

# *Grey Goose Owner's Notes*

## **Contents**

1.	INTRODUCTION .....	3
2.	PREPARING FOR DEPARTURE .....	4
3.	GETTING UNDERWAY .....	8
4.	CRUISING .....	9
5.	RETURNING TO DOCK.....	10
6.	CONNECTING TO SHORE POWER .....	11
7.	CLOSING THE BOAT .....	11
8.	ELECTRONICS.....	12
9.	FUEL.....	14
10.	WATER .....	17
11.	BOAT ELECTRICAL.....	18
12.	HEAD .....	21
13.	DECK WASH.....	23
14.	GALLEY .....	23
	Stove .....	23
	Non-stick cookware .....	24
	Refrigerator.....	24
	Microwave .....	24
15.	HEATING SYSTEMS.....	24
16.	OTHER SYSTEMS.....	25
	Cell Phones.....	25
	Barbeque Grill .....	26
	Anchoring Systems.....	26
	Stern Tie .....	28
	Mooring Buoy .....	28
	Tender .....	28
	Sea Kayaks.....	31

17. SALON SETTEE CONVERSION TO A BED ..... 31  
18. KEY ITEMS TO REMEMBER..... 32

# 1. INTRODUCTION

**Grey Goose** is a 2009 American Tug 34, powered by a Cummins diesel engine, with a HP rating of 380 @ 2600 RPM. It is a pilothouse coastal cruiser built on a Lynn Senour hull and has capacity for 400 gallons of fuel and 150 gallons of water. At a time of high fuel prices and environmental concern, Grey Goose provides an efficient and comfortable cruising solution. According to Cummins Northwest, Inc. data, the American Tug 34 provides hours of cruising fun at reasonable speeds with very limited fuel consumption.

<u>RPM</u>	<u>SPEED (kts)</u>	<u>Gallons/hour</u>	
1200	6.75	1.5	
1400	7.6	2.1	Economy Cruise
1800	8.75	5.2	
2200	10.2	9.8	

NOTE: All system operation instructions assume you have appropriate AC and DC circuit breakers powered.

We hope you enjoy cruising with Grey Goose. Please let us know if you find anything missing or in need of improvement.

While using or reviewing these notes, please feel free to mark corrections, and make suggestions and improvements. Your constructive criticism will be appreciated.

Thank you, Tom and Hillary Haug (Owners) [tom.haug@comcast.net](mailto:tom.haug@comcast.net) 425-301-0782

**Note:** Throughout this manual, red lettering indicates safety items or key operational notes.

*These notes are prepared for Quick Reference. American Tug, Inc. has provided an operation manual for the 2009 model. Much of the information is taken from the Tug Operator's Manual but has been condensed for quick reference. For more in depth systems information please consult the owner's manuals and component manufacturers' installation/operation manuals that came with the boat. They are large notebooks found in the document cabinet located under Fusion Stereo unit under the port side Helm Station seat.*

*The Owner's Notes assume that the charter guest/operator is experienced and competent in the safe operation of a 22,000 pound, 37 foot powerboat, and knowledgeable of boating rules and regulations. These notes do not attempt to anticipate every situation or occasion that may arise, and are not a substitute for reading the Owner's Manuals and other informational materials which are located on the boat, or for exercising reasonable care and good judgment in the handling and operation of the boat.*

**NO WARRANTY IS EXPRESSED OR IMPLIED.**

## 2. PREPARING FOR DEPARTURE

### 1. ENGINE ROOM CHECKS (performed daily, before cruising).

At the helm station switch panel, turn ON the Engine Room Lights. Enter the engine room through the port side hatch in the floor in of the pilot house.

- a. **Check the oil level in the engine.** The dip stick (marked yellow) is on the port side of the engine. The oil level on the dipstick should be between the hash marks. **If the oil level is low (below the bottom mark):**
  - i. Add oil from the Delco 400 15/40 SAE, blue plastic jug using the oil funnel located with the spares kits in the starboard side of the engine room.
  - ii. DO NOT OVERFILL THE OIL CAPACITY of the engine. It only takes 1 quart to fill the oil supply from the lower line to the upper line on the dipstick. Oil level should never go above the top mark on the dip stick.
  - iii. When replacing the dip stick ensure it is properly seated. If not seated, oil will spray out making a mess.
- b. **Check the coolant level** of the white plastic recovery reservoir mounted on the forward bulkhead in front of the engine. The reservoir should be between  $\frac{1}{4}$  and  $\frac{1}{2}$  full. **If the coolant level is low:**
  - i. Add coolant to the recovery reservoir to the appropriate level, being careful not to overfill—the coolant needs an opportunity to expand.
  - ii. The pre-mixed engine coolant is located with the spares kits in the starboard side of the engine room.
- c. **Check the oil level in the generator.** The generator has a diesel engine requiring the same care as the main engine. Open the rectangular panel on the FRONT SIDE of the generator to access the dipstick. The oil level on the dipstick should be within the hatch-marked area on the stick. **If the oil level in the generator is low:**
  - i. Open the OIL FILL to the side of the dipstick.
  - ii. Add oil from the Delco 400 15/40SAE blue plastic jug using the oil funnel located with the spares kits in the starboard side of the engine room. Be careful not to overfill.
- d. **Check the coolant level in the generator.** The generator's diesel engine uses coolant just like the main engine. A plastic coolant recovery reservoir is mounted on the port side of the generator. Visually check that the coolant level shows approximately 2 inches when the engine is cold and 6 inches if hot. **If the coolant level in the generator is low:**
  - i. Add coolant to the recovery reservoir to the appropriate level, being careful not to overfill—the coolant needs an opportunity to expand.
  - ii. Use the pre-mixed engine coolant located with the spares kits in the starboard side of the engine room.
- e. **Check the RACOR fuel filters for water or debris.** Few things you do are as important to your safety on the water as having uncontaminated fuel going to the engine. As you enter the engine room through the port side hatch, look on the aft bulkhead where you

will find the RACOR fuel filters. The 2 larger fuel filters on the left are for the main engine. The smaller fuel filter on the right is for the generator. Use a flashlight while performing the following visual checks below. Note: For your convenience a blue flashlight is located on the aft bulk head close to the fuel filters. Please return the flashlight to its holder when finished.

- i. Make sure both filters are free of debris or water. Look through the glass at the liquid in the bottom of each filter. You don't want to see contaminants or a separation of fluid in the bottom. (Water is heavier than diesel fuel, and will collect at the bottom of the glass bowl if there is water in the fuel.) **IF YOU SEE CONTAMINANTS OR LIQUID SEPARATION**, you want to remove them without removing all the fuel in the glass bowl:
  1. Close the shut-off valve to the specific fuel filter (located under the fuel filter)
  2. Be prepared to catch any fuel from the filter with a small container and some rags.
  3. Remove the plug from the bottom of the drain valve and slowly open the valve to evacuate just the water or contaminants, and then quickly re-tighten the valve and reinstall the safety plug
  4. Open the shut-off valve.
  5. Note: If the engine doesn't start, you may need to prime the fuel system at this time:
- f. Priming the Fuel System:
  - i. Turn the ignition switch at the helm to the 'ON' position.
  - ii. The fuel priming pump will automatically start and run for approximately 20 seconds
  - iii. Turn off the ignition switch after the pump has stopped.
  - iv. Repeat steps i. through iii. At least one more time.
  - v. If engine fails to start after repeating 3 times, contact San Juan Charter.
- g. Check the fuel filter of the GENERATOR for water or contaminants. **If you see liquid separation or other contaminants**, you need to remove them. Repeat steps 1 through 4 above.
- h. Ensure the valve on each **RAW WATER THRU-HULL is in the 'open' position** (lever vertical/in-line with the valve).
- i. Make sure the RAW WATER SEA STRAINERS for the engine and generator are free of debris. If necessary:
  - i. Using a flashlight, visually check to see if that the engine strainer is clear and not plugged with seaweed or debris.
  - ii. To clean the strainer, close the seacock (lever horizontal), unscrew the top with (may require a tool), lift out the basket, swish it back and forth in a bucket filled with clean water, and then reinstall it. There is an orange bucket in the

lazarette that can be filled with clean saltwater. Use the bucket to prevent dropping it overboard!

iii. Replace the screen and secure the cap and tighten by hand only.

j. REOPEN THE SEACOCK!!

i. Make sure that the seawater strainer for the generator is free of seaweed or debris. Use the same procedure as above. It is a smaller unit similar to the engine strainer and is located on the left side (facing aft) of the generator.

ii. Remember to REOPEN THE SEACOCK!!

k. Complete a visual check of the engine room for leaking oil, fuel, or coolant, loose items that should be secured, or anything unusual.

l. When you have completed the engine room checks, turn off the engine room lights at the helm station switch panel. Failure to do so may needlessly deplete the batteries.

