

MARINE DIESEL & ENGINEERING, INC.

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

VISUAL ENGINE INSPECTION REPORT

DATE:	AUGUST 18, 2026	INSPECTOR:	JACK DIBELLA
PURCHASER:	SAL DICARLO	VESSEL:	100
PHONE:	561- 316- 4848	BUILDER:	HATTERAS
EMAIL:	sdcd5properties.com	YEAR:	2005
MAGIC EMAIL :	dllc@aol.com	VESSEL NAME:	MAGIC
SURVEYOR:	ROLLIE GORDON	LOCATION:	JUPITER
BROKER:	MIKE STRESSEL	HULL NO.:	HATGF618I405

IDENTIFICATION AND COLD CHECK INFORMATION

	PORT	STARBOARD
ENGINE MANUFACTURER	MTU	MTU
ENGINE SERIAL NUMBER	536 2002 573	536 2002 575
ENGINE MODEL NUMBER	16V-2000	16V-2000
ENGINE HOURS	6018.75	6029.64
TRANSMISSION MAKE	ZF	ZF
TRANSMISSION MODEL	ZF 2565	ZF 2565
TRANSMISSION SERIAL	50010719	50010720
TRANSMISSION RATIO	4.792	4.792

FLUID SYSTEMS CHECK

	PORT	STARBOARD
COOLANT LEVEL	FULL	FULL
COOLANT CONDITION	OK	OK
ENGINE OIL LEVEL	FULL	FULL
ENGINE OIL CONDITION	OK	OK
TRANSMISSION OIL LEVEL	FULL	FULL
TRANSMISSION OIL CONDITION	OK	OK
TRANSMISSION STRAINER	OPERATIONAL	OPERATIONAL

INSPECTION OF PORT ENGINE

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

EXHAUST

DISCHARGE RISERS	HARD LAGGED/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 LINES	SECURE

FUEL SYSTEM

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

INSPECTION OF PORT ENGINE (CONT'D)

ENGINE AIR INTAKE

TYPE	PAPER ELEMENT
AIR SEP REGULATOR	MTU CCV
AIR SEP DRAIN LINES	N/A

ENGINE ASPIRATION

TURBO CHARGERS	TWIN TURBO
BLOWERS	N/A
CHARGE-AIR COOLER	FRESH 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	SERVICEABLE
SEA WATER INLET HOSE	CLEAN
SEA STRAINER	NO LEAKS OBSERVED
RAW WATER PUMP	NO LEAKS OBSERVED
RAW WATER PIPING	SECURE
FUEL COOLERS	NO LEAKS OBSERVED
AFTER COOLERS	NO LEAKS OBSERVED
TRANSMISSION OIL COOLER	NO LEAKS OBSERVED
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RAW WATER CLAMPS	SECURE

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COOLING SYSTEM

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FUEL MANIFOLD	VALVES ON RACOR
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INSPECTION OF STARBOARD ENGINE (CONT'D)

ENGINE AIR INTAKE

TYPE	PAPER ELEMENT
AIR SEP REGULATOR	MTU CCV
AIR SEP DRAIN LINES	N/A

ENGINE ASPIRATION

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BLOWERS	N/A
CHARGE-AIR COOLER	FRESH 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	YES	YES
POWER STEERING PUMPS	NO	NO
PTO	ON TRANSMISSION	ON TRANSMISSION
BELT DRIVEN ADD ONS	ALTERNATOR	ALTERNATOR
OIL UNDER ENGINES	NO	NO
MISC ENGINE OIL LEAKS	NO LEAKS OBSERVED	NO LEAKS 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
HYDRAULIC OIL LEAKS	NO LEAKS OBSERVED	NO LEAKS OBSERVED
CONTROLS	DDEC/MTU	DDEC/MTU

INITIAL START UP INSPECTION

	PORT	STARBOARD
BATTERY VOLTAGE	24 VDC	24 VDC
ALARM OPERATIONAL	OPERATIONAL	OPERATIONAL
ALL GAUGES TO ZERO	YES	YES

ENGINE STARTED COLD DOCKSIDE

	PORT	STARBOARD
EXHAUST SMOKE	SLIGHT	SLIGHT
OIL PRESSURE	92	88
TRANS PRESSURE	222	220
R.P.M.	575	575
ENGINE VIBRATION	NO	NO
BATTERY VOLTAGE	26.2	26.1
INSPECTED FOR LEAKS	YES	YES
CONTROL OPERATION	GOOD	GOOD

SEATRIAL OPERATING AT CRUISE

	PORT	STARBOARD
CRUISING RPM	1800	1800
COOLANT TEMP	164	159
ENGINE OIL PRESSURE	98	104
ENGINE OIL TEMP	167	168
BOOST	33.7	33.5
FUEL PRESSURE	79	82
ENGINE LOAD	54	66
FUEL RATE (GPH)	49	43
TRANS OIL PRESSURE	242	242
TRANS OIL TEMP	117	118

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SEATRIAL OPERATING AT FULL LOAD

	PORT	STARBOARD
FULL LOAD RPM	1970	2210
COOLANT TEMP	177	176
ENGINE OIL PRESSURE	96	93
ENGINE OIL TEMP	177	179
BOOST	50	50
FUEL PRESSURE	78	78
ENGINE LOAD	55	100
FUEL RATE (GPH)	59	90
TRANS OIL PRESSURE	250	250
TRANS OIL TEMP	120	120

