Sea Trial Report

Chris Sitarz Inc.

Diesel Engine Repair

13 Brookview Dr.

West Gardiner, Me. 04345

chrissitarz@yahoo.com

Date:

5/4/26

Customer:

Niel Reiter

6 South St.

Portland, Me. 04101

Vessel:

M/V Minkie B

1997 Lyman Morse Custom 46 Flybridge

Hull No.: MJE44053J597

DOC No.: 1041601

Engine Port:

Make: Caterpillar

Serial No.: C700169

Model: C7

A/R No.: 247-3819

Bare Engine Hi Idle: 2940rpm

Engine Power: 420BPH 313.0Kw. @ 2800RPM

Engine Hours: 1798

Engine STBD:

Caterpillar

Serial No.: C700170

Model No.: C7

A/R No.: 247-3819

Bare Engine Hi Idle: 2940rpm

Engine Power: 420BHP 313.0Kw. @ 2800RPM

Engine Hours: 1821

Gear Port:

Caterpillar/Twin Disc

Model No.: MG-507-A1

Serial No.: 5DG669

Ratio: 1.98:1

Cat. Part No.: 7E-1140

Gear STBD:

Caterpillar/Twin Disc

Model No.: MG0507-A1

Serial No.: 5DG0668

Ratio: 1.98:1

Cat. Part No.: 7E-1140

Generator:

Kohler

Model No.: 9E0ZD

Serial No.: 2157220

Spec No.: GM37403-GA1

Kw: 8.5

Hertz: 60

RPM: 1800

Voltage: 120/240

Amps: 35.40

PF: 1.0

Hours: 570

Findings:

The starboard engine sea water pump appears to have been recently replaced.

The starboard prop shaft coupling appears to have been recently replaced.

The port prop shaft appears to have been recently replaced.

Both main engines are equipped with a single Racor fuel/water separator Model 500MA.

The generator is equipped with a single Parker/Racor fuel water separator. Part number S3240TUL.

The port engine heat exchanger appears to have been removed and serviced recently.

The starboard engine heat exchanger appears to have been removed and serviced recently.

Issues:

The port engine wiring behind the alternator should be properly secured to prevent chaffing.

Starboard engine fuel lines are chaffing on the main engine harness. The harness and the hose should be rerouted and properly secured to prevent chaffing.

The port engine outboard side fuel hose is also chaffing on an electrical harness. The hose and the harness should be properly secured to prevent chaffing.

The port engine left front has a broken grounding wire by the left front engine mount.

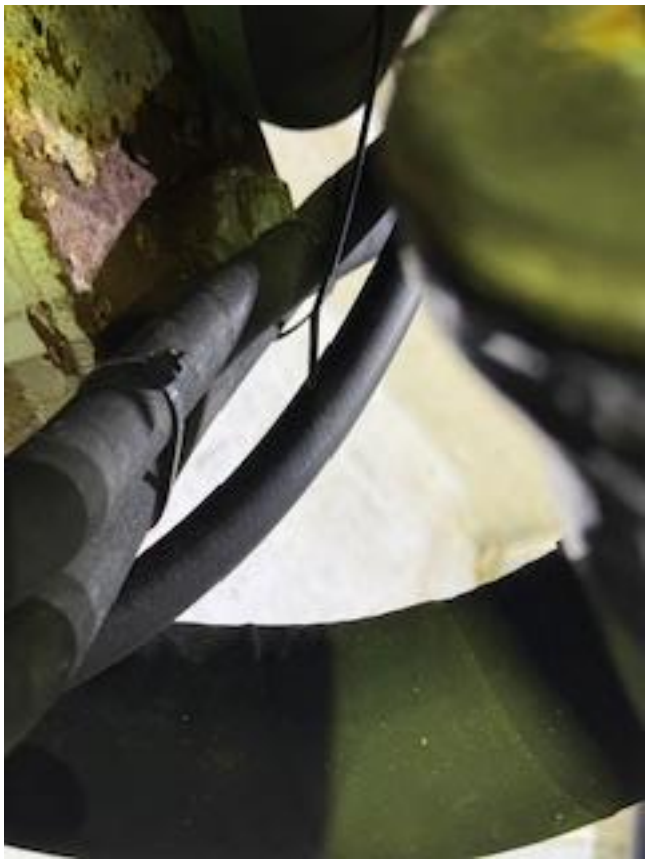
The starboard engine also has a broken grounding wire by the right front mount.

