procedure.
- o MOVE the throttles to the FORWARD IDLE position.
- o MANEUVER the boat so the bow is into the wind.
- o MANEUVER the boat until the anchor chain is hanging vertically beneath the boat.
- o RETRIEVE the anchor.
  - Use the wired windlass controller.
    - LOCATION: The wired windlass controller is located within the anchor locker.

- CAUTION: Keep fingers, hands, and loose clothing away from the windlass during operation. Failure to do so could cause severe injury.
- CAUTION: Ensure the anchor chain is always hanging vertically when retrieving the anchor. This prevents the anchor chain from dragging along either hull.
- NOTE: Retrieved anchor chain length is read at the anchor chain counter located at the starboard helm station.
- o REMOVE the bridle hook from the anchor chain and secure the bridle.
  - NOTE: Secure the bridle hook to the flat cleat in the anchor locker.

If the anchor chain begins to pyramid in the anchor locker:

PUSH the pyramid further in the locker with the broom handle.

When the length of chain reaches the depth of the water:

- o STOP windlass operation.
- TAP/SELECT, briefly, the UP switch on the windlass controller to loosen the anchor from the seabed.

If the windlass cannot loosen the anchor from the seabed:

- MANEUVER the boat in forward idle to loosen the anchor.
- CONTINUE windlass operation.

When the anchor comes out of the water:

- o POSITION the anchor to come over the anchor roller with the anchor tip pointing down.
  - CAUTION: Do not use the anchor roller to stop the anchor during windlass operation. Damage to the windlass or anchor roller could occur.

When the anchor shank is on the anchor roller:

- o PULL the anchor chain by hand to manually secure the anchor on the anchor roller.
- ENSURE the anchor chain is slack.
- o SECURE the anchor chain with the small hook and line.
  - NOTE: Stow the windless controller before closing the anchor locker hatch.
- TO TIE THE STERN TO SHORE:
  - o OPEN the transom gate.
  - o RETRIEVE the spool of 600' polypropylene line from the port cockpit locker.
  - o INSERT the white plastic pipe through the middle of the spool.
    - NOTE: The spool rotates around the white plastic pipe as the line is deployed.

- NOTE: The spool stays on the boat.
- o DEPLOY the dinghy.
  - NOTE: Section 6. DINGHY & OUTBOARD has the DEPLOY the DINGHY procedure.
  - NOTE: Allow the spool to rotate freely as the line is deployed.
- O SECURE the working end of the line to an object on shore or return the line to a transom cleat.
- o SECURE the non-working end of the line to the boat.
- o SECURE the dinghy.
  - NOTE: Section 5. DINGHY & OUTBOARD has the SECURE the DINGHY procedure.

# **Troubleshooting - Anchors**

- IF THE WINDLASS DOES NOT ROTATE:
  - o CHECK that the windlass circuit breaker is in the IN position.
    - LOCATION: The windlass circuit breaker is on the DC battery panel located in the port stateroom under the berth.

# 2. BARBEQUE

- TO TURN THE BARBEQUE ON:
  - o VERIFY the propane valve is OPEN.
    - LOCATION: The propane valve is located in the stern locker on the top of the propane tank.
  - o PUSH IN & TURN the barbeque knob to the IGNITE position.
  - o PUSH IN & HOLD the igniter until the burner lights.

### Once the burner is lit:

- o ADJUST the flame to the desired setting.
- o NOTE: The BBQ runs quite hot even when on the lowest temperature setting. Turn food frequently to prevent burning.
- o NOTE: High winds can blow out the flame or cause excessive cooling.
- o NOTE: Please clean the grill when finished using the barbeque.

### 3. BILGE PUMPS

- TO REMOVE WATER USING THE MANUAL BILGE PUMP:
  - o MOVE the selector valve to the HULL or ENGINE position.
  - o PULL the top of the pump handle aft and then push the handle forward.
  - o CYCLE the pump handle until all bilge water is removed.

### 4. DECK HOUSE WINDOWS & COCKPIT ENCLOSURE

### **No Checklists**

### 5. DINGHY & OUTBOARD

- TO DEPLOY THE DINGHY:
  - o ROUTE the starboard and port davit lines to the starboard and port winches.
  - OPEN the clutch on the starboard and port davit.
  - o LOOSEN, simultaneously, the davit lines until the dinghy rests on the water.
  - o REMOVE the bow and stern bridle.

