



RPM DIESEL ENGINE CO. INC.
2555 STATE RD 84
FT. LAUDERDALE FLORIDA 33312
BROWARD: 954-587-1620 FAX: 954-587-0367

DATE: August 26, 2026

HULL# QE011923A404

DOC# JMP20112

WO # 75341

TO: M/V RISK AND REWARD
410 OAKTON TERRACE
MARIETTE, GA. 30064

Survey on the M/V Risk and Reward,

The 120' Crescent was inspected on August 26, 2026 while in West Palm Beach, FL and during a trial run on the Atlantic Ocean. This was requested by the prospective owner, buyer, or broker/agent for the vessel.

The vessel was equipped with Twin MTU 16V2000 M91 Main Engines and Twin Northern Lights generator sets.

The following inspections and tests were conducted by external methods only. If major dismantling of the engines is required, it will be conducted at a later date at an agreed upon rate at which time an addendum to this report will be issued. The type of inspections conducted at this time are intended to relay the present operating condition of the engines, transmissions, and generators as of this date. Latent defects and internal failures will not be covered in this report.

A bore scope test was not conducted at this time, as per customer request. ____ Customer Initial. See attached addendum.

Oil samples were taken and sent to laboratory for analysis. The results should be sent to us in four or five days.

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TERMS, CONDITIONS & LIMITATIONS

This engine survey report is issued by the undersigned, who has exercised reasonable care in conducting a visual inspection of the accessible areas, in connection with a marine diesel engine survey of the subject vessel. All details and particulars in this report are believed to be true, but are not guaranteed accurate. All judgements, conclusions and recommendations are expressions of opinion of the undersigned based on his skill, training and experience. After a routine examination of the vessel's engines, and after discussions with owners or others familiar with the vessel.

No part of this report is issued as an expressed or implied warranty of the condition or life expectancy of the vessel's engines, reverse gears and generators, or of the cost of repairs. Unless specifically stated otherwise in this report, the undersigned has not disassembled or removed any components, covers, or accessories for inspection or testing; therefor this report does not cover latent defects not readily discovered without such removal or disassembly. **The undersigned has conducted his survey and issued this report for the sole use of the specified requesting party. For an agreed fee based on the intended use of the report and legal liability of the undersigned; accordingly, Others are not to use this report and not to rely upon the contents of this report without payment to the undersigned of an additional agreed fee based upon reevaluation of the same factors.** Further, the undersigned shall have no liability for property loss damages, and no liability for punitive damages, all of which shall be deemed to have knowingly and voluntarily waived upon use of this report; further, in no event shall the legal liability of the undersigned for this report ever exceed the fee paid by the requesting party for issuance of this report, regardless of the number of claims or suits and regardless of whether under theory of tort, contract, warranty, outrage, or otherwise.

THIS SURVEY IS PREPARED EXCLUSIVELY FOR A POTENTIAL BUYER AND IS NOT IN ANY CIRCUMSTANCES TRANSFERRABLE.

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TRIAL RUN DATA

	IDLE	PORT FULL LOAD	IDLE	STBD FULL LOAD
RPM	<u>575</u>	<u>2364</u>	<u>575</u>	<u>2346</u>
OIL PRESSURE (psi)	<u>42</u>	<u>86</u>	<u>43</u>	<u>91</u>
FUEL PRESSURE (psi)	<u>65</u>	<u>95</u>	<u>46</u>	<u>108</u>
GEAR OIL PRESSURE	<u>350</u>	<u>374</u>	<u>348</u>	<u>372</u>
GEAR OIL TEMP	<u>121</u>	<u>133</u>	<u>119</u>	<u>130</u>
ALTERNATOR OUTPUT	<u>27.4</u>	<u>27.2</u>	<u>27.6</u>	<u>27.1</u>
TURBO PRESSURE PSI	<u>14.5</u>	<u>50.7</u>	<u>15.9</u>	<u>49.3</u>
WATER TEMP (deg. F)	<u>155</u>	<u>172</u>	<u>156</u>	<u>176</u>

Notes:

- 1.Sea trial went well. Ocean seas were 1 to 2 feet.
- 3.Ocean temperature was 85 degrees.
- 2.Port and Starboard engines came up to proper full load RPMs.
All readings are within spec.