## 2. DISCONNECT SHORE POWER

a. At the main AC breaker panel, turn OFF the main AC gang breaker labeled SHORE POWER.

b. On the dock, first turn OFF the shore power circuit breaker at the pedestal, and then disconnect the white electrical cord from the dock power.

c. On the boat, disconnect the white electrical cord. Coil the cord and store in the cockpit lazarette

d. **Caution:** To avoid handling and moving a LIVE cord, always first DISCONNECT from the SHORE-END first. Conversely when connecting to shore power always CONNECT the BOAT-END first!

## 3. POWER AND CONFIGURATION CHECK

a. The electrical system is divided into two distribution systems: 110-volt AC and 12-volt DC. The systems are controlled from the AC ELECTRICAL PANEL located in the Pilothouse, the DC AUXILIARY PANEL located in the Pilothouse, and the BATTERY SWITCHES FOUND next to the starboard side helm seat. When not connected to shore power or generator, batteries are providing all power. Therefore, monitor the use of onboard electricity carefully with your volt meter located on the DC Panel, and turn off electrical devices that are not needed.

b. For getting underway the settings below are the recommended configuration in most instances:

DC Panel	
Electronics	On
VHF	On
Head	On

Freshwater	On
Macerator Pump	Off
Wipers	Optional
Lights	On

12 Volt DC Outlets	On
Autopilot	On
Radar	On
Spare	Off
Anchor Remote	Optional
<b>AC Panel</b>	
Water Heater	Off
Heater	Off
Heater 2	Off

Spare	Off
Spare	Off
Inverter	On
Outlets	On
Outlet 2	On
Microwave	Optional

- c. Check DC Voltages using battery bank switch. There are 3 battery banks: Start, House and Generator. Approximate Voltage Battery State:

<b>Voltage</b>	<b>State</b>
12.8	100%
12.4	75%
12.2	60% (time to recharge)*
11.8	25%
11.6	0%

\* Note: Running the voltage below 12.2 volts shortens battery life. Should the house batteries discharge to this level, please start the generator or plug into shore power to recharge the batteries.

4. **CLOSE ALL PORT HOLES AND HATCHES** that might permit water to enter the interior, especially during rough seas and windy conditions.

**5. CONFIRM DINGHY IS SECURE**

**6. CHECK AROUND THE BOAT**

Review the exterior area around the hull to confirm that there are no obstacles in the water or loose items that should be secured.

**7. HELM CHECKLIST**

- a. Check the fuel level in both the port and starboard fuel tanks using the Vessel View monitoring panel (loc. Left of the throttle/shifter lever). The tanks should be full on the first day of your charter. Notify San Juan Yachting staff if tanks are not full.

- b. Check the potable water tank level using the Vessel View monitoring panel. See instructions below for adding water, if necessary.
- c. Start up the two Garmin 5212 Chartplotters and the GPS Radar by pressing and holding the red power buttons until the display comes on. When the warning screen appears touch "I agree".
- d. If not already on, turn on the Garmin GMI 10 and GHC 10 by pressing and holding the red power buttons until the screen appears.
- e. Power on the I COM VHF radio:
  - i. Check the weather channel (Channel 4)
  - ii. Turn to Channel 16 to monitor the hailing channel.

### 3. GETTING UNDERWAY

#### 1. Start Engine.



- a. Set throttle/shifter control handle to neutral (perpendicular to base mounting surface).
- b. Turn ignition switch 2 clicks clockwise to ON. Wait 30 seconds for the Vessel View control panel (located left side of the throttle/shifter) to power up and for the engine to pre-heat. The red Neutral light on the throttle/shifter base will glow when the shifter is set to neutral.
- c. Press and hold the soft black Start/Stop button on the throttle/shifter base and crank engine until it starts. Note-Cummins engine company states "do not crank engine for more than 30 seconds, wait 2 minutes to allow the starter motor to cool down before restart attempt."
- d. For cold weather warm up, the transmission can be disengaged and the RPM increased by pressing the soft black Throttle Only button on the throttle/shifter base. The red Neutral light will flash in this mode. Increase the RPM to 800 to smooth out the engine vibrations. When the engine temperature reaches 100 degrees the throttle can be decreased back to idle. Press the Throttle Only button again to re-engage the transmission.

- e. Check that cooling water is coming out the exhaust. If no water flow is visible, shut down the engine and check in the engine room to see that the seawater intake seacock is open.
  - f. Observe the readings of the gauges. The oil pressure will register about 50-60 PSI. The engine temperature should rise slowly. Note -- If oil pressure is low, shut down engine, and inspect engine compartment and look for possible cause (for example, loss of oil.) Caution -- If the engine is overheating or there is lack of raw water expelled in the engine idle exhaust stop the engine immediately.
  - g. When needed, stop the engine by pressing and holding the Start/Stop button on the throttle/shifter base until the engine shuts down. Turn the ignition key counter clockwise to OFF.
- 2. Turn on the bow and stern thrusters** by pushing the 2 "ON" buttons below the thruster joysticks simultaneously. The amber light between the buttons will come on.
- a. Toggle the joysticks briefly in both directions to ensure that the thrusters are functioning properly.
  - b. The thruster control panel will turn off automatically after 5 minutes of non-use. Press the ON buttons again to reactivate.
  - c. Use the thrusters in short bursts of 5-10 seconds to prevent overheating. If the thrusters are used continuously for more than 3 minutes they will also overheat. It can take 10-15 minutes for the thrusters to reset after overheating. The stern thruster has a manual breaker which is located in the Tank Room under the floor hatch in the main salon, aft starboard side of the hatch opening on the underside of the floor. Pull the large red knob to reset.
  - d. The thrusters are used primarily in maneuvering at or near the dock. In open water while underway, the thrusters are not effective.
- 3. Bring up rudder indicator** in the GMI 10 display, by cycling through the screens. Set rudder to neutral position.
- 4. Check wind and current directions.**
5. Use the thrusters to control sideways movement of the bow and stern while operating the throttle in short applications of forward or reverse, pausing in neutral, as you maneuver in the marina. *Note: when using reverse, the STERN WALKS TO STARBOARD.*

## 4. CRUISING

1. When clear of the marina, make sure all mooring lines, fenders and anything loose are stowed. Operate the engine at 1000 rpm for warm up. (5min.)

2. After a 5 min. warm up operate the engine no faster than 1400 rpm until the coolant temperature reaches 140 degrees. You will probably operate at 1200 to 1500 rpm, as this is very economical and quiet.
3. **Please make power changes slowly, rapid power changes can put great stress on engine and drive components.**
4. Monitor the engine instruments at the helm station while cruising.
  - a. Volts should read between 13 and 14 at normal cruising.
  - b. Water temperature should be between 160 and 180 degrees.
  - c. Oil pressure should range between 30 and 100 depending on RPMs.