# • TO SECURE THE DINGHY:

- o POSITION the dinghy with the dinghy's bow to starboard.
- o ATTACH the bow and stern bridles.
- o ROUTE the starboard and port davit lines to the starboard and port winches.
- o CLOSE the clutch on the starboard and port davit.
- o GRIND, simultaneously, the davit lines until the dinghy rests below the davit.
  - NOTE: Ensure the davit line does not jam in the davit block.



**OUTBOARD STAYS ON DINGHY** 

### 6. ELECTRICAL – A/C SYSTEM – DC SYSTEM – INVERTER

- TO TURN THE INVERTER ON:
  - o MOVE the inverter control switch to the ON position.
    - LOCATION: The inverter control switch is located on the XANTREX 1800W Inverter Control Panel.
  - o NOTE: With the inverter operating, the 110V AC outlets throughout the boat will have AC power.

### 7. ELECTRONICS – AUTOPILOT – CHARTPLOTTER - VHF

# **AUTOPILOT**

Autopilot Garmin 742XS Chartplotter Operation

- TO TURN THE AUTOPILOT ON (with the Navigation Display Shown)
  - o Sweep up from the bottom of the display.
  - Select Engage
    - Note: Green horizontal bar shows when the autopilot is engaged.
- TO TURN THE AUTOPILOT OFF
  - Select Engage
    - Note: Green horizontal bar does not show when the autopilot is not engaged.

Autopilot Starboard Helm Operation – Garmin GMI 20 Display

- TO TURN THE AUTOPILOT ON:
  - o MOVE the ELECTRONIC switch to the ON position.
    - NOTE: The ELECTRONIC switch is located on the DC Electrical Panel.
  - o MOVE the AUTOPILOT switch to the ON position.
    - NOTE: The AUTOPILOT switch is located on the DC Electrical Panel.
  - o PUSH the ENGAGE switch. (On the Garmin GMI 20 display)
    - NOTE: The autopilot will engage in the WIND HOLD mode.
- TO TURN THE AUTOPILOT OFF:
  - o PUSH the STBY switch. (On the Garmin GMI 20 display)

### Autopilot Hand-Held Remote Operation

- LOCATION: The hand-held autopilot remote is stored on the forward bulkhead by the dinette table.
- TO TURN THE AUTOPLIOT ON/ENGAGE:
  - o MOVE the ELECTRONIC switch to the ON position.

- NOTE: The ELECTRONIC switch is located on the DC Electrical Panel.
- o MOVE the AUTOPILOT switch to the ON position.
  - NOTE: The AUTOPILOT switch is located on the DC Electrical Panel.
- o PUSH the ENGAGE switch. (On the hand-held remote)
  - NOTE: The autopilot will engage in COURSE HOLD.
- TO ENGAGE THE AUTOPILOT TO HOLD THE EXHISTING WIND ANGLE:
  - o PUSH the WIND HOLD switch. (On the hand-held remote)
- TO TURN THE AUTOPILOT OFF:
  - o PUSH the STANDBY switch. (On the hand-held remote)
    - NOTE: If the helm wheel will not respond to manual input PUSH the STANDBY switch again.

### **CHARTPLOTTER**

- TO TURN THE CHART PLOTTER ON SHOWING BOAT LOCATION:
  - o MOVE the ELECTRONIC switch to the ON position.
    - NOTE: The ELECTRONIC switch is located on the DC Electrical Panel.
  - PUSH the POWER switch to ON
    - NOTE: The POWER switch is located on the Garmin GPS 742XS Chart Plotter front panel.
      - o This supplies power to the Garmin GPS 742XS Chart Plotter.
  - o SELECT I Agree
    - This shows boat location.
- TO ZOOM IN & ZOOM OUT ON THE DISPLAY:
  - SELECT the graphic "+" or "-" on the display. Or
  - o PINCH or SPREAD two fingers on the display.
- TO CHANGE TO A HEAD UP DISPLAY ON CHART PLOTTER:
  - o SELECT Menu
  - o SELECT Settings
  - o SELECT Orientation
  - o SELECT Head Up
- TO ACTIVATE THE RADAR:
  - o SELECT Home
  - o SELECT Radar
  - o SELECT Single Range
  - o SELECT Green Bulls Eye icon
    - NOTE: The Green Bulls Eye icon is located in the upper left corner of the display.
    - Radar transmits/receives