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ENGINES: PORT

PORT ENGINE	<u>MTU</u>	HOURS	<u>2721</u>
MODEL NUMBER	<u>16V2000 M91</u>	SERIAL#	<u>536 200 2451</u>
NO. OF CYLINDER	<u>16</u>	RATED H.P	<u>2000</u> KW <u>1491</u>
TRANSMISSION	<u>Twin Disc</u>	Rated RPM	<u>2350</u> Year <u>2002</u>
MODEL NUMBER	<u>MG 6598-00-DC</u>	SERIAL#	<u>9A1788</u>
RATIO	<u>3.48:1</u>		

CONDITION

PRIMARY FUEL FILTER	<u>TWIN RACOR</u>
SECONDARY FUEL FILTER	<u>Twin Spin On</u>
AIR CLEANER	<u>serviceable</u>
FUEL LINES	<u>Not Leaking</u>
LUBE OIL LINES	<u>Note #1</u>
TRANSMISSION OIL LINES	<u>Not Leaking</u>
TRANSMISSION WATER COOLING LINES	<u>Not Leaking</u>
RAW WATER SYSTEM	<u>Serviceable</u>
RAW WATER HOSES	<u>Not Leaking</u>
RAW WATER CLAMPS	<u>Serviceable</u>
RAW WATER PUMP	<u>Note #2</u>
RAW WATER SEA VALVE	<u>Free</u>
RAW WATER STRAINER	<u>Serviceable</u>
HEAT EXCHANGER	<u>Not Leaking</u>
FRESH WATER SYSTEM	<u>Serviceable</u>
FRESH WATER CIRCULATING PUMP	<u>Not Leaking</u>
FRESH WATER HOSES	<u>Not Leaking</u>
FRESH WATER CLAMPS	<u>Not Leaking</u>
COOLING FLUID CONDITION	<u>Serviceable</u>
PRESSURE CAP	<u>Not Leaking</u>
EXHAUST SYSTEM RISER	<u>No external leaks</u>
EXHAUST SYSTEM HOSES	<u>Not Leaking</u>

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PORT ENGINE (Continued)

EXHAUST SYSTEM	<u>Note #3</u>
TURBO	<u>Spin Freely</u>
SHAFT COUPLER	<u>True</u>
CLUTCH AND THROTTLE CONTROL	<u>Normal Operation</u>
MOTOR MOUNTS	<u>Secure</u>
EMERGENCY ENGINE STOPS	<u>Mechanical</u>
GAUGES	<u>MTU</u>
WIRING	<u>Serviceable</u>
BELTS	<u>Note #4</u>
TRANSMISSION SEAL	<u>Not Leaking</u>
ENGINE FRONT SEAL	<u>NOTE #5</u>
ENGINE REAR SEAL	<u>Not Leaking</u>

REMARKS AND RECOMMENDATIONS:

- 1.A bank exhaust actuator ram seal leaking oil
- 2.Raw water pump shows signs of sea water leak at relief bore
- 3.A bank exhaust actuator flap shaft showing signs of slight exhaust leak
- 4.Belt guard is missing
- 5.Front main seal leaking a small amount of oil, recommend clean and monitor leak
- 6.Cover missing on bock heater control box
- 7.4/2-way solenoid missing retaining nut for solenoid
- 8.Fuel pressure sensor harness connector damaged

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ENGINES: STARBOARD

STBD ENGINE	<u>MTU</u>	HOURS	<u>2697</u>
MODEL NUMBER	<u>16V2000 M91</u>	SERIAL#	<u>536 200 2453</u>
NO. OF CYLINDER	<u>16</u>	RATED H.P	<u>2000</u> KW <u>1491</u>
TRANSMISSION	<u>Twin Disc</u>	RATED RPM	<u>2350</u> Year <u>2002</u>
MODEL NUMBER	<u>MG-6598-00-DC</u>	SERIAL#	<u>9A1789</u>
RATIO	<u>3.48:1 A</u>		

