



## LANCING SAILING CLUB

### Guide to use and operation of Mercury 4 Stroke Engines with Electric Trim & Tilt.

#### Keys & Rescue Kit Bag

Collect the keys for starting the engines & the Rescue Kit bags. (These are stored next to the radios in the race box and are colour coded to match the boats).

Attach keys to the boat at the remote control console using the lanyard provided and place the rescue kit bag under the elastic cord on the other side of the steering console.



#### Fuel



Check that each boat has adequate fuel and refill if required from the spare fuel tanks stored in the rescue boat huts – tanks should be at least 75% full. Each fuel tank is labelled to show what type of fuel is in the tank. The new Mercury engines on the two main rescue boats take unleaded 4 stroke fuel and will have no oil added to the tank.

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

Open breather vent on fuel tank (as shown in picture).



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



## **Battery**

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

Isolator switch **ON**.



## **Electric Trim & Tilt**



Electric trim & tilt switch  
(up & down)

The 30HP Mercury outboard engines are equipped with electric trim & tilt. The trim & tilt mechanism is operated using the switch on the side of the engine control lever (see picture) – 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 &

## **Testing & Warming Engines on Shore**



Remove the engine cowling and check oil level with the dipstick – replenish if necessary from the stock held in the tool box in North Shed. Connect the hose and muffler over the water intakes at the base of the engine and switch the water on. Check the engine is lowered and is in neutral - it will not start if it is in gear. Start the engine and leave to warm up for a few minutes. Water should now be running through the

engine and you will get a stream of warm water as shown.

When the engine starts, there will be an audible 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. Do not attempt to put the engine in gear while the revs are high. 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 can be re-inserted into the switch by pushing the button away from the housing – use the key to do this if necessary.

## **Electric tilt - leaving the shore**

On the beach with the boat still on the trolley, test the tilt mechanism by lowering & raising the engine.

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 & continue to push the boat into the water.

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

Start the engine as soon as the propeller is in the water & gradually tilt the engine down as the depth of water increases.

Once clear of the beach & in deep water, the engine should be lowered as far as it will go & then raised slightly to stop any vibration.

## **Electric trim – on the plane**

When the boat is on the plane, the trim can be adjusted with slight use of the up & down tilt switch to obtain most comfortable ride.

### **Electric Tilt – returning to the shore**

Before returning to the beach, practice raising & lowering the engine leg. Tilt the engine leg to an angle of approximately 45 degrees so that the propeller is just under the surface of the water. As the boat nears the beach, the driver should 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 switched off & raised to maximum tilt.

### **Launching & recovery in heavy surf**

Extreme care should be taken when launching or recovering the boat in heavy surf. Get plenty of help to launch and recover the boat in heavy surf & take extra care to ensure that the engine leg does not strike the beach. Before launching, discuss how & 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.

### **Cleaning the engines after use**

When back on shore, repeat the warm-up procedure by connecting muffler etc. Leave the engine to run for 5 minutes to ensure it is fully flushed through with fresh water.

Close the vent on each fuel tank. Rinse the boat and trolley with fresh water. Be careful not to get water in either the engine air vent or the fuel tank breather vent.

Remove all marks/buoys from the boat and drain all water.

Check fuel filter & drain water if necessary.

Remove engine cover and spray engine and remote control box with WD40. Then replace cover before placing each boat carefully back in each 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 the engine leg slightly and turn the steering wheel so that the engine is not lying to one side.

Turn off the isolator switch and return engine keys and rescue kit bag to race box.

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

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