

# Winterisation

For conditions were close to or below freezing point is anticipated, you should consider the following steps to prevent the cold weather damaging your engine.

Task	CHECK
Run engine up to temperature; <ul style="list-style-type: none"><li>• Drain and Remove old oil</li><li>• Replace Oil Filter</li><li>• Add Fresh Oil</li></ul>	
Drain down raw water system and flush with anti-freeze coolant. Ensure anti-freeze is appropriate for expected temperatures.	
Replace the Primary Fuel Filter and the Engine Fuel Filter	
Remove water pump impeller to allow blades to relax when not in use. Ideally move to a warm climate to prevent cold temperature embrittlement. So that you don't forget it, tie it to the battery switch key so that you remember it has been removed.	
Replace coolant in the engine cooling system. Ensure anti freeze is appropriate for expected temperatures.	
Check anodes, hoses and hoses clamps	
Remove injectors from the engine to allow them to be serviced over winter. Squirt some light oil into the cylinder and plug the holes to each cylinder	
Plug Air inlet and plug exhaust to prevent potential moist air or freezing air from circulating through the engine.	
Check Gearbox oil level. If the oil shows creaminess, replace the gearbox seals over winter.	
Relax the drive belts to prevent stretching	
Fill the fuel tank with appropriate grade diesel	

NOTE: Make sure the engine is run up to operating temperature before replacing the coolant, if the engine can not be run up to temperature, then the thermostat will need to be removed to ensure there is no restriction in circulating the fresh anti-freeze/coolant. Once the new anti-freeze has been circulated, replace the thermostat and top up.