CONDITION

PRIMARY FUEL FILTER	<u>Twin Racor</u>
SECONDARY FUEL FILTER	<u>Twin Spin On</u>
AIR CLEANER	<u>Serviceable</u>
FUEL LINES	<u>Not Leaking</u>
LUBE OIL LINES	<u>Note #1</u>
TRANSMISSION OIL LINES	<u>Not Leaking</u>
TRANSMISSION WATER COOLING LINES	<u>Not Leaking</u>
RAW WATER SYSTEM	<u>Serviceable</u>
RAW WATER HOSES	<u>Not Leaking</u>
RAW WATER CLAMPS	<u>Serviceable</u>
RAW WATER PUMP	<u>Not Leaking</u>
RAW WATER SEA VALVE	<u>Free</u>
RAW WATER STRAINERS	<u>Serviceable</u>
HEAT EXCHANGER	<u>Not Leaking</u>
FRESH WATER SYSTEM	<u>Serviceable</u>
FRESH WATER CIRCULATING PUMP	<u>Not Leaking</u>
FRESH WATER HOSES	<u>Not Leaking</u>
FRESH WATER CLAMPS	<u>Serviceable</u>
COOLING FLUID CONDITION	<u>Serviceable</u>
PRESSURE CAP	<u>Not Leaking</u>
EXHAUST SYSTEM RISER	<u>No External Leaks</u>
EXHAUST SYSTEM HOSES	<u>Not leaking</u>

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STARBOARD ENGINE (Continued)

EXHAUST SYSTEM	<u>Note #2</u>
TURBO	<u>Spin Freely</u>
SHAFT COUPLER	<u>True</u>
CLUTCH AND THROTTLE CONTROL	<u>Normal Operation</u>
MOTOR MOUNTS	<u>Secure</u>
EMERGENCY ENGINE STOPS	<u>Mechanical</u>
GAUGES	<u>MTU</u>
WIRING	<u>Serviceable</u>
BELTS	<u>Note #3</u>
TRANSMISSION SEAL	<u>Not Leaking</u>
ENGINE FRONT SEAL	<u>Not Leaking</u>
ENGINE REAR SEAL	<u>Not Leaking</u>

REMARKS AND RECOMMENDATIONS:

- 1.A bank side of oil pan gasket leaking oil
- 2.A bank exhaust actuator flap shaft showing signs of slight exhaust leak
- 3.Belt guard is missing

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GENERATOR: PORT

GENERATOR	<u>Northern Lights</u>	HOURS	<u>6051</u>
MODEL NUMBER	<u>MP445T-HE-55KW</u>	SERIAL#	<u>4452-31791</u>
KILOWATTS	<u>55</u>	VOLTS	<u>120/208</u>
NO. OF CYLINDERS	<u>4</u>	RPM	<u>1800</u>

	CONDITION
FILTERS	<u>Twin Racor</u>
LIFT PUMP	<u>Note #1</u>
FRESH WATER PUMP	<u>Not Leaking</u>
RAW WATER PUMP	<u>Not leaking</u>
RAW WATER HOSES	<u>Not leaking</u>
FRESH WATER HOSES	<u>Not Leaking</u>
BELT(S)	<u>Serviceable</u>
MUFFLER	<u>Not Leaking</u>
EXHAUST HOSES	<u>Not Leaking</u>
INJECTORS	<u>Serviceable</u>
INJECTION LINES	<u>Not Leaking</u>
ZINCS	<u>Serviceable</u>
HEAT EXCHANGER	<u>Not Leaking</u>
MIXING ELBOW	<u>Not leaking</u>

OPERATIONAL DATA

WATER TEMPERATURE	<u>170 F</u>
OIL PRESSURE	<u>62 Psi</u>

REMARKS AND RECOMMENDATIONS:

- 1.Low pressure fuel pump leaking oil
- 2.Oil leak at turbo oil drain hose
- 3.Oil pan gasket leaking oil
- 4.Oil in drip tray

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GENERATOR: STARBOARD

GENERATOR	<u>Northern Lights</u>	HOURS	<u>6005</u>
MODEL NUMBER	<u>MP445T-HE-55KW</u>	SERIAL #	<u>4452-31792</u>
KILOWATTS	<u>55</u>	VOLTS	<u>120/208</u>
NO. OF CYLINDERS	<u>4</u>	RPM	<u>1800</u>

