

Operating Procedures for SSTV Mariah

Revised June 2021

Before or while connecting the trailer to the towing vehicle...

Crew Member Check

- Does the person towing the boat have a valid driver's license for the towing vehicle?
- Do the potential adult and youth boat operators have their blue plastic Boating Safety Education Certificate cards actually with them?
- Has a Float Plan been filed with someone on land who is available by phone for the entirety of the trip?
- Is there at least one charged and working cell phone among the crew?
- Do you have permission slips from all participants?
- Are all participants BSA swim-qualified? (BSA policy: All persons on boats less than 20' must wear PFDs at all times underway)
- Have you collected money in advance? (It costs about \$10 per hour to run this boat)

Location Check

- Have you checked the weather forecast for the boating location?
- If going on Lake Clarke, have you called Safe Harbor Dam Automated Info at [844-430-3569](tel:844-430-3569) to learn of any expected water level drops?

Vessel & Trailer Check

- Is the boat's trailer registration current? (Sticker On Licence Plate and/or Trailer Registration Card)
- Is the boat's vessel registration and insurance current? (Sticker On Bow and/or Vessel Registration Card)
- Is the boat's USCG Vessel Safety Check current? (Sticker On Port Side Windshield Glass)
- Do the trailer tires have adequate air pressure? (Check PSI number on tire sidewall)
- When was the last time the trailer wheel bearings were greased with white lithium grease, and are the rubber bearing covers in place?
- Is the trailer adequately attached to the towing vehicle? (chains crossed, hitch lever pinned)
- Do all the trailer lights work? (Night-Time General Driving / Break / 4-Ways / Left Turn / Right Turn)
- Is the boat adequately secured to the trailer? (bow winch cable, bow strap, port and starboard quarter straps)
- Is the boat engine key in the switch, with a float fob, whistle, and compass attached on the key chain?
- Have you checked that the boat battery is sufficiently charged and secured? NOTE: Never attempt to start the motor out of the water unless the motor is connected to a supply of cooling water (earmuffs and hose) with excess water coming out around the earmuff edges
- Have you checked that the **7 gallon red fuel reserve tank** under the transom is secured, full, and on standby with its vent closed?
- Have you checked that the **23 gallon main tank** is full and on service?
- Is the outboard motor in the fully-raised position with the safety lock in place to prevent it descending accidentally while traveling?
- Are the trailer guide posts removed and stowed in the boat for road travel?
- Do you have everything required by state and/or federal regulations and by common sense?
 - Boat & Trailer registration cards
 - Blue plastic Boating Safety Education Certificate card for each operator born after 1/1/1982
 - USCG-approved PFDs for each occupant
 - 1 or more USCG-approved throwable cushion
 - Mechanical sound producing device not dependent on ship's battery (whistle on ignition key chain suffices)
 - Working running lights and anchor light
 - 3 or more unexpired USCG-approved day/night VDS (Visual Distress Signals, i.e. flares)
 - 1 or more B-1 type USCG-approved portable marine fire extinguisher
 - Paddles or oars
 - Anchor with sufficient chain and rode
 - Minimum 2 Dock lines
 - Working marine VHF radio on board
 - Working handheld marine VHF radio on land
 - Working and charged cell phone
 - Minimum 2 fenders
 - Boat hook
 - Bilge plug wrench
 - Oil measuring container, funnel, and spare mixing oil
 - Fuel Stabilizer Fluid
 - Davis Fiberglass Stain Remover (aka "Blue Gunk")
 - Bailer
 - First Aid kit
 - Flashlight
 - Charts & Compass
 - Boat flag
 - Sunscreen, sunglasses, and water

- Is everything secured in the boat? (Better yet, placed in towing vehicle so nothing blows out en route)
- Is the marine VHF radio antenna in the down (about 10-20 degrees up from horizontal) position pointing aft? (Do not place the antenna perfectly horizontal as the metal antenna marks the side of the boat while en route)
- Is the folding windshield in the closed position and tightened down?
- Is the folding boarding ladder raised and secured with a bungee cord?
- DID YOU PUT THE BOAT DRAIN PLUG IN NOW AND TIGHTEN IT WITH A WRENCH (SNUGLY, BUT DON'T STRIP THE THREADS)?**
- Record the boat's starting engine hours from the gauge on the boat's dashboard _____

Upon arrival at the boat launch ramp...

