

**MILEY MARINE**  
Marine Surveying and Consulting

**1997 Jefferson 48 Rivanna Sundeck**  
***WEGO***



MEMBER OF SOCIETY OF ACCREDITED MARINE SURVEYORS

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# Miley Marine Surveying



## Report of Marine Survey

Of The Vessel

**WEGO**

**1997 Jefferson 48 Rivanna Sundeck**

Conducted by  
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ABYC Standards Accredited

PREPARED FOR:  
Bob Gassert

May 14, 2019

# TABLE OF CONTENTS

SECTION	PAGE NO.
I. INTRODUCTION.....	1
II. GENERAL INFORMATION.....	3
III. SYSTEMS.....	4
HULL DECK AND SUPERSTRUCTURE.....	4
CABIN AND INTERIOR SYSTEMS.....	5
PROPULSION.....	6
FUEL SYSTEM.....	7
ELECTRICAL SYSTEMS.....	8
STEERING SYSTEM.....	9
ELECTRONICS AND NAVIGATION EQUIPMENT.....	9
THRU-HULLS.....	10
BONDING SYSTEM.....	11
SAFETY EQUIPMENT.....	11
OUT OF WATER INSPECTION.....	12
SEATRIAL REPORT.....	12
IV. FINDINGS AND RECOMMENDATIONS.....	15
V. SUMMARY AND VALUATION.....	19
VI. PHOTOGRAPHS.....	21

# I. INTRODUCTION

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## SCOPE OF SURVEY

Acting at the request of Bob Gassert, the attending surveyor did attend onboard the 1997 Jefferson 48 Rivanna Sundeck, WEGO beginning on May 14, 2019 where an "in-the-water-survey" & "out-of-the-water-survey" WAS conducted at Apollo Beach, FL. The ship's papers were on board and appeared to be in order. The Hull Identification Number (JEF48210L697) WAS verified from the transom. A sea trial WAS performed. An out-of the water inspection of underwater machinery and the exterior of the hulls wetted surface area WAS performed on May 14, 2019 before the sea trial while the vessel was on the slings at Apollo Beach, FL. The reason for the survey, was to ascertain the physical condition and value of the vessel. An Electrophysics moisture meter was used in the inspection of this vessel. AC and DC power WAS used to check operation of the electrical systems specified in this report only. No reference or information should be construed to indicate evaluation of the internal condition of the engines or the propulsion system's operating capacity. Electronic equipment was checked for "power up" only.

This vessel was surveyed without removals of any parts, including fittings, tacked carpet, screwed or nailed boards, anchors and chain, fixed partitions, instruments, clothing, spare parts and miscellaneous materials in the bilges and lockers, or other fixed or semi-fixed items. Locked compartments or otherwise inaccessible areas would also preclude inspection. Owner is advised to open up all such areas for further inspection. Further, no determination of stability characteristics or inherent structural integrity has been made and no opinion is expressed with respect thereto. This survey report represents the condition of the vessel on the above dates, and is the unbiased opinion of the undersigned, but it is not to be considered an inventory or a warranty either specified or implied.

Some of the recommended repairs and corrections may be required to ensure compliance with federal law. Others may, in the surveyor's opinion, be required for the safety of the boat or its crew, or to conform to voluntary standards published by the American Boat and Yacht Council or the National Fire Protection Association. Certain of these regulations and voluntary standards may not have been in effect, or may not have been adhered to by the builder, when the boat was constructed. Most recommendations involve routine or preventive maintenance; others address prudent upgrades to existing systems and equipment to enhance safety or crew comfort.

Fuel, water, and waste tanks were inspected where and IF readily accessible, and their conditions appear serviceable and free of obvious leakage, unless noted. However, all tanks were NOT full at the time of inspection. These tanks should be filled with their appropriate liquids and checked under full level status. Pressure test tanks, fittings, hoses and plumbing to attest to their conditions.