- NOTE: The status of the radar "Xmit On" shows within the Green Bulls Eye icon.
- Note: A green vertical bar shows within the Green Bulls Eye icon when the radar is On.
- TO SHOW RADAR OVERLAY & ACTIVATE THE RADAR:
  - SELECT Home
  - o SELECT Radar
  - o SELECT Radar Overlay
    - Radar overlay shows on display
  - o SELECT Green Bulls Eye icon
    - NOTE: The Green Bulls Eye icon is located in the upper left corner of the display.
  - o Radar transmits/receives
    - NOTE: The status of the radar "Xmit On" shows within the Green Bulls Eye icon.
    - Note: A green vertical bar shows within the Green Bulls Eye icon when the radar is On.
- TO SHOW SIDE-BY-SIDE CHART PLOTTER ORIENTATION:
  - o SELECT Home
  - o SELECT Combs
  - o SELECT Split Nav
    - Or
  - o SELECT Chart/Radar
- TO NAVIGATE TO THE HOME SCREEN:
  - o SELECT Home
  - Select Nav. Chart
    - Note: If Home is not shown, sweep up from the bottom of the display.
- TO FIND THE COURSE OVER GROUND (COG) LINE
  - o SELECT Menu
  - SELECT Layers
  - o SELECT My Vessel
  - o SELECT Heading Line
  - SELECT Angle Markers
    - Green vertical line shows
  - o SELECT Source
  - SELECT GPS Heading (COG)
- TO RETURN TO THE SHIP STOP PANNING
  - o Note: Anytime the navigation chart is manually moved "Stop Panning" shows.
  - o SELECT "Stop Panning" to return to a normal navigation display.

- TO CLEAR WAYPOINT AND TRACKS
  - o SELECT Info
  - o SELECT User Data
  - o SELECT Delete All User Data
    - Note: This deletes all tracks, waypoints, routes, auto guidance, paths, and boundaries.
  - o SELECT OK
- TO CHANGE THE BRIGHTNESS/BACKLIGHT OF THE CHART PLOTTER
  - o SELECT Home
  - SELECT Settings
  - o SELECT System
  - o SELECT Sounds & Display
  - o SELECT Backlight
    - Note: From any screen, press the power switch repeatedly to scroll through the brightness levels. This is helpful when the brightness level is so low you cannot see the screen.

### VHF

# VHF Radio Operation – Interior VHF Radio

- NOTE: The interior VHF radio and the external remote microphone are tied together when changing radio channels. Changing a channel on one device changes the channel on the other device. The interior VHF radio volume and squelch and the external remote microphone volume and squelch are controlled independently.
- CAUTION: Always monitor channel 16 when operating the boat.
- NOTE: Radio Check is Channel 22 in the US and Channel 83 in Canada.
- LOCATION: The interior VHF radio is located on the forward bulkhead by the dinette table.
- TO TURN THE VHF RADIO ON:
  - o MOVE the VHF/AIS switch to the ON position
    - NOTE: The VHF/AIS switch is located on the DC Electrical Panel.
- TO CHANGE THE VOLUME LEVEL
  - o PUSH the VOL/SQ rotary knob twice
    - ROTATE the VOL/SQ rotary knob to the desired volume level
- TO CHANGE THE SQUELCH LEVEL
  - PUSH the VOL/SQ rotary knob

- ROTATE the VOL/SQ rotary knob to the desired squelch level
- TO CHANGE THE CHANNEL
  - o ROTATE the SELECT WX rotary knob to the desired station.
    - NOTE: The triangles on the handset change the VHF radio channel.
    - NOTE: The 16/9 key changes the channel between channel 16 and channel 9. The transmission wattage automatically changes to 25 W when channel 16 is selected and 1 W when channel 9 is selected.
- TO HEAR WEATHER RADIO BROADCASTS
  - o PUSH the SELECT WX rotary knob
  - o ROTATE the SELECT WX rotary knob to the desired station
- TO CHANGE THE TRANSMISSION POWER SETTING
  - o SELECT the HI/LO switch
  - o SELECT the switch associated with 1W or 25W
    - NOTE: For normal operation, select 1 W to transmit. If the transmission is not received select 25 W to transmit.
- TO SELECT CHANNEL 16:
  - o SELECT the 16/9 key
- TO SELECT THE FREQUENCY BAND (USA, CANADIAN, INTERNATIONAL)
  - o SELECT MENU
  - o SELECT CHANNEL
  - SELECT FREQUENCY BAND
- TO TURN ON CHANNEL SCANNING
  - o SELECT SCAN
  - SELECT ALL
    - NOTE: Channel Scanning is not saved when power is removed from the VHF radio.
- TO TURN OFF A DIGITAL SELECTIVE CALLING (DSC) ALARM
  - SELECT any key
- TO TURN THE VHF RADIO OFF:
  - o MOVE the VHF/AIS switch to the OFF position
    - NOTE: The VHF/AIS switch is located on the DC Electrical Panel

