



Sandpoint Marina
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HULLEY MARINE
Boat Builder Supplier & Scottish Distributors For
BLAKES MARINE PAINT BRUYNZEEL PLYWOOD YANMAR DIESEL ENGINE



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PROCEDURE TO WINTERISE A YANMAR DIESEL ENGINE

- A). Just prior to hauling the boat from the water, run the engine hot then change the lube oil and filter,
B). If the boat has already been removed from the water, carry out the following:-

1. Disconnect the cooling water supply pipe from the seacock.
2. Arrange for a fresh water supply, from a 2-3 gallon bucket (preferably topped 'up from a mains supply),
3. Run the engine for 10 - 15 minutes until the engine reaches operating temperature, then change the lube, oil and filter.
4. Drain off block and remove thermostat. Replace thermostat housing (also inspect the anodes for corrosion).
5. Run engine again, but this time use an antifreeze solution in the bucket (1 gallon approximately).
6. Again drain off block and replace thermostat (having first cleaned it).

Fresh Water Cooled Engine

7. Drain the fresh water section, and refill with a suitable antifreeze solution. (50:1 or more according to manufacturers recommendations).
 8. Follow the previous directions to inhibit the salt-water side of the cooling system and the cooling water pump.
 9. Replace the fuel filter element and, if fitted, clean out the water/dirt trap.
 10. Fill the fuel tank to its maximum.
- C)
1. Remove the air cleaner cover and with, the engine de-compressed and the stop button lever fully out, spray a small amount of anti-corrosive oil into the air intake port, whilst turning the engine over by hand (2-3 revolutions only). Wash air cleaner element with soapy water and dry. Replace air cleaner and cover. Release the de-compression lever.
 2. Turn engine onto compression stroke, release the stop lever and cover the air intake to prevent damp air ingress.

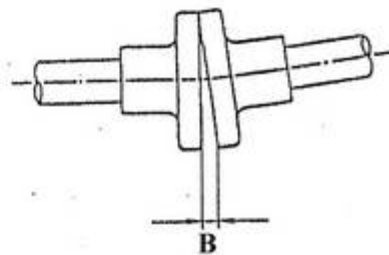
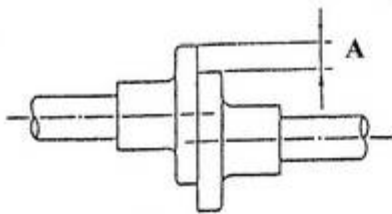
D) Additional Precautions

1. Remove alternator belt and cooling water pump belt and tie to engine. Then grease the pulleys. On re-commissioning the boat, remove the grease with white spirit or petrol.
2. If possible disconnect the flexible exhaust pipe and cover the exhaust manifold opening.
3. Before De-commissioning the boat, remove the prop shaft coupling bolts and check for coupling misalignment.

The recommended tolerance for misalignment is:

mm (in)

COUPLING MISALIGNMENT A	0.1 - 0.3 (0.0039 - 0.0118)
COUPLING FACE RUN-OUT B	0 - 0.2 (0 - 0.0079)



Wintering The Boat

1. Scrub the bottom of the boat removing weed and barnacles.
2. Inspect for cracks, blisters, rot or corrosion (depending on construction).
3. Check the stern gear for wear by lifting the shaft vertically, looking for any sign of looseness in the stern gland or P-bracket bearings.
4. Inspect the propeller for any signs of damage or corrosion and ensure that it is tight on the shaft.
5. Check the rudder for wear in the bearings. Also inspect for cracks or corrosion, particularly where it joins the shaft.
6. Inspect all anodes, any, which are seriously eroded, will have to be replaced, any, which look suspiciously shiny or have developed a pale brown colour, are not doing their job. The most likely cause is that the electrical connection between the affected anodes and the boat's metal fittings has become disconnected.