NOTE: It is recommended and understood that all gas or diesel engines and generators be surveyed by a qualified Engine Surveyor to determine the condition of the engines, gears and pumps, heat exchangers, coolers, etc. It should be noted here that Jon Marquette was present on the day of survey for this purpose.

### CONDUCT OF SURVEY:

THE MANDATORY STANDARDS PROMULGATED BY THE UNITED STATES COAST GUARD (USCG), UNDER THE AUTHORITY OF TITLE 46 UNITED STATES CODE (USC); TITLE 33 AND TITLE 46, CODE OF FEDERAL REGULATIONS (CFR), AND THE VOLUNTARY STANDARDS AND RECOMMENDED PRACTICES DEVELOPED BY THE AMERICAN BOAT AND YACHT COUNCIL (ABYC) AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAVE BEEN USED AS GUIDELINES IN THE CONDUCT OF THIS SURVEY.

The use of the word "appears" is intended to indicate that a close or complete inspection was not possible or it was not deemed appropriate at the time of this survey. The deficiencies reported herein reflect the conditions observed at the time the survey was conducted.

Use of asterisks \* in the body of the report will indicate that a finding will be listed in the Findings and Recommendations section pertaining to the asterisked item, following the body of the report.

# I. INTRODUCTION

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## VESSEL DESCRIPTION

Per Powerboat Guide - An attractive blend of modern styling and comfortable accommodations, the Jefferson 48 Rivanna is a Taiwan-built motor yacht whose affordable price included an impressive array of cruising features. Like all Jeffersons, she was constructed on a low-deadrise, solid fiberglass hull with a long keel for directional stability. The Rivannas original three-stateroom floorplan is arranged with centerline island beds in the fore and aft staterooms and a second guest cabin aft of the salon. With the galley and dinette down, the salon is open and very expansive. A lower helm was standard in early models, and its notable that the Rivannas interior uses much less teak than earlier Jefferson models. Additional features include a hardtop and radar arch, wide side decks, and a huge aft deck platform with wing doors and a wet bar. Several engine options were offered in the Rivanna during her production years. Among them, 375hp Cats cruise at 1516 knots, and a pair of 450hp Cummins cruise around 20 knots. Note that the 50 Rivanna Sundeck (2002 -03) is the same boat with an integral swim platform and molded boarding steps.

## II. GENERAL INFORMATION

### GENERAL INFORMATION

FILE NUMBER: .....	48Jefferson
SURVEY PREPARED FOR: .....	Bob Gassert
NAME OF VESSEL: .....	WEGO
TYPE OF SURVEY: .....	Pre-Purchase Condition and Value for Buyer
OVERALL VESSEL RATING: .....	**** AVERAGE
ESTIMATED MARKET VALUE: .....	\$ 135,000.00
ESTIMATED REPLACEMENT COST: .....	\$ 890,000.00
YEAR/MAKE/MODEL OF VESSEL: .....	1997 Jefferson 48 Rivanna Sundeck
YEAR BUILT: .....	1996
HULL IDENTIFICATION NUMBER .....	JEF48210L697
ENGINE #'S: .....	Twin Volvo inline 6 cylinder turbo charged inboards M/n TAMD72P EDC , rated at 430 hp each P s/n 2071083977 S s/n 2071083672 showing 650.7-p, inop-s hours
USCG DOCUMENTATION NUMBER: .....	1051797 (not currently in documentation)
STATE REGISTRATION .....	FL 7936 RK
OWNER'S NAME: .....	Mark Johnson
PLACE OF SURVEY: .....	Apollo Beach, FL
DATE/TIME OF SURVEY: .....	May 14, 2019
HULL MATERIAL: .....	FRP (Fiber Reinforced Plastic)
HULL TYPE: .....	Planing, Modified-V
LENGTH OVER ALL (L.O.A): .....	***** 48' 4"
BEAM: .....	***** 16'
DRAFT: .....	***** 4' 0"
WEIGHT: .....	***** 42,500 #
FUEL CAPACITY: .....	***** 600 gallons
AC POWER: .....	Yes, One (1) 250 volt, 50 amp inlet and auxiliary generator
DC POWER: .....	12 volt
FRESH WATER CAPACITY: .....	***** 200 gallons
HOLDING TANK: .....	Yes, USCG marine sanitation device type III, holding tank
INTENDED USE: .....	Recreational cruising
USE OF *:	
Use of * in the body of this report will indicate that a finding will be listed in the "Findings and Recommendations" section pertaining to the * item.	

