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Our Time and Experience
is our Stock in Trades

February 20, 2026
File No.: 13935-26

Mr. Jeff Engler
Email: JTE@Borderfoods.com

Mr. John Anderson
Email: john@superyachtsac.com

RE: "LIV MAS", 2017, 85' Ocean Alexander Motor Yacht

Note: In addition to this text, there are 4 pages of recommendations which are an integral part of the report and should be read in conjunction with this text.

Dear Mr. Engler,

At your request via John Anderson of Superyachts this undersigned independent marine surveyor has inspected the Motor Yacht "LIV MAS" Ocean Alexander hull number while she was dockside at the Port 32 Marina in Fort Lauderdale Fl.

Date of Inspections:	February 18th – 19th 2025
Scope of Inspections:	Pre-purchase
Trial Run:	Atlantic Ocean Fort Lauderdale Beach FL
Hauled Out:	Port 32 150ton Marine Travel Lift
Attending Surveyor:	Walter Richardson – Patton Marine Surveyors
Engines & Generators:	Marine Diesel Inc.

This is a pre-purchase survey only and is not to be used for other purposes. The following is a report of those findings.

LIMITATION OF SCOPE OF SURVEY:

The survey of this yacht is based solely on a careful visual and non-destructive inspection of easily accessible portions of its structure and available equipment. Complete inspection can be made only by removal of flats, soles, decking, head liners, ceiling or hull lining, tanks, gas freeing and joiner work removals. This would be damaging in nature and prohibitively time-consuming and as we do not want to be held responsible, it was not done.

The information contained in this report, concerning sizes, accuracy of build, hull or superstructure geometry, ratings, capacities, speeds, etc., was ascertained from maker's plates, logs, documents, plans and certificates on board together with statements of the instructing entity. Unless specifically noted otherwise, none of the information was ascertained by direct measurement or calculation and, although all the information contained is believed to be correct, the accuracy thereof is in no way guaranteed.

Complete inspection of machinery, auxiliaries, piping, tanks, systems, electrical wiring, electrical and electronic equipment can be made only by continuous operation or by disassembly. This has not been done. It is recommended and understood that the engines and electrical systems are to be surveyed and tested under load by a qualified marine engineer and/or marine electrician to further determine the condition of the engines, gears and pumps, heat exchangers, coolers, or electrical systems etc..

Further, no determination of stability characteristics or inherent structural integrity has been made, but some opinion maybe expressed with respect thereto. It implies no guarantee against faulty design, hidden or latent defects. This report represents the condition of the yacht on the survey report date(s), and is the unbiased opinion of the undersigned, but it is not to be considered a warranty either specified or implied.

No warranty is made regarding the classification or regulatory status of the yacht. While the details reported are believed correct, the regulatory status of the yacht can only be confirmed directly by the certifying authorities.

This report carries no warranty regarding ownership or any warranty regarding outstanding mortgage, charges, liens or other debt there may be on the yacht.

This report is submitted for the exclusive use of the instructing client and no liability will be accepted to any third party who may subsequently read or hold a copy of this report or any of its contents. Copyright remains with the instructing client who has paid for the survey and the surveyor or surveyors. The survey is not to be given out indiscriminately. The instructing client only has the right to disperse this survey at his/or her discretion.

The scope of the examinations was (further) limited by:

The following report is the result of a (strictly) limited survey, and is not to be considered a full condition survey. Please observe 'x' marked boxes.

X Due to the yacht's interior construction, it was not possible to access all bilges and internal hull construction.
X An air conditioning survey by an authorized manufacturer's representative was unable to be or not performed.
X A full electrical survey was not performed by an electrical surveyor.
X Electronics and entertainment equipment was tested only as to functioning or not.

GENERAL:

"LIV MAS" is a semi-custom built 85' fiberglass motor yacht built by Ocean Alexander in Kaohsiung Tiawan in 2016 with the model year 2017.

She has a raked stem, Euro transom stern, raised aft deck seating and dining with raised foredeck forward, main deck wheelhouse and flybridge enclosed with Ising glass and aft tender deck. There is access in the reverse transom via a bulwark gate to a fixed swimplatform. She is twin diesel engine powered.

Her dimensions as noted from manuals:

-Length Overall:	85' 9 1/8"
-Beam:	20' 1"
-Designed Draft:	5' 11"
-Displacement:	165,721lbs
-Hull ID starboard transom:	OAX85E12J617

Certificate of Registry:

She is a US Documented Vessel, and a copy of her US Document was seen and states:

-Name:	" LIV MAS "
-Official No.:	1279001
-HIN No.:	OAX85E12J617
-Year Built:	2016
-Model Year:	2017
-Type of ship:	Pleasure
-Place Built:	Kaohsiung Tiawan
-Home Port:	Montauk NY
-Hull material:	Fiberglass (FRP)
-Length:	71.2'
-Main Breadth:	19.5'
-Depth:	7.3'
-Gross Tonnage:	133 GT ITC
-Net Tonnage:	39NT ITC
-Owner and Address:	Soliva Holdings LLC 108 W. 13th Street. Wilmington DE 2760 SHADYWOOD Rd. Excelsior MN 55331
-Restrictions:	No Fisheries – Foreign Built
-Entitlements:	None
-Restrictions:	Operation in Coastwise trade Restricted in Accordance with Maritime Administration letter dated February 7, 2022, which must accompany any current certificate of Documentation bearing a Coastwise endorsement
-Dated:	December 02, 2025
-Expires:	December 31, 2030
Other Documents Sighted:	FCC Radio Station Authorization – Call Sign WDM 3894 issued: 05-27-2021 Expires: 05-27-2031
Bill of sale:	4-26-2021 for tender – PKD27076F516

HULL:

The hull is protected by stainless steel oval rub rails fastened over PVC rubbing strakes. The one highest is at the knuckle from the stem to the transom and the second is a lower rub rail just above waterline from approximately midships aft and wrapping around the transom.