## 5. RETURNING TO DOCK

### 1. Insure you have fenders out and mooring lines prepared:

- d. On docking side of the boat, (starboard side is most convenient).
  - e. At appropriate level for the dock.
2. **Turn on the bow thrusters** by pushing the 2 "ON" buttons simultaneously. The amber light between the buttons will come on. Toggle the joysticks momentarily in both directions to ascertain that the thrusters are functioning properly.
  3. The engine cool down period (the last 5 minutes) should be at slow speeds to allow the engine to cool down before shut off.
  4. Once docked and the mooring lines are secure, turn off the engine.

### 5. End of Charter Return – Re-fueling

When returning to Bellingham at the end of your charter, refuel at the fuel dock. Following is the refueling procedure:

- i. One person watches the Vessel View monitor panel. Alert the fueling person when the gauge reaches 7/8 full and again when full.
  - ii. The fueling person listens for a change in pitch (higher pitch) in the fill pipe. Stop the fuel flow immediately when the pitch rises. If the monitor shows FULL, you're done. If not wait 30 seconds for any bubbles in the filler pipe to recede and SLOWLY continue filling until the pitch rises again OR the monitor person indicates the gauge is at FULL.
  - iii. Note that the sight tubes on the fuel tanks are not convenient to use and will only show the fuel level up to 90% full. Please use the Vessel View tank monitor as described above.
6. If docking for the day, record engine hours and fuel consumed in the Daily Log book.
  7. Shut down all electronics
  8. Please re-place the screen covers on all the screens as direct sunlight can damage them.

9. At the DC POWER breaker panel next to the helm station turn OFF breakers on labeled VHF, RADAR, AUTOPILOT, and Electronics.

## 6. CONNECTING TO SHORE POWER

1. At the electrical distribution panel, make sure the AC gang circuit breaker marked SHORE POWER is in the OFF position.
2. Take the white electrical cord located in the cockpit lazarette and connect it to the receptacle located in the port side stern area. Line up the prongs, insert the plug, turn, and tighten.
3. Locate the power supply on the dock; making sure that the breaker on the dock is in the OFF position. The white electrical cord is 30 amps. Check the amps for the shore power pedestal on the dock, and use an appropriate adapter, if necessary. Connect the electrical cord to the dock power source, matching prongs, twisting, and tightening. Then turn the dock power source ON.
4. Return to the boat and 1<sup>st</sup> verify the reverse polarity indicator is not illuminated. Then turn the AC SHORE POWER circuit breaker to the ON position.
5. Verify that you have power to the main electrical distribution panel by looking at the AC voltage gauge on the SHORE POWER distribution panel.
6. Insure that the Inverter circuit breaker is turn on to allow the battery charger to engage if necessary. Other AC breakers may be turned on as desired.

**NOTE:** 30-amps of power may not be sufficient to run all the ships systems if the batteries have been discharged. The inverter/charger will draw large amperage to charge up the batteries and may cause the dock power to disconnect. If the load exceeds 30 amps, the breaker will activate. If this occurs, turn off any non-essential systems (e.g. water heater, electric heaters, etc) until your use of amps drop. This procedure will be even more important if you are limited to 20 or 15 amp dockside power, which is common at smaller marinas in Canada. Remember to recheck that AC power is still connected after 10 minutes, if not reduce the load more. The most important thing is to keep the batteries charged and not let them fall below 12.2 volts. As the charge level comes up the inverter/charger will draw less power and enable you to turn on other systems like the water heater and / or electric heaters.

**NOTE:** Any time you are connected to shore power, be sure to turn the inverter **OFF** (green LED light not illuminated) on the Magnum control panel (port side of helm station table). Failure to do so could rapidly discharge the batteries should the dock side power fail. Should this occur, the inverter will attempt to run the entire electrical load.

## 7. CLOSING THE BOAT

1. Close windows and hatches. Close all shades in pilothouse and both port and starboard sides of boat. (To prevent sun damage to the interior).

2. At the DC POWER distribution panel
  - a. Ensure the inverter circuit breaker is ON, but at the Magnum Control Panel, turn OFF the inverter.
  - b. Leave the DC POWER circuit breakers ON except for the red flagged breakers.
  - c. Turn off the water heater breaker on the A/C panel.
3. Lock the doors.
4. On the dock, check the position of all fenders and see that mooring lines are secure.

## 8. ELECTRONICS

### 1. Garmin touch screen Chart-plotter, Depth/Fish finder, Sonar, GPS Auto Pilot and high-definition radar.

Grey Goose is equipped with the latest Garmin electronic equipment with highly-detailed BlueChart g2 Vision marine cartography of the San Juan's to Alaska. Advanced features include:

- a. MarinerEye view and FishEye view provide you a 3-D perspective of map information, both above and below the waterline.
- b. High-resolution satellite images and aerial photographs help you orient yourself in unfamiliar areas.
- c. Auto Guidance technology searches through all relevant charts to create a route you can actually follow — one that avoids obstacles, shallow water, buoys and other obstructions.
- d. Navigational support for storing routes, way points, favorite locations and tracks
- e. Built in information on marine services and facilities
- f. Man overboard feature
- g. Built in tide and current tables and sun/moon calendars

It is a wonderful tool and confidence builder and should be used in conjunction with paper charts. Routinely, we operate with 2 map displays open. One window will be zoomed in for more detail; the other window will be zoomed out for a bigger picture of the area being navigated. Your check-out skipper will show you the basics on the chart plotter. Use the manual for more detailed functions.

### 2. Entertainment Package

Grey Goose is equipped with an entertainment package consisting of:

- A Fusion Marine DVD Stereo system
- A 22" Samsung HD TV
- A ROKU Internet Streaming device

The Fusion DVD Stereo system is mounted on the port side of the stairs between the salon and pilot house. It has a very user friendly interface and all functions are easily accessible from the front control panel. There is also a remote control which provides handy access and management of the systems features. The system provides over the air access to AM/FM radio stations, a DVD/CD player for use with music or video content, true integration for iPods.

**To use the Fusion system, the “Lights” breaker switch on the DC Panel must be turned on.**

The manual which describes all operations is found in the documentation cabinet which is in the top of the Galley to Pilot house steps, port side, under the Fusion Stereo Unit.

- a. Radio:
  - i. To listening to the radio, select the antenna source and tune to your radio station of preference.
- b. iPod
  - i. Use the special adaptor found in the drawer under the port-side helm station seat. This is a standard iPod/iPhone digital adaptor which will charge your device while attached.
  - ii. Once attached, select the I Pod function on the front panel; iPod control is provided through the front panel of the Fusion console.
- c. CD
  - i. There is a black button on the top of the Fusion console. Depressing this button will allow the front panel of the console to open and swing down revealing a CD access slot.
  - ii. Insert CD into the slot and select the “disk” icon source on the front panel of the console.
  - iii. Hit play.
- d. Watching a DVD
  - i. Carefully pull down the hidden TV entertainment center located immediately above the sink in the salon.
  - ii. Turn on the Samsung TV using the remote control and select AV1 as the source video input.
  - iii. Next follow the same procedure as in c) above to insert a DVD disc into the Fusion DVD Stereo unit.
  - iv. Hit play and the DVD will start; audio for the DVD is now available over the speaker system for the Fusion Stereo unit.
- e. Television
  - i. First insure the Outlet circuit breakers have been turned out (AC panel). If not plugged into shore power, the Inverter must also be turned on at the Magnum control panel.
  - ii. Carefully pull down the hidden TV entertainment center located immediately above the sink in the salon.