- There is normally an out-of-the-way spot to park the boat and trailer while getting everything ready to move to the actual launch ramp. Take your time and ensure everything is ready **BEFORE** you move to the launch ramp. Other boaters waiting to use the ramp will not be happy if you waste time at the launch ramp.
- Remove the bow strap and the port and starboard quarter straps that hold Mariah to the trailer and place in the port lazarette.
- Attach the mooring lines to the port or starboard cleats so they will be ready to use once the boat is launched and moved to the loading dock. Recommendation: where possible, dock starboard side to, so operator can help fend off from the pier.
- Attach the trailer guide posts.
- Unlock and fold open the windshield so the operator can access the foc'sle area of the boat if needed.
- Raise the marine VHF radio antenna to the upright position.
- Have the boat fenders ready to use, but don't put them over the side yet or they may snag on the trailer guide posts as the boat backs off the trailer.
- Have the boat hook ready to use.
- BE SURE (CHECK AGAIN) THAT THE BILGE DRAIN PLUG IS IN PLACE AND SECURED.**
- DISCONNECT THE TRAILER WIRING FROM THE TOW VEHICLE SO YOU DON'T SHORT OUT THE TRAILER BULBS.**
- Ensure all the gear you will need for the excursion gets transferred from the tow vehicle to the boat.
- Place the boat flag in the flag socket.
- Place the PVC tubular extensions over the trailer marker posts so the location of the posts will be visible when retrieving the boat.
- Turn the battery switch found behind the bench seat on the starboard side to "Battery 1". "Battery 2" is a backup. Never turn to "Both" as you will drain both batteries together.
- Turn the boat marine VHF radio on and tuned to channel 68 with the volume up.
- Turn the handheld marine VHF radio on and tuned to channel 68 with the volume up and give to someone on land to communicate. Recommendation: give to the tow vehicle driver.
- Turn the depth sounder.
- Place a competent boat operator in the boat at the controls. Have a second person ready to stand on the trailer tongue to disconnect the bow of the boat from the trailer winch once the boat is floating.
- Open the rear window of the tow vehicle and side windows to ensure visibility and ability to communicate.
- Tilt the motor up slightly to release the safety lock on the motor bracket.
- Make a final, common sense, check of everything and proceed to the boat launch ramp.

As you back down the boat launch ramp...

- BE SURE (CHECK AGAIN) THAT THE BILGE DRAIN PLUG IS IN PLACE AND SECURED.**
- Place the tow vehicle in four-wheel drive if available.
- Judgment is required in backing the trailer down into the water far enough to float at least the after end of the boat, but not so far as to endanger the tow vehicle. Generally, by opening the driver's door and watching the rear wheels, when the rear wheels of the tow vehicle are about 1/3 submerged, that's far enough.
- Once the rear of the boat is floating, and BEFORE removing the winch strap, lower the motor to the normal operating position. NOTE – some ramps are so shallow that it is advisable to just lower the motor enough to get the engine water intakes into the water until the boat backs into deeper water. Local area knowledge is helpful.
- Squeeze the main tank fuel line black bulb until firm to bring initial fuel to the engine.
- Ensure the kill switch is in the UP position and attach the kill switch safety line to the boat operator.
- Start the motor – high speed idle lever in up position, turn key, push in key to choke if needed.
- After the motor starts, the operator should verify that cooling water is coming out the engine cooling water outlet which will look like a steady stream on the starboard side of the motor. It takes a few seconds for water to work its way through the motor. If you do not see a stream, shut down the engine to avoid damage and investigate the cause.
- If the motor fails to start after a reasonable time, or you have a failure of cooling water, you still have the bow winch strap attached to the boat so you can retrieve the boat if necessary, proceed back up the ramp to an out-of-the-way area, investigate, and problem-solve.
- Once the motor is running smoothly, only then release the bow winch strap.

- Give the boat operator an “all clear” signal, at which time the boat operator should lower the high idle lever, put the boat motor in reverse, back off the trailer, and proceed to tie up at the loading dock.
- The tow vehicle operator should then proceed back up the ramp, park the tow vehicle and trailer, and proceed to board the boat at the loading dock along with the passengers.

While you are underway...

- Turn the vessel marine VHF radio on and tune to Channel 16 and also periodically monitor the weather channel.
- If someone is staying on land with the handheld VHF radio, also tune that radio to Channel 16.
- Conduct safety orientation for the passengers. Do they know to stay seated while the boat is in motion? Do they know where the fire extinguisher is? Could they conduct a man-overboard recovery? Do they know how to signal for assistance? Have they applied sun protection? Do they understand that it is illegal to “bow ride”, which is to have feet or arms hanging over the side, and/or to sit on the backrests due to the danger of being knocked into the water by a wave and then run over by the propeller?
- Preliminary estimates are that Mariah and her 115 h.p. Mercury outboard **motor will consume the entire 23 gallon main fuel tank in about 2-3 hours if operated continuously at full throttle.** The **6.65 gallon red reserve tank can be connected and used for about 1/2 hour** if the main tank is totally consumed. The current engine hour reading compared to the beginning reading will tell you how long the engine has been in operation.
- If you have to switch from the main tank to the reserve tank, note the engine hours on the engine hour meter for log purposes.
- Mariah, as all speedboats, operates most efficiently when up on a plane and skimming across the top of the water rather than plowing through it. Normally, the operator will use full throttle to get Mariah up on plane (about 5,500 rpm) and then throttle back to about 4,000 rpm to remain on plane but conserve fuel and save wear and tear on the engine.

To retrieve the boat from the water...