No. of port lights:	Per side: Four (4) Rectangle (Vertical Forward) Two (2) Rectangle (Horizontal Aft)
Paint Manufacturer:	Awlgrip full paint job in 2023 by Westport after starboard hull damage while shipped as deck cargo.
Hull Color:	White
Boot Stripe:	Medium Grey / white
Color of Superstructure:	White with Medium Grey arch/hardtop & mast
Antifouling Paint:	Black Sea Hawk – Fair condition

HULL CONSTRUCTION:

"LIV MAS" is a molded fiberglass semi-displacement hull yacht. It is molded in three major sections which are: the hull, superstructure and flybridge.

Large aft areas in some sections are reinforced for rigidity by sandwiching a rigid core in between layers of fiberglass, thus obtaining the desired rigidity without materially adding to the weight. The basic fiberglass sections of the boat are both mechanically and chemically bonded together to make the boat an integral unit.

History:

In 2023 after being loaded on a ship as deck cargo the yacht was struck by another vessel being loaded. This caused damage to the starboard bulwark and hull. After the yacht arrived at port the yacht was unloaded and taken on its own power to Westport Shipyard in Port Angeles WA where it was repaired to a very high standard and fully painted. There are no signs of the previous damage.

Hull:

The hull section is of one-piece molded fiberglass construction. There are four molded main fiberglass longitudinal stringers, fiberglass bonded to the hull. Primary transverse bulkheads of marine plywood are fiberglass bonded in place while the hull section is still in the mold. A hull drain cap is located in forward engine room to enable draining the boat when it is pulled out of the water.

Deck/Superstructure:

The deck/superstructure is molded as one piece. It is fiberglass bonded and mechanically fastened to the hull section to make the two sections integral.

Flybridge:

The flybridge is also molded as one piece and is mechanically fastened to the superstructure

The hull was inspected wherever visible and wherever access was possible and found to be in good structural condition with all stringers, bulkheads, and decks well-glassed in. No details of the hull-to-deck joint were available.

Transverse stiffening is achieved through the use of foam-cored, glassed-in stringers.

Stem:
Solid, no cracks on external inspection. Moisture readings were relatively dry.

Stem thru hull fittings:
A stainless-steel bow eye for trailering was well secured through the stem. Well secured. A chrome plated double tow hood was sighted on the stem. They appeared well secured and in good condition.

Side thru hull fittings:
Bronze mushroom type thru hull fittings were sighted on the vessel's topsides. All thru hull fittings appeared to be well secured to the vessel.

Rub rail:
The rub rail appeared to be made of a white PVC like material with a stainless-steel-cap rail and surrounded the vessel at the hull to deck joint. The rub rail was reinforced with a chemical bonding compound and stainless-steel fasteners. The rub rail appeared well secured to the vessel.

Transom:
Shear transom with a molded in outboard platform. Appeared secure

HAULOUT and BOTTOM INSPECTION:

The bow has a fine V entry and deep V bottom with hard chines, tunnels over the propeller shafts with manually adjustable trim plates. The bow thruster has a moulded eyebrow, and the main engine underwater exhaust are fitted with cowlings. She is fitted with a skeg keel, which runs forward of the shaft logs.

STERN VIEW

PORT BOW

STARBOARD BOW

The bottom was sounded with a phenolic hammer while supported in thee forward and two aft slings. No voids or delamination or signs of previous damage repairs was found. The bottom is considered to be in sound condition.

Weight from Travel Lift Scale:	117,000lbs
Draft: @ Prop tip:	5' 8"
Draft @ Keel:	5' 2"
Draft @ Rudder:	5' 4"
Draft at aft end of Stabilizer fin:	4'7"

Rudders:

Dimensions:	Height-41" x width-33"
Type:	Stainless steel, Balance Spade

- Rudders are noted to be toe out 1".
- Both are offset outboard for propeller and shaft removal.
- No problems noted, they are snug in the bearings.

Shaft:

Diameter: 4" (101.6 mm)
Overhang: 3 ½" with serrated line cutters on shaft.

- 1-piece stainless steel shafts 4971mm long Nonmagnetic
- Carried in single Morse bronze cutlass type bearing (E06000) at aft V strut and shaft log there is some wear sighted in the bearings port .055 and starboard .065, at the next Haulout.
- Shaft seals Tides Marine dripless with spare cartridge on shaft, good condition

Propellers:

Manufacturer: VEEM
Type: 5 blade, NiBrAl 43" diameter 42" pitch sighted
Port No.: 188047/2,
Starboard No.: 188047/1

The propellers were turned by hand against a straight edge and the tips tracked true. No damage sighted on the leading or trailing edges. The PropSpeed coatings are in good condition.

Bow & Stern Thruster:

Manufacturer: Side Power

- Bow 11 ½" molded tunnel ¼" prop tip clearance
- Stern 11 ¾" externally mounted to transom
- Dual- Four bladed CCR propeller - Composite material
- Turn free and bearings appear sound.

Stabilizers:

Manufacturer: Side Power Marine.
Fins: Are elliptically shaped with a lower wing tip and of a cored laminate construction.
Dimensions: 69" wide (top) x 35" high
Type: Hydraulic Active - Underway and At Anchor

They were sounded with a phenolic hammer and are in sound condition.

THROUGH-HULLS:

As an annual maintenance project or at each Haulout, it is recommended that all of the seacocks and sea strainers be disassembled, cleaned, inspected, and lubricated. All accessible valves were cycled and operated smoothly.

Fittings:

All underwater through hull fittings are bronze and have sea cocks inside the boat. All through hull fittings are electrically bonded to each other and connected to the boat's grounding system.

All through hull valves were visually examined and found clean and in good condition. The valves were cycled during the bilge examination and operated freely.

Port Side Underwater:	Nine (9)
Starboard Side Underwater:	Ten (10)
Transom:	Three (3) each port and starboard
Main Engine Underwater Exhaust:	15"
Generator at Transom Under Swim Platform:	4"

Underwater lights:

- 4 x LED on transom

Trim Tabs:

- Bolted, Composite, fixed blade type over prop tunnel, no problems noted.

