



Lancing Sailing Club

Standard Operating Procedure

RIB Operation and

Safety Boat Duty



1. Document history

Version	Date	Amendment	Amended by
1.0	13.03.2016	Document creation from previous documents 2008-2011	Steve Lynch/Angela Davey
2.0	27.3.2017	General update and removal of references to Mercury 4 stroke engine	Steve Lynch/Angela Davey



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3. Guide to use and operation of Rescue Boats and Rescue Boat Duty –Suzuki 4 Stroke Engines with Electric Trim & Tilt, and Mercury 2 Stroke manual start and lift

3.1. Keys & Equipment

Collect the radios and keys for starting the engines (These are stored next to the radios in the race box and are marked to match the boats/engines). Note: there is no ignition key for the Mercury 2 Stroke.

Attach keys to the boat at the remote control console using the lanyard provided to prevent loss, and check that the rescue kit bag is in place and is complete - (contains spare kill cord, safety knife, whistle, flat headed screwdriver and thermal blanket) and is securely fitted under the elastic cord on the port side of the steering console.

The bag for the reserve boat which has a Mercury 2 Stroke engine (RIB 3) is stored under the bow cover.



Key in ignition

Check that there is a burgee in the boat to enable course setting – this should be stored next to the Rescue kit bag.

Check that the Anchor and Tow Rope are securely fitted.

Ensure that two radios are taken afloat and are switched to the appropriate channel as indicated on the radio. A test transmission with the Race box must be conducted whilst ashore. Call signs are “Beach” and “RIB 1” / “RIB 2” / “RIB 3”.

Ensure that the RIB tubes are inflated – use the foot pump to do this.

Check with the Race Officer for the course to be laid and gather the marks required from the garage



3.2. Fuel

Check that each boat has adequate fuel and refill / swap from the spare fuel tanks stored in the garage – tanks should be at least 75% full but should not be completely filled to allow for expansion. Each fuel tank is labelled to show what type of fuel is in the tank.

The Suzuki engines on the two main rescue boats take unleaded 4-stroke fuel and will have no oil added to the tank. (“No Oil Added”)

The reserve boat (RIB 3) located in the North rescue boat hut has a 2-stroke engine and has separately labelled tanks to which oil has been added at a mixture of 100:1 (“Oil Added”).

Open breather vent on fuel tank.

Ensure the fuel tank is secured by the retaining strap to the boat.



3.3. Kill-cords

Check that a kill-cord is fitted to each engine control box. A spare kill-cord can be found in the Rescue Kit Bag or in the Race Box. Ensure that each boat is prepared ready for operation with main plus spare. There is no control box for the Mercury 2 Stroke – the kill-cord (different from the forked Suzuki type) is fitted at the front of the engine on the red “run” switch.



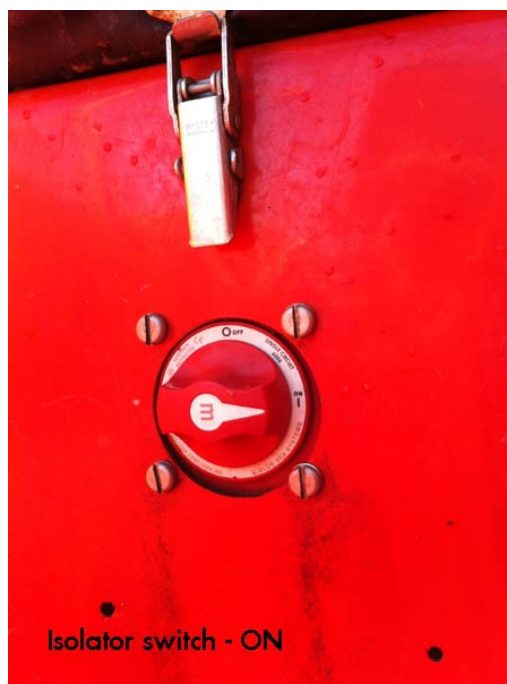
The boat must **NOT** be driven without the kill-cord being attached to the driver's leg, buoyancy aid or wrist.



