

OPERATION GUIDE FOR MSC EQUIPMENT

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Operation of 15 hp Johnson 4 stroke motor on the Committee (Pontoon) Boat

**NOTE, THIS MOTOR RUNS ON REGULAR GASOLINE ONLY!
DO NOT UNDER ANY CIRCUMSTANCES RUN IT WITH OIL-GAS MIX!**

If low, fill with REGULAR GAS ONLY- NO OIL (or use the second tank).

Carefully connect fuel line to tank- notched male fitting goes in the hole next to the spring-loaded lever. This fitting can be broken easily if you are not careful.

Pull back outer knurled sheath and fit the round quick-disconnect fitting to the motor releasing the sheath should lock fitting to motor.

Vent the tank by unscrewing (turn ccw) the vent screw on tank fill-cap (if so fitted)

Pump the bulb until it shows resistance or gets hard.

Return to console and MAKE SURE SHIFT LEVER IS IN NEUTRAL (straight up) Do not shift with motor stopped- if motor has stopped in gear, pull slowly on the starting rope as you shift into neutral.

Check that lower part of motor is in the water.

Make sure that the "dead man's switch" is in place (otherwise motor cannot run).

COLD START

Advance throttle by squeezing the rear of the shift box and lifting the lever on the top to about 45degrees (forward). This can be done ONLY if the shift is in neutral.

Choke the engine by holding the key in (press towards forward end)

While holding key in, turn key to start motor

With key at 45 degrees engage choke by pressing in key when motor falters

Once motor is running, red indicator lights should all go out. If they don't, stop motor and check oil level.

Warm up motor by pulling back throttle advance lever so that motor doesn't race. After a few minutes of warm-up return throttle advance to its locked position.

WARM START

Make sure shift is in neutral.

Turn key to farthest right and release once motor starts. Briefly choke by pushing in key if necessary

If motor doesn't start immediately, squeeze primer bulb a few times and return to COLD START

SHIFTING

Motor MUST be turning over at idle to shift. Throttle advance lever must be fully down and fastened by its clip.

To shift into forward squeeze the red handle on the vertical throttle arm and gently move the throttle arm forward. Once the throttle is advanced beyond vertical, the red handle should be released. Vary the throttle position to change motor speed. Pulling back the throttle shifts into reverse. DO NOT shift from full forward to reverse without allowing the motor to slow to idle in neutral.

STOPPING THE MOTOR

Shift into neutral then turn off the motor by turning the key to vertical position (leave the key in the keyhole)

AT THE END OF THE DAY

If fuel is low, refill at the Marina dock before returning to **mooring 17**. Gasoline only, NO OIL.

Once moored, shift to neutral and turn off the motor as above with the key (leave the key in place)

DO NOT RUN THIS MOTOR DRY

Disconnect fuel line from motor by pulling on the outer knurled sleeve to unlock fitting. Wrap fuel line on storage ears on the tank so that the fitting doesn't fall into the water.

Close vent by turning clockwise (avoids condensation in tank)

Secure boat cover and other gear.

Sound the horn three times to call the shuttle (Extra horns are in the front bench)

Operation of the Service Boat Motor(s)

AS OF THIS DATE (2004) OUR SERVICE BOAT MOTORS ARE TWO STROKE AND MUST USE A 50 TO 1 OIL GAS MIX.

DO NOT RUN ON GASOLINE ONLY OR MOTORS WILL BE RUINED

Starting procedures for the electric start 30hp Johnson and the 9.9hp manual start Evinrude are similar, except as noted. (9.9) or (30)

Tilt motor housing into the water by releasing lever at side of motor.

Connect the fuel hose to the motor and to the tank carefully noting the polarization of the connectors. The locking spring clip fits on the notched rod; do not force the connector or it will break. Since both ends of the fuel line have identical connectors, **note that the direction arrow on the primer bulb must point toward the motor.**

Check the fuel level and vent the tank by unscrewing the cap or turning the vent screw (ccw). Tank should be 2/3 full (30) or 1/2 full (9.9).

Squeeze primer bulb several times until resistance is felt.