Sacrificial Anodes:

It is important to maintain the proper zinc level on any yacht, particularly aluminum or steel vessels. It is important that proper zincs of a known composition be used. There are two grades of zincs that are specific for bottom applications. They are, military spec #A-18001H, the other is an ASTM No. B-418-67.

- Six (6) transom 12" x 7" plates 15% wastage
- One (1) each port and starboard 4" round rudder zincs: 15% wasted each
- One (1) each port and starboard shaft collar zincs: 15% wasted
- Two (2) each thruster prop tip zinc: 10% wasted

TRIAL RUN:

The following gauge readings were taken during the trial run. Noise readings were also taken and they will follow. Note: Temperature is in ºF and pressure is in PSI.

Duration of trials: Approximately 5 hours
Persons onboard: 5

Weather Condition:
Air temperature: 78^0F
Barometric Pressure: 30.03inHg
Humidity: 77%
Wind: SSE7kts
Seas: 2'
Sea temperature: 74^0F

Consumables Onboard:
Fuel: 1,223 gallons
Freshwater: 212 gallons
Black & Grey Water: 10%

- Main tender stowed on aft tender deck.

	Port	Starboard
Engine hour start:	2,286	2,291
Generator Hours Start:	2,652	2,610

During the trial run, the following systems were test operated and/or monitored.

- Main engine gauge readings
- Exhaust temperatures monitored
- Controls tested at all stations
- Bow thruster test performed
- Steering by autopilot
- Anchor windlass test operated
- Noise level readings taken
- Gear temperatures monitored
- Main engine remote starts and stops
- Stabilizers test operated underway and stationery
- Electronics and navigation equipment turned on and monitored
- Water maker test operated
- Hull potential readings taken
- Generator load testing conducted on return to dock

RPM	Speed Kts	Eng. Load %	Gal Per HR	Eng Temp ^{0}F	Eng Oil psi	Gear Temp
600	7.0	18 - 22	2 – 3	158 – 158	46 – 48	115 – 110
800	9.0	23 – 25	5 – 6	160 – 160	69 – 73	116 – 110
1000	11.0	25 – 26	8 – 9	160 – 162	91 – 94	117 – 111

RPM	Speed Kts	Eng. Load %	Gal Per HR	Eng Temp ^{0}F	Eng Oil psi	Gear Temp
1200	12.2	32 – 32	14 – 16	163 - 163	100 – 103	118 – 111
1400	13.3	38 – 37	24 – 24	167 – 167	102 – 106	117 – 111
1600	15.5	49 – 49	35 – 36	169 – 169	105 – 109	119 – 113
1800	18.0	59 – 59	50 – 50	176 – 176	106 – 109	127 – 122
2000	21.2	67 – 68	67 – 68	180 – 180	108 – 111	130 – 129
2200	24.5	84 – 84	80 – 82	181 – 181	109 – 112	130 – 129
MAX	27.1					
P2366		100	100	181	109	134
S2374		100	98	183	112	134

Date: 02/19/2026

Engine Room ambient temperature port forward:	117°F
Engine Room ambient temperature mid:	119°F
Engine Room ambient temperature starboard forward:	116°F
Engine Room ambient temperature aft:	115°F
Starboard main engine exhaust blanket temperature:	144°F
Port main engine exhaust blanket temperature:	142°F
Starboard shaft log temperature @ 1600-RPM:	90°F
Port shaft log temperature @ 1600-RPM:	89°F
Starboard shaft log leaking?:	No
Port shaft log leaking?:	No
Hydraulic oil temperature bow thruster/stabilizers:	125°F
Hydraulic pressure bow thrusters/stabilizers	1900-PSI
Comments on port stabilizer:	No leaks
Comments on starboard stabilizer:	No leaks
Comments on bow & stern thruster: Bow Thruster turn 360° to port Bow Thruster turn 360° to starboard	No issues 2min 50 sec 2min 40 sec

Comment on port rudder assembly: Comments on starboard rudder assembly:	No leaks. Tie-bar is tight along with tillers
Retrieval of anchor 100ft of chain	Yes – No issues
Black water diaphragm pump tested?	Yes – No issues

DB Noise levels were taken with a CURCONSA SL720 Digital Noise level meter set on Slow Mode. Noise levels were taken near the center of each room.

Room	**DB @ 1600 Rpm**	**DB @ Zero Speed**
Wheelhouse	57.5DB	57.4DB
Master State Room	69.0DB	56.7DB
Dining Salon	61.9DB	56.6DB
Main Deck Salon	61.2DB	55.8DB
Port Guest	58.9DB	52.7DB
Starboard Guest	58.8DB	54.5DB
Fwd VIP Guest	57.1DB	50.5DB
Galley	58.4DB	55.5DB

All onboard liquid contents tanks were visually examined, externally only. Unless otherwise mentioned in the "RECOMMENDATIONS" section of this report, no external signs of leaks or damage were found during these examinations. It is to be noted that the tanks are not totally accessible or visible on all sides. For a complete evaluation of tank tightness, they should be hydrotested.

Fuel:
Tank Capacity: 2803 Gallons
Tank Construction: Aluminum tank
Tank Location: Centerline owners stateroom bilge

Freshwater:
Tank Capacity: 360 Gallons
Tank Construction: Stainless steel
Tank Location: Centerline guest bilge

Black Water Holding:
Tank Capacity: 200 Gallons
Tank Construction: Polyethylene
Tank Location: Centerline guest bilge

Gray Water Sump Boxes:
No. of Boxes: 2
Tank Capacity: 5 gallons
Tank Construction: FRP
Tank Location: Port and starboard guest bilge

FUEL SYSTEM:

Main Engine Primary: 2 each RACOR 751000MAX fuel water separators with manifold, and Vacuum gauges

Generators: Dual RACOR 755MAX fuel water separators with manifold, and Vacuum gauges

FRESH WATER SYSTEM:

No. of tanks: One (1)
Location: Bilge Centerline between guest state rooms frame 3-5
Type: Welded stainless steel drop in
Reported capacity: 360 US gallons
Tank fill: Starboard forward main deck
Tank vent: Hull side starboard
Tank monitor: Octoplex™ Tank Tender monitor in wheelhouse and crew quarters

Fresh Water Pumps (1):
Location: Under forward companionway sole pump room
Manufacturer: Headhunters Mach 5
Voltage: 120 VAC

- One (1) spare pump sighted
- Fitted with inline strainer filter

Accumulator Tank:
Location: Under guest companionway sole
Manufacture Model: Headhunter AvF4
Capacity: 4 US gallons

The system has good pressure.