Asterisks \* in this General Information section refers to the source of such information as follows:

\*\*\* Per USCG Documentation

\*\*\*\*\* Per Powerboat Guide

# III. SYSTEMS

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## HULL DECK AND SUPERSTRUCTURE

### HULL CONSTRUCTION

**TYPE:** Modified V, planing type. The hull is constructed of a fiberglass reinforced plastic (FRP) laminate, finished with gelcoat above the waterline and an anti fouling paint below. The decks are constructed of an FRP cored laminate, finished with paint and a nonskid texture along the working surfaces. The cosmetic condition of the superstructure was found to be in slightly less than average condition, mainly due to a "amateur/homemade" type paint finish observed. The partitions, bulkheads and hull to deck joints were inspected where accessible and found to show no visual signs of weakness due to flexing or separation of their fastenings. Hull to deck joint was of the overlap type construction, with stainless fasteners and FRP overlap, observed in the chain locker, forward.

**EXTERIOR HULL:** White gelcoat hull - faded and chalky, paint above the rubrail

- \* **PORTLIGHTS: [C1]** 3 portlights to port, 5 portlights to starboard, opening type in the hull.

**BULKHEADS:** Athwartships reinforcement enhanced by cored FRP bulkheads bonded to the hull with FRP (fiber reinforced plastic). Appears serviceable where sighted.

**STRINGERS:** Hull stiffness provided by FRP encapsulated longitudinal stringers. Complete inspection not possible due to limited access. Inspected by visual and by soundings with phenolic hammer. Moisture meter was used in limited areas, where accessible. Appears serviceable where observed.

- \* **TRANSOM: [C2]** FRP transom with bolted on swim platform. Serviceable.
- \* **BILGE: [B1]** Needs attention, oily residue noted throughout bilge.

**CHAIN LOCKER (DRAINAGE):** The chain locker is forward with drainage topsides. Serviceable.

**LIMBER HOLES:** Limber holes are of adequate size and clear where sighted.

**MOISTURE CONTENT:** A moisture meter was used in the inspection of this vessel. No abnormal readings were observed, except as noted in findings.

### DECK CONSTRUCTION

**TYPE:** Molded and cored FRP (fiber reinforced plastic) with paint and non-skid surface. Percussion soundings indicated no areas of delamination. Paint was rough, homemade condition.

**UPPER SALON/AFT DECK:** Covered with a FRP hard top and enclosed with eisen glass, worn condition.

### DECK FITTINGS

**BOW PULPIT (BOW RAIL):** Welded stainless steel bow rail, with intermediate vinyl covered lifeline, boarding gates port and starboard, found to be serviceable.

**TOE RAILS:** Molded FRP toe rails, part of deck layup, homemade painted finish

**VENTILATION:** Deck hatch, portlights forward p/s, salon door to aft deck, and master stateroom transom hatch, all were serviceable and appears adequate.

- \* **SCUPPERS: [B2]** Cockpit and decks drain overboard thru toerail molded freeing ports and scuppers with securely attached/clamped hoses leading to topsides fittings, found to be in need of attention.