3.4. Battery

Move the battery isolator switch at the rear of the seat to the on position. (The battery is located under the centre console seat and will not need any attention).

Isolator switch **ON**. (Not applicable for Mercury 2 Stroke)





3.5. Electric Trim & Tilt - (Not applicable for Mercury 2 Stroke)

The 30HP Suzuki outboard engines are equipped with electric trim & tilt. The trim & tilt mechanism is operated using the switch toggle on the side of the engine control lever or on the engine itself.



Ensuring that there is adequate clearance, check that the trim & tilt mechanism works correctly on each engine (Please refer to additional notes below for further guidance on using the electric trim & tilt when afloat).

3.6. Testing & Warming Engines on Shore

Remove the engine cowling and check oil level with the dipstick – replenish if necessary from the stock held in garage for that engine.

Fill the blue water tank to the indicator line and lower the engine into the water ensuring that the water level is above the flat cavitation plate above the prop guard.



3.6.1. 4-Stroke Engines

Check the engine is in neutral - it will not start if it is in gear.

Prime the fuel by squeezing the fuel line pump until it is hard.

Start the engine using the ignition key and leave to warm up for a few minutes. Water should now be running through the engine and you will get a telltale stream of warm water as shown in picture above.

When the engine starts, there will be a beep with a red light visible on the front of the engine for a short time. If the beep continues, or the red light stays on, turn the engine off immediately.

If the light comes on or the beep starts during engine operation, stop the engine immediately to investigate.



When the engine starts, revs will go high for a short time (~1-2 seconds) before dropping to normal idle. It should not be necessary to use the fast idle control on the top of the engine control console.

Do not put the engine in gear whilst in the water tank.

Stop the engine by pulling out the kill cord (testing to ensure it will work later if it has to be used). The forked end of the cord should be re-inserted into the switch ready for use.

After running up has been completed, use the electric tilt to lift the engine out of the blue water tank – leave the engine in the semi raised position whilst moving the boat to the shore line ready for launching.

If leaving the boat on the trolley and not launching immediately return the engine to the lowered position to ensure oil level is maintained (the reserve boat should be left in this state with the battery isolator switch in the off position)

3.6.2. Mercury 2 Stroke engine with manual start / lift

Ensure that the correct fuel tank is connected (OIL ADDED).

Check the engine tiller control is in the “start” position - it will not start if it is in gear.

Prime the fuel by squeezing the fuel line pump until it is hard.

Make sure that the red switch at the front of the engine is in the “run” position and the kill cord is in place. Ensure the choke control is primed by pulling out and shutting off twice. Pull out the choke again and use the pull cord to start the engine. When the engine has started push the choke control back in immediately.

Stop the engine by pulling out the kill cord (testing to ensure it will work later if it has to be used). The cord end should be re-inserted into the red switch ready for use

Lift the engine out of the blue water tank and leave on shallow drive setting when moving to the beach area. Return to the fully down position when leaving the boat.

4. Launching & Recovery Team

Get plenty of help to launch and recover the boat especially in heavy surf and take extra care to ensure that the engine leg does not strike the beach. Before launching, discuss how and when to launch with other Club members who will have experience of launching in heavy weather – in these conditions do not attempt to put the boat back on its trolley in the water – do this when the boat is on the beach.



4.1. Leaving the shore

Check that all the anchors and warps for the marks are placed tidily in the boat and that the large marks are outside the boat and secured to the grab lines.

Check that the engine is in the raised position.

If the sea is calm, then the boat can be pushed on the trolley stern first into the water. At the waters' edge, lower the engine leg to an angle of approximately 45 degrees and continue to push the boat into the water. The Mercury 2 Stroke should be on shallow drive setting.

If there is breaking surf, then remove the boat from the trolley on the beach and push the boat, bow first, into the water.

Start the engine when the propeller is in the water and gradually tilt the engine down as the depth of water increases.

Once clear of the beach and in deep water, the engine should be lowered as far as it will go and then raised slightly to stop any vibration. The Mercury 2 Stroke should be locked in the fully down position.