Hot Water Heater:
Location: Forward thruster compartment and Fwd pump room
Quantity: Two (2)
Manufacturer: Torrid
Model: MV40 3000-watt 220 volt
Capacity: 40 US gallons
Hot water Circulation: Grundfos UP15-29U

Watermaker:

Manufacturer:	Aqua Matic
Model No.:	900-2 GPD, 220V, 1ph, 60hz
Serial No.:	02AQMC0356374915
Hours:	System pickled for transport from west coast
Capacity:	900 gpd approx. 36gph
No. of membranes:	One (1)
Boost pumps:	One (1)
Feed pumps:	One (1)

The watermaker was tested during the trial run and operated properly the ppm is a little higher than optimal suggest replacing filters and retesting.

Membrane Pressure:	652psi
Pre-filter inlet:	33psi
Pre-filter Outlet:	32psi
Brine Flow:	226 Gph
Product Flow:	38 Gph
Salinity:	270ppm

BLACK WATER/WASTE SYSTEM:

Fresh Water Flush Heads:	7 x Planus, model ARPAD24EWHLS2ND
MDS:	Techicmar
Model:	ECOMAR 6AC, PO07A26
Serial No.:	051115EC154
Macerator Pump:	BCM20-60 .75kw 220vac
CL Dosing Pump:	DLX-MA/aD .37Kw 220vac
Discharge Pump:	Tecnicmar ZHM613040 ,55Kw 220vac

All head are electric flush were flushed underway operating correctly

GRAY WATER SYSTEM:

The lower deck end users (sinks, showers, air conditioning pans) drain to three sump boxes for direct overboard discharge via 24 VDC Rule sump pumps. The galley sink, washing machine, and dishwasher plumb overboard via a port hull side fitting at the waterline with isolation valve in the engine room.

LUBE OIL SYSTEM:

The engine maintenance system is furnished with a dedicated reversible lube oil change pump.

Manufacturer: Groco U-lube
Type: 24 VDC - centrifugal

The pump is manifold to supply and draw from each end user, i.e., main and generator engines, and gear sumps. It is fitted with a wondering hose and is designed to empty and suction via individual oil pails. The system was proven during this survey.

BOW and STERN THRUSTER:

Side Power bow and stern thrusters were sighted on the forward thruster tube and transom of the vessel. The dual propeller drives were securely mounted inside the FRP thruster tubes. No cracks or leaks were sighted where thruster tube fits into hull. The thrusters were proven in docking maneuvers and in 360^0 turns during the trial run providing adequate power in maneuvering.

Condition summary: Good condition
Model: SP 300 Hydraulic/ U-16
Turn to port: 2min 50sec
Turn to Starboard: 2min 40sec

STABILIZERS:

Manufacturer: Side Power
Model: SPS92-VF1350
Type: Active underway and At Anchor.
Controls: Digital control head at lower helm station.
Power Pack location: Stbd aft engine room

Power provided by PTO's (JRRS75CLS202) on back of main engine gear boxes and electric motor turning PTO while at anchor.

The stabilizer heads were observed in both underway and at anchor modes operating correctly.

BILGES:

Forward thruster:

- Rule 2000gph with Float switch and Gem highwater alarm

Guest Bilge:

- Rule 2000 gph with Float switch and Gem highwater alarm

Forward engine room:

- Rule 3700 gph with Float switch and Gem highwater alarm

Aft engine room:

- Rule 3700 gph with Float switch and Gem highwater alarm

Crew bilge:

- Rule 2000 gph with Float switch and Gem highwater alarm

Lazarette:

- Rule 2000 gph with Float switch and Gem highwater alarm

Comments:

Bilge spaces and stringers below the decks of the vessel (where they could be accessed) were in good condition when inspected. No raised tabbing, cracks, or shifting of the hull liner, stringers or transverse frames were sighted.

Areas that were sealed that could not be fully sighted were: Under the forward deck, under the cockpit deck (where the large fuel tank was installed), and under the port and starboard decks outboard of the cockpit deck.

FIRE SYSTEM:

2 x Manufacturer:	Sea Fire (Xintex)
Model :	GA-2000-227
Location:	Forward engine room
Agent :	78.4lbs of HFC-227
Inspection date :	Feb. 2026
Automatic Shut down :	ES-8000-01-24vdc

AIR CONDITIONING:

Type:	Direct expansion / reverse cycle heating
System voltage:	230 VAC/1-phase/60Hz
Location:	Port and Starboard engine room over generators.
Manufacturer:	Marine Air / Dometic
Controllers:	Digital Marine Air SMX
Sea Water Pump:	Marine Air model 225-500-102
Refrigerant:	410A

The yacht temperature and humidity control are managed by the eight (8) air handlers ducted as follows:

All air handlers were opened and inspected and found to be clean and in good condition.

