

MARINE DIESEL & ENGINEERING, INC.

525 Groaton Avenue
Davie, FL 33325
(954) 260-5250

VISUAL ENGINE INSPECTION REPORT

DATE:	AUGUST 25, 2026	INSPECTOR:	JACK DIBELLA
PURCHASER:	TIM MALONEY	VESSEL:	80'
EMAIL:	citi@comcast.net	BUILDER:	OCEAN ALEXANDER
PHONE:	443-463-0111	YEAR:	2005
SURVEYOR:	ROLLIE GORDON	VESSEL NAME:	JUST MAD
		LOCATION:	FORT LAUDERDALE, FL
		HULL NO.:	OAX78004E505

IDENTIFICATION AND COLD CHECK INFORMATION

	PORT	STARBOARD
ENGINE MANUFACTURER	M.T.U.	M.T.U.
ENGINE MODEL NUMBER	12V2000	12V2000
ENGINE SERIAL NUMBER	535104291	535104290
ENGINE HOURS	7344	7359
TRANSMISSION MAKE	ZF	ZF
TRANSMISSION MODEL	ZF 2150 A	ZF 2150 A
TRANSMISSION SERIAL	50014741	50014740
TRANSMISSION RATIO	2.920:1A	2.920:1A

FLUID SYSTEMS CHECK

	PORT	STARBOARD
COOLANT LEVEL	FULL	FULL
COOLANT CONDITION	SERVICEABLE	SERVICEABLE
ENGINE OIL LEVEL	FULL	FULL
ENGINE OIL CONDITION	CLEAN	CLEAN
TRANSMISSION OIL LEVEL	FULL	FULL
TRANSMISSION OIL CONDITION	CLEAN	CLEAN
TRANSMISSION STRAINER	SPIN ON FILTER	SPIN ON FILTER

INSPECTION OF PORT ENGINE

SEA WATER INLET VALVE	FREE
SEA WATER INLET HOSE	SERVICEABLE
SEA WATER STRAINER	CLEAN
RAW WATER PUMP	NO LEAKS OBSERVED
RAW WATER PIPING	NO LEAKS OBSERVED
FUEL COOLER	NO LEAKS OBSERVED
AFTERCOOLER	NO LEAKS OBSERVED
TRANSMISSION OIL COOLER	NO LEAKS OBSERVED
RAW WATER DISCHARGE HOSE	SERVICEABLE
RAW WATER HOSES	SECURE
RAW WATER CLAMPS	SECURE

EXHAUST

DISCHARGE RISERS	BLANKETED/NO LEAKS OBSERVED
EXHAUST HOSE	SERVICEABLE
EXHAUST CLAMPS	SECURE

COOLING SYSTEM

HEAT EXCHANGERS	PLATE STYLE / NO LEAKS OBSERVED
FRESH WATER PUMP	NO LEAKS OBSERVED
COOLANT HOSES	SERVICEABLE
CLAMPS	SECURE
HIGH PRESSURE HOSES	SECURE

FUEL SYSTEM

PRIMARY FUEL FILTERS	DUAL RACOR 1000
SECONDARY FILTERS	DUAL MTU SPIN ON
FUEL SUPPLY HOSE	SERVICEABLE
ENGINE FUEL LINES	SECURE
FUEL MANIFOLD	VALVES ON RACOR
FUEL PRIMING SYSTEM	HAND PUMP

INSPECTION OF PORT ENGINE

ENGINE AIR INTAKE

TYPE	PAPER ELEMENT
AIR SEP REGULATOR	CANISTER
AIR SEP DRAIN LINES	N/A

ENGINE ASPIRATION

TURBO CHARGERS	SEQUENTIAL
BLOWERS	N/A
CHARGE AIR COOLERS	RAW WATER COOLED
AIR SHUT DOWN SYSTEM	YES
BOOST HOSE & PIPING	SECURE

ENGINE MOUNTING

TYPE	VIBRATION ISOLATORS
CONDITION	FIRM

CONTROLS

TYPE	ELECTRONIC
OPERATION	OK
SYNCHRONIZER	YES

INSPECTION OF STARBOARD ENGINE

SEA WATER INLET VALVE	FREE
SEA WATER INLET HOSE	SERVICEABLE
SEA WATER STRAINER	CLEAN
RAW WATER PUMP	NO LEAKS OBSERVED
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INSPECTION OF STARBOARD ENGINE

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ENGINE ASPIRATION

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BLOWERS	N/A
CHARGE AIR COOLERS	RAW WATER COOLED
AIR SHUT DOWN SYSTEM	YES
BOOST HOSE & PIPING	SECURE

ENGINE MOUNTING

TYPE	VIBRATION ISOLATORS
CONDITION	FIRM

CONTROLS

TYPE	ELECTRONIC
OPERATION	OK
SYNCHRONIZER	YES

STATIONARY INSPECTION OF ACCESSORIES

	PORT	STARBOARD
ENGINE AIR COMPRESSOR	N/A	N/A
STABILIZER PUMPS	ON TRANSMISSION	ON TRANSMISSION
POWER STEERING PUMPS	N/A	N/A
PTO	ON TRANSMISSION	ON TRANSMISSION
BELT DRIVEN ADD ONS	ALTERNATOR	ALTERNATOR
OIL UNDER ENGINES	NO LEAKS OBSERVED	NO LEAKS OBSERVED
MISC ENGINE OIL LEAKS	NO LEAKS OBSERVED	NO NLEAKS OBSERVED
TRANS OIL LEAKS	NO LEAKS OBSERVED	NO LEAKS OBSERVED
FUEL LEAKS	NO LEAKS OBSERVED	NO LEAKS OBSERVED
COOLANT LEAKS	NO LEAKS OBSERVED	NO LEAKS OBSERVED
SALT WATER LEAKS	NO LEAKS OBSERVED	NO LEAKS OBSERVED
EXHAUST LEAKS	NO LEAKS OBSERVED	NO LEAKS OBSERVED
BOOST LEAKS	NO LEAKS OBSERVED	NO LEAKS OBSERVED
CONTROLS	ELECTRONIC MTU	ELECTRONIC MTU

INITIAL START UP INSPECTION

	PORT	STARBOARD
BATTERY VOLTAGE	25.9 VDC	25.9 VDC
ALARM OPERATIONAL	OERATIONAL	OPERATIONAL
ALL GAUGES TO ZERO	YES	YES

ENGINE STARTED COLD DOCKSIDE

	PORT	STARBOARD
EXHAUST SMOKE	NO	NO
OIL PRESSURE	110	110
TRANS PRESSURE	70	70
R.P.M.	600	600
ENGINE VIBRATION	NO	NO
BATTERY VOLTAGE	28.4 VDC	27.0 VDC
INSPECTED FOR LEAKS	YES	YES
CONTROL OPERATION	OK	OK

SEATRIAL OPERATING AT CRUISE

	PORT		STARBOARD			
CRUISING RPM	1400	1400	1550	1550	1700	1700
COOLANT TEMP	167	171	169	170	171	171
ENGINE OIL PRESSURE	105	103	109	109	109	109
BOOST	38	38	43	43	48	48
FUEL RATE(GPH)	20	21	28	28	36	36
ENGINE LOAD %	33	33	39	38	67	67
TRANS OIL PRESSURE	255	255	258	258	260	260
TRANS OIL TEMP	120	119	106	105	109	109

SEATRIAL OPERATING AT FULL LOAD

	PORT		STARBOARD	
FULL LOAD RPM	1950	1950	2150	2150
COOLANT TEMP	181	182	185	185
ENGINE OIL PRESSURE	110	109	112	111
BOOST	50	50	61	61
FUEL RATE(GPH)	57	56	78	78
ENGINE LOAD%	89	89	100	100
TRANS OIL PRESSURE	263	262	269	269
TRANS OIL TEMP	114	114	127	125

IDLE SPEED OPERATING CONDITION

(CHECK AFTER COOL DOWN FROM RUNNING HARD)

	PORT	STARBOARD
ENGINE RPM	600	600
COOLANT TEMP	160	160
ENGINE OIL PRESSURE	45	46
ENGINE OIL TEMP	160	160
TRANS PRESSURE	250	250
TRANS OIL TEMP	110	109

BACK DOWN TEST

(RUN ONE ENGINE AT A TIME FWD & RVRS UP TO 1500 RPM)

	PORT	STARBOARD
MOUNT MOVEMENT OR RUNOUT	NO	NO
TRANS CUPLING RUNOUT	0	0
TRANS REAR SEAL LEAK	NO	NO
SHAFT SEAL LEAKING WATER	NO	NO
SHAFT MOVEMENT	NO	NO
ENGINE STALLING	NO	NO

OIL SAMPLES TAKEN FROM

PORT ENGINE	YES
STARBOARD ENGINE	YES
PORT TRANSMISSION	YES
STBD. TRANSMISSION	YES
GENERATOR(S)	YES

GENERATOR SET(S)

(COLD CHECKS BEFORE STARTING)

	<u>PORT</u>	<u>STARBOARD</u>
MANUFACTURER	NORTHERN LIGHTS	NORTHERN LIGHTS
MODEL	M844LW2-20KW	M984L-33KW
SERIAL	8442-34688C	9842334581
KW	20 KW	33 KW
HOURS	3994.6	6472.1
AC VOLTAGE	240 VAC	240 VAC
DC VOLTAGE	24 VDC	24 VDC
HZ	60	60
PHASE	SINGLE	SINGLE
WIRED 120 OR 120/240	120/240	120/240
OIL LEVEL	FULL	LOW
OIL CONDITION	CLEAN	CLEAN
COOLANT LEVEL	FULL	FULL
COOLANT CONDITON	SERVICEABLE	SERVICEABLE
BELT TENSION	PROPER	PROPER
LIFT MUFFLER CONDITION	SECURE	SECURE
EXHAUST HOSE CONDITION	SECURE	SECURE
FRESH WATER PUMP	NO LEAKS OBSERVED	NO LEAK OBSERVED
HOSES AND CLAMPS	SECURE	SECURE
EXHAUST ELBOW CONDITION	NO LEAKS OBSERVED	NO LEAK OBSERVED
GENERAL WIRING	GOOD	GOOD
SEA STRAINER	CLEAN	CLEAN
SEA VALVE	FREE	FREE
CIRCUIT BREAKER	HELD LOAD	HELD LOAD

START UP AND TEST RUN

<u>RUNNING AT AVERAGE LOAD</u>	<u>PORT</u>	<u>STARBOARD</u>
AC VOLTAGE	240	240
AMP DRAW	170	215
HZ	60	60
EXHAUST COLOR	CLEAN	CLEAN
SALT WATER FLOW	GOOD	GOOD
FRESH WATER TEMP	216	183
OIL PRESSURE	58	55

ENGINE SURVEY

BOYH ENGINES RAN WELL FOR THE DURATION OF THE SEA TRIAL AND APPEAR TO HAVE BEEN MAINTAINED. HOWEVER, THE ENGINES DID NOT REACH FULL RATED RPM'S. THE FOLLOWING ARE RECOMMENDATIONS BASED UPON EXTERNAL VISUAL INSPECTION AND SEA TRIAL.

PORT ENGINE:

- 1. AN OIL CHANGE WAS PERFORMED RECENTLY. NO CURRENT SERVICE RECORDS WERE FOUND FOR EXTENDED SERVICE. RECOMMEND CHECK FOR RECORDS THAT SHOW POSSIBLE 1000 HOUR SERVICE.**
- 2. DIP STICK TUBE IS LEAKING OIL AT THE OIL PAN. RECOMMEND TIGHTEN DIPSTICK AS NEEDED.**
- 3. THE ENGINE DID NOT REACH FULL RATED RPM. NO HAUL OUT WAS CONDUCTED. SUSPECT THE PROPELLERS NEED SERVICE.**

STARBOARD ENGINE:

- 1. AN OIL CHANGE WAS PERFORMED RECENTLY. NO CURRENT SERVICE RECORDS WERE FOUND FOR EXTENDED SERVICE. RECOMMEND CHECK FOR RECORDS THAT SHOW POSSIBLE 1000 HOUR SERVICE.**
- 2. OIL WAS NOTICED ON AN OIL PAD UNDER THE ENGINE. RECOMMEND CLEAN ENGINE AND LOOK FOR THE SOURCE OF THE OIL LEAK.**
- 3. TRANSMISSION OIL APPEARS DARKER IN COLOR THEN PORT. RECOMMEND CHANGE TRANSMISSION OIL AND FILTER.**
- 4. THE ENGINE DID NOT REACH FULL RATED RPM. NO HAUL OUT WAS CONDUCTED. SUSPECT THE PROPELLERS NEED SERVICE.**
- 5. BOTH TRANSMISSION OIL ANALYSIS REPORTS SHOW ELEVATED CHROMIUM. RECOMMEND CHANGE OIL AND RETEST AT NEXT OIL CHANGE.**

GENERATOR RECOMMENDATIONS:

BOTH GENERATORS RAN WELL FOR THE DURATION OF THE SURVEY AND APPEAR TO HAVE BEEN WELL MAINTAINED. THE PORT GENERATOR IS SMALLER THEN THE STARBOARD. LOAD MANAGEMENT WILL NEED TO BE CONTROLLED WHILE USING THE 20 KW GENERATOR.

THE FOLLOWING ARE RECOMMENDATIONS BASED UPON AN EXTERNAL VISUAL INSPECTION AND LOAD TEST USING SHIPS EQUIPMENT.

PORT GENERATOR SET:

- 1. NO CURRENT SERVICE RECORDS WERE FOUND FOR EXTENDED SERVICE. RECOMMEND CHECK FOR RECORDS THAT SHOW POSSIBLE 1000 HOUR SERVICE.**

STARBOARD GENERATOR SET:

- 1. NO CURRENT SERVICE RECORDS WERE FOUND FOR EXTENDED SERVICE. RECOMMEND CHECK FOR RECORDS THAT SHOW POSSIBLE 1000 HOUR SERVICE.**

The Opinions and Recommendations set forth in this report were compiled as of this date stated and do not imply or constitute a warranty of any type. This report issued without prejudice to the rights of whom it may concern.