### VHF Radio Operation – Exterior Remote Hand Held Microphone

- NOTE: The interior VHF radio and the external remote microphone are tied together when changing radio channels. Changing a channel on one device changes the channel on the other device. The interior VHF radio volume and squelch and the external remote microphone volume and squelch are controlled independently.
- CAUTION: Always monitor channel 16 when operating the boat.
- LOCATION: The exterior remote hand held microphone is located at the starboard helm station.
- TO TURN THE VHF RADIO ON:
  - o MOVE the VHF/AIS switch to the ON position
    - NOTE: The VHF/AIS switch is located on the DC Electrical Panel
- TO CHANGE THE VOLUME LEVEL
  - o PUSH the ENTER rotary knob twice
  - o ROTATE the ENTER rotary knob to the desired volume level
- TO CHANGE THE SQUELCH LEVEL
  - PUSH the ENTER rotary knob
    - ROTATE the ENTER rotary knob to the desired squelch level
- TO CHANGE THE CHANNEL
  - o ROTATE the ENTER rotary knob to the desired station
    - NOTE: The 16/9 key changes the channel between channel 16 and channel 9. The transmission wattage automatically changes to 25 W when channel 16 is selected and 1 W when channel 9 is selected.
- TO HEAR WEATHER RADIO BROADCASTS
  - o PUSH the ENTER rotary knob
  - o ROTATE the ENTER rotary knob to the desired station
- TO CHANGE THE TRANSMISSION POWER SETTING
  - o SELECT the HI/LO switch
  - o SELECT the switch associated with 1W or 25W
    - NOTE: For normal operation, select 1 W to transmit. If the transmission is not received select 25 W to transmit.
- TO SELECT CHANNEL 16:
  - o SELECT the 16/9 key

- TO SELECT THE FREQUENCY BAND (USA, CANADIAN, INTERNATIONAL)
  - o SELECT MENU
  - SELECT CHANNEL
  - SELECT FREQUENCY BAND
- TO TURN ON CHANNEL SCANNING
  - SELECT SCAN
  - SELECT ALL
    - NOTE: Channel Scanning is not saved when power is removed from the VHF radio.
- TO TURN OFF A DIGITAL SELECTIVE CALLING (DSC) ALARM
  - o SELECT any key
- TO TURN THE VHF RADIO OFF:
  - o MOVE the VHF/AIS switch to the OFF position
    - NOTE: The VHF/AIS switch is located on the DC Electrical Panel

# 8. EMERGENCY/SAFETY EQUIPMENT

- ENGINE FIRE:
  - o REMOVE the engine safety cover.
    - NOTE: The engine safety cover is removed with the winch handle.
  - o INSERT the fire extinguisher nozzle.
  - o DISCHARGE the contents of the fire extinguisher.
- EMERGENCY TILLER OPERATION:
  - o REMOVE the metal emergency tiller cover.
    - NOTE: The emergency tiller cover is removed with the winch handle.
  - o INSERT the emergency tiller handle, notched end, in the round receptacle.
  - o MANEUVER the boat with the emergency tiller.
- EMERGENCY BILGE PUMP OPERATION:
  - o MOVE the selector valve to the desired position.
  - o PULL the top of the integrated handle aft.
  - o PUSH the top of the integrated handle forward.
  - o CYCLE the integrated handle aft/forward until the desired amount of water has been removed.

### **ENGINE**

- TO CHANGE THE THROTTLE QUADRANT IN COMMAND:
  - o PLACE throttles, at current helm station, in the NEUTRAL position.
  - o PUSH the selector switch, at the base of throttle quadrant, at the new helm station.
    - The red light at the top of the throttle quadrant comes ON.
    - Throttle control has now changed to the new throttle quadrant.
  - o NOTE: The throttle levers at each helm station are not connected. The throttle levers, at each helm station, will not move in tandem.
- ENGINE START (WITH MODERATE WARM AIR TEMPERATURE):
  - CHECK the engine compartment for general condition.
    - Check for water & oil in the bilge.
    - Check engine belts. There should be no "belt powder" or excessive looseness of the belts.
  - o MOVE throttle levers to the NEUTRAL position.
  - o PUSH the ON/OFF switch.
    - The engine control panel will energize.
  - PUSH the engine start switch.