- One (1) for salon 30,000 BTU
- One (1) for wheelhouse/ galley 30,000 BTU
- One (1) Flybridge 24,000 BTU

- One (1ea) master stateroom, Crew cabins DEU16,000 BTU
- One (1ea) mid guest cabins ED8,000 BTU
- One (1) VIP Cabin ED12,000 BTU

Room	Return Air ^{0}F	Supply Air ^{0}F
Salon	66.8	41.7
Galley/Helm	64.2	39.4
VIP Cabin	55.7	36.9
Port Guest	62.7	53.2
Stbd Guest	62.1	52.5
Master SR	59.2	45.1
Flybridge	76.7	48.6
Crew cabin	69.5	50.7

Engine Room Ventilation

The Delta-T 610-MCE-P/T4 Ventilation Control System allows for the variable speed control of the intake and exhaust fans via a digital screen control panel.

Fan speed is automatically controlled via both temperature and pressure input signals when main engines are operating, however manual fan speed control in both forward and reverse directions is also provided. If electrical power is supplied to the various components, the Ventilation Control System will automatically start the fans when the engines are started, managing, adjusting and controlling the air flow required for both combustion and cooling air. When the engines are shutting down the VCS will switch modes and cool the engine room space, shutting down all fans once the user defined temperature has been reached. The system also provided for shut down of all fans in the event of a fire extinguishing system discharge. The fire system was recently certified by Pye-Barker 2024.

System Main Components:

- One 30" intake fan port side with variable speed drive, Delta-T mist eliminator & intake Belimo damper
- One 19" exhaust fan starboard side with variable drive, Delta-T mist eliminator and exhaust Belimo damper
- One T2 fan control interface
- One main control enclosure
- Pressure sensors
- Engine Room temperature sensor

Other Ventilation Systems

- Bathroom ventilation
- Washer/Dryer fan & Laundry exhaust blower
- Tank venting system
- Pilot House window defroster

MAIN ENGINES :

The yacht is fitted with a pair of Comon Rail freshwater intercooler, turbo charged diesel engines. For full engine details and condition please See the seperate survey preformed by Eric Schade of Marine Diesel Specialist Inc.

Manufacturer :	MTU – 2015
Engine model No.:	12V2000 M96L
Family No.:	FMDDN35.7KNK Tier II
Engine rating:	1320HP (1432Kw) @ 2450rpm
Port Engine serial No. :	544100251
Hour meter:	2,286
Stbd Engine serial No.:	544100250
Hour meter:	2,291

- Maine engine exhaust is discharged thru GRP mufflers underwater with bypassing out the transom under the swim platform

Controls: Glendinning model 11413-15T and wireless yacht controller

Marine Gears:

Gear Manufacture:	ZF
Gear model No.:	ZF2075A
Gear Ratio:	2.487 to 1
Port Gear serial No.:	50037494
Starboard Gear serial No.:	50037493

RUNNING GEAR:

The following is a list of the drive train from the main engine mounts through to propellers:

Main Engine and Reverse Gear Mounts:	Rubber Design resilient type
Reverse Gear Coupling:	Rigid steel flange type
Propeller Shaft:	4" diameter non-magnetic

Shaft Seals: Tides Marine water-cooled dripless shaft seals with main engine cooling water bypass

GENERATOR:

Manufacturer :	Kohler
Spec No. :	GM553747-GA5
Model No:	32EOZD
Rated:	32Kw 120/240vac1ph 60 Hz @ 1800rpm
Port Serial No.:	N7447
Hour meter:	2,652
Serial No.:	N7448
Hour meter:	2,610

- Factory sound shields are installed.
- Both generators were full load tested. No problems noted.

Generator Exhaust:

- Steel saltwater injected spray rings
- Wire reinforced wet exhaust hose to fiberglass water lift muffler
- Wire reinforced wet exhaust hose to through-hull penetrations

PORT GENERATOR AND STARBOARD WITH FULL AC & GALLEY LOAD

ELECTRICAL:

General

"LIV MAS" The systems and equipment were visually examined throughout, where accessible and appropriate specialized tests were conducted. The details of the electrical installation are reported below. There are numerous recommendations associated with the overall system, as well as recorded test results.

The yacht is provided with generation and distribution system for the voltages of 240/120V single phase@ 60Hz. There is also a 12/24 VDC system which will be described under the DC system heading.

AC System:

The ships AC system comprises of:

- 1 x Octoplex NMEA 2000 Monitor Network electrical control system
- 2 x 32 KW Kohler Main Generators
- 1 x 100amp Iso-Boost Shorepower isolation transformer Model TRSF160520-2
- 1 x 50amp Iso-Boost Shorepower isolation transformer Model TRSFBT160-111-1

General Description:

AC System
The vessels VAC system comprises of two (2) main Kohler generators, rated at 32 KW and are wound single phase to produce 221Amps @ 120/240+N volts @ 60 cycles. Both generators are fitted with 150 Amp Square D over current protection breakers located in the respective electrical end. Supply from each generator breaker is then direct to the respective contactor within the power source contactor enclosure under the captain's bunk for control from the Octoplex system.

Main Electrical System:
The main electrical system is designed by Octoplex®, the system puts the user in complete control of all AC and DC loads within the vessel. Utilizing an NMEA 2000® CAN bus network, system reliability and safety are achieved through a redundant architecture that eliminates single point failures. The Octoplex system offers significant weight reduction in wiring and reduced installation complexity, while also allowing for the monitoring and control of common NMEA 2000 marine devices. Field-replaceable AC and DC circuit breakers can be controlled remotely through the NMEA 2000 network, allowing panels to be placed in remote locations, thereby eliminating the need for traditional large electrical panels.

The system has been designed to allow supply from the shore and generators to supply buss A (service 1) or buss B (service 2), the port shore power or port generators supplies Buss A and similarly the starboard shore power or starboard generators supply Buss B, the power sources do not operate in parallel, the system is electrically interlocked to prevent accidental parallel of any source buy means of electrically interlocked contactors.

In the event of only one power source available Buss A and Buss B can be supplied from a single source by closing the buss tie contactor.

Power from the contactors is then distributed throughout the vessel to distribution panels which are controlled and monitored by the Octoplex system. In the event of a PLC or 24VDC failure the system can be manually operated by the use of selector switches which have been provided on the power source contactor enclosure under the captain's bunk. And in addition, distribution panel's circuits have been fitted with means to override the Octoplex system by use of microswitches to be able to individually energized circuits, which was test operated and operated without fault.

