

Chris Sitarz Inc.
Diesel Engine Repair
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Date:
4/4/23

Custom:
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Vessel:
S/V Sunflower
2004 Oceanis 523

Gen Set:
Onan 11Kw
M/N: 11MDKAW-5667234, S/N: E040649992, A/C Volts: 115v, Amps: 95.7, KVA: 11,
PF: 1, HZ: 60, PH: 1, KW: 11, RPM: 1800, Battery: 12 volts.
Hours: 2149

Engine:
Yanmar M/N 4JH3-THE, S/N E23465,
Continuous Power Kw. 67.7 at 3700rpm.
Fuel Stop Power Kw. 73.6 at 3800rpm.

Transmission:

ZF. M/N ZF30M, S/N 30794 P/N 3320002001

Notes:

From the service records I got from the owner. The engine oil was last changed on 11/14/22 at 3400hrs. The engine sea water pump impeller was last changed on 4/11/22 at 3227hrs. The generator oil was last changed on 11/14/22 at 2147hrs. The generator sea water pump impeller was last changed on 3/21/23.

Findings: The main engine fuel filter was last changed on 10/21/20. Recommend replacing it.



Generator fuel filter was last replaced on 10/21/20 recommend replacing it.



Issues: Recommend replacing the exhaust outlet hose due to kinks and cracks in the hose.



The generator heat exchanger end cap shows signs of corrosion. Recommended resealing it.



Issues:

(1) During my inspection of the engine compartment I found the cooling hose that runs to the PSS shaft seal is not hooked to a sea water supply source.

(2) During the sea trial I found the engine would not rev to it full load rpm of 3800 rpm. The engine only turned 3450rpm under full load. The boat owner did have the boat short hauled and adjust the prop and ran the boat again. After the prop adjustment the engine turned 3668rpm which is still low. I would like to see it closer to 3800rpm.

	Engine	Genset
Engine Idle	650rpm	1800rpm
Engle Hi Idle	4140rpm	1800rpm
Full Load	3668rpm	1800rpm
Oil Pressure	74psi	No Gauge
Coolant Temp	176 degrees	165 degrees
Aftercooler Inlet Temp	147 degrees	N/A
Aftercooler Outlet Temp	106 degrees	N/A
Heat Exchanger Inlet Temp	167 degrees	165 degrees
Heat Exchanger Outlet Temp	135 degrees	128 degrees.
Transmission Temp	97 degrees	N/A
A/C Voltage		118.5 volts
D/C Voltage		13.44 volts
A/C Amps		10 amps

Boat Conditions at time of Sea Trial

Air Temp 46 degrees
Sea Water Temp 41 degrees
Fuel Tank 2 fuel tanks. Total capacity 170 gallons. 60% full.
Fresh water Tank 2 tanks. Total capacity 248 gallons. 70% full.
Holing tank 3 tanks. Total capacity 105 gallons. 0% full.
Adults on Board 7

RPM	Knots	Oil Press	Coolant Temp.
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		Bar	Fer.
1000	4.1	6.7	173
1200	4.2	6.7	173
1400	5.1	6.7	173
1600	5.6	6.9	173
1800	6.4	6.9	175
2000	7.2	6.9	175
2200	7.5	6.9	176
2400	7.8	6.9	176
2600	8.0	6.9	177
2800	8.3	6.8	177
3000	8.4	6.8	177
3200	8.7	6.8	177
3400	8.8	6.8	178
3450	8.7	6.8	178
3668	8.7	6.8	179

Comments: The main engine did not perform as designed due to the lack of full load engine RPM. The owner did have the prop adjusted but I would like to see the full load RPM closer to 3800.

The engine, transmission and the generator are all in good shape other than the minor issues I listed above. They all appear to be free of any fluid leaks and ran good at the time of the sea trial. All finding at the time of the sea trial are subject to change with age and the different condition of where the boat is located.