# After the engine starts:

- VERIFY water is discharging from the exhaust outlet.
- ENGINE START (WITH COLD AIR TEMPERATURE):
  - o CHECK the engine compartment for general condition.
    - Check for water & oil in the bilge.
    - Check engine belts. There should be no "belt powder" or excessive looseness of the belts.
  - PUSH/HOLD the selector switch.
    - LOCATION: The selector switch is located at the bottom of the throttle quadrant.
  - o MOVE the throttles to the FORWARD IDLE position.
  - o RELEASE the selector switch.
    - The red light at the top of the throttle quadrant will flash. The flashing red light indicates that the propeller is disconnected from the engine.
  - PUSH the ON/OFF switch.
    - The engine control panel will energize.
  - PUSH the engine start switch.

### After the engine starts:

- VERIFY water is discharging from the exhaust outlet.
- o MOVE the throttles to operate the engines at 1100 RPM.
- o OPERATE the engines at 1100 RPM for two minutes.
- MOVE the throttles to the NEUTRAL position.

- The red light at the top of the throttle quadrant stops flashing. A steady red light indicates the engine and propeller are connected for normal operation.
- o RESUME normal operation.
- ENGINE SHUTDOWN:
  - o OPERATE the engine below 1000 RPM for two minutes.
    - NOTE: Operating in a marina or anchoring will usually satisfy the twominute cooling period.
  - PUSH the STOP switch
  - o PUSH the ON/OFF switch.

# If sailing:

- o MOVE the throttle levers to full REVERSE for ten seconds.
- o MOVE the throttle levers to the NEUTRAL position.
  - This action will feather the propeller blades. Feathered propeller blades will increase speed when sailing.

# **Troubleshooting - Engine**

- OVERHEAT ALARM SOUNDS or STEAM COMES OUT THE EXHAUST:
  - o CHECK water flow out of the exhaust.

If no or little water flow:

- o CHECK raw water strainer for eel grass.
  - LOCATION: The raw water strainers are located above the waterline. There are no intake shutoff valves for the raw water strainer. The raw water strainers will fill with water automatically.
  - NOTE: Screw on the raw water strainer lid, hand tight. There is no need to excessively tighten the raw water strainer lid.

### If there is water flow:

- o CHECK engine coolant level.
  - Normally the coolant level, in the overflow plastic container, is at the LOW level. If the coolant is below the LOW level, ADD coolant.
  - LOCATION: The coolant is located in the starboard cockpit settee.

### 9. ENTERTAINMENT SYSTEMS

### No Checklists

# 10. FUEL

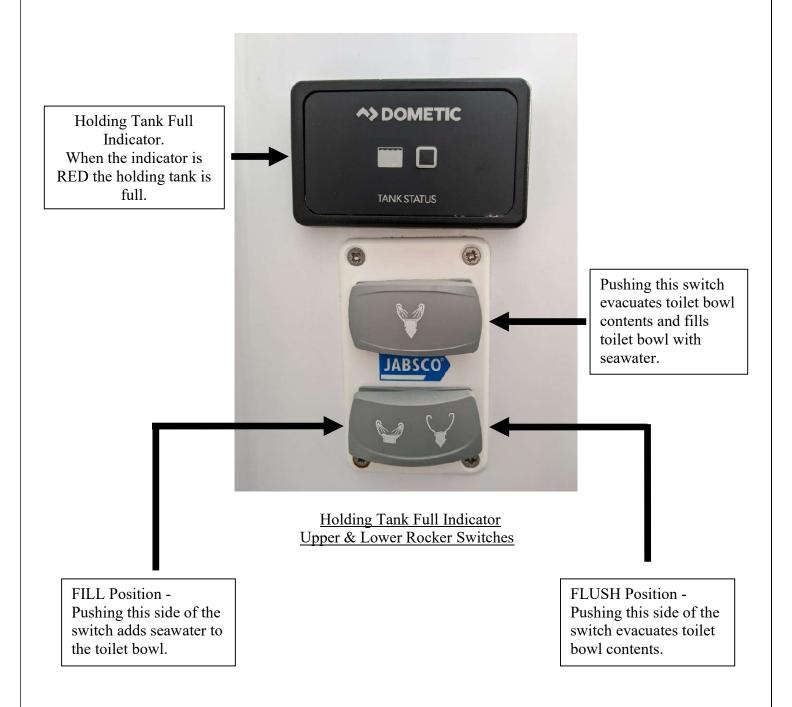
- TO READ FUEL QUANTITY:
  - o PUSH & HOLD the fuel tank select switch to the desired tank.
    - LOCATION: The fuel tank select switch is located on the DC Electrical Panel.
- TO ADD FUEL TO THE FUEL TANK:
  - o CHECK current fuel tank quantity.
  - o DETERMINE how many gallons are needed.
    - NOTE: A single fuel tank's capacity is 58 gallons.
  - o REMOVE the fuel tank fill cap.
    - NOTE: The fuel tank fill cap requires a special tool. The tool is located in the drawer below the starboard dinette seat.
  - o SURROUND fuel fill port with absorbent pad.
  - o ADD fuel.
    - CAUTION: Do not add fuel to the fuel tank quickly. Keep track of how many gallons are dispensed. Check fuel level frequently.

