YACHT SALES
POWER & SAIL
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Engine Start Problem

Is the engine cranking?

YES → Fuel, air or compression

NO → Likely electrical problem

Fuel, air or compression

TURN OFF ENGINE SEACOCK

Check for fuel by cracking injector supply line and cranking engine

Is there fuel at the injectors?

- **NO** → Is there fuel in the primary (racor) filter?
  - **YES** → Bleed fuel system → Is there fuel at the injectors now?
    - **NO** → Check for:
      - Out of fuel
      - Fuel valve off
      - Broken fuel (lift) pump.
    - **YES** → Does engine now start?
      - **NO** → Is there fuel at the injectors?
      - **YES** → Yippee! It's running but... → **OPEN ENGINE SEACOCK** → If engine starts after bleeding fuel lines then air in system. Problem will re-occur until source of air is removed
- **YES** → Is air intake blocked?
  - **YES** → Clear air intake
  - **NO** → Is cranking speed too low?
    - **YES** → Weak battery or poor electrical connections Fix problem
    - **NO** → Does engine have glow-plugs?
      - **YES** → Possibly more than one glow plugs burned out.
      - **NO** → Too low compression (temperature). Maybe worn or broken engine → In emergency remove injectors and add a tablespoon of oil in injector hole then try restarting!

Likely electrical problem

TURN OFF ENGINE SEACOCK

Does starter motor spin but engine not turn

- **YES** → Possible causes:
  - Missing teeth on flywheel
  - Bendix on solenoid broken
- **NO** → Can you hear a "click" when trying to start
  - **YES** → Solenoid trying to engage. Try tapping solenoid
  - **NO** → Is engine battery dead?
    - **YES** → Use spare or house battery to start engine or charge battery and re-try starting
    - **NO** → Will jumping solenoid start engine?
      - **YES** → **OPEN ENGINE SEACOCK**
      - **NO** → Are Battery terminals or leads to starter hot to touch?
        - **YES** → Hot terminals, leads or connections indicate poor connection. Clean all connections and try re-starting
        - **NO** → Possible open circuit from battery to starter

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