



Ottawa's Waterfront Sports Centre

2025 Powerboat Operations

Martin Rhéaume

communications@sailonec.com

2025-07-03

Agenda

- Training Area
- Weather
- Boat parts
- Rigging
- Points of Sails
- Right of Way
- Capsized
- Seamanship

Function of Powerboats

ONEC has different types of powerboats, and they are shared between all watersports.

The powerboats are used for:

- Rescue
- Race Committee duties
- Training
- Maintenance of docks and boats.

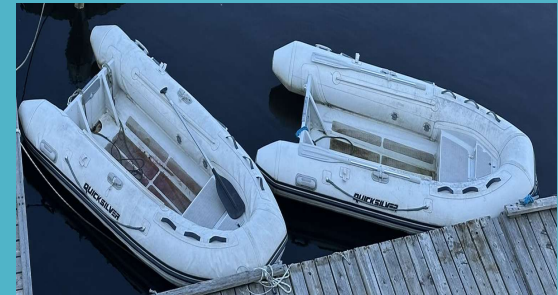
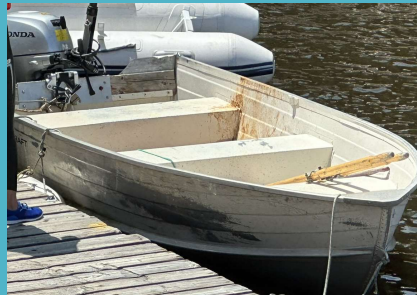


IT IS MANDATORY TO HAVE A VALID PLEASURE CRAFT OPERATOR CARD TO USE ONE OF THE POWERBOAT.

<https://tc.canada.ca/en/marine-transportation/marine-safety/office-boating-safety>

ONEC power boats cannot be used for personal activities.

Type of Powerboats



Boston Whaler	Princecraft	Inflatable
Favorite of the sailing program	Rarely use	Use by day camp
Made of fiberglass	Made of Aluminum	Made of Vinyl
Heavy so stable in both heavy wind and waves	Light so not stable in heavy wind and waves	Light so not stable in heavy wind and waves
Can carry heavy load	Can carry heavy load	Can carry small load
Resistant to damage	Resistant to damage	More prone to damage
Have an anchor	Does not have an anchor	Does not have an anchor

Powerboats - Rigging

They all need to be rigged in a very similar fashion before being used:

- Transport Canada requires this safety equipment:
 - PDF for everyone (Not provided by ONEC).
 - Whistle (Not provided by ONEC).
 - Already in the boat: bailer, towing line, and oars.
- Fuel tank (Always loosen the vent at the top of the tank to allow oxygen to go in)
- Ensure you have a boot hook in the boat as it is useful to grab anchor line, shrouds and forestay
- Deadman switch – This switch is attached to the driver of the boat. It will turn off the engine if it become disconnect such if the drive falls overboard..
- Engine key – with some smaller engines, this is not required.
- Unlock safety cable - This cable secures the boats to the docks to prevent theft.
- Before leaving the docks, always start the engine to ensure it works properly.

AND DO NOT FORGET YOUR PLEASURE CRAFT OPERATOR CARD (PCOC)

At the end of the day/back at the docks: Reverse the actions indicated above.

Do not leave the fuel line in the bottom. Keep it elevated to prevent ingress of water.

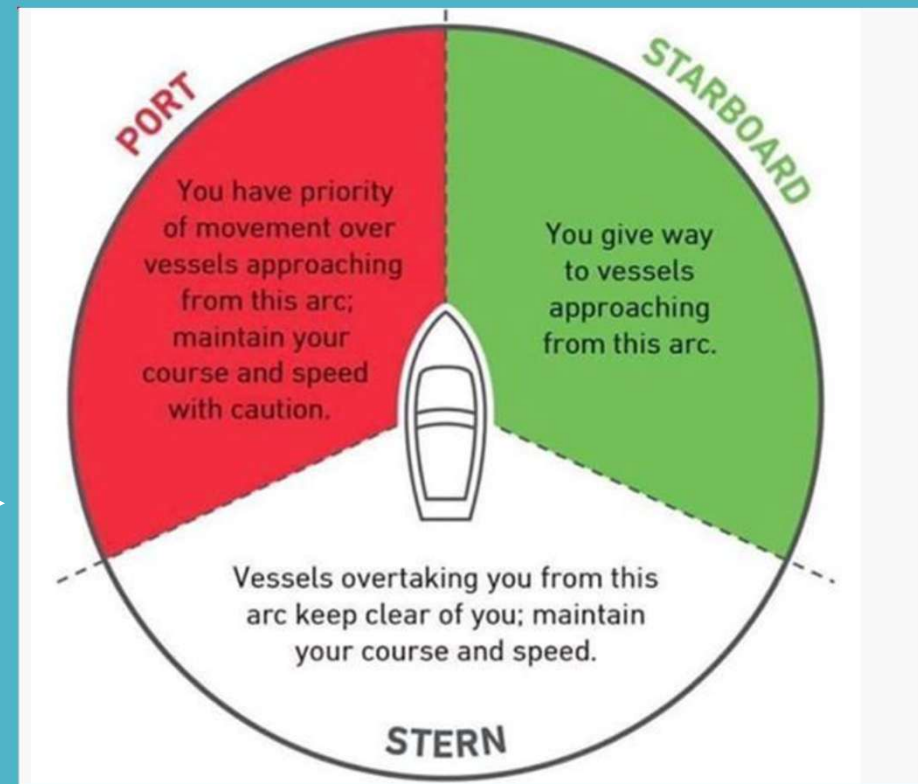


Powerboats- Right of Way

Always give way:

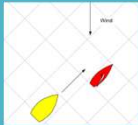
- Sailboats under sail
- Kayak, Stand-up Paddle Board, rowing shells
- Swimmer
- Ottawa River tourists boats
- Boats towing/being towed.

For any encounters, check this diagram

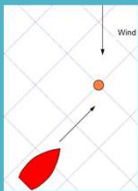


Powerboats- Operation

- When leaving the docks:
 - Lift the fenders and put them in the boat. If you leave them in the water, it will create resistance (so it may splash water upward so you may become wet. The line may also break and we will lose the fender.
 - Be very careful of the dock anchor lines. You do not want a line to get wrapped around the engine propellor.
- When approaching a moving craft (powerboat, sailboat, kayak, rowing shell, etc...), always do so from the stern. When the people on the other craft notice you and they know you are coming, only then can you move up beside them.
- When moving to go beside another craft :



- If it is a sailboat: Move up to the windward side of the boat. You do not want the mainsail and boom to be over the power boat as it may create some safety issues.



- If it is a kayak or rowing shell: As the power boat will be much heavier, you want the light craft to be push on the heavier one due to wind or current. So choose the correct side appropriately.

Powerboats- Helping a capsized boat

If you see a capsized boat:

- Priority is for the individuals. If need to, bring them in the powerboat immediately and worry about the sailboat later.
- Keep your eye on the boat and head toward them counting heads as you. Example: You should see two heads for a CL-16 and one head for a Laser.
- If there is missing a head, situation seems to be out of control, exhaustion, risk of injury or hypothermia get to the boat immediately so you can better evaluate the situation.

Unassisted capsize recovery

- When situation is under control the crew is trying to right the capsized boat, stay around but not too close.
- Maintain proper distance from the individual in the water.
- Be ready to provide help as required.

Assisted Capsize Recovery

- Crew are not able to right the capsized boat without help so the powerboat needs to help.
- Powerboat approaches the mast tip slowly and puts the engine in neutral.
- Powerboat crew grabs top of mast and lifts it out of the water. [If it is a CL-16 and turtle, go to the bow]
- Move your hand along the mast (going up) and then the shroud, using hand-over-hand technique. [If it is a CL-16 and turtle, grab the forestay first near the tack plate on the bow, then the mast, then the shroud].

Scoop recovery

Same as Assisted Recovery above. Only difference is that the boat's crew stays hold on to something in the cockpit (hiking strap?) to get scooped in when the boat is righted.



Powerboats- Men overboard

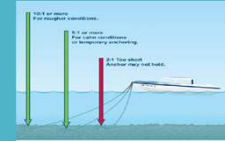
If you are going to rescue an individual that is in the water:

- Safest way to approach is from downwind (and if possible downstream). You will have more control over your boat with the bow pointing into the waves and wind and will be able to reach the person swiftly. Navigate the boat next to the person and shut off the engine when you are close enough
- Approach slowly, because you don't want the boat's momentum carrying it into the person.
- If a person in the water is going to be anywhere near the stern of the powerboat (e.g. to climb in), stop the engine. [A spinning propeller is a serious hazard, and an engine in neutral can be thoughtlessly put into gear at the wrong time. By the time the operator reacts and switches back to neutral the damage will be done].
- When you help someone in the powerboat, always pull on their PDF only. Never pull their arms or wrists as you may easily cause injury.
- Avoid entering the water to retrieve the person unless absolutely necessary. If the person is panicked, they could drag the rescuer underwater or cause further injury. If you do, wear a life vest and take a flotation device with you when you swim to the person. Keep the flotation device between them and yourself as you pull them back to the boat.

Powerboats- Anchoring

We rarely need to anchor the powerboat, but we do need to use anchors for the racing buoys. The process is very similar.

- 1) The boat/buoy will ne be directly over the anchor as you need to have some slack in the anchor line, to allow movement of boat/buoy due to wind and waves.
- 2) Be aware of the wind and current as once the anchor is dropped, the boat/buoy will be push back and align with the wind/current.
- 3) You want to create as much distance between the anchor line and the propellor. As such, always drop the anchor/buoy from the bow of the boat.
- 4) Do not “throw” the anchor overboard. Lower the anchor by hand so that you will feel when it touches bottom. Then you can add enough line to allow for wind/current and waves.