4.2. Use of the Electric trim

When the boat is on the plane, the trim can be adjusted with slight use of the up and down tilt switch – you should be able to “feel” and determine from the wash where the best trim is to obtain the most comfortable ride and power. Trim should be re-adjusted to the “down” position if motoring from rest.

4.3. Communication with Shore / Good seamanship / Safety Considerations

Communication should be kept with the Race Box whilst course setting and during your duty. However, do not communicate with the Race Box unnecessarily, especially when boats are being recorded passing the start/finish line.

Position yourself / patrol the race area so that you can keep an eye out for any casualties but keep away from boats unless attending a capsize, and do not cause competitors to need to avoid you or be impacted by your wash. Conserve fuel by not joyriding.

REMEMBER YOUR PRIME RESPONSIBILITY IS KEEPING A GOOD LOOKOUT, THE PERSONAL SAFETY OF THE COMPETITORS, YOURSELF AND YOUR CREW –THIS MEANS CHECKING THEY ARE SAFE AND GETTING PEOPLE ASHORE BEFORE YOU WORRY ABOUT BOATS.

4.4. Operating Problems encountered afloat

If the engine cuts out check that the battery isolation switch is still in the “on” position, that sufficient fuel is held and that the fuel line has not been inadvertently disconnected / obstructed



If an engine warning light comes on or a beep starts during engine operation, stop the engine immediately to investigate.

If the engine is over-revved, a warning buzzer will sound and result in a severe loss of power. Switching off for 4 secs will reset the engine management control allowing the engine to be restarted and normal operation resumed.

In case of battery failure, the 4-stroke engines can be started manually with the pull cord – ensure that the ignition is switched on.

If the Electric Trim and Tilt fails, do not attempt to return to shore with the engine in the fully down position. The engine is able to be lifted by first turning the flat headed screw located in a hole on the lower starboard side of the engine bracket, then raising the engine by hand. This will be a difficult operation at sea so seek assistance to undertake this.



4.5. Returning to the shore

Care should be taken that the propeller does not sustain damage and thereby require replacement.

Before returning to the beach, practice raising & lowering the engine leg to see when the propeller is just under the surface of the water. You will also be able to determine this by the sound of the propeller wash.

On your approach to the beach tilt the engine leg to an angle of approximately 45 degrees so that the propeller is just under the surface of the water and still providing forward power – your crew may be able to help you determine the appropriate angle. Be aware that with the engine at this angle steering control is greatly reduced.



On the final part of your approach keep the power on until the last moment to avoid getting broached by the waves but continuously raise the leg to ensure that the shaft/propeller does not hit the bottom. As soon as the propeller is clear of the water, the engine should be put into neutral, switched off and raised to maximum tilt, ready for recovery.

With the Mercury 2-stroke, ensure that the engine is placed in the shallow drive position prior to final approach then put into neutral, switched off and fully raised on beaching.

4.6. Day End Procedure

Remove all marks from the boat and return to garage.

Run down the engines that have been used in the blue water tank for 5 minutes to ensure fully flushed through with fresh water.

Close the fuel tank breather to prevent water getting into the fuel whilst washing down and also to prevent moisture from the air being absorbed into the fuel system.

Rinse the boat, external engine and controls, and trolley with fresh water - be careful not to get water in the engine air vent.

Remove engine cover and spray engine, remote control box and steering wheel spindle with WD40, replacing cover on completion.

Drain **ALL** water from the boats – lift the engine then raise the boat and trolley and prop up on the trolley handle to do this.

Return each boat carefully back in garage / Rescue boat shed. You will need to use the electric tilt to fit the engine through the shed doors. Once clear of the door, lower and centralise the engine leg so that it just clears the ground.

TURN OFF THE BATTERY ISOLATOR SWITCH

Rinse and dry radios ready for recharging, return radios and ignition keys to race box.

Lock garage and rescue boat security posts and sheds.

Finally, please report any problems or faults to the Race Officer for inclusion in the day's Report Log.