IDLE SPEED OPERATING CONDITION

(CHECK AFTER COOL DOWN FROM RUNNING HARD)

	PORT	STARBOARD
ENGINE RPM	600	600
COOLANT TEMP	153	153
ENGINE OIL PRESSURE	52	52
ENGINE OIL TEMP	161	164
TRANS PRESSURE	222	220
TRANS OIL TEMP	126	121

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 LEAKS OBSERVED	NO LEAKS OBSERVED
SHAFT SEAL LEAKING WATER	NO LEAKS OBSERVED	NO LEAKS OBSERVED
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	CUMMINS/ONAN	CUMMINS/ONAN
MODEL	45MCGCA-999	45MCGCA-999
SERIAL	E030501972	E030496421
SPEC	D	D
KW	45	45
HOURS	2290	2478
AC VOLTAGE	240 VAC	240 VAC
DC VOLTAGE	24 VDC	24 VDC
HZ	60 HZ	60 HZ
PHASE	1	1
WIRED 120 OR 120/240	120/240	120/240
OIL LEVEL	FULL	FULL
OIL CONDITION	OK	OK
COOLANT LEVEL	FULL	FULL
COOLANT CONDITON	OK	OK
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	OK	OK
EXHAUST ELBOW CONDITION	NO LEAKS OBSERVED	NO LEAKS OBSERVED
GENERAL WIRING	GOOD	GOOD
SEA STRAINER	CLEAN	CLEAN
SEA VALVE	OPERATIONAL	OPERATIONAL
CIRCUIT BREAKER	HELD LOAD	HELD LOAD

START UP AND TEST RUN

RUNNING AT AVERAGE LOAD

	<u>PORT</u>	<u>STARBOARD</u>
AC VOLTAGE	238	239
AMP DRAW	64	65
HZ	60	60.2
EXHAUST COLOR	CLEAN	CLEAN
SALT WATER FLOW	GOOD	GOOD
FRESH WATER TEMP	181	180
OIL PRESSURE	50	52

ENGINE SURVEY

VESSEL IS EQUIPPED WITH TWO MTU MARINE DIESEL ENGINES, ZF TRANSMISSIONS AND TWO ONAN GENERATOR SETS.

**THE OVERALL CONDITION OF THE ENGINE ROOM IS GOOD.
THE ENGINES ARE EQUIPPED WITH RACOR FUEL FILTERS AND
WALKER AIR SEPS.**

**BOTH ENGINES RAN WELL FOR THE DURATION OF THE SEA TRIAL.
THE FOLLOWING ARE RECOMMENDATIONS BASED UPON EXTERNAL
VISUAL INSPECTION AND SEA TRIAL:**

PORT ENGINE:

- 1. PORT ENGINE CRANK CASE VENT LINE ARE DRIPPING SOME OIL. RECOMMEND TIGHTEN FITTING, CLEAN AND MONITOR.**
- 2. PORT ENGINE RACORS HAVE SOME ALGUE AND SEDIMENT IN BOWLS. RECOMMEND SERVICE RACORS.**
- 3. PORT TURBO EXHAUST FLAP IS STUCK SHUT, ENGINE WILL NOT COME UP TO SPEED. RECOMMEND REPAIR THE EXHAUST FLAP AND RETEST THE ENGINE.**

STARBOARD ENGINE:

- 1. STARBOARD ENGINE CRANK CASE VENT LINE ARE DRIPPING SOME OIL. RECOMMEND TIGHTEN FITTING, CLEAN AND MONITOR.**
- 2. STARBOARD ENGINE RACORS HAVE SOME ALGUE AND SEDIMENT IN BOWLS. RECOMMEND SERVICE RACORS.**
- 3. STARBOARD TRANSMISSION FRONT HAD SOME OIL STREAKING. NO ACTIVE LEAKS WERE OBSERVED. SUSPECT TO BE DRIPPING DOWN FROM ABOVE CRANK CASE PIPING. RECOMMEND CLEAN AND MONITOR.**
- 4. BOTH TRANSMISSIONS OIL ANALYSIS REPORTS SHOW ABNORMAL READING FOR CHROMIUM. RECOMMEND CHANGE OIL AND RETEST AT NEXT OIL CHANGE'**

GENERATOR RECOMENDATIONS:

**VESSEL IS EQUIPPED WITH TWO ONAN GENERATOR SETS.
THE FOLLOWING ARE RECOMMENDATION BASED UPON A VISUAL
INSPECTION AND LOAD TEST USING SHIPS EQUIPMENT:**

PORT GENERATOR:

- 1. PORT GENERATOR IS IN GOOD OPERATING CONDITION.
RECOMMEND CONTINUE REGULARLY SCHEDULED MAINTENANCE.**

STARBOARD GENERATOR:

- 1. STARBOARD GENERATOR HAD SOME OIL POOLED IN DRIP TRAY.
NO ACTIVE LEAKS WERE OBSERVED. RECOMMEND CLEAN OIL AND
MONITOR.**
- 2. STARBOARD GENERATOR IS IN GOOD OPERATION CONDITION.
RECOMMEND CONTINUE REGULARLY SCHEDULED MAINTENANCE.**

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.