- iii. Turn on the Samsung TV using the remote control and select TV as the source video input. You can now tune to off the air channels that may be accessible. Note that unless you are close to a major city/broadcast center, channels may not be available.
- f. Internet Streaming: Note, to utilize Internet streaming services via Roku, the guest must provide their own internet connection, via an internet hot spot. Connections are available in many marinas.
  - i. Carefully pull down the hidden TV entertainment center located immediately above the sink in the salon.
  - ii. Turn on the Samsung TV using the remote control and HDMI 2 as the source video input.
  - iii. Using the Roku remote, hit the “home” screen, then follow directions to set up your internet connection.
  - iv. Once an internet connection has been established, use the menu to navigate to available streaming services.

### **3. ICOM VHF Radio and VHF Handheld**

The Operations manual can be found the Systems Binder in the port side document cabinet, directly under the Fusion Stereo unit.

It is recommended that mariners monitor channel 16 while underway. Weather updates are found on channel 4.

The handheld unit is both a backup to the primary I Com unit, and if needed when operating the dinghy to stay in touch with Grey Goose. The unit is stored in the pull out drawer on the Starboard side of the steps between the salon and the pilot house.

## **9. FUEL**

Grey Goose has two (2) diesel fuel tanks located on the port and starboard sides of the tank room, under the salon. Each fuel tank holds 200 gallons.

### **1. Managing Fuel Consumption and Monitoring Fuel Levels**

Grey Goose fuel tanks will be full upon your departure. Unless extended cruising is expected, you shouldn't have to worry about how much fuel is onboard. However, it is a good practice to measure fuel usage on a daily basis to track your overall consumption. Following are the procedures for measuring fuel level as well as daily tracking of fuel consumption:

#### **Measuring Fuel Level:**

- a. The Monitor Panel located on the port side of the helm station. Turn the monitoring panel on and use the up/down arrow keys to cycle through the various tank positions. Starboard and Port tanks will be the helm select the starboard position. The LCD display also provides a visual indicator of fuel remaining.

### **Measuring Daily Fuel Consumption:**

To measure daily fuel consumption, use the trip log feature available in the Vessel View display. The feature is accessible in the “boat status” screen. Readings for daily operating hours and fuel consumption can be taken directly from this display. These should be recorded each day in the Grey Goose log book.

## **2. FILLING THE FUEL TANKS**

Fuel should be added as needed on extended cruise and/or upon return to the fuel dock in Squalicum harbor at the end of your journey.

**Fuelling is a 2 person job. One person monitors the Vessel View fuel gauges and one person fills the tanks.**

Note: The “deck key” to open the filler ports is located in the Starboard side pull out drawer, located at the top of the steps between the saloon and the pilot house.

- a. **Preparation.** Before you start to fuel, make sure the engine is shut down, the furnace is off, and all ignition materials have been extinguished. Everyone except the person monitoring the gauges and the filler should be off the boat. Also, have an oil/fuel sorbs handy to soak up spilled fuel. You should have a rough idea of the number of gallons you will need if you have been monitoring engine hours and fuel consumption on a daily basis.

- b. **Open Fill Caps.** Located on the port and starboard side decks just forward of the cockpit (push down on the filler cap, which will pop up, and can usually be twisted off by hand).

**On the starboard side the water filler cap is next to the diesel fill cap.**

- i. Make sure you have the correct fuel hose! → DIESEL! DIESEL! DIESEL!*
- ii. Make sure you have the correct fill pipe - Diesel! DOUBLE-CHECK!*
- iii. Do not fill starboard side diesel and water at the same time!! Cross contamination is very likely.*

- a) **Fueling.** Following is the refueling procedure:

- iv. One person watches the Vessel View monitor panel. Alert the fueling person when the gauge reaches 7/8 full and again when full.
- v. The fueling person listens for a change in pitch (higher pitch) in the fill pipe. Stop the fuel flow immediately when the pitch rises. If the monitor shows FULL, you’re done. If not wait 30 seconds for any bubbles in the filler pipe to recede and SLOWLY continue filling until the pitch rises again OR the monitor person indicates the gauge is at FULL.

- vi. Note that the sight tubes on the fuel tanks are not convenient to use and will only show the fuel level up to 90% full. Please use the Vessel View tank monitor as described above.

### 3. SERVICING THE FUEL FILTERS

Few things you do are as important to your safety on the water as having uncontaminated fuel going to the engine! Grey Goose is equipped with two RACOR fuel filters. (One filter for each tank) and are located aft of each fuel tank in the engine room. A vacuum/pressure gauge is read at the top of each filter.

- a. Check the two fuel filters for contaminants or water as part of the pre-cruising engine room check. If there are contaminants or a separation of fluid in the bottom of the glass collection containers, they should be drained of the contaminants:
  - i. Close the shut-off valve to the specific fuel filter (located under the fuel filter)
  - ii. Be prepared to catch any fuel from the filter with a small container and some rags.
  - iii. Remove the plug from the bottom of the drain valve and slowly open the valve to evacuate just the water or contaminants, and then quickly re-tighten the valve and reinstall the safety plug.
  - iv. Open the shut-off valve.
  - v. Note: If the engine doesn't start, you may need to prime the fuel system at this time:
    - 1. Replace the RACOR fuel filter if the pressure gauge reads between 7 and 10. The two RACOR fuel filters located in the engine room have a vacuum gauge read when the engine is running at cruising speeds. The RACOR Company instructions say when the needle on the vacuum gauge reads between 7 to 10 inches (of vacuum) it is time to replace the filter element. The elements are changed routinely, but you never know when water or contaminants will get into the fuel tank, so be prepared to change out the filter if the vacuum gauge is reading between 7 and 10 inches! The replacement RACOR 10-micron filters are located in the black plastic bin in the engine room. Labeled SPAREPARTS, AND FILTERS.
  - vi. Change the filter with the reading between 7 and 10 inches of vacuum. If both indicate in this range than change them both.
  - vii. To change the filter element:
    - 1. Close the shut-off valve to the specific fuel filter (located under the fuel filter)
    - 2. Unscrew and remove the lid to the filter housing
    - 3. Slowly remove the filter element from the top of the housing.
    - 4. Slowly insert the replacement element and replace the lid and tighten the T-handle (hand tight only).
    - 5. Open the shut-off valve.

6. Start the engine and check for leaks. Correct any leaks with the engine off.
7. You may need to prime the fuel system at this time.

## 10. WATER

There is a 150 gallon fresh water tank on Grey Goose. The tank is located in the aft section of the tank room. The tank room is accessed through the hatch door in floor of the salon.

### 1. CHECKING THE WATER LEVEL/Refilling Water Tank

- a. **Observe the water** level by use of the tank monitoring system with a read-out panel at the forward edge of the Navigation Table in the Pilothouse and/or by the sight glass on the tank (located under the hatch in the Salon) which is more accurate.
- b.
- c. To refill the tank,
  - i. Remove the WATER CAP located on the starboard side deck just forward of the cockpit (push down on the cap, which will pop up, and can be twisted off by hand). Avoid flushing debris from the deck into the tank opening. **DO NOT FILL WATER AND DIESEL AT THE SAME TIME!**
  - ii. Connect the White with Blue stripe, fresh water hose (located in the lazarette under the cockpit) to the domestic water supply at the dock. Let the water run through the hose (overboard) for a minute or two to wash any contaminated water from the hose. **DO NOT USE THE HOSE AT THE DOCK TO FILL THE WATER TANK—YOU DON'T KNOW WHERE IT HAS BEEN.**
  - iii. Fill until the filling sound starts to increase or water comes out the Vent/overflow on the hull just below the deck fill.
  - iv. Tighten the deck plate and re-stow the clean water hose in the lazarette.

### 2. HOT WATER Tank

The HOT WATER HEATER has an 11 gallon capacity tank and is available when connected to shore power, the generator or via a heat exchanger with the engine when underway. To use on shore power or with the generator in operation, flip on the water heater circuit breaker on the AC electrical panel. **Do not use the water heater if the water tank level is very low.** The water heater tank is located in the port-side engine room.