BE SURE MOTOR IS IN NEUTRAL (both) and that the dead-man's switch is clipped to the red button on the throttle (30 only)

To start the motors when cold:

- **Gently** pull choke control to ON (fully out).
- Advance the throttle beyond the shift position (full open is OK)
- Crank motor by pushing black START button (30 only)
- OR

- Pull starting cord twice slowly then firmly to start (9.9).
- Push choke control to OFF after a few seconds (or longer if very cold) and reduce throttle to idle speed.

Shift gears with throttle in SHIFT position only to avoid damage.

To restart motor when hot:

Re-attach dead-man's switch to red clip on throttle (30 only)

Set shift control lever on starboard side to NEUTRAL

- Advance twist handle throttle to START
- Crank by pushing black START button (30)
- OR
- Pull starting cord firmly.

If motor does not start readily, advance the throttle slightly. As a last resort, **gently** pull choke control 1/2 way or less for one or two pulls only. Do not choke more than two pulls or the motor will flood.

To stop the motors

Shift into NEUTRAL

- **(30) Pull clip off the red knob.** It's a very good idea to replace it after the motor stops so that you don't forget when you re-start.
- **(9.9) Push STOP button**

Before storing the motors at the end of the day, disconnect fuel line at the motor and allow motor to run dry of fuel.

When refilling tanks for these motors use only (2) stroke oil/gas mixture fuel available at the pump at Davis Hollow Marina.

COMMITTEE (pontoon) BOAT OPERATION

Upon arrival at the marina the operator will -

1. Ask the attendant for a shuttle to the MSC pontoon boat mooring.
2. Make note of the mooring number **(17)** and its location for reference upon return.
3. Generally inspect the RC boat checking for visible damage uneven trim (indicating a pontoon may be leaking) operability of the steering mechanism and the inventory of gasoline **(two 6 gal tanks at least one 3/4 full)**.
4. Place the least full can on the stern platform and connect its hose to the motor; vent the

- tank and pressurize the line as above.
5. Start motor as indicated for cold start.
 6. Uncover and check for required safety equipment: PFD's, horn, life ring.
 7. Unsnap mooring line from float and allow RC boat to drift about 1/2 boat length from mooring.
 8. Depress red button on handle and engage shift in FORWARD and steer around mooring then toward open water maintaining only enough speed to steer and overcome wind force until well away from other moored boats.

Upon arrival at Watts Bay, the operator will prepare dock lines, reduce speed, and determine wind direction at the dock area; deploy fenders on landing side. Approach a dock upwind and into the wind if possible, using the windage to slow the boat or drift it into the dock.

CAUTION: the boat cannot be steered when the propeller isn't turning. Maintain moderate propeller speed while aligning boat for dock approach and then cut to idle. To change heading at low boat speed, use short bursts with steering fully angled.

Do not shift rapidly between forward and reverse; it hurts the motor!

Reverse gear does not operate effectively in stopping the boat. Steering thrust in reverse is opposite to that in forward.

When anchoring at race station, operator will -

1. Head the boat into the wind and come to near stop.
2. Verify that anchor is attached to the line (rode) and that other end of rode is attached to the boat.
3. Drop (do not throw) two anchors simultaneously off port and starboard bows.
4. Allow boat to drift back while paying out lines in equal amounts.
5. When almost all line is out, snub both lines and pull hard to set anchors and then run forward to desired scope (about 2:1, or more if heavy chop).
6. Coil and hang excess anchor line.

When returning RC boat to mooring, operator will -

1. Take the RC boat to the marina service dock. Fill any gas can that is less than 3/4 full; pay for gas (if you want to be reimbursed, send a note to the MSC Treasurer). **Use only unleaded regular gas for the committee boat, no oil mix!**
2. Return RC boat to the original mooring, approaching facing upwind and with caution, maintaining only enough propeller speed for steering.
3. Pick up eye of float with boat hook and snap on mooring lines.
4. Secure all equipment as follows: Disconnect and store all gas tanks inboard. Lower the topmast and all shapes. Secure signal halyards. Stow all flags in flag locker. Place cover over class panels. Stow blankets, loose lines, clipboards, and PFDs in benches. Place boat fenders inside rails.
5. Use horn (3 blasts) to summon marina shuttle. Spare horns are stowed in the front bench.

SERVICE BOAT OPERATION

Preparation for launch

Our main 16-foot service boat with the 30hp motor is stored in a Park spot next to the shed. Should a second boat be needed it will be towed from its storage location (Burk's on West Park Road).

