

## **Engine Starting**

1. Check the oil level on the dip stick. It should be between the upper and lower limits. (Beware of high oil levels this can indicate water in the oil or fuel in the oil). Top up as/if necessary.
2. Check the oil filler cap for emulsified oil which is white or yellow paste.
3. Gearbox oil check. Look for water ingress or higher than expected levels. Or discoloured oil.
4. Raw water filter check. Then re-prime if required.
5. Raw water pump and hoses.
6. Check coolant level and for any leaks in hoses or at hose ends.
7. Electrical check. Cables, insulation connections.
8. Belts and tensions check. (As described in your manual).
9. Shut off cable or emergency stop.
10. Throttle and gear linkage checks.
11. Engine mounts and drive linkage check.
12. Shaft seal check. Or check sail-drive of gator/area.
13. Check fuel is switched on and visually check fuel lines and water separator.
14. Check and log engine hours. (May require engine power on).
15. Check fuel gauge or capacity. (You should know that you have 30% more fuel than you need for the journey as a minimum).
16. Power engine circuit on and check alarms.
17. Power to heater plugs. (If not automatic). Do not use excessive heater time (See handbook).
18. Engage starter motor. For 3-5 seconds. (If engine does not start after 3 tries do not proceed. The raw water pump will continue to push water into the heat exchanger and exhaust which can fill and then back-flow into your engine).
19. On starting water should exit the exhaust (Wet exhaust types only). Or the tell tail where fitted within 5-7 seconds. If not check why.
20. Most engines will give a puff of smoke on starting. If this persists for more than 1-2 minutes you need to investigate why. Allow engine to warm for 3-5 mins while listening for any unusual noises or sounds. Do not load up a cold engine.

We recommend a second visual check when the engine has been running for 5 minutes. On longer voyages it is recommended that visual checks are undertaken every 3-5 hours where it is practical to do so.

These checks should in addition to your normal servicing and maintenance.