- Drop the tow vehicle operator, winch strap attachment person, and passengers off at the loading dock.
- The boat operator (plus one other person if possible) remains with the boat at the loading dock, or circles the area slowly waiting for the tow vehicle and trailer to be in the proper loading position.
- The tow vehicle operator checks to make sure the trailer lights are still disconnected, windows open, then backs the trailer down the ramp as before.
- Check the trailer to make sure all boat bunks are properly in place and secured so no damage is done to the boat.
- The tow vehicle operator has the handheld marine VHF radio turned on and tuned to channel 68 with the volume up.
- The boat operator has the boat marine VHF radio turned on and tuned to channel 68 with the volume up.
- BE SURE THAT THE TRAILER WIRING FROM THE TOW VEHICLE IS DISCONNECTED SO YOU DON'T SHORT OUT THE TRAILER BULBS IN THE WATER.**
- The person who will attach the winch strap should hop up on the trailer tongue by the winch once the trailer enters the water.
- Place the tow vehicle in 4-wheel-drive if possible for additional traction on wet ramps.
- The boat operator then aims the boat so as to cause it to slide up onto the trailer bunks, centered between the trailer guide posts.
- The boat operator may have to apply some forward engine throttle to get the bow of the boat to snug up against the winch bow roller. Do this sparingly and in short bursts. Excess throttle can create sandbars on the ramp causing problems in launching and recovery for other boaters. The winch bow strap is attached by the person on the trailer tongue and assists getting the bow of the boat firmly up against the bow roller.
- The boat operator shuts down the boat engine and raises the motor to the full up position.
- The tow vehicle operator then drives the trailer and boat to an out-of-the-way spot to finish the preparations to move the boat and trailer back to home base.

Before leaving the launch area...

- Take the tow vehicle out of four-wheel drive.
- Open the bilge drain plug, noting whether any unusual amount of water drains out which might indicate the need for further investigation as to the reason. Put bilge plug and wrench in the starboard lazarette.
- Attach bow strap and port and starboard quarter straps to secure Mariah to the trailer.
- Place the outboard motor in the fully-raised position with the safety lock in place to prevent it descending accidentally while traveling
- Remove and stow the boat flag, mooring lines, fenders, gear, etc. so nothing will blow out on the way home.
- Place the windshield in the closed and latched position.
- Ensure the VHF radio, depth sounder, and all accessories are disconnected or turned off.
- Turn the battery switch found behind the bench seat on the starboard side to the off position.
- Lower the marine VHF radio antenna to the down position (about 10-20 degrees up from horizontal) pointing aft. (Do not place the antenna perfectly horizontal as the metal antenna marks the side of the boat while en route)
- Remove the trailer guide posts and stow inside the boat for road travel.
- Note the voyage ending engine hours at the end of this checklist for log purposes. This is found on the engine hour meter on the dashboard.

En route home...

- Stop at a nearby gas station to refuel the boat, check for damage, and clean the hull. Break the crew into two teams.
- Team 1
 - Throw away any trash at the gas pump trash can.
 - Wipe down the hull with Davis Fiberglass Stain Remover , aka "Blue Gunk". Paper towels are usually available at the gas pump.
 - Check the hull and propeller for any damage, nicks, or gouges that need repaired.
 - Spray and wipe both sides of the windshield with Windex. If Windex is not available, use the gas pump's squeegee and cleaner. Paper towels are usually available at the gas pump.
 - Record the boat's ending engine hours from the gauge on the boat's dashboard _____
- Team 2
 - Fill the **23 gallon main tank**, and **6.65 gallon reserve tank** if needed, with mid-grade fuel (not premium, ethanol free if possible) and the appropriate amount of **oil mix at a 50/1 ratio of fuel to oil**. A mixing container, oil, and a funnel should be in the starboard lazarette. Note the quantity and cost of fuel and oil for log purposes at the end of this checklist.
 - Add an appropriate amount of fuel stabilizer to protect the engine and fuel against ethanol related deterioration. Follow the instructions on the bottle which is found in the port lazarette.
- Purge any water from the fuel filter / water separator mounted inside the engine well. You will see a white filter with a clear bottom. If there is water you will see a very clear distinction between the water and the fuel. If you see water turn the black wing knob to drain the water. Close the knob when water is gone but don't leave open too long as you will begin to drain fuel into the boat.

When you return home...

- If the boat was used in saltwater, spray the boat hull and engine down with a hose to remove any salt or debris.
- Back the boat back into the barn.
- Cover the boat with the silver boat cover.
- Record any observations of repairs needed or issues encountered for resolution before the next voyage.
- Notify the holder of the Float Plan of the successful return of crew and vessel.
- Give this form to the Skipper for final entry into the records.

Fuel Consumption Calculation

(Starting With A Full Tank)

- A) Starting Engine Hours (Recorded Earlier): _____
- B) Ending Engine Hours (Recorded Earlier): _____
- C) Hours Used (Subtract Ending Hours From Starting Hours): _____
- D) Gallons Used (From Fuel Pump): _____
- E) Calculate Gallons Per Hour (Divide Gallons Used By Hours Used): _____

Notes
