

Yanmar Periodic Inspection and Maintenance

Start of season procedures

1. Install impeller (if removed)
2. Open thru hulls
3. Check oil level
 - After wiping and reinstalling the dip stick, wait 15 seconds before checking the oil level
 - The rubber bushing around the top of the dip stick will push the oil level down in the tube and will indicate a low oil level potentially causing over filling of the engine oil
4. Check the saildrive oil
 - ONLY fill to the bottom of the range
5. Check coolant level
 - Coolant level should be checked at the "radiator cap", not at the reservoir tank
 - If there is an air leak between the heat exchanger and the reservoir, fluid levels at the reservoir tank will be incorrect
6. Check belt condition
 - Yanmar belts are high-temp metric belts
 - Only be replaced with new Yanmar belts
7. Check the seawater strainer
8. Startup procedure should be followed anytime the engine sets for more than a few weeks - Mack Borings recommended startup procedure to get engine oil circulated before starting the engine:
 - Hold *Stop* button and crank engine for 5 seconds
 - Stop and wait 10-15 seconds
 - Hold *Stop* button and crank engine for 5 seconds
 - Release *Stop* button and start engine

During the season

1. Check engine oil level
2. Check the saildrive oil
3. Check engine coolant
4. Check belt condition
5. Check the seawater strainer
6. On engine startup, idle engine 3-5 minutes to warm up before leaving the dock
7. On engine shutdown, idle the engine 5 minutes to cool down engine

At the end of every season:

1. Change fuel filters
 - The primary fuel filter must be 30 micron or the engine will starve for fuel
 - The secondary filter on the engine can be a 10 micron
 - The secondary filter contains chemically treated filter paper which prevents rust in the injectors
2. Any rust on the engine (especially fuel lines) should be sanded, primed, and painted with Rustoleum or Yanmar paint
3. Be sure to clean up all diesel fuel that is spilled while changing the fuel filters or bleeding the fuel system
 - Use a 409 or orange type solvent cleaner

- Diesel fuel will weaken/breakdown the rubber engine mounts so pay close attention to cleaning them
4. Change engine oil and filter at the end of the season
 - Used oil contains diesel contaminants that will change to acids when the engine is not run for a long period of time which will cause engine damage
 - Always use the same oil manufacturer and weight oil, mixing manufacturers can cause problems because they each use different processes and slightly different additives
 - Use only Yanmar oil filters – other brands (such as the FRAM) may not handle the oil pressure adequately, bypass too easily (Yanmar filters believed to be made by WIX)
 - Synthetic oil is not recommended for sailboat engines
 5. Impellers should be inspected at the end of each season
 - To extend their useful life, remove the impeller and soak it in olive oil during the off-season and re-install at the start of the season or just replace the impellor at the start of the season
 6. Strainer seals should be inspected at the end of each season
 - A leaking seal may not be apparent but will suck air during operation
 - Aerated water does not cool as efficiently and may cause overheating problems
 7. Anti-siphoning valves should be inspected and tested for correct operation each season
 8. Belts should be inspected and replaced if there is cracking or glazing of the belts
 9. Top off fuel tanks to prevent condensation buildup
 10. It is recommended that the engine coolant should be changed every two years
 11. Check deck fillcap O-rings
 - O-rings can crack and allow water and contaminants into fuel and drinking water