1. Check the condition of the boat, cover and trailer, and report any apparent vandalism to the storage proprietor. Unlock the hitch (combination is same as the shed) and put lock on shelf in the shed.
2. Drain any accumulated rainwater and **install the drain plug.**
3. Select the **most full** gasoline can from the shed and install it on the service boat as outlined above. Arrow on bulb shows fuel flow and must point **to** the motor.
4. Load the boat with required safety equipment: 4 PFD's, a throw able ring, a whistle or horn, boarding ladder, and *oars with appropriate oarlocks*,
5. Identify course marks need and inflate (with hair dryer) if necessary. Verify that anchor rode appropriate for each mark is **firmly attached to both the mark and its anchor**. Load marks with their ground tackle into the service boat. Usually 3 marks and a "pin" (flag on a float) will be needed.
6. Verify that a painter and stern line appropriate for towing are attached. securely to the boat.

The operator will -

1. **Check the drain plug** then launch service boat and tie it out of the way of launching sailboats.
2. Lower motor, if tilted, and start as described above.
3. Check radio operation and verify with day steward how and when the course should be set.
4. At the end of the race day, run motor dry of fuel, return equipment to the shed for storage; assist in hauling out the service boat on its trailer.
5. Remove drain plug, tilt trailer, chock wheels, and replace hitch lock.

General operation

PA watercraft regulations require a wearable CG approved PFD for each person on board in addition to a throw able PFD on boats over 16 feet. The capacity of our 16' service boat is 4 people. Do not exceed that number for non-emergency activities such as ferrying race committee. A whistle or horn is required (one should be tied to the motor) and the current registration must be carried (it's laminated and taped inside the battery box) We have permission from the Fish Commission to operate our 30hp service boat on race days even though the lake limit is 20hp.

When you are operating the service or committee boats, you are representing Moraine Sailing Club to all other boaters on the lake. Please be courteous and helpful.

Useful phone numbers

Marina phone number is	(724) 368-9346
Park Office is	(724) 368-8811
Watts Bay pay phone	(724) 368-0051
Emergency EMT	911

DIGITAL TIMER

1. The digital timer is kept in the race steward's briefcase. When in use, its lanyard should be around the user's neck. It is reasonably rugged but is not waterproof or shockproof.
2. The timer has a single operating mode similar to a stopwatch with lap freeze capability. The LCD reads HRS: MIN: SEC to hundredths of a second. There are two control buttons:
3. START/STOP (upper right of face) and
4. LAP/RESET (upper left of face).
5. To prepare timer for operation, press STOP until the word appears in the display. Then press L to reset the display to zeros.
6. To start the timer press START Do not press START again until the last yacht has finished. Use of a backup timer is recommended.
7. When recording finish times It is recommended that the timer read the times "on the fly" with the watch running. If you press LAP/RESET to freeze the time, then press It again to continue counting. **Do not press START** or the time will be lost.

OPERATING RADIOS

1. Turn on each radio and adjust volume.
2. Rotate the "squelch" control fully counterclockwise then slowly rotate clockwise until the static stops.



3. Using the front panel channel buttons set both radios to **channel 69**. Channels 16 and 9 are to be used for emergency calling only.



4. Hold radio upright with antenna vertical, press the PTT switch on side, and speak clearly in a normal voice into the front grille area.



5. Release the PTT switch to hear replies.
6. Turn off radios during lunch break and after racing by rotating volume fully counter clockwise

Replacing radio batteries

When a radio beeps when the PTT switch is pressed and contact cannot be made between the units, the batteries are low. An indicator on the front panel may show. Each unit requires **nine** AA alkaline cells. Spare batteries should be in the race committee (purple) crate or will be found in the shed. Be sure to insert them in the order indicated in the battery compartment. Mark and discard old cells so that they are not mistaken for new.

LOUD HAILER OPERATION

1. With the VOICE/SIGNAL switch to VOICE, depress the microphone switch and speak into the microphone about 2 inches from the lips.



2. Adjust gain to eliminate feedback squeal.



3. Be sure microphone switch is not locked on when loud hailer is not in use.

Replacing loud hailer batteries.

The loud hailer uses 8 C cells. There should be a spare set in the shed. They are placed in series in each of 4 holders. The correct orientation is shown below where the battery underneath has the same orientation as the one on top

