

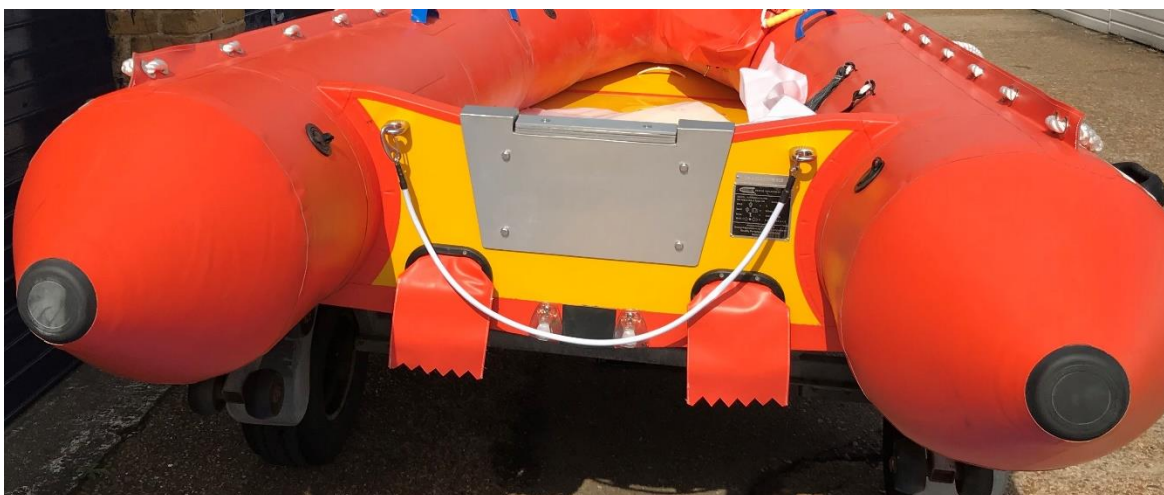


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Service points to consider for your small outboard engine (OB) prior to start of boating season.



Boating is back - what about your outboard engine (OB) to hang on the above transom - is it ready? Here are 7x steps a D-I-Y boater can do – and your outboard is not so new anymore. It maybe past the warranty period, and you're ready to do some maintenance on your own. Changing the oil is one of the best things you can do to prolong the life of your outboard.

However, if your engine is still under warranty, or you're not that mechanically inclined, you might want to consider leaving it up to the dealer, especially if additional work is

required. Yes, it will cost more than doing it yourself. But with good reasons, especially during the factory warranty period, to simply let the dealer do this work.

**Step 1** – Oil change for 4x stroke engines, they have oil in the engine sump, same as our petrol and diesel cars. Oil should be changed regularly, at least once a season – depending on use-hours. (Skip this step if your engine is 2x stroke, they have no sump oil - the lubricating oil in a 2x stroke engine is the oil you mix with the fuel.)

Follow the manufacturer's recommendations for your specific outboard. Warm up the engine to ensure that the crankcase oil gets warm and flows easy for more complete draining. (With the boat not in the water, you'll need to use muffs.)

Oil change is reasonably straightforward, there is normally a drain screw below the engine, undo this and catch the oil in a suitable container (make sure the engine is upright & level for this part). See makers service manual for full “how to” details and oil specification and quantity.

**NOTE:** some newer engine models are designed to use only an oil extraction pump. On these engines, the pump lift tube should reach all the way to the bottom of the crankcase to effectively pull out all the old oil and any debris inside. If your outboard doesn't have this feature, it's preferable to use the drain-plug method in order to ensure complete drainage.

Change oil filter at same time, remove the old filter (you may need an oil filter wrench if it was tightened excessively).

When the oil has finished draining, reinstall the drain plug with a new washer if you removed one.

Before installing the new filter, lubricate the O-ring seal with fresh oil. Install and hand tighten the new filter – again see makers service manual for “how to” details.

Refill from the filler which is located on the engine – usually a yellow coloured screw cap. Add less to start with, it is always easier to add more than remove some, and use the sight glass or dipstick to check your level, giving the oil time to settle.