### 3. Shower

Before taking a SHOWER, make sure and shower sump breaker is on. The breaker is located in the pilot house, on the starboard side of the overhead plane. All other sump pumps should remain on at all times.

It generally a good idea to take short "boat showers". To keep shower tidy wipe down the shower stall and floor. Check for accumulation of hair in the shower and sink drains. An optional

hand-held FRESH WATER SHOWER is located in the cockpit. Ensure that the faucets and nozzle are completely off after use.

Note: Should the shower begin to drain slowly, it is probably because the filter in shower sump reservoir has become clogged. The shower sump is located beneath the hatch in the bathroom floor. There is a plastic enclosure covering the sump. It can be easily removed (4 screws) and the sump and filter and cleaned. Please be sure the filter is replaced and secure before reassembly.

## **11. BOAT ELECTRICAL**

The electrical system is divided into two distribution systems: 110-volt AC and 12-volt DC. The electrical panels controlling each of these systems are located behind the smoked Plexiglas door in the pilot house.

When not connected to shore power or generator, batteries are providing all power. Therefore, monitor the use of onboard electricity carefully with your volt meter located on the DC Panel, and turn off electrical devices that are not needed. Note: switches controlling the batteries are located next to the starboard side helm seat.

### **1. 110-Volt AC System**

**The master 110V circuit breaker is located at the aft end of the port salon settee.**

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

To connect to shore power, plug the 30 amp POWER CORD into the boat and then into the dock receptacle. Check the power rating/plug size of the nearest dock receptacle (that is 30 amp, 20 amp, or 15 amp). If Doc power is 20 or 15 amp, use the appropriate adapter stored in the starboard side drawer under the starboard side helm seat.

Turn the dock power breaker on. Cords coming off the bow can be wrapped loosely around the bow line.

At the ELECTRICAL PANEL in the Pilothouse, flip the SHORE CIRCUIT BREAKER on (note that there is a sliding protector to insure that the panel can be energized by either shore power or generator, but not both). Check for reverse polarity. Then turn on appropriate breakers for battery charger, water heater, outlets and microwave. Watch your amp meter for load. If the load exceeds 30 amps, the breaker will pop. If this occurs, turn off any non-essential systems (e.g. water heater or space heaters) until your use of amps drop.

All outlets on board are controlled via the 3 circuit breakers in the Auxiliary AC Panel (Outlets, Outlets 2 and Microwave). Should any outlets fail to work, check your GFIs (one in the kitchen and one in the head) to make sure that they have not been tripped.

### **2. Generator**

Grey Goose has a 6KW Northern Lights generator. You will likely not need to use it as long as you are connected to shore power or using the engine several hours a day. To start your GENERATOR, first check that your generator's fluids are topped off and the raw water intake is open. The generator controls are located on the forward bulkhead in the Salon on the port side of the steps to the helm station.

Before starting the generator, make sure you have performed the pre-start checklist .

At the control panel, push and hold the rocker switch to pre-heat the generator for 15 seconds. While continuing to hold down the pre-heat rocker switch, push the start button. The engine should start. See manual to add more details.

Let the generator warm up for about two minutes, and then at the AC control panel, move the sliding protector up and energize the generator power breaker. Then turn on AC systems as you would on shore power one system at a time. Monitor your current usage.

To turn the generator off, first take off the load by turning off AC breakers. then turn off main AC breaker. Let the generator idle for 2 minutes, before killing it by generator switch in the Salon to "off" until it dies.

### **3. 12-volt System (DC System and Battery System)**

Three battery banks support 12-volt DC power: 1) Main Engine start battery 2) house battery bank 3) generator start battery

The BATTERY SWITCHES are located on the cabinet below the starboard-side helm seat. The "DC Main" toggle switch is normally left in the "On" position and supplies power to the DC Panel.

The rotary switch below the DC Main is the "Starting Battery Switch" for the Main Engine. It is normally left in the "On" position unless there should be a fire in the engine room or a battery problem. **Except in an emergency, do not change this switch while the engine is running.** Alternator damage will result.

The "Battery Parallel" rotary switch is normally left in the "Off" position. This switch should only be used to combine the Main Engine Start and House Batteries as a last recourse to provide additional cranking power to start the Main Engine. To the right is the "Constant 12 Volt Breaker". This breaker provides power to the Fuse Block located under the console in the Pilothouse, which supplies power to the Bilge Pumps, Propane Snifter Systems, Tank Monitor Panel and Defroster. **It should be left in the "On" position at all times.**

House Battery Bank: Two AGM 4D batteries supply House Power. The 12 volt panel shows all the systems supported by the House Battery Bank with the exception of those on the Constant 12 Volt Breaker mentioned above. This includes the Engine Room lights, wash-down pump, and Navigation Lights (all controlled with rocker switches at the console), the Inverter and the Diesel Heater, bilge pumps, CO Detector and Propane Sniffer. Primarily you will be turning on the panel breakers for your lights, water pressure, electronics, autopilot, refrigerator, toilet, wipers and 12 Volt outlets.

Console rocker switches for the Bilge pumps should always be left on.

Main Engine Start Battery: An AGM 4D battery provides power to start the Main Engine. In addition, it is used to power the Bow Thruster via a 400 Amp Thruster Fuse and the Anchor Windlass via a 125 Amp Fuse. **The Engine should always be running when operating the Bow Thruster or Windlass to avoid depleting the start battery.**

Generator Start Battery: A Group 24 battery supplies power to start the Generator.

#### **4. Inverter/Battery Charger**

Grey Goose is equipped with combined Inverter/Battery Charger unit which is controlled by the Magnum control panel located on the port side of the helm station.

When connected to shore power or when the generator is running AND the inverter circuit breaker is ON, the unit acts as a charger for all of Grey Goose's batteries. When disconnected from these AC power sources, the units' Inverter converts DC battery power to AC power to supply all AC outlets on board with 110V AC. Note: The inverter does not provide AC power to the water heater or the electrical heating units.

The inverter's power source is the DC house batteries located under the hatch in the Salon. The quantity of DC power is limited to the capacity of these batteries. Therefore, running hair dryers, toaster, coffeepots, etc. and will quickly discharge the house/inverter batteries. Use these items VERY SPARINGLY! Monitor your battery usage very carefully! Also, note that the inverter has a 2,000 watt capacity governing maximum connected load.

The Magnum INVERTER control panel has a display which is useful for monitoring the status of the battery charge levels and the operation of the Inverter /Charger. The location of the integrated unit is within the cabinet behind the settee in the salon.

#### **5. Battery State and Charging**

The HOUSE BATTERY BANK provides power for all DC systems, except the engines and other systems noted above. When disconnected from shore power, all 12-volt devices drain the house battery. Use devices only as needed. The DC voltmeter on the DC panel can be switched between 1) Main Engine Start, 2) House Battery Bank and 3) Generator Start Battery to measure charging or resting battery voltages.

The Main Engine Start and House Batteries are charged by the engine ALTERNATOR while underway. The Main Engine Start and House Batteries are charged by the BATTERY CHARGER when connected to Shore Power or to the Generator. Ensure the Inverter circuit breaker at the 110 Volt electrical panel is ON.

The Generator Start Battery is charged directly by the Generator when the Generator is in use. On Shore Power the Generator can be charged by the Battery Charger if necessary after a long period of inactivity. To do so, turn-on the rotary switch found near the Battery Charger below the hatch in the Salon (Normally this switch should be kept in the "Off" position. With the Generator running, the Battery Charger will not provide a charge to any of the batteries if it

detects another charging source, namely the direct charge from the Generator to its own battery).

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

#### **Approximate Voltage/Battery State**

12.8 volts 100%

12.4 volts 75%

12.2 volts 60% → Recharge at 60% or battery damage could occur.