Port engine starter wiring is chaffing on the right rear engine mount.

The port engine has an exhaust leak at the turbo outlet flange.

The starboard engine also has an exhaust leak at the turbo outlet flange.

The port engine has a sea water hose chaffing on the right rear engine mount.



The starboard transmission cooler hoses are chaffing on the right rea engine mount.

The generator muffler outlet hose is partly kinked.

The generator sea water pump was overheated at some point. There was no overheating issue at the time of the sea trial.

There is a small oil leak coming from the starboard engines’ lower valve cover gasket.

While out on sea trial I found that the starboard engine runs at about 14% less engine load than the port engine. This issue could be related to the props being mismatched. This difference stays through out the throttle range under load from idle to wide open throttle. At full load the port engine is running 98% engine load and the starboard engine is running at 84% engine load.

Engine reading after the full load run!

	Port	STBD	Genset
Engine Idle RPM	650	650	1800
Engine Hi Idle RPM	2954	2960	1800
Full Load RPM	2828	2859	1800
Oil Pressure	34	31	N/G
Coolant Temperature	198	196	175 heat gun
Heat Exchanger Inlet Temp.	188	177	140
Heat Exchanger Outlet Temp.	154	148	98
Aftercooler Inlet Temp.	309	289	N/A
Aftercooler Outlet Temp.	94	88	N/A
Gear Cooler Inlet Temp.	98	103	N/A
Gear Cooler Outlet Temp.	73	92	N/A

Conditions at the time of the sea trial

Air Temperature: 56 degrees

Sea Temperature: 47 degrees

Fuel Tanks: 1 Tank. Total capacity is 435 gallons. 95% full

Fresh Water Tanks: 2 Tanks. Total capacity is 174 gallons. 0% full

Holding Tanks: 1 Tank. Total capacity is 46 gallons. 0% full.

Adults on board: 4.

RPM	Knots	Oil Press	Coolant Temp	Boost Pressure	Manifold Temp	Fuel Press	Fuel Rate	Engine Load

1000	6.5	30	34	190	192	0	0	61	63	68	70	2	2	17	14
1200	7.6	35	39	190	190	1	1	61	63	70	72	3	3	20	17
1400	8.5	36	40	192	194	2	1	61	63	70	74	4	4	27	23
1600	9.8	37	42	194	194	4	3	61	61	73	75	6	5	37	30
1800	10.9	37	42	194	194	6	6	59	61	73	77	8	7	43	36
2000	13	37	42	196	196	10	8	59	59	73	77	11	9	48	38
2200	15.5	37	42	196	196	16	13	59	59	74	79	13	12	56	46
2400	17.4	37	41	198	196	22	17	63	59	74	79	16	13	68	53
2600	20.3	36	40	199	196	28	23	68	64	73	80	20	16	81	65
P 2824 S 2860	22.8	35	39	201	198	33	30	75	72	73	79	24	21	98	84

Engine Lifetime Totals

Engine Hours: P 1798hrs, S 1820hrs.

Idle Hours: P 443hrs. S 456hrs.

Fuel used: P 12459 gallons. S 11986 gallons.

Idle Fuel used: P 343 gallons. S 325 gallons.

Comments

The port engine was smokey during the cold start. It stayed smokey until we got under way and started loading up the engine. After the full load run the port engine smoke did go away and did not come back during the time of the sea trial. The engine did run good other than the engine load difference. There was not unusual vibrations at the time of the sea trial.