

MARINE DIESEL & ENGINEERING, INC.
525 Greaton Avenue
Davie, FL 33325
(954) 260-5250

VISUAL ENGINE INSPECTION REPORT

DATE:	MAY 29, 2026	INSPECTOR:	CODY DIBELLA
PURCHASER:		VESSEL:	130
EMAIL:		BUILDER:	WESTPORT
BROKER:	MICHAEL STRASSEL	YEAR:	2004
EMAIL:	mstrassel@hmy.com	VESSEL NAME:	ELYSIAN
SURVEYOR:	WALTER RICHARDSON	LOCATION:	FORT LAUDERDALE
		HULL NO:	WPS01508M204

IDENTIFICATION AND COLD CHECK INFORMATION

	PORT	STARBOARD
ENGINE MANUFACTURER	M.T.U.	M.T.U.
ENGINE MODEL NUMBER	5262001446	5262001447
ENGINE SERIAL NUMBER	12V4000	12V4000
ENGINE HOURS	5965 (ON DISPLAY)	9141
TRANSMISSION MAKE	TWIN DISC	TWIN DISC
TRANSMISSION MODEL	MG-6984-00-A	MG-6984-00-A
TRANSMISSION SERIAL	9A9810	9A1809
TRANSMISSION RATIO	2.50	2.50

FLUID SYSTEMS CHECK

	PORT	STARBOARD
COOLANT LEVEL	FULL	FULL
COOLANT CONDITION	SERVICEABLE	SERVICEABLE
ENGINE OIL LEVEL	FULL	FULL
ENGINE OIL CONDITION	SERVICEABLE	SERVICEABLE
TRANSMISSION OIL LEVEL	FULL	FULL
TRANSMISSION OIL CONDITION	CLEAN	CLEAN
TRANSMISSION STRAINER	INTERNAL	INTERNAL

INSPECTION OF PORT ENGINE

SEA WATER INLET VALVE	FREE
SEA WATER INLET HOSE	NO LEAKS OBSERVED
SEA WATER STRAINER	CORRODED
RAW WATER PUMP	NO LEAKS OBSERVED
RAW WATER PIPING	SECURE
CHARGE AIR COOLERS	NO LEAKS OBSERVED
TRANSMISSION OIL COOLER	NO LEAKS OBSERVED
RAW WATER DISCHARGE HOSE	SECURE
RAW WATER HOSES	SECURE
RAW WATER CLAMPS	SECURE

EXHAUST

DISCHARGE RISERS	HARD LAGGED/ LEAKS NOTED
EXHAUST HOSE	SERVICEABLE
EXHAUST CLAMPS	SECURE

COOLING SYSTEM

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

FUEL SYSTEM

PRIMARY FUEL FILTERS	DUAL SEA PRO 600
SECONDARY FILTERS	CANISTER
FUEL SUPPLY HOSE	SECURE
ENGINE FUEL LINES	SECURE
FUEL MANIFOLD	VALVE AT PRIMARY
FUEL PRIMING SYSTEM	HAND PUMP

INSPECTION OF PORT ENGINE

ENGINE AIR INTAKE

TYPE	MTU PAPER ELEMENT
AIR SEP REGULATOR	BREATHERS
AIR SEP DRAIN LINES	NO LEAKS OBSERVED

ENGINE ASPIRATION

TURBO CHARGERS	TWIN SEQUENTIAL
BLOWERS	N/A
CHARGE AIR COOLERS	DUAL FRESH WATER COOLED
AIR SHUT DOWN SYSTEM	NO
BOOST HOSE & PIPING	SECURE

ENGINE MOUNTING

TYPE	QUAD ISOLATORS
CONDITION	FIRM

CONTROLS

TYPE	MTU
OPERATION	OK
SYNCHRONIZER	YES

INSPECTION OF STARBOARD ENGINE

SEA WATER INLET VALVE	FREE
SEA WATER INLET HOSE	NO LEAKS OBSERVED
SEA WATER STRAINER	CORRODED
RAW WATER PUMP	NO LEAKS OBSERVED
RAW WATER PIPING	SECURE
CHARGE AIR COOLERS	NO LEAKS OBSERVED
TRANSMISSION OIL COOLER	NO LEAKS OBSERVED
RAW WATER DISCHARGE HOSE	SECURE
RAW WATER HOSES	SECURE
RAW WATER CLAMPS	SECURE

