

Winterising your diesel

When the autumnal chill settles, it really is time to think about putting your boat to bed. An important part of this is winterising your engine.

Here are a few pointers:

"If you are planning to take your boat out of commission over the winter, then it is important that you winterise the engine, otherwise come the spring you may start to incur problems before you launch, the key is to get the basics right.



There are different levels of winterisation depending on the boat or the engine and different engineers will have different views on ways it should be done, obviously it should be done in line with the manufacturers recommendations as a minimum.

So here are some of the basics:

1. Fill your diesel tank (take care not to spill any diesel, take careful note of the fuel gauge to reduce the risk of overfilling and an absorbent collar around the nozzle to catch the drips. A steady hand and a good funnel can save a lot of red faces!

The Reason:

This is to reduce condensation in the tank over the winter; it is important to ensure that water does not enter the fuel tank as the interface between water and fuel is where diesel bug thrives.

If you suspect signs of the bug then this would be a good time to add a fuel additive to keep it under control. Use products which can kill the 'diesel bug', reduce emissions and remove water during the combustion process.

2. Check the fuel filler cap seal and using a light (Vaseline) smear around the thread to give a better seal

The Reason :

Simply to stop any rain water entering the tank, and to make it easy to open in the spring.

3. Change and drain the fuel pre-filter. You will find that a large clear plastic lemonade bottle cut in half is idea for this job as you can drain the fuel and in some cases catch the filter in the bottle and because it's clear you can examine the condition of the fuel. The top end of the bottle you can use as a funnel to use to pour into a container for disposal. Once you have refitted filters you will need to bleed the system (some fuel

filters may need to be filled with fuel from a can).

The Reason:

It is important that we find out if we have a problem with the fuel, even if the glass bowl is clear.

The only way is to remove the filter and inspect. If you find a problem then you can make a decision about what to do about it well before the spring. You may want to have the tank emptied and cleaned, or what is becoming more popular is fuel cleaning with a filtration system. This of course re-uses your fuel which means you don't have to pay for disposal.

If you suspect a problem you may decide to check the pre-filter before topping up with fuel. There are several companies offering this service.

It is best to use a drip tray or absorbent mat to collect any drips while you are doing this. In confined spaces we have found that flexible silicone baking trays make excellent drip trays. They are safe for use at very high temperatures but will change shape if exposed to oil and fuel for a long time so they are not a permanent solution.

4. Change the engine oil. Run the engine up to temperature.

The cleanest and easiest way to do this is to use a vacuum pump. A vacuum pump has its own self contained reservoir and tube that is inserted into the dipstick. This makes the whole process very clean and helps prevent spills.

Refill the sump with clean oil and of the correct grade for your engine

The Reason:

Change the oil to ensure any corrosive acids formed as product of combustion does not remain in the engine over the winter.

Remember to dispose of used oil as hazardous waste, your local club or marina should have an oil disposal facility. Remember oily rags and tissues should also be disposed of in this way to avoid contaminating other waste.

5. Change the oil filter, this is the messy job and if access is tricky you may need a lot of rags.

You will need a good filter wrench, one that doesn't damage the filter. To minimize mess we suggest using an old bowl to catch the oil or the silicone trays referred to above.

Old engine oil is full of carbon and is incredibly hard to clean so try and use a barrier cream on your hands, alternatively you could wear latex gloves but remember the filter will be very very slippery.

As before make, sure you dispose of all oily rags as hazardous waste. Using oil absorbent mats and a bilge sock will make sure that a) your bilges stay clean and minimise smell, important when a boat is closed up for prolonged periods over the winter, and b) that you will not have a nasty haze of oily water coming out of your bilges in the spring.

The Reason:

Carbon, swarf and other combustion products build up in the filter and start to restrict the flow so changing once a year is a minimum requirement but should be done as per manufacturer's recommendations of course. You can never have enough oil changes.

6. Check the fresh water cooling level and top up. It is also important to ensure that you have the right ratio of water to Anti-freeze. If you have been topping up with just water all season you might like to drain the system and top up with the correct mixture. Manufacturers will recommend that the system is drained at a particular service interval.

The Reason:

Anti freeze or coolant doesn't just protect your engine from the cold but more importantly act as a corrosion inhibitor that protects the internal water ways within the engine.

7. Remove the SW pump impeller and tie to the side of the pump

The Reason:

If the impeller remains in one position for too long then it might become deformed, become less effective and fail. You should always change your impellor annually at least. I personally don't like the idea of using old one as a spare as they tend to fail.

8. Relax or remove the drive belts

The Reason:

Again leaving them in one position for several months may cause them to deform and crack

In the spring we strongly recommend that you replace them if there are any signs of wear. Sign to look out for is black belt dust on the engine and engine bearers this means the belt is slipping.

9. Clean the engine and inspect it from all angles looking for anything amiss, check all jubilee clips for corrosion, electrical wiring for corrosion and chafe and, of course, any water fuel or oil leaks.

This will give you good amount of time to put things right, also make sure the bilges are clean. Use a bilge sock to soak up oil and fuel from the bilges before cleaning.

There are a range of environmentally friendly cleaners available these days, choose ones which are low in phosphate and bleach. Clean bilges make it easier to spot faults earlier. Finally after cleaning the engine, coat it with duck oil or corrosion block to prevent any corrosion, pay particular attention to the drive belt pulleys, this must be kept free of rust another wise when the belts are replaced they will wear down in no time.

10. Batteries: If possible remove them and charge them up and check the water levels. Once charged, the condition of the battery can be checked with a hydrometer measuring the specific gravity of each of the cells and comparing the readings. Check and charge them every month to keep them in order.

11. Exhaust and Inlet: It is a good idea to block off the exhaust and if possible the air inlet to the engine this can simply be done with tape or wooden bung. This prevents moisture from getting into the engine. Don't forget to remove before you re-float!