A handheld thermal imaging camera was used to trace any hot spots or overheating of wire of breakers within the main supply source contactor enclosure none were found.

The batteries are kept charged by the engine alternators or the 120 Volt A.C. powered charger. The electrical circuits are controlled by circuit breakers on the electrical panel.

Batteries 2019 – 2020
Batteries are installed in the engine compartment. Additional information about the batteries is listed on the Vital Information page in the front of this manual. Each engine is normally started by its respective battery. On the electrical panel there is a battery condition meter to check the condition of the individual batteries. Battery disconnect switches for the batteries are located in the engine room. The batteries are kept charged by the engine alternators or the 120-volt A.C. powered battery charger.

Generators
The generators are located in the engine room outboard of the main engines. The remote start-stop switch, and pre-heat switch is located on the electrical panel. Power for starting the generator comes from a separate battery, and fuel comes from the fuel manifold. The output of the generator feeds the 120/240-volt ship's service section of the electrical panel. For more information on the generator see the generator operator's manual.

Operation
The generator can be started and stopped by either the switch on the electrical panel or the switch on the generator itself. If the generator shuts down from either low oil pressure or high-water temperature, the cause must be corrected and the reset button on the generator pressed before restarting.

D.C System
The main D.C. electrical system is 24 volts with negative ground. Two or four batteries are used for engine starting and general service. One or two batteries for generator, If it is installed. All circuits are protected by miniature circuit breakers. A voltage indicator and an ampere gauge show the condition of the system. The batteries are kept charged by the engine alternators or battery charger.

Main Engine Start Batteries:	Quick Energy SBC 1450 NRG 24v, 60Amp
Generator Start Batteries:	240, 24v 24amp
House Service Batteries:	Victron Energy Skylla-I 24v, 100amp

A.C System
Two power inlets with circuits breaker and power inlet selector switch bring the 120V or 240V shore power for onboard use. The generator is installed, it provides A.C power, when the shore power is not possible.

Two multi-position switches are mounted on the A.C panel to select either shore power or generator power for service system.

All circuits are protected by miniature circuit breakers. A voltage gauge and an ampere gauge are installed to show the condition of this system.

- Two Glendenning CM8 shore power reels
- One - 100amp shore cord with 100amp breaker
- One – 50amp shore cord with 50amp breaker

Electrical Panel:
The electrical panel is designed to put all electrical service in one package. The panel is located near the lower helm station and contains all the switches, meters and pilot lights necessary to control the electrical systems aboard.

Operation:
The 110/220-volt ship's service system section of the panel contains a source selector switch which enables selecting either shore power or generator power. It is a rotary switch to prevent selecting both sources at the same time. To take on shore power have the source on either "Generator" or "Off" until shoreline is connected.

(NOTICE; To ensure that the shoreline service is of the same polarity as that of the yacht's electrical system, check the polarity and see if the amber light comes on, then polarity is reversed.)

Turn the individual and master circuit breakers on the panel off, and then turn the source selector switch to "Shore". Secure generator as soon as you are on shore power. Turn on master and individual breakers as desired. Check the "Input Voltage" voltmeter as low voltage will damage certain motors and will reduce the efficiency of all electrical appliances. To shift to generator power, first turn them individual and master switches off, then turn the source selector switch to "Generator". The generator will now be feeding the system (providing, of course, that the generator is running). Disconnect shoreline and turn the master and individual switches back on as desired.

On the 24-volt section of the electrical panel there is a master circuit breaker switch and individual circuit breaker switches to the various appliances.

Battery Charger:
The battery charger is installed in the engine compartment. The battery charger has the following features: automatic line voltage correction from 70 - 140 volts A.C.; automatic shutoff when the engines are started; completely automatic current limiting; and automatic complete shutoff when the batteries are fully charged. The nominal inputs are 110 volts (70 - 140 volts acceptable) 60 cycles from the electrical panel.

When energized in automatic with engines off, the battery charger monitors the state of charge of the battery that is providing 24-volt ship's service, and when sufficiently discharged starts charging the lower battery automatically. When the lower battery is up to the state of charge of the higher battery, both batteries are then charged until they are both fully charged at which time the charger shuts off automatically.

BONDING SYSTEM:

A bonding system is provided and was tested for continuity when dry docked for survey with a KLINE multimeter set on Ω a measurement of >1 ohm was taken which is in the proper range. The bonding system wire is properly sized and well connected.

The Hull Potential was check while the yacht was alongside with a KLINE multimeter connected to a Silver-Silver Chloride Anode and the meter set to Millivolts a reading aft of -968mV and shafts and gearbox of -972mV and forward at the windlass of –970mV which are all in the correct range for proper protection.

Ground System:

This yacht is a negative ground boat. All D.C. equipment installed, and the batteries have been grounded to a common ground terminating at the boat's ground plates which go through the hull. This is done to reduce the danger of electrical shock. Also terminating at the boat's ground plates is a bonding system to minimize electrolysis, consisting of copper strips running fore and aft on the inboard stringers to which wire jumpers are run to the various pieces of metallic equipment.

ENGINE ROOM:

Access:	Via aft watertight door through the Crew mess, Access to the outboard of the main engines is tight making access to equipment rather difficult
Protection:	Two (2) Fire Boy GA 2000-227 (HFC227 clean agent) fire suppression systems
Overhead lighting:	LED
Insulation:	Not determined
Decking:	white diamond plate
Ventilation:	Delta T Model C2-149962 with (2) 24" fans

LAZARETTE:

Access:	Via transom door and watertight door into crew mess
Lighting:	Overhead DC lamps
Protection:	24 VDC automatic / 2000gph bilge pump

The area is used for stowage and serves as access for the steering gear. Please see various sections of this report for equipment descriptions.