### 11. HEADS & HOLDING TANKS

- CAUTION: Flush only bodily waste. Nothing outside of bodily waste should go down the marine toilet. Please place toilet paper and feminine articles in a plastic zip lock bag, a plastic bag, or the waste basket.
- MARINE TOILET OPERATION FOR LIQUID WASTE:
  - ENSURE that the STBD TOLIET switch and the PORT TOLIET switch are in the ON position.
    - LOCATION: The STBD TOLIET switch and the PORT TOLIET switch are on the DC Electrical Panel.
  - o ENSURE sea water is covering the very bottom of the marine toilet.
  - o USE the toilet.
  - o PUSH the lower rocker switch to the FLUSH position.
    - Liquid waste pumps out.
  - o PUSH the lower rocker switch to the FILL position.
    - Fill the very bottom of the bowl.
      - NOTE: Sea water covering the bowl outlet prevents holding tank odors from entering the head.
- MARINE TOLIET OPERATION FOR SOLID WASTE:
  - ENSURE that the STBD TOLIET switch and the PORT TOLIET switch are in the ON position.
    - LOCATION: The STBD TOLIET switch and the PORT TOLIET switch are on the DC Electrical Panel.
  - PUSH the lower rocker switch to the FILL Position.
    - Fill the marine toilet with approximately one quart of water.
  - o USE the toilet.
  - o PUSH the lower rocker switch to the FLUSH position.
    - Continue to PUSH the lower rocker switch until all the solid waste is removed.

If all solid waste is not evacuating:

- PUSH the upper rocker switch to remove the remaining solid waste.
- o PUSH the lower rocker switch to the FILL position.
  - Fill the very bottom of the bowl.
    - NOTE: Sea water covering the bowl outlet prevents holding tank odors from entering the head.
- HOLDING TANK FULL INDICATOR RED:
  - o NOTE: The holding tank is full.
  - o EMPTY the holding tank.



### 12. HEATERS

- TO TURN THE HEATER ON:
  - O VERIFY that the exhaust port is clear.
    - LOCATION: The exhaust is located on the aft section of the port hull.
  - o CLOSE all portholes on the port hull.
    - Closed portholes prevent diesel exhaust fumes from entering the boat.
  - o CHECK battery voltage.
  - o MOVE the HEATER control switch to ON
    - LOCATION: The heater control switch is located on the DC Electrical Panel.
  - o SET the desired temperature on each thermostat.
  - o SELECT the desired fan speed.
- TO TURN THE HEATER OFF:
  - o MOVE the HEATER control switch to OFF
    - LOCATION: The heater control switch is located on the DC Electrical Panel.

# 13. NUANCES

No Checklists

### 14. PROPANE

No Checklists

### 15. REFRIGERATION

- TO TURN THE COCKPIT REFRIGERATOR ON:
  - o MOVE the COCKPIT FRIDGE switch to the ON position.
    - LOCATION: The COCKPIT FRIDGE switch is located on the DC Electrical Panel.
- TO TURN THE GALLY REFRIGERATOR ON:
  - o MOVE the FRIDGE switch to the ON position.
    - LOCATION: The FRIDGE switch is located on the DC Electrical Panel.
- TO TURN THE COCKPIT REFRIGERATOR OFF:
  - o MOVE the COCKPIT FRIDGE switch to the OFF position.
    - LOCATION: The COCKPIT FRIDGE switch is located on the DC Electrical Panel.
- TO TURN THE GALLEY REFRIGERATOR OFF:
  - o MOVE the FRIDGE switch to the OFF position.
    - LOCATION: The FRIDGE switch is located on the DC Electrical Panel.

### 16. SAILS & RIGGING

- TO HOIST THE MAINSAIL:
  - o POINT the boat directly into the wind.
  - REMOVE the bungee cord between the mainsail halyard and the starboard shroud.
  - o REMOVE the single, pre-rigged, 4' section of line attached to the mast.
  - o UNZIP the stack pack.
  - One crew member at the base of the mast PULLS the mainsail halyard.