**MOORING CLEATS:** Eight 12" stainless steel mooring cleats, thru bolted and serviceable.

- \* **WINDLASS/GROUND TACKLE SYSTEM: [B3]** Maxwell 2200 vertical 12 volt vertical windlass with helm and deck switching, operable. Overcurrent protection sighted, inline circuit breaker at the salon electrical panel. Installed ground tackle consisted of an adequate 45# stainless steel plow anchor with approximately 200' of 5/16" galvanized chain, securely shackled, also with safety wires at shackles. No spare anchor noted on the vessel.
- \* **ANCHOR PLATFORM: [B4]** FRP platform with removable anchor bow roller assemblies.
- \* **DAVITS: [B5]** Mounted to hardtop aft, with painted aluminum support aft salon/deck area, inoperable on the day of survey.

# III. SYSTEMS

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## HULL DECK AND SUPERSTRUCTURE

### SUPERSTRUCTURE

- \* **MATERIAL: [C3]** Cabin house and deck are one unit molded FRP (fiber reinforced plastic) and cored. Molded FRP hardtop over the aft deck area.

**DECK HATCHES:** Deck hatch forward, transom hatch aft, serviceable.

- \* **WINDOWS/PORTS/DOORS: [C4, C5]** Sliders port and starboard house, with fixed windows otherwise.

**JOINERY STRESS:** None sighted.

**CANVAS AND SUPPORT STRUCTURE:** Eisen glass for aft deck and bridge, serviceable but showing signs of age. FRP hard top for bridge and aft deck.

### BRIDGE DECK

**MATERIAL:** FRP (fiber reinforced plastic) molded flybridge, covered with FRP molded hardtop. Molded FRP helm forward.

**COCKPIT:** Bench seating aft with storage below. Pedestal mounted helmsman seat forward.

- \* **SEATS: [C6]** Bench seating with cushions, aged condition.

**WINDSHIELD:** Spray shield/venturi type, tinted acrylic - faded, serviceable.

### ADDITIONAL EQUIPMENT AND ACCESSORIES

**GENERAL EQUIPMENT:** Cockpit icemaker by Edgestar, operable.

**FENDERS:** An adequate array of fenders were observed on board the vessel at the time of survey.

**DOCK LINES:** An adequate array of dock lines were observed on vessel at the time of survey.

## CABIN AND INTERIOR SYSTEMS

### INTERIOR DESCRIPTION:

**JOINERY AND FINISH:** Average condition

**INTERIOR BULKHEADS:** Finely fit where observed.

**WATER INTRUSION SIGNS:** Port and starboard salon aft stained/deteriorated flooring, master stateroom sole was soft below the wood flooring and propped up with a wedged in 4 x 4.

**STORAGE AREAS:** The cabinets, lockers, drawers, and shelving were sighted and found to be serviceable. Shelving in both the marine heads below the basins showed to be rotted/deteriorated.

**HEADLINERS:** Headliner material in the cabins appeared to be a light colored vinyl. Appeared serviceable.

**DOORWAYS:** Serviceable and well fitting.

**FABRIC AND CUSHIONS:** Serviceable condition

**FLOOR AND WINDOW COVERINGS:** Light wood sole, dirty, water stained.

**ACCOMMODATIONS:** Forward stateroom with berth, aft stateroom with island berth, convertible couch

- \* **HEAD/BLACKWATER SYSTEM: [B6]** The vessel was equipped with two electric flush heads by Raritan, and were found to be operable. Raw water supply is the vessel's fresh water system. Waste is directed to an FRP waste tank located centerline below galley and on to a deck pump out plate located side deck, clearly marked for WASTE. The vessel was also equipped with a below the water line discharge seacock, bronze, bonded and operable located starboard forward engine compartment, with an operable Jabsco macerator. USCG Marine Sanitation Device type III, holding tank. Inline Y valves below each marine head basin directed waste to tank or directly overboard.

**SHOWERS:** There are stand up shower enclosures in the heads and they drain to greywater sumps (2) with 12 volt pumps and float switches in the sumps. They operate and appear serviceable. Thorough cleaning is recommended.



