### 1999 28' single diesel pilothouse fisherman

\* The following is the list of Deficiencies, (not listed in priority order), that require correction.

1-- engine: A) hose (type J2006) run heat exchanger to riser elbow shows worn; install new hose, routed to avoid sharp bends not be in contact with hot (turbo / exhaust manifold) surfaces. (recommend-"T" type hose clamps.) B) raw water pump shaft/ shaft -seal is leaking (rust stains on engine & engine mount). C) replace rusted hose clamps @ engine exhaust hose connection w/ new ss. "T" clamps.

2-- fuel feed line (appeared from fwd. tank) runs fwd.- aft stbd. & outboard of the engine; needs to be supported, at height above the tank and protected from chafe. *ABYC std H-33.7.1 Hoses shall be secured and routed so that they will not chafe on boat structure or equipment.* 33.7.2 *Clips, straps or other means used for securing fuel lines shall be of corrosion resistant materials, & 33.7.2.1 shall be designed to eliminate cutting or abrading action where in contact with the fuel line.* 33.14.4.2 *Fuel lines between the tank and valve shall be secured above the top of the tank with clips or straps capable of withstanding a 2 <sup>1</sup>/<sub>2</sub> minute fire test.* 



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3-- fwd. bilge pump (under cabin sole; with built-in float switch) did not power on via helm panel switch.

4-- MSD (toilet system): A) raw water intake and macerator outlet (2) bronze ballvalves show: i) bright green w/ white surface stain / residue (possible stray current caused corrosion or hose leaks). ii) are too stiff / could not be closed: Inspect each for weakness / corrosion and verify operation (each should be smooth / easy to open - close); replace as needed.

B) 12v macerator did not power on (12v breaker tripped-off within a few seconds being placed in on position).

C) verify that the "Y" valve is operational and which position is for deck pump-out and for macerator overboard discharge (label the valve positions).

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5-- raw water wash down and live well(?) 12v pumps (aft port under cockpit deck) did not power on.

6-- 120v water heater did not power on (plug in volt meter showed no current draw when heater's 120v breaker was placed in on position).

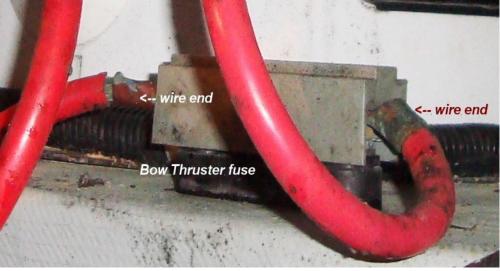
7-- DC electric system. A) 4-D battery: i) install cover the "+" post. *ABYC std. E-10.7.7 To* prevent accidental contact of the -ungrounded battery connection to ground, each battery shall be protected so that metallic objects cannot come into contact with the ungrounded battery terminal". ii) replace terminal post wing-nuts with loc-nuts.

B) Bow Thruster:

i) install cover on the 2- "+" lugs on the thruster DC motor. (ABYC std. E-10.7.7)

ii) install cover on the 2- bare metal terminal ends of the + wires at the high capacity in-line fuse (stbd. under cockpit deck fwd. hatch). (ABYC std. E-10.7.7)

iii) thruster powers on when the battery switch is in "OFF" position: If the thruster is powered by the 4D battery; a battery switch needs to be installed between that battery & the thruster. *ABYC std. E- 11.6.1.2.1- A battery switch shall be installed in the positive conductor(s) from each battery or battery bank with a CCA rating greater than 800 amperes or 100 Ah if CCA is unavailable.*C) wire runs stbd. under the cockpit need to be neatly bundled & harnessed / supported.



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8-- masthead & anchor navigation light (2-bulb) fixture: A) did not power on.
B) fixture's pole needs to be taller than the radar dome (for proper display anchor light display. (Suggest; consider relocating masthead steaming light further aft of cabin top fwd. edge to reduce glare - spillover to foredeck / pilothouse windshield.)
-End of Notes-

NOTE: See engine surveyor's report for their findings, remarks and recommendations.

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