	CONDITION
FILTERS	<u>Twin Racor</u>
LIFT PUMP	<u>Note #1</u>
FRESH WATER PUMP	<u>Not Leaking</u>
RAW WATER PUMP	<u>NOTE #2</u>
RAW WATER HOSES	<u>Not Leaking</u>
FRESH WATER HOSES	<u>Not Leaking</u>
BELT(S)	<u>Serviceable</u>
MUFFLER	<u>Not Leaking</u>
EXHAUST HOSES	<u>Not leaking</u>
INJECTORS	<u>Serviceable</u>
INJECTION LINES	<u>Not Leaking</u>
ZINCS	<u>Serviceable</u>
HEAT EXCHANGER	<u>Not Leaking</u>
Mixing Elbow	<u>Not Leaking</u>

OPERATIONAL DATA

WATER TEMPERATURE	<u>180 F</u>
OIL PRESSURE	<u>60 Psi</u>

REMARKS AND RECOMMENDATIONS:

- 1.Low pressure fuel pump leaking oil
- 2.Raw water pump leaking raw water, salt residue on oil cooler and oil filter
- 3.Oil leak at turbo oil drain hose
- 4.Oil pan gasket leaking oil
- 5.Oil in drip tray

MTU (PLEASURE CRAFT) MAINTENANCE RECOMMENDATIONS (2000 SERIES)

1) **Lubricating System**

*Check oil level daily. Replace oil and filters every 500 hours.

Crankshaft Ventilation- clean wire meshes for:

Crankcase ventilation system, every 500 hours, and 250 Hours to fit new paper or woven insert (if fitted) for Line separator for oil mist. Centrifugal oil filter (If fitted), Check thickness of oil residue layer, 500 Hours.

2) **Fuel System**

*Change fuel filters every 500 hours or annually.

*Fuel hoses should be inspected every 500 hours and Replaced at 1000 hours. Fire resistant fuel hoses do not require automatic replacement at 1000 hours, but should be inspected and replaced as necessary.

*M-90 Series Engines- Bayonets & Injectors should be changed every 3000 hours. Fuel Injection Pumps (E.U.P.'s) every 6000 hours.

*M-91 Series Engines Bayonets, Injectors and Injection Pumps (E.U.P.'s) should be replaced every 2000 hours.

3) **Cooling System**

*Check coolant level daily. A cooling system properly maintained and protected with antifreeze and supplemental inhibitors can be operated up to 2 years or 4000 hours, whichever comes first.

*Cooling hoses should be inspected every 500 hours and replaced at 1000 hours of service.

*Check engine zincs initially every 60 days, then as required or annually.

*Raw water pump (flexible impeller) should be replaced annually.

*All marine tube & bundle type heat exchangers should be replaced after 4 years or 4000 hours, whichever comes first.

4) **Air System**

*Air separator filter elements and vacuum limiters must be cleaned and re-oiled every 250 hours of engine operation.

*Filter elements must be replaced every year or every 500 hours of engine operation, whichever comes first. Vacuum limiters must be replaced every two years or 1000 hours of operation, whichever comes first.

*Air box collectors should be drained every 150 hours.

*Air silencers - clean or replace polyurethane foam elements (socks) 3 years or 2000 hours. Should be cleaned though.

4) **Drive belts**

*Drive belt tension should be checked every 150 hours, adjust if necessary and inspect for splits, cracks, and glazing. Replace belts after 2000 hours of service for M-91 series, and 3000 hours on M-90 Series, regardless of apparent conditions.

MTU (PLEASURE CRAFT) MAINTENANCE RECOMMENDATIONS (2000 SERIES

5) **Marine Gear**

*Check marine gear oil level daily. Replace marine Gear oil coolers every 4 years or 4000 hours.

FUEL SYSTEM-

- 1) M-90 Series Engines- Bayonets & Injectors should be changed every 3000 hours. Fuel Injection Pumps (E.U.P.'s) every 6000 hours.
- 2) M-91 Series Engines Bayonets, Injectors and Injection Pumps (E.U.P.'s) should be replaced every 2000 hours.
- 3) Combustion Chambers- Inspect cylinder chambers using the Bore scope.

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