# III. SYSTEMS

## CABIN AND INTERIOR SYSTEMS

### INTERIOR DESCRIPTION:(continued)

- \* **FAUCETS/FRESHWATER SYSTEM: [C7]** The vessel's freshwater system is supplied from 2 tanks, appearing to be a monel type stainless steel, with an approximate capacity of 100 gallons each, located below the aft berth. Pressure is supplied by a 12 volt Shurflo pump with an inline screen/strainer located starboard engine compartment. The vessel was also equipped with a dockside water pressure regulator inlet. Tank fill was located aft deck corner, and was clearly labeled for WATER. Faucets and showers were found to be operable.

The vessel was also equipped with a 20 gallon water heater by Raritan, located starboard forward engine compartment, with a built in pressure relief valve. Water heater was found to be operable.

- \* **LIGHT FIXTURES: [C8]** Cabin/courtesy lights throughout the vessel were operable except if noted.
- \* **AIR CONDITIONING UNITS: [B7]** The vessel was equipped with 3 each air conditioning units by Cruisair, 24,000 btu, 12,000 btu and one 16,000 btu. Raw water supply is located starboard forward engine compartment, and was found to be a bronze seacock, bonded, and operable. Hoses and clamps were in need of attention. Air conditioning raw water pump was found to be a 110 volt pump, with an inline sight glass strainer. Discharge was topsides. System was found to be in need of attention, drop down testing was performed on both heat and cooling cycles to prove units operable.

**TELEVISIONS:** Insignia 15" forward, Emerson 32" aft, and a Vizio 42" salon, all powered up.

### GALLEY

**GALLEY SYSTEMS:** Galley is located to starboard up. Equipped with a single molded basin with drainage to topsides, a Kitchen Aid 2 burner stovetop, a GE Compactall trash compactor, a GE Profile over/under refrigerator, and a GE Profile microwave oven. All were checked and found to be operable. Kenmore washer/dryer mounted aft stateroom, dryer is vented overboard. Washer was not used for a complete cycle, checked for power up only. Stove top is not equipped with potholders/searails.

## PROPULSION

### MAIN ENGINES

**TYPE:** Two inline 6 cylinder turbo charged diesel inboards.

#### ENGINE #'S:

Position	Mfg/model	Serial #	Horsepower	Fuel	Hourmeter
Port	Volvo TAMD 72 P	2071083977	430 @ 2600	diesel	301
Starboard	Volvo TAMD 72 P	2071083672	430 @ 2600	diesel	306

**AGE/REBUILT INFO:** Verbally reported as installed 2007, no documentation observed.

Per the Volvo website, s/n search, both of these engines were put into service 5/5/1997. This model engine was in production from 1995 -1999.

**INDICATED HOURS:** Port tachometer hourmeter was reading 650.7, this tachometer had been replaced. Starboard tachometer hourmeter reading was inoperable.

Engine hours are considered to be unknown.

**THROTTLE CONTROLS:** Morse mechanical lever/cable type, with single lever for the throttle and single lever for the clutch, each engine. Bridge deck helm only.

**ENGINE MOUNTS AND BED:** FRP stringers port and starboard. In conjunction, adjustable motor mounts are bolted to the stringers and are used to align the engine to the hull stringer structure. Serviceable.

**LUBRICATION:** Normal level observed. Oil filter # , spin on type. Date of last service is

**VENTILATION:** Power blowers were operable. Natural ventilation provided by topsides vents, port and starboard.

# III. SYSTEMS

## PROPULSION

### MAIN ENGINES(continued)

- \* **EXHAUST SYSTEM:** [B8] Raw water cooled wet exhaust, double clamped rubber hose, and stainless steel elbows, needs attention.

**LUBE TRANSFER:** 12 volt oil change pump by Oil X Change R, powers up.

**ENGINE ALARMS:** Low oil pressure alarm and coolant over heat warning audible at helm station. Appears serviceable.

**ENGINE SHUT DOWN:** Key switches, clearly marked at helm station.

**ENGINE SYNCHRONIZER:** Inoperable/no synchronizer

**NOTE:** Engines were showing to be in need of maintenance in terms of rust/corrosion, clamps, tubes, and general cleanliness.