11.8 volts 25%

11.6 volts 0%

## **12. HEAD**

Grey Goose has one head with a VACUFLUSH freshwater marine toilet. The head also has enclosed shower, vanity, and sink. The toilet uses a VACUFLUSH freshwater system, which helps to eliminate odors often emanating from salt-water toilets. The VACUFLUSH system flushes into a 45gallon-holding tank. The holding tank can be emptied at a pump-out station, or can be pumped overboard through a macerator pump, and a seacock in the bottom of the hull, (if you are in a legal zone to do so).

### **1. USING THE TOILET**

It is important that every member of the crew be informed on the proper use of the MARINE TOILET. The valves, openings, and pumps are small and may clog easily. If the toilet clogs, it is YOUR RESONSIBILITY. Always operate the toilet for children, so you can make sure nothing foreign is being flushed.

Grey Goose has an electrically operated fresh water VacuFlush toilet. To use the toilet, lift the foot pedal to add water to the bowl as necessary. After using the toilet, to flush, press down sharply on the foot pedal to initiate the vacuum action until contents clear the bowl. A sharp popping noise is heard when the vacuum seal is broken and the flushing action begins. Hold the foot pedal down for 3 seconds to ensure complete flushing action. As desired lift the foot pedal to wet the bowl again. Clean the toilet as necessary.

**Caution – DO NOT PUT ANYTHING DOWN THE HEAD THAT HAS NOT BEEN EATEN FIRST. 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. MARINE TOILET PAPER IS THE ONLY EXCEPTION! Grey Goose is supplied with this type of paper. Should you run out, please get more at the nearest marine or RV store. It is prudent to minimize the amount of marine toilet paper put in the head. If possible, use the wastebasket. A plugged up waste system can ruin an otherwise great cruise.**

## 2. CLEANING THE TOILET

There is a toilet brush in the cabinet under the sink. Use liquid dish washing soap and water for everyday cleaning of the toilet bowl. Never use chlorine based cleaners, caustic cleaners, chemicals, drain openers, alcohol, solvents, etc. in the system.

## 3. HOLDING TANK

The sanitation HOLDING TANK holds approximately 46 gallons. Be aware of the rate of waste production. (about 1-1.5 pints per flush). With an overfilled tank, it is possible to break a hose, clog a vent, or burst the tank. The result will be indescribable catastrophe and an EXPENSIVE FIX. Empty the tank EVERY OTHER DAY to avoid this problem.

The HOLDING TANK is located under the Stateroom floor. It can be inspected via the hatch in the Head compartment, and may be given a visual check with a flashlight or the “watermelon” test by thumping it. There is also a tank monitor system with a read-out panel in the Helm station. For the Holding Tank, it is only approximate and should not be relied on as the tank gets full. Note that the tank monitor must be powered off then back on again to get an updated reading on the gauge.

## 4. EMPTYING THE HOLDING TANK:

- a. The holding tank is emptied in one of two ways:
  - i. **At the Marine Pump-Out Station**, remove the WASTE CAP located on the port side deck just forward of the Pilothouse door (push down on the cap, which will pop up, and can be twisted off by hand).
    1. Insert the pump-out nozzle into the waste opening. Double-check your deck fitting!
    2. Turn on pump and open valve located on handle.
    3. When pumping is finished (will now be sucking mostly air with a little water), close lever on handle and turn off pump. Remove from deck fitting.
    4. If there is a fresh water hose on the dock, rinse the tank by adding 2 minutes of water into tank. **DO NOT USE Grey Goose’s WHITE FRESH WATER HOSE.**
    5. Then re-pump the tank. This also eliminates head odors.
    6. Replace the WASTE CAP and tighten
    7. Wipe up any spills on the deck and throw away the used disposable gloves and wipe up rags.
    8. Wash down the fill area on the boat with the fresh water hose.
  - ii. Discharging the Holding Tank Overboard using the macerator.

The tank’s contents can be discharged with the MACERATOR only in where legal to do so. In the US, this is 3 miles or more from US shores (Canadian rules differ however). Confirm that through-hull seacock located in the starboard-side

engine room is OPEN. Note by Coast Guard regulation this through-hull must remain closed unless a pump-out is taking place where legal to do so.

1. Ensure the Holding tank discharge sea cock is open (located in starboard side of the engine room at the bottom the access ladder).
2. Turn on Macerator breaker on DC Control panel.
3. Insert the key into the Macerator key switch on the console.
4. Turn the key 2 clicks clockwise to begin pumping. The indicator light will illuminate. Use the tank monitoring system and listen for a change in pump motor pitch as the tank empties. It should only take a few minutes to empty the tank.
5. When finished, turn off the key to stop the macerator pump and close the overboard through-hull seacock (located in starboard side of the engine room at the bottom the access ladder).

### 13. DECK WASH

There are 2 deck wash access ports at the bow on the port side of the windless. When facing forward, the left side port is for using the Salt Water wash down system. The right side port is for using the Fresh Water system. To preserve fresh water, it is generally recommended to use the salt water system. The blue self-coiling hose (kept in the bow lazarette), is compatible with either system and should be used to clean the anchor and chain, or wash dirt overboard through the deck drains. To utilize the Salt Water system:

1. Plug in and twist the hose into the seawater access point (DO THIS FIRST BEFORE TURNING ON PUMP AT DC CONTROL PANEL)
2. Turn on the SEAWATER WASHDOWN C/B on the helm station panel. Seawater should pressurize the hose and enable you to stand at the bow and use the spray nozzle to clean the anchor and chain as it comes out of the water. It is best to spray water on the chain before it gets to the roller so that mud and other debris wash back to the sea and not onto the deck or in the chain locker.

Note: If there is no water flow, check to see that the seawater seacock, located in the starboard side of the engine room is OPEN and verify that the blue wash down adapter is twisted fully into the access port.

### 14. GALLEY

#### Stove

To operate the stove:

1. Check the propane tank valve is open. (Tank is located in the propane locker in the aft cockpit starboard side of the salon door.
2. Turn on the propane control safety switch is on the propane monitor panel, just inside the salon door on the cabinet (above the magazine rack). This is the left most switch/indicator on the panel.
3. Propane should now be available to the stovetop and oven.
4. The stove is equipped with electric starters, to activate push in and turn the knob until the burner starts.
5. To activate the stove, you must first light the pilot. To do so, use the long stemmed butane lighter found in the galley drawers. First turn stove control knob to the pilot starting position, press in and hold while lighting the pilot.

Tip: if the stove or oven have not been used for a while, you may need to bleed air from the feed lines. Hold knob depressed in the position for lighting for 15 seconds before using the electric starter. You

### Non-stick cookware

1. *Do not use nonstick cooking sprays* on the nonstick cookware- an invisible buildup will impair the nonstick release system and food will stick in the pan. The nonstick cookware *does not need oil*. If you prefer oil for flavor, olive oil or peanut oil is recommended.
2. Use *low to medium heat* only. Excessive use of heat will cause pan warping and permanent nonstick coating damage. The non-stick cookware is *oven safe to 350 degrees F*, but never in the broiler.
3. Do not use metal or sharp-edged utensils.
4. Clean using mild dishwashing detergent and warm water. Use only nonabrasive plastic mesh pads to dislodge food particles.

### Refrigerator

Make sure the refrigerator is breaker is ON at the DC Control panel in the HELM station.

### Microwave

Make sure the Microwave is on at the AC Control panel in the HELM station. Each time power is applied to the microwave, you will need to set the clock before the unit can be used.