Keep adding until you get the correct level and refit the filler cap.

**Step 2** - Gearbox oil can become contaminated with water over time, and should be changed annually regardless of condition.

There are usually two drain/fill plugs on the gear case - one at the top and one at the bottom. Place a container below the lower drain plug and remove it.

You will normally need to remove the top drain plug too as this lets air in to the top of the gearcase and allows the oil to drain out.

Refill with suitable Gear Lube, fill from the bottom plug until the lube comes out of the top, then quickly insert the top screw to create a vacuum inside allowing you to quickly insert the bottom screw before more than a few drops of oil leaks out.

**Step 3** - Spark plugs last quite a long time in a modern 4x Stroke outboard, so we don't recommend changing these unless it shows signs of wear or damage. Two stroke engines can and do foul the plug tips though, so we would suggest changing the spark plug(s) on a 2x stroke engine annually.

**Step 4** - Impellers pump coolant water around the engine block of a water cooled engine (some smaller OBs are air-cooled so do not have an impeller – so skip this step). It is located in the 'leg' of the engine, on the main drive shaft just above the lower gear case.

They have a hard life so it's wise to inspect this, (and replace if worn) you will need to drop the lower gearbox (the lower part with the propeller with guard/deflector for lifesavers boats) from the engine itself. This is normally done by removing two or three

bolts. (See makers service manual for “how to” details.)

It will also often need you to disconnect the gearshift rod that runs from the top of the engine down to the gearcase.

Carefully lowering the gearcase should reveal the pump housing with the main drive shaft running through the middle of it. Lift the pump housing (most need bolts removing) to reveal the impeller and check the condition. If in doubt replace.

For IRBs these engines are a safety critical item so we suggest to change the impellers every year.



Picture above showing lower leg and prop guard/deflector.

**Step 5 - Fuel System** - small outboards have a small fuel filter in the fuel hose line under the engine cowling. These are designed to be replaced periodically. If it shows any signs of dirt or debris inside it's worth replacing - being reasonably cheap.

**Step 6** - Anodes - OBs generally have a single anode attached to the cavitation plate above the propeller (see makers service manual for exact location details). Check them for signs of wear and replace if any look significantly corroded.

**Step 7** - While you're at it, grease all fittings on the outboard with marine waterproof grease. You'll need a grease gun with correct fitting. Check the service manual for all grease point locations.

### **Environmental and other matters**

Disposing of used oil, a hazardous waste, can be a messy problem. Petroleum products are toxic to fish, plants, and animals, and if they're not handled properly they can contaminate soil and waterways, resulting in environmental damage, costly cleanup, and possibly even fines. Usually, used engine oil can be easily and safely recycled. Ask your marina if it offers collection of used oil for recycling, be sure to follow its guidelines for handling it. If this isn't an option, check with your local authority for where you can recycle engine oil at your nearest recycling bank.

If in doubt ask your dealer to recommend the correct oil and filter. The makers recommended oil and filter is the way to go. A few pounds saved on aftermarket oil and filters may cost dearly if the wrong specification, and it may void your warranty.

Read your manual, or ask with your dealer, on the best way to extract the old oil from your engine. Some engines have a drain plug; others must have the oil sucked outward through the dipstick tube. For that, you'll need a special oil extraction pump.

All servicing is of course carried out on a safe hard standing or work area out of the water. Be aware of the potential consequences of spillage, which could lead to major problems.

Properly dispose of the waste oil and filter, but not before you rub a little of the recently removed oil between your protectively gloved fingers. If the oil feels at all

gritty or has a burnt smell to it, it could be an indicator of problems. Investigate or ask service dealer to do so.

Carefully document each service: date/time, hours (if possible), type of oil and filter used, disposal method, old oil condition, and any other relevant conditions.

Don't use automotive oils and filters. Marine oils are specially formulated for harsh and wet conditions, prolonged periods of inactivity, and much higher exposure to potential rust and corrosion.

Follow factory procedures or makers service manual and advice to the letter.