GROUND TACKLE:

Windlass: Maxwell – Centerline on the foredeck
Model: VWCLP4000/ Hydraulic
Chain: 500' of 3/8" High Tensile galvanized link
Anchor: Stainless steel plow 125lbs

- Secondary Stainless-steel Safety chain and D clip provided
- 2 x Foredeck stainless-steel cleats with SS fairleads
- Aft deck Maxwell VC2500 24vdc capstans
- The anchor was powered down 100' of water and foredeck and flybridge controls were tested and operated correctly.

ELECTRONICS, COMMUNICATION, and NAVIGATION EQUIPMENT:

The following electronics, communication, and navigation equipment were seen aboard the yacht. All was tested and proven to be operational unless otherwise noted in "RECOMMENDATIONS".

Wheelhouse:

- 2 x Garmin 8624, 24" multifunction color display monitors
- 5" Ritchie magnetic compass
- Garmin GPS 19X NMEA 2000
- GM52 Sirius XM Marine Receiver
- Garmin 2526 XHD2 Radar 96nm, 25Kw with 6' open array scanner
- 2 x Garmin 200 VHF Radios
- Garmin 600B AIS
- Garmin GHC20 Autopilot
- Garmin GHP Reactor hydraulic autopilot smart pump
- Garmin GSD25 sonar Module
- Garmin GT51M THP SS through hull transducer
- Garmin GC marine CCTV 3 Cameras
- Exalto 4 x windshield wiper control
- Schain Remote searchlight

Flybridge:

- 2 x Garmin 8624, 24" multifunction color display monitors
- 5" Ritchie magnetic compass
- Linked with the above inputs

ENTERTAINMENT EQUIPMENT:

The following entertainment equipment were seen aboard the yacht. All was tested and proven to be operational unless otherwise noted in "RECOMMENDATIONS".

TracVision KVH Sat Antenna, Direct VT, Fusion Marine sound system

- Master SR: 40" Samsung TV
- VIP SR: 32" Samsung TV
- Salon: 48" Samsung TV on drop down Panel
- Port & Stbd Guest: 24" Insignia TV
- Aft main deck 32" Insignia TV
- Flybridge 32" Insignia TV
- Crew Mess: 32" Insignia TV
- Capt Cabin: 32" Insignia TV

APPLIANCES:

The following appliances were seen aboard the yacht. All was tested and proven to be operational unless otherwise noted in "RECOMMENDATIONS".

Galley:

- Jenn Air 4 burner cook top
- Jenn Air Microwave oven
- Jenn Air Convection air Oven
- Jenn Air Dish washer
- Whirlpool Trash Compactor
- Samsung Refrigerator Freezer
- Glass top Chest freezer

Salon:

- Edge Star wine cooler

Aft Deck Wet Bar:

- Uline Undercounter Refrigerator

Guest Laundry:

- LG washer
- Blomberg Drier

Flybridge:

- Electric Chef grill stainless steel
- Kenyon single burner cooktop – Not operational
- Wet Bar with Dometic bar refrigerator
- Isotherm Ice Maker

Crew Mess:

- Uline bar refrigerator
- Whirlpool Microwave oven
- LG Washer & Drier

CRANE:

Location:	Starboard aft flybridge deck
Manufacturer:	Steelhead Marine
Type Model:	24Vdc Electro/hydraulic Es1750
Function:	Hydraulic boom extension, winch, slewing
24vdc/Hydraulic PTO:	Under Starboard aft sun pad pump and reservoir
Safe Working Load:	1750 Lbs

The davit was test operated satisfactorily launching and retrieving the yacht tender Luffing and winching functions are hydraulic. Slewing is manual.

TENDER:

Manufacturer:	Novurania
Model:	RIB 14.5'
Engine:	Yamaha
Model:	F60LB
Serial No.:	6C5-L-1071072
Hours:	158

Features:

- Bilge pump
- Nav lights
- Icom IcM324 VHF Radio
- Garmin Eco Map DV

The tender is in good condition.

TEAK DECK:

Type:	Teak veneer overlay on structural fiberglass
Plank Dimensions:	2" wide x ½" thick on average 146" long
Inner and Outer Margins:	3" wide X ½" thick
Seams:	$^{3}/_{16}$" black

Coverage:

- Swim platform,
- Aft Cockpit deck,
- Side Companionway to foredeck stairs

There are teak treads on the flybridge access stairs and those to the swim platform.

Condition:

All sounded randomly with a phenolic hammer and the deck seemed well adhered. The planks are laid parallel to the waterways and nibbed to the house margin where needed. The decks are in good condition.

INTERIOR:

- Aft lower deck owners' suit with ensuite head and shower
- Mid port & starboard Guest cabins with ensuite head and shower, forward VIP cabin with ensuite head and shower, 2 x Aft Crew cabins with common head and shower.

Note: A detailed design/layout and cosmetic conditions of the interior of this vessel will not be covered in this report. It is assumed that prospective owners or representatives are well informed by brokers or seller about the vessel interior appointments, specific cosmetic conditions and layout. Generally, the interior is in good condition with the exception of the Items listed in the recommendations.

EXTERIOR FINISH:

The finish is Awlgrip Marine finish applied at Westport Shipyard in 2023 and is very good condition within its expected endurance parameters with good gloss and no visible repairs.

SAFETY EQUIPMENT:

The following safety equipment was noted aboard. Those items not operational are noted in the "RECOMMENDATIONS."

- Life Ring with Throw line
- 2 x Sea Safe Pro-Light 6-person life Rafts: SN PL6-0901 & PL6-0899 inspection good until- Dec-27
- 2 x Hydrostatic releases: Hammer
- ER Automatic Fire Bouy GA-2000 - HFC227 inspected 12/2026
- One ACR RLD41 EPIRB
- Dual Kahlenberg air horns
- Two Life Jackets type II in each cabin plus 7 inflatable, 6 type-1 and 2 child PFD on flybridge
- One set of handheld Flairs Exp 11/2027
- Handheld ABC fire extinguishers in each cabin
- Removable swim platform ladder provided.