## 15. HEATING SYSTEMS

There are three sources of heat on Grey Goose:

1. Hydronic Diesel furnace:

- a. There are 2 heating “zones’ in Grey Goose. The first is the Saloon, Galley and Helm area and the second is in the Stateroom. Each has its own thermostat control.
- b. To use the Hydronic furnace, first turn the “ITR” switch to the “ON” position. The switch located in the panel on the starboard side of the steps to the helm station.
- c. You may now set either thermostat to your desired temperature.

Note: The furnace burns diesel and circulates hot water to radiators. Fans are then activated to blow across these heated transducers and warm the air. It may take 15 or 20 minutes for the furnace to heat water, which is then circulated through its distribution system.

Note: The furnace will occasionally “flame out”. Should this occur, an alert tone will emanate from the heater control panel for about 15 seconds and a message displayed on the front panel. Recycling the ITR switch typically resolves the issue.

TIP: The salon thermostat is mounted on a space adjacent to the engine room and hydronic pump. This space has a tendency to heat up, so you may want to set the thermostat a few degrees higher than your desired air temp. Conversely, the state room thermostat is located on an outside wall and under conditions where the outside temp is low, the space behind the thermostat will be cool, so you may want to the temperature a few degrees lower than the desired temp.

2. Auxiliary heat when the engine is running

- a. Auxiliary heat is available in the salon/galley/helm station area, any time the engine is running and up to its cruising temperature of 170 to 180 degrees. Just turn on the ITR switch and set the salon thermostat to the desired temperature.

3. 2 electric heaters; one in the aft part of the salon, on the port side and one in the stateroom.

- a. These heaters should be used only when plugged into shore power and typically when you have left the boat for an extended period of time.
- b. To use the saloon heater, turn on the AC panel breaker labeled “Heater”.
- c. To use the state room heater, turn on the AC panel breaker labeled “Heater 2”
- d. Each heater has a small thermostat control knob located on the front panel.

**Caution: Do not leave anything in front of these heaters which would impede airflow while they are operating, especially something combustible.**

## 16. OTHER SYSTEMS

### Cell Phones

You can re-charge your cell phones at the 12-volt receptacles located at either side of the helm station. There is a cell phone signal amplifier installed on the boat that is designed work most major cell phone providers. Signal amplification will not occur beyond approximately 10 feet from the Helm station.

## Barbeque Grill

The stainless steel propane barbeque grill is mounted on the starboard aft railing. It is for *outdoor use only*. The propane tank which serves the grill is secured in the propane locker located in the port aft lazarette in the cockpit.

To use the grill:

1. First remove the cover.
2. Open the valve of the propane tank as well as the BBQ shutoff valve, both of which are located on the tank Locker.
3. Make sure the regulator knob on the grill is in the OFF position.
4. Open the lid to the grill. Remove any accessories stored inside.
5. Push and turn the regulator knob counter-clockwise to the high setting.
6. Push the red igniter button, several times if necessary
7. Confirm that the burner is lit, by looking through the front vents of the BBQ.
8. Adjust the regulator knob on the grill to the desired heat setting.
9. The BBQ does not require pre-heating. Do not overheat.
10. Do not cook on the high setting with the lid closed.
11. Unless you are searing a steak the low setting works best for general use.
12. To shut off the grill, turn the regulator knob on the grill clockwise to the LOCK-OFF position.

Cleaning the Grill:

The grill should be cleaned on a regular basis. Stainless steel exposed to high heat will change color over time. Discoloration of components does not affect the operation or performance of the BBQ.

1. On the front lower outside of the BBQ slide out the grease tray for cleaning.
2. Lift out the cooking grill and the heat plate for cleaning.
3. The exterior of the BBQ can be cleaned with soapy water.
4. Lock the lid of the grill securely with the latches.
5. Cover the grill with the canvas cover between use.

## Anchoring Systems

1. CHAIN MARKINGS

The anchor chain is 250' in length with about 15' of nylon line at the "bitter end". The nylon line is used in case of emergency to release the anchor by cutting the line. The chain is marked

with white line at 20' intervals. 100' intervals are by a yellow line with white just above and below.

Grey Goose also is equipped with an automatic chain counter in the Anchor Remote control panel in the helm station. Nevertheless, it is recommended that you use the chain markings to make your determination of length of chain that has been deployed.

## 2. WINDLASS

The anchor windlass has foot controls (Up/down) at the forward end of the deck. There is also a control switch (up/down) in the Anchor Remote panel in the helm station, so the anchor can be deployed or lifted at either location.

If there is no power to the Windlass, check the two circuit breakers for the windlass. One is located in the master stateroom on the starboard side of the berth. The other is in the helm station electrical panel near the bottom of the panel.

**Note: It is strongly recommended that you use this second breaker as a safety switch and turn it on only when deploying or retrieving the anchor and then turn it off. This will prevent an unintentional deployment of the anchor that could also cause injury.**

## 3. SCOPE AND TIDE SWING

Scope is the relationship of length of rode (chain, line, cable) to the depth of the water. San Juan Sailing recommends a 4:1 scope.

- a. Check the tide tables to know at what point in the range you are anchoring, and measure the scope for the high tide.
- b. Check for depth and rocks within the proposed "swing" area.

## 4. SETTING THE ANCHOR

- a. The boat should be stopped facing into the wind. At the bow, take the pin attached to the roller out of the anchor.
- b. Ensure that the "Windlass" breaker on the DC panel is ON. Depress the down arrow foot switch momentarily to let out about 2' of chain.
- c. Gently ease the anchor out on the roller so that gravity can take over.
- d. Let out the proper amount of rode based on scope desired.
- e. Put the engine astern momentarily to put a strain on the anchor.
- f. Verify the anchor is set by feeling the anchor catch and boat move forward. The angle of chain dropping down should be near straight.
- g. Using the anchor holding line with the stainless chain hook (stowed in the step at the helm settee), secure the chain in front of the anchor roller with the stainless hook and tie off each end of the line to the port and starboard bow cleats. Let out more chain so that a slack loop is created in the chain between the anchor roller and the place where the hook grabs the anchor chain. This will relieve stress on the windless and ensure additional chain is not pulled from the windless.

- h. Do an “anchor watch” for the first 30 minutes, observing how the boat swings and how close it gets to other boats and objects.

#### 5. RETRIEVING THE ANCHOR

- a. Raise the chain so you can easily unhook the anchor harness. Release the line from one of the cleats and bring it over to the other cleat and remove the harness and stow.  
Wash the chain and anchor with plenty of sea water as it is retrieved:
  - i. Turn ON the SEAWATER WASH DOWN breaker on the DC power panel.
  - ii. Retrieve the blue self-coiling hose and nozzle from the Lazarette.
  - iii. Connect the hose with the nozzle attached to the seawater receptacle at the bow near the anchor.
  - iv. Start the engine and move slowly toward the anchor.
- b. At the bow, have a crewmember depress the up arrow switch to retrieve the anchor.
- c. Use the seawater nozzle to continuously wash the chain and anchor before they reach the deck.
- d. If the chain tightens and starts to bog down the Windlass, wait until the boat “catches up” before continuing. **Don't drag the boat by the anchor chain through the water.**
- e. When the anchor is clear of the water make sure it is clean of mud and seaweed. A boat brush and spray nozzle may be necessary to make this easier.
- f. Be careful for the last couple feet to make sure the anchor is facing the proper direction. Use short bursts on the windless as the anchor comes aboard.
- g. Reinsert the pin to secure the anchor in the bow roller.
- h. Release the tension on the chain slightly to take the strain off the Windlass.
- i. Re-stow the hose and nozzle in the Lazarette.

### Stern Tie

There is 300' of line that can be used for a stern tie off to an object on shore. Use the tender to take the line ashore and loop around your tie off ring or tree, etc. Bring the end of the line back to Grey Goose and tie it to a cleat.