### Simultaneously:

- Second crew member at the starboard helm pulls the slack mainsail halyard through the closed clutch.
- o NOTE: As the sail rises, ensure the main sail battens run between the lazy jack lines.

When the mainsail can no longer be raised by hand:

- OPERATE the electric winch to raise the mainsail to the desired position.
  - NOTE: A mark/black band on the mast indicates the fully raised position.
- o LOOSEN the topping lift.

### • TO LOWER THE MAINSAIL:

- o POINT the boat directly into the wind.
- o TIGHTEN the topping lift.
- One crew member at the starboard helm loosens the mainsail halyard.
  - NOTE: Ensure the mainsail halyard clutch is OPEN.

As the mainsail lowers in the stack pack:

o Second crew member ensures the mainsail flakes properly.

Once the main sail is fully lowered:

- SECURE the top mainsail car with the single, pre-rigged, 4' section of line attached to the mast.
- o ZIP the stack pack.
- o TIGHTEN, the mainsail halyard slightly.
- o ATTACH a bungee cord from the mainsail halyard to the starboard shroud.
  - NOTE: This prevents the mainsail halyard from slapping against the mast.

- TO REEF THE MAINSAIL:
  - o POINT the boat directly into the wind.
  - o RELEASE the mainsheet.
  - o RELEASE the mainsail halyard.
  - o LOWER the mainsail to the desired reef position.
  - o SECURE the sail tack using the snap hook reefing hook line.
    - NOTE: Insert the reefing hook fitting into the sail cringle.
    - NOTE: The snap hook reefing hook line is attached to the mast. RAISE the mainsail halyard, tightening the sail luff to the desired tautness.
  - - TENSION the proper reef line until the new clew is close to the boom.
      - NOTE: Tension the reef line with the winch on the base of the mast.
  - ADJUST the mainsheet.

### 18. SHOWERS & SUMP PUMPS

- TO USE THE STARBOARD SHOWER:
  - o MOVE the FRESH WATER switch to the ON position.
    - LOCATION: The FRESH WATER switch is on the DC Electrical Panel.
  - MOVE the STBD SHOWER PP switch to the ON position.
    - LOCATION: The STBD SHOWER PP switch is located on the DC Electrical
    - With the STBD SHOWER PP switch in the ON position the sump pump is armed. The sump operates/activates via a float switch when grey water reaches a predetermined level. The sump pump discharges grey water overboard.
  - CAUTION: Do not use the shower without the STDB SHOWER PP switch in the ON position.

### When finished with the shower:

- o MOVE the FRESH WATER switch to the OFF position.
- o MOVE the STBD SHOWER PP to the OFF position.
- TO USE THE PORT SHOWER:
  - o MOVE the FRESH WATER switch to the ON position.
    - LOCATION: The FRESH WATER switch is on the DC Electrical Panel.
  - MOVE the PORT SHOWER PP switch to the ON position.
    - LOCATION: The PORT SHOWER PP switch is located on the DC Electrical Panel.
    - With the PORT SHOWER PP switch in the ON position the sump pump is armed. The sump operates/activates via a float switch when grey water reaches a predetermined level. The sump pump discharges grey water overboard.

CAUTION: Do not use the shower without the PORT SHOWER PP switch in the ON position.

When finished with the shower:

- o MOVE the FRESH WATER switch to the OFF position.
- o MOVE the PORT SHOWER PP to the OFF position.
- TO USE THE TRANSOM SHOWER:
  - o MOVE the FRESH WATER switch to the ON position.
    - LOCATION: The FRESH WATER switch is on the DC Electrical Panel.
  - o ADJUST the transom hose knob to the desired temperature.

When finished with the transom shower:

o MOVE the FRESH WATER switch to the OFF position.

### 19. SPECIFICATIONS

No Checklists

### 20. SPARES/PARTS & TOOLS

No Checklists

### 21. STOVE & OVEN

- TO TURN THE STOVE ON:
  - VERIFY the propane valve is OPEN.
    - LOCATION: The propane valve is located at the top of the propane tank.
  - o MOVE the Gauges/LPG switch ON.
    - LOCATION: The Gauges/LPG switch is on the DC Electrical Panel.
    - The DETECTOR ON light flashes then illuminates steady green.
      - The DETECTOR ON light is located on L.P.GAS CONTROL & DETECTION SYSTEM panel on the galley cabinet to the left of the starboard stairs.
    - This arms the propane solenoid valve.
  - o PUSH the Propane Gas Control ON switch.