CANVAS and COVERINGS:

The exterior covers provided for the tender, seating, tables and bars are in good condition.

MISCELLANEOUS GEAR and EQUIPMENT:

Tide Ride side boarding ladder.

MAINTENANCE:

The maintenance on the yacht was kept to a high standard by the Owner and the Professional crew.

COMMENTS:

"LIV MAS" is a well-designed and well-built yacht. She is in ABOVE ADVERAGE yacht condition.

STATEMENT OF OVERALL VESSEL RATING OF CONDITION:
It is the surveyor's experience that develops and opinion of overall vessel rating of condition after a survey has been completed and the findings have been organized.

The grading system accepted in the marine industry for a vessel at the time of survey determines the adjustment to the base range of values for a similar vessel sold within a given time period as a consideration to determine the Market Value.

The following is an accepted marine grading system of condition

EXCELLENT CONDITION:
Yacht has been maintained in mint or "Bristol" fashion – usually better than factory new and loaded with extras – a rarity

ABOVE AVERAGE CONDITION:
Yacht has had above average care and is equipped with extra electrical, mechanical, electronic or interior outfitting

AVERAGE CONDITION:
Yacht is ready for sale requiring little or no additional work and normally equipped for her size

FAIR CONDITION:
Yacht requires usual maintenance to prepare for a sale

POOR CONDITION:
Yacht requires substantial yard repairs and does not have 'extras'

RESTORABLE CONDITION*:*
Yacht is currently unusable but has enough of hull and engines remaining to restore yacht to a usable condition.

As a result of the examinations carried out and reported above, and by virtue of my experience, my opinion is that the
OVERALL VESSEL RATING of CONDITION for the subject vessel is:

"ABOVE AVERAGE"

VALUE:

Fair Market Value
The "FAIR MARKET VALUE" is the most probable price in terms of money which a yacht should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under condition whereby:

- Buyer and seller are typically motivated.
- Both parties are well informed or well advised, and each acting in what they consider their own best interest.
- A reasonable time is allowed for exposure in the open market.
- Payment is made in terms of cash in US dollars or equivalent thereof; and
- The price represents a normal consideration for the yacht sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

FAIR MARKET VALUE

Therefore, after consideration of the reliability of the data, the extent of the necessary adjustments and condition of the vessel, it is the undersigned surveyor's opinion that the "FAIR MARKET VALUE" of the subject vessel, as seen and equipped, is in the region of:

$4,650,000.00 US
Four Million Six Hundred Fifty Thousand US Dollars

The Builder's USA authorized representative was contacted on November 14, 2023 for their current estimated Replacement Cost.

REPLACEMENT COST
Estimated Replacement Cost indicates the cost of a new vessel of the same make / model with similar equipment. The Replacement Cost of the subject vessel as seen and equipped, is in the region of:

$8,000,000.00 US
Eight Million US Dollars

Note: The values appearing in this report are subjective and are based on comparable yachts and the yacht resale market at the time of the survey. The values are based on an average selling price of a yacht of this type and size similarly equipped, considering all extras and accessories onboard. The values are intended for insurance and financial evaluation only but are not intended to influence the purchase or non-purchase of the yacht.

SURVEYOR'S CERTIFICATION:

The undersigned surveyor certifies that, to the best of his knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are personal, unbiased professional analyses, opinions, and conclusions.
- The undersigned surveyor has no present or prospective interest in the vessel that is the subject of this report, and no personal interest or bias with respect to the parties involved.
- My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the instructing client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
- I have made a personal examination of the yacht/vessel that is the subject of this report.

SUMMARY:

"LIV MAS" is a good yacht with good gear and equipment. Once her few safety and asterisked "RECOMMENDATIONS" have been complied with, she will be considered a good marine risk for the East Coast of the United States, coastwise waters and inland waters, the Gulf Coast of Mexico, U.S. waters coastwise and inland waterways, and the Bahamas in fair weather cruising. Any extended limits and extensions would have to be set by an arrangement with the underwriters.

GENERAL NOTES:

Note: This survey report is issued by the undersigned, who has exercised reasonable care in conducting a visual inspection of the accessible areas, in connection with the examination, 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 expression of opinion of the undersigned, based on his skill, training, and experience, after a routine visual examination of the vessel's systems, and after discussions with owners, crew, and others familiar with the vessel.

Unless otherwise stated, no actual measurements or calculations were made by the surveyor at the time of this examination. Reported measurements and capacities were obtained from the vessel's/yacht's papers/documentation and/or from other published sources.

No part of this report is issued as an expressed or implied warranty of the condition, life expectancy, seaworthiness, or value of the vessel/yacht or its systems, machinery, or equipment.

The undersigned has conducted his visual examinations and issued this report for the sole use of the specified requesting party for an agreed fee based upon 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 re-evaluation and examination of the same factors.

Further, the undersigned shall have no liability for consequential, no liability for personal injury damages, 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 receipt and use of this report.

Further, in no event shall the legal liability for the undersigned of this report, or Patton Marine Surveyors and Consultants, Inc. ever exceed the fee, less expenses, paid by the requesting party for the 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 for Mr. Jeff Engler, and as aforesaid does not expressly or impliedly warrant or any way guarantee the condition, seaworthiness, or value of the vessel. It is further agreed by the aforesaid Mr. Jeff Engler that Patton Marine Surveyors and Consultants, Inc. and Mr. Walter Richardson of Cutter Marine Inc., shall not be held liable under any circumstances whatsoever or responsible in any way for any error in judgment, default or negligence nor for any inaccuracy, omissions, oversights, misrepresentation or misstatement in this report and that the use of this report shall be construed to be an acceptance of the foregoing conditions.

The above report has been prepared and submitted without prejudice to the rights or obligations of any party.

PATTON MARINE SURVEYORS
AND CONSULTANTS, INC

Walter Richardson
Marine Surveyor

WR:ms:isa

–NOTICE–

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