### Mooring Buoy

You may use one of the bow dock lines to tie to a mooring buoy by using the boat hook to catch the ring on top of the buoy. Carefully maneuver the boat to approach and come along side of a buoy. Then move the boat forward while walking the buoy toward the stern were it will be easier to attach the dock line. Pull the ring up enough to pass the dock line through the ring twice, back the boat until you can easily tie off to the port and starboard bow cleats. A second bowline looped through the buoy ring is advisable as a safety backup.

### Tender

#### 1. LAUNCHING THE TENDER

- a. The Swim platform Davit system is used to launch the tender.

- b. The tender is an Walker Bay 10 foot hard bottom inflatable style boat. It can handle a maximum of four people for a sight-seeing cruise or can be used for a variety of activities for two people including fishing, crabbing, and gathering other meals from the sea.
- c. A 20 HP Honda, four stroke motor with electric start and trim, power the tender. There is fish finder/depth sounder, plenty of storage compartments under each seat, built in fuel tank, and a helm station.
- d. The Honda outboard uses unleaded gas straight from the fuel tank. **(DO NOT MIX OIL WITH THE FUEL!).**
- e. To launch the tender:
  - i. Remove the canvas cover by releasing the snaps all around the underside of the rail. It is NOT safe to get into the tender to remove the straps or cover.
  - ii. Insert the drain plug into the stern and secure.
  - iii. Loosen the cables that attached the davit to the stern rail by twisting until the latch can be released. This detaches the davit.
  - iv. Also loosen the tender's bow "tie off" line enough that the boat may be lowered into the water. Then retie to the aft starboard cleat.
  - v. The winch control switches are located port side and aft. They are red and grey and heave arrows indicating up and down.
  - vi. Using the winch controller feed out enough line to determine that there are no encumbrances to full deployment (ie, no lines or cables are attached and there nothing restraining the tender from being deployed.) Once satisfied, proceed to lower the tender into the water.
  - vii. Deploy the davit until the securing lines are slack. Check to see that there is no water entering through the drain plug.
  - viii. It is now safe to step into the tender and release the securing lines. The tender should now be floating freely, secured to the boat by its tie off line.
  - ix. Position the tender close to the swim platform, so any passengers boarding (only up to 3) can step off the platform and comfortably on board.
    - 1. **All parties boarding the tender should be wearing life vests provided on Grey Goose.**
    - 2. The ignition key is kept on a float key located over in the pull out drawer on the starboard side of the helm steps.
    - 3. The driver should board first followed by up to three additional passengers.
- f. Starting the tender
  - i. Ensure the gas line is connected, and pump the primer bulb until it is firm.
  - ii. Make sure the outboard is in neutral, (throttle lever vertical), and the motor is lowered to the stop. Turn the key to start. The choke is automatic.
- g. Retrieving the tender
  - i. Shut down the engine and lift the motor out of the water.

- ii. Reverse launch procedure the tender by offloading passengers and positioning the tender so that it is ready to be lifted by the davit system.
- iii. Rehook lift cables and using the winch controls, raise the davit a few inches to insure cables are secure.
- iv. The driver should now step off onto the swim platform, enter the cockpit and continue to raise the tender until it is secure against the protecting pads on the aft rail.
- v. The cables which secure the davit to the stern rail may now be reconnected and tightened to secure the tender and davit.

*Note: If the davit is raised too quickly and strikes the railing, this may cause the 40 amp protective circuit breaker to trip. Should you suddenly find you the red/grey control buttons are not working, it is a good possibility this has occurred and you need to reset the break. The breaker is located in the tank room under the galley floor and the forward bulk head. See picture below.*



*Davit Control Circuit Breaker*

- vi. Remove the drain plug in the aft section of the tender and restow.
  - vii. Put the ignition key back in the drawer on the starboard side of the helm steps.
2. OPERATING THE TENDER (The Honda OUTBOARD manual located in the document cabinet under the port side pilot house seat.
- a. Make sure all occupants are wearing appropriate life jackets. (This is a coast guard requirement. All occupants must have life jackets be immediately available). There are 2 inflatable life jackets kept in forward most pull out drawer in the salon under the dining table. Additionally there are 4 standard US Life Guard approved orange life jackets in the cockpit lazarette.
  - b. Never let minors start or operate the tender.
  - c. Check the gas level by observing the gauge on top of the fuel tank. *Always stop the motor before refilling the tank.*
  - d. The key for the tender is located inside the starboard side drawer over the helm steps.
  - e. Start the motor:

- i. Check for a steady, stream of water flowing out of the back of the motor. If little or no water is coming out, *stop the engine* and check the cooling water intake or the outlet hole for obstruction. If there is no obstruction, there may be a water pump failure or blockage in the cooling system, which will cause the engine to overheat--*do not operate the engine*.
- f. The red lanyard is connected to the safety switch or (kill switch). The driver should attach one end the event he/she falls out of the tender the motor will stop.
- g. Operate the motor with the shift/throttle lever by smoothly advance the throttle until it shifts from neutral to forward and then advance the lever for desired speed. Use the same procedure for reverse. Steer with the wheel. Use the power trim as required for optimum performance based on the weight distribution in the tender.
- h. The Garmin 4000 chart plotter/fish/depth sounder can be used as required. The manual can be found with other documents in the cupboard on the port side at top of the helm station steps.
- i. To stop the engine, close down the throttle, put the motor in neutral and turn the key to off.

## Sea Kayaks

Grey Goose is equipped with 2 sea kayaks mounted on the top of the pilot house. These kayaks are provided for use by our guests; however they are to be used at your own risk and assume you have appropriate experience and safety equipment to operate.

**Warning: The kayaks are supplied as is, with paddles only. Paddles are located in the cockpit lazarette. Spray skirts and specialized kayak life vests are not provided and are the responsibility of the guest. The kayaks are to be used only at your own risk. Do not use unless you are experienced in operating sea kayaks. Deploying as well as retrieval and re-stowing of the kayaks requires at least 2 strong and able bodied persons. If not performed carefully damage to Kayaks or Grey Goose may occur. Any damages are the responsibility of the charter guest. Mounting sea kayaks off swim set is tricky and may be dangerous. Please observe appropriate caution and care. Should you use the kayaks, securely re-stow facing down using the provided straps.**

## 17. SALON SETTEE CONVERSION TO A BED

To convert the salon settee to a queen bed, release the locking lever under the settee table and lower the table to its lowest position. Lift the front side of the settee about 6" and smoothly pull it toward the center of the salon. The leg for the aft inboard corner of the bed is stored in the cabinet aft of the bed at the bottom level. The backrest come down and fill out the bed to its full width.

Note: Please insure the table is at its lowest position to avoid scratching its surface as the settee is pulled out.

Reverse this procedure to return the backrest to the settee configuration.

In the pockets behind the settee cushions you will find additional bed sheets, comforters and pillows. Advise San Juan Yachting staff if you plan on using the salon settee as a bed and they will provide additional linens.

## **18. KEY ITEMS TO REMEMBER**

1. Remember to properly seat all dipsticks after checking oil levels. If not seated, oil will spray out and make a mess.
2. Turn the Inverter OFF on the Magnum inverter panel (helm station) when shore power is connected. (Prevents battery depletion if shore power fails).
3. Turn the Windlass breaker off (located in the DC breaker panel) when anchor is not in use. (Prevents accidental deployment of the anchor).
4. When raising and lowering the shades, use two hands. Note also that there is both a courtesy shade and a privacy shade associated with each salon window
5. When operating Macerator, turn the macerator key 2 clicks clockwise to begin. The associated LED light indicates the pump is running.
6. If the tender outboard motor has been raised using the motor tilt control, insure the motor has been turned to full starboard rotation (using steering wheel). Failure to do so, could allow oil to leak when underway, which can result in smoke plumes during starting and subsequent rough running of the outboard motor. If the outboard motor is not tilted, the engine may remain in the neutral position.