- LOCATION: The Propane Gas Control switch is located on the L.P.GAS CONTROL & DETECTION SYSTEM panel.
- This opens the propane solenoid valve.
- The VAVLE ON light should illuminate green.
- o PUSH IN & TURN the stove knob to the IGNITE position.
- o LIGHT & HOLD the lighter at the base of the stove burner.

### Once the burner is lit:

- o ADJUST the flame to the desired setting.
- TO TURN THE STOVE OFF:
  - o MOVE the stove knob to the OFF position.
  - PUSH the Propane Gas Control OFF switch.
    - LOCATION: The Propane Gas Control OFF switch is located on the L.P.GAS CONTROL & DETECTION SYSTEM panel on the galley cabinet to the left of the starboard stairs.
    - This closes the propane solenoid valve.
    - The VAVLE ON light should extinguish.
  - o MOVE the Gauges/LPG switch to the OFF position.
    - LOCATION: The Gauges/LPG switch is on the DC Electrical Panel.
    - The DETECTOR ON light should extinguish.
- TO TURN THE OVEN ON:
  - o VERIFY the propane valve is OPEN.
    - LOCATION: The propane valve is located at the top of the propane tank.
  - o MOVE the Gauges/LPG switch ON.
    - LOCATION: The Gauges/LPG switch is on the DC Electrical Panel.
    - The DETECTOR ON light flashes then illuminates steady green.
      - The DETECTOR ON light is located on L.P.GAS CONTROL & DETECTION SYSTEM panel on the galley cabinet to the left of the starboard stairs.
    - This arms the propane solenoid valve.
  - o PUSH the Propane Gas Control ON switch.
    - LOCATION: The Propane Gas Control switch is located on the L.P.GAS CONTROL & DETECTION SYSTEM panel.
    - This opens the propane solenoid valve.
    - The VAVLE ON light should illuminate green.
  - o PUSH, TURN & HOLD the oven selector knob, ½ turn.
  - o LIGHT & HOLD the lighter at the bottom of the oven.

### After the flame is lit:

o Continue to HOLD the oven selector knob for 30 seconds.

### AFTER 30 seconds:

- o RELEASE the oven selector knob slowly.
- o VERIFY the flame continues to burn.
- o NOTE: The flame may go out if the oven door is opened or closed rapidly.
  - If the flame goes out the propane alarm may sound.

### • TO TURN THE OVEN OFF:

- o TURN the oven selector knob to the OFF position.
- o PUSH the Propane Gas Control OFF switch.
  - LOCATION: The Propane Gas Control OFF switch is located on the L.P.GAS CONTROL & DETECTION SYSTEM panel on the galley cabinet to the left of the starboard stairs.
  - This closes the propane solenoid valve.
  - The VAVLE ON light should extinguish.
- MOVE the Gauges/LPG switch to the OFF position.
  - LOCATION: The Gauges/LPG switch is on the DC Electrical Panel.
  - The DETECTOR ON light should extinguish.

### • Troubleshooting – Stove & Oven

- o STOVE WILL NOT LIGHT:
  - ENSURE there is propane in the propane bottle.
  - ENSURE the propane bottle valve is in the OPEN position.
  - ENSURE the Gauges/LPG switch is in the ON position.
    - LOCATION: The Gauges/LPG switch is on the DC Electrical Panel.
  - Ensure the Propane Gas Control ON switch is pushed and the VALVE ON light and the DETECTOR ON light are illuminated.
  - ENSURE the stove knob is pushed and then turned to the IGNITE position.
- o CAUTION: Propane is heavier than air. If a leak is detected, extinguish all flames, and ventilate the bilges.

### OVEN WILL NOT LIGHT:

- ENSURE there is propane in the propane bottle.
- ENSURE the propane valve is in the OPEN position.
- ENSURE the Gauges/LPG switch is in the ON position.
  - LOCATION: The Gauges/LPG switch is on the DC Electrical Panel.
- ENSURE the Propane Gas Control ON switch is pushed and the VALVE ON light and the DETECTOR ON light are illuminated.
- ENSURE the oven selector knob is pushed in, held, and turned a ¼ turn.
- O CAUTION: Propane is heavier than air. If a leak is detected, extinguish all flames, and ventilate the bilges.

# 22. WATER

- TO VIEW WATER TANK LEVEL:
  - o MOVE the LPG/GAUGES switch to the ON position.
    - LOCATION: The LPG/GAUGES switch is located on the DC Electrical Panel.
  - o MOVE the toggle switch to the desired tank.
    - LOCATION: The toggle switch is located below the water level gage on the DC Electrical Panel.

After reading the water quantity:

o MOVE the LPG/GAUGES switch to the OFF position.