### COOLING SYSTEM

**TYPE:** Closed reservoir type cooling (heat exchanger) with raw water cooled exhaust.

**COOLANT LEVEL:** Normal level observed.

- \* **HOSES AND CLAMPS:** [B9] Re-inforced rubber hose securely clamped and well routed and supported, where sighted.

**BELTS AND PULLEYS:** Belts condition appears serviceable. Carry spares on vessel at all times.

- \* **SEACOCKS AND STRAINERS:** [B10] Engine raw water intakes were bronze seacocks, double clamped and operable - note that port engine seacock was tight. Inline strainers sighted, serviceable.

### TRANSMISSIONS

**MODEL/SERIAL #'S:**

POSITION	MANUFACTURER	MODEL	SERIAL	RATIO	FLUID LEVEL
Port	ZF Marine	IRM 301 A.2	95-17967	2 / 1	normal
Starboard	ZF Marine	IRM 301 A.2	95-17966	2 / 1	normal

**FLUID LEVEL AND CONDITION:** Normal level observed.

**CONTROLS:** Morse type mechanical cable and linkage.

**PROP SHAFT:** 2" stainless steel, serviceable.

**COUPLER (SAFETY WIRE):** Couplers were inspected and found to be serviceable.

- \* **PACKING GLAND:** [B11] Double bolt flange type clamped to rubber hose with 4 stainless steel clamps, serviceable.

**COOLER:** External engine mounted raw water heat exchanger. Appears serviceable.

## FUEL SYSTEM

### MAIN ENGINE(S) FUEL SYSTEM

**FUEL TYPE:** Diesel

**MATERIAL:** Aluminum, labeled as 5052

**NUMBER OF TANKS:** Two (2)

**TANKS CAPACITY:** 300 gallons each, port and starboard engine compartment.

**SECURED:** Tanks were secure.

**MANUFACTURING LABEL:** The ABYC & USCG required labels were sighted on the fuel tanks.

# III. SYSTEMS

## FUEL SYSTEM

### MAIN ENGINE(S) FUEL SYSTEM(*continued*)

**FILL PIPE LOCATIONS:** Port and starboard side decks, clearly marked for DIESEL.

**FILL PIPE GROUNDED:** Appears to be properly grounded.

**FILL PIPE MATERIAL:** USCG Type A2, double clamped and serviceable.

**FUEL LINES AND FITTINGS:** Both USCG type A1 and copper tubing, color coded yellow. Serviceable.

**FUEL MANIFOLD VALVES:** Fuel manifold system located aft engine compartment bulkhead, labeled and operable.

**VENT LOCATION:** Topsides, p/s, found to be serviceable.

**SHUT-OFF VALVE:** Tank top, and filter selector valve at the Racors, serviceable.

**FUEL FILTERS:** Racor 1000, per engine, serviceable. Volvo spin on secondary

**FUEL COOLER:** Engine mounted heat exchanger, signs of corrosion noted, see findings.

## ELECTRICAL SYSTEMS

### ELECTRICAL SYSTEM (D.C. SYSTEM)

- \* **VOLTAGE: [B12]** Lead acid battery powered 12 volt system for the vessel

#### BATTERIES:

TYPE	CAPACITY	LOCATION	SECURE	DATED	ELECTROLYTE LEVEL	#
4D	1050 cca	generator	adequate	April 2016	normal	1
8D	1400 cca	P/S engine fwd	adequate	Feb 2017	normal	2

**PANEL:** The main DC panel was located port at the salon area. Overcurrent protection was provided by a main breaker and individually labeled branch breakers. Additional breaker panels located at bridge deck.

**TYPE CONNECTORS/WIRING:** Round, captive type connectors where observed except as noted. Serviceable. Wiring was stranded copper/tin plated boat cable where sighted. See findings for wire nuts/twisted wires.

**ROUTING/SUPPORT:** Adequate, see findings for AC wiring

**CHARGING SYSTEM (BATTERY CHARGER):