Mechanical Survey

1982 Panda 40

Yanmar 4JH2 E Serial Number: 10763

Engine hours: 427.1 as read from hour meter

The engine space is clean and clear if debris. This engine is not original to the vessel. The repower is suitable in its installation and satisfactory in its application. From notation on the oil filter the last service was in 2010 and at 406 hours. It does not appear that the raw water impeller has been serviced. Small gauge wires running past the forward and starboard metal stringer bracket are not chafe protected and disconnected wires are not properly terminated. The coolant expansion tank has been relocated to the port cockpit locker. The relocation was needed to accommodate a water heater that is mounted above the engine. A closed cooling system pressure test was conducted to 10 psi with a gradual leak down over 10 minutes. This is due to the lower engine radiator cap pressure and is to be expected. Engine coolant is low in the remote expansion tank and in the coolant overflow bottle.

Belts condition: Good

Hoses and Clamps: Satisfactory

Oil: Good

Coolant: Good

Transmission: Kanzaki Model: Unknown Serial Number: Not legible

Ratio: Not legible Oil level: Good

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Observations

The main engine is a diesel inboard with a closed cooling system and salt water heat exchange. The manufacturer rated horsepower is 50 at 3400RPM. During sea trial the wide open throttle was 2700 rpm. The engine started easily. The engine started with some smoke that cleared after the engine was up to operating temperature. Shift and throttle actuation was smooth.

Engine oil pressure was noted at 4 BAR, the coolant temperature was noted at 80*c, alternator voltage was noted at 14.0vdc (taken with meter at alternator). Inferred temperature readings taken after wide open throttle tests were 172.5*

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Recommendations

1. Consider sourcing a higher pressure rated radiator cap for the engine and allow the remote expansion tank radiator cap to regulate coolant overflow.
2. Chafe protect wires running over the metal stringer brace at the front of the engine.
3. Terminate or remove unconnected wires at the front of the engine according to ABYC standards.
4. Determine significance of low wide open throttle rpm. Check propeller size and re test.
5. Consider a complete engine service as part of a regular maintenance program.

Respectfully submitted,

Bradley Destache S.A.M.S. SA

May 21, 2014

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