Powerboat - Towing

- Approach the sailboat from astern.
- Throw the towline from the powerboat to the sailboat. It is preferable to use the towline from the powerboat.
- Once the towline is wrapped around the mast twice and held by the sailor as well as the centerboard being raised, then the powerboat can slowly move forward.
- Once the towline has tension in it (no clack), only then can you increase speed.
- When at destination, slowly reduce speed. Otherwise, the sailboat may ram the stern of the powerboat.
- While it is possible to tow multiple boats, it is not recommended as it puts lots of stress on the boats.



Powerboats- Trouble shooting

If you have an issue while on the water: Drop the anchor right away !

If you do not, you may drift down river and it could be a long paddle back to the club

ENGINE DOES NOT START	
Possible cause	Correction
Kill switch not properly installed.	Installed the kill switch
Have you pumped the bulb of the full tank line ?	Prim the bulb
Control lever not in neutral position	Shift level to neutral
Out of fuel	Refuel tank
Bad fuel	Change tank – Identify and separate the fuel tank from others to prevent further contamination.
Battery connections loose	Tightened he connections
Fuel line not properly attached to the fuel tank and the engine.	Re-attached fuel line
Battery dead	Change battery
Rope caught around propeller	Remove rope



ENGINE STARTS BUT THEN STOPS	
Possible cause	Correction
Engine not getting enough oxygen	loosen the vent on the fuel tank to allow air into the fuel tank
Fuel tank is empty	Refuel tank
Kill switch became loose	Re-insert kill switch
Rope caught around propeller	Remove rope
If you pull the choke out to start the engine and then forget to push it back in, the engine will eventually stall.	

Questions ?

Outboard Motor Problem	Possible Cause
Starter Cord Won't Grab or Won't Recoil	● Starter cord recoil spring broken or starter cord damaged. Open motor cover and wrap spare starter cord directly on flywheel. Notches are usually provided for this purpose. Do not knot the rope as it should be able to slip off the flywheel once motor starts. If spare starter cord not available, use suitable piece of rope and dowel. Never wrap the rope around your hand.
Motor Won't Start or Quits	● Fuel tank vent screw not open. ● Fuel tank empty. ● Fuel is old and contains gummy deposits that are clogging up fuel line, carburetor, etc. Replace fuel or fuel-oil mixture. ● Fuel line not connected or kinked or connected backwards (check flow direction arrow on primer bulb). ● Primer bulb not pumped till hard. ● If motor is warm, choke pulled out too far or too long. ● If motor is cold, choke not pulled out far enough or long enough. ● Shift lever not in neutral before pulling starter cord. ● Dirt or water in fuel tank or fuel lines or fuel filter. ● Air leak in fuel lines. For example, damaged or worn o-ring in fuel line connector. ● Motor is flooded. Disconnect fuel line and pull starter cord to clear excess fuel. ● Ignition lead is loose or shorting out. Re-check all connections. Replace leads, if worn or damaged. ● Spark plug worn, dirty, oily, or gapped incorrectly. Clean, re-gap, or replace. ● Points worn, dirty, oily, or gapped incorrectly. Clean, re-gap, or replace. ● If electric start, battery not fully charged or poor cable connections. Charge battery or clean and tighten battery cable connections.
Motor Runs Irregularly or Misses	● Fuel line pinched or kinked. ● Fuel filter needs cleaning. ● Fuel is old and contains gummy deposits that are clogging up fuel line, carburetor, etc. Replace fuel or fuel-oil mixture. ● Air leaking into fuel system such as past a faulty o-ring in the fuel line connector. ● Wrong gasoline in fuel mixture. ● Too much oil in fuel mixture. ● Spark plugs are worn, dirty, or defective. ● Spark plugs are the wrong type. ● Water or dirt in the fuel or motor.

Outboard Motor Problem	Possible Cause
Motor Speed Faster Than Normal	● Propeller damaged. ● Tilt angle not adjusted correctly. ● Boat loaded improperly. ● Transom too high resulting in propeller being too close to the water's surface. ● Wrong pitch or diameter of propeller.
Motor Speed Slower Than Normal	● Tilt angle not adjusted correctly. ● Boat improperly loaded. ● Transom too low resulting in propeller being too far below the water's surface. ● Wrong pitch or diameter of propeller. ● Also check items under Motor Won't Start or Quits.
Motor Overheats	● Cooling water flow blocked or reduced or water intake partially out of the water. ● Water pump or impeller not working. ● Weak or intermittent spark from spark plug. ● Incorrect fuel-oil mixture (too much or too little oil). ● Wrong oil or wrong gasoline in fuel mixture. ● Weak or intermittent spark. ● Air leak in fuel system such as damaged o-ring in fuel line connector.
Motor Knocks	● Wrong gasoline or oil or wrong proportions in fuel-oil mixture. ● Propeller loose. ● Flywheel (inside powerhead) is loose. ● Motor is overheated. ● Parts worn.
Motor Vibrates Excessively	● Damaged or fouled propeller. ● Motor clamp or bracket loose.
Propeller Won't Turn	● Shear pin (or drive pin) broken. ● Propeller shaft or propeller broken or bent. ● Propeller fouled with rope, grass, or other material.