

MARINE ENGINE FAILURES and ANNUAL CHECK SHEET

FUEL SYSTEM PROBLEMS

Empty Fuel Tank or Fuel not switched "ON". Air leak or Fuel leak. Water in Fuel. Contaminated Fuel. Blocked Filter or Pipe Fittings. Air in the High pressure fuel system. Broken Pipe. Faulty fuel lift pump (worn valves).

COOLING PROBLEMS

SYMPTOMS:- No Water at Exhaust outlet. Steam at Exhaust outlet. Exhaust temperature alarm activated. Steam from engine box and air vents. Lack of power.

CAUSES:- Seacock not turned "ON". Intake Blocked or Restricted. Thermostat failed (shut, or sticking). Blocked Exhaust at water injection elbow. Loose water filter cap. Broken Pipe. Water pump drive failure. Air Leak due to worn pump seals or pipe fittings. Failed Impeller drive. Impeller broken up. Impeller debris blocking heat exchanger.

ENGINE NOT CHARGING.

Drive belt broken or slipping. High resistance/corroded connections. Faulty Regulator. Worn Brushes. Broken lead.

LOSS OF DRIVE

Stripped or worn splines on input shaft and drive flange (Volvo 2000 series). Drive coupling slipping (Tighten shaft clamping bolts correctly). Drive pin in coupling sheared (propeller striking underwater obstruction). Loss of propeller. (failure of propeller nut locking pin or washer)

LAYING-UP. TASKS "COMPLETE AT END OF SEASON."

4 Box When Task Complete

1.	Change Engine Oil & Filter.	
2.	Flush salt water cooling system with fresh water.	
3.	Inhibit with solution of coolant/soluble oil.	
4.	Clean Air Filter	
5.	Blank off air intake and exhaust outlet	
6.	Clean seawater filter.	
7.	Fill fuel Tank to reduce condensation.	
8.	Check freezing point of coolant.	
9.	Examine Hoses and Clips. (Replace and tighten as required)	
10.	Remove Impeller & clean and store in plastic bag.	
11.	Slacken Generator drive belts, and inspect pulleys.	
12.	Remove Battery, clean, top up, charge, and store (a flat battery may freeze). Charge every six weeks to maintain in good condition.	
13.	Leave all electrical switches in the ON position to keep contacts clean.	

COMMISSIONING "BEFORE LAUNCHING"

1.	Clean water separator / sedimenter.	
2.	Renew fuel filter.	
3.	Check oil level.	
4.	Check that all plugs have been replaced and drain cocks are fully closed.	
5.	Replace Anode if 50% of its volume has been used.	
6.	Check level of fresh water system (Coolant).	
7.	Install a perfect impeller and new cover gasket.	
8.	Tighten V Belts and adjust tension (10 mm between pulleys).	
9.	Switch all electrical switches to the OFF position.	
10.	Refit a fully charged Battery.	
11.	Replace all fuel filters, bleed system	
12.	Remove Air inlet and exhaust blanking plugs	
13.	Run engine in forward and reverse if possible, check levels & for leaks (Water, fuel & oil)	