EXHAUST

DISCHARGE RISERS	HARD LAGGED/ LEAKS NOTED
EXHAUST HOSE	SERVICEABLE
EXHAUST CLAMPS	SECURE

COOLING SYSTEM

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

FUEL SYSTEM

PRIMARY FUEL FILTERS	DUAL SEA PRO 600
SECONDARY FILTERS	CANISTER
FUEL SUPPLY HOSE	SECURE
ENGINE FUEL LINES	SECURE
FUEL MANIFOLD	VALVE AT PRIMARY
FUEL PRIMING SYSTEM	HAND PUMP

INSPECTION OF STARBOARD ENGINE

ENGINE AIR INTAKE

TYPE	MTU PAPER ELEMENT
AIR SEP REGULATOR	BREATHERS
AIR SEP DRAIN LINES	NO LEAKS OBSERVED

ENGINE ASPIRATION

TURBO CHARGERS	TWIN SEQUENTIAL
BLOWERS	N/A
CHARGE AIR COOLERS	DUAL FRESH WATER COOLED
AIR SHUT DOWN SYSTEM	NO
BOOST HOSE & PIPING	SECURE

ENGINE MOUNTING

TYPE	QUAD ISOLATORS
CONDITION	FIRM

CONTROLS

TYPE	MTU
OPERATION	OK
SYNCHRONIZER	YES

STATIONARY INSPECTION OF ACCESSORIES

	<u>PORT</u>	<u>STARBOARD</u>
ENGINE AIR COMPRESSOR	N/A	N/A
STABILIZER PUMPS	N/A	N/A
POWER STEERING PUMPS	N/A	N/A
PTO	ON GENERATOR	ON GENERATOR
BELT DRIVEN ADD ONS	ALTERNATOR	ALTERNATOR
OIL UNDER ENGINES	NO	NO
MISC ENGINE OIL LEAKS	NO	NO
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 WAATER LEAKS	NO LEAKS OBSERVED	NO LEAKS OBSERVED
EXHAUST LEAKS	YES	YES
BOOST LEAKS	NO LEAKS OBSERVE	NO LEAKS OBSERVED
CONTROLS	ELECTRONIC	ELECTRONIC

INITIAL START UP INSPECTION

	PORT	STARBOARD
BATTERY VOLTAGE	26.8 VDC	26.8 VDC
ALARM OPERATIONAL	YES	YES
ALL GAUGES TO ZERO	YES	YES

ENGINE STARTED COLD DOCKSIDE

	PORT	STARBOARD
EXHAUST SMOKE	YES/WHEN WARM	YES/WHEN WARM
OIL PRESSURE	70	68
TRANS PRESSURE	34	32
R.P.M.	575	575
ENGINE VIBRATION	NO	NO
BATTERY VOLTAGE	27.6 VDC	27.5 VDC
INSPECTED FOR LEAKS	YES	YES
CONTROL OPERATION	OK	OK

SEATRIAL OPERATING AT CRUISE

RPM	Coolant Temp	Oil Pressure	Boost Pressure	Fuel Burn (GPH)	Engine Load	Trans Oil pres.	Trans Oil temp
1100	168 168	76 72	18.8 17.3	16 17	36 42	330 328	109 108
1200	174 174	71 70	21.0 19.5	21 22	41 45	332 330	116 114
1400	179 178	75 72	29.5 26.5	29 31	48 49	334 332	118 117
1650	182 182	78 76	28.8 27.5	72 73	74 72	340 340	121 121
1800	185 188	80 78	36.0 34.0	87 88	71 74	342 340	122 122
1900	190 190	80 78	37.3 36.3	97 98	72 74	344 342	129 127
2102/2102	192 191	81 79	49.0 47.8	121 123	82 84	346 344	137 132

IDLE SPEED OPERATING CONDITION

(CHECK AFTER COOL DOWN FROM RUNNING HARD)

	PORT	STARBOARD
ENGINE RPM	700	700
COOLANT TEMP	178	175
ENGINE OIL PRESSURE	35	31
ENGINE OIL TEMP	184	184
TRANS PRESSURE	318	316
TRANS OIL TEMP	133	129

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)

	PORT	STARBOARD
MANUFACTURER	NORTHERN LIGHTS	NORTHERN LIGHTS
MODEL	M1064T2/65KW	M1064T2/65KW
SERIAL	0642-50018	0642-50017
KW	65 KW	65 KW
HOURS	13,226	13,217
AC VOLTAGE	240 VAC	240 VAC
DC VOLTAGE	12 VDC	12 VDC
HZ	60	60
PHASE	SINGLE	SINGLE
WIRED 120 OR 120/240	120/240	120/240
OIL LEVEL	FULL	FULL
OIL CONDITION	SERVICEABLE	SERVICEABLE
COOLANT LEVEL	FULL	FULL
COOLANT CONDITON	SERVICEABLE	SERVICEABLE
BELT TENSION	PROPER	PROPER
LIFT MUFFLER CONDITION	SECURE	SECURE
EXHAUST HOSE CONDITION	SERVICEABLE	SERVICEABLE
FRESH WATER PUMP	NO LEAKS OBSERVED	NO LEAKS OBSERVED
HOSES AND CLAMPS	SERVICEABLE	SERVICEABLE
EXHAUST ELBOW CONDITION	NO LEAKS OBSERVED	NO LEAKS OBSERVED
GENERAL WIRING	GOOD	GOOD
SEA STRAINER	CLEAN	CLEAN
SEA VALVE	FREE	FREE
CIRCUIT BREAKER	HELD LOAD	HELD LOAD

START UP AND TEST RUN

	PORT	STARBOARD
AC VOLTAGE	240	240
AMP DRAW	152	158
AMP DRAW	60	60
EXHAUST COLOR	CLEAN	CLEAN
SALT WATER FLOW	GOOD	GOOD
FRESH WATER TEMP	180	180
OIL PRESSURE	51	59

ENGINE SURVEY

THE FOLLOWING ARE RECOMMENDATIONS BASED UPON EXTERNAL VISUAL INSPECTION AND SEA TRIAL.

MAIN ENGINES:

- 1. PORT SHAFT COOLING WATER SUPPLY HOSE IS SINGLE CLAMPED AT DISCHARGE PIPE. RECOMMEND DOUBLE CLAMP.**
- 2. BOTH ENGINE SEA STRAINERS ARE CORRODED. RECOMMEND SERVICE SEA STRAINERS.**
- 3. FRONT OF PORT ENGINE IS DIRTY/OILY. RECOMMEND CLEAN AREA TO MONITOR FOR ANY LEAKS.**
- 4. BOTTOM BOLT BACKED OUT ON FRONT OF PORT INBOARD EXHAUST MANIFOLD. RECOMMEND TIGHTEN BOLT.**
- 5. EXHAUST LEAKS AT EXHAUST MIXERS. RECOMMEND REPLACE EXHAUST SYSTEMS. **ESTIMATED COST OF \$35,000 PER ENGINE.****
- 6. THERE ARE DISCREPANCIES ON PORT ENGINE HOURS. THE DISPLAY READS 5965 HOURS WHILE THE STARBOARD ENGINE IS OVER 9000 HOURS. RECOMMEND CHECK RECORDS TO FIND ACCURATE ENGINE HOURS.**
- 7. BONDING WIRES TO TRANSMISSION OIL COOLER FITTINGS AND SHAFT BRUSHES ARE DISCONNECTED. RECOMMEND RECONNECT AND SECURE BONDING WIRES.**
- 8. STARBOARD BOOST PRESSURE IS LOWER THROUGHOUT RPM RANGE/BLACK SMOKE THEN CLEARS UP. RECOMMEND CHECK CLEARANCE ON TURBO EXHAUST HOUSINGS.**

GENERATOR RECOMENDATIONS:

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

PORT GENERATOR:

- 1. AFT INBOARD LATCH IS NOT SECURE. RECOMMEND SECURE LATCH.**
- 2. OVERFLOW BOTTLE IS NOT SECURE. RECOMMEND SECURE OVERFLOW BOTTOM.**
- 3. GENERATOR INSULATION IS MELTED. RECOMMEND REMOVE AND INSTALL NEW INSULATION.**
- 4. HEAT EXCHANGER IS CORRODED AT OUTLET. RECOMMEND REMOVE AND SERVICE HEAT EXCHANGER.**

STARBOARD GENERATOR:

- 1. GENERATOR HAS EXCESSIVE SMOKE UNDER LOAD. RECOMMEND REMOVE AND SERVICE INJECTORS AND INJECTION PUMP.**
- 2. EXCESSIVE OIL IN DRIP PAN. NO ACTIVE LEAKS. RECOMMEND CLEAN AND MONITOR.**
- 3. HEAT EXCHANGER IS CORRODED AT OUTLET. RECOMMEND REMOVE AND SERVICE HEAT EXCHANGER.**

The Opinions and Recommendations set forth in this report were compiled as of this date stated and do no imply or constitute a warranty of any type. This report issued without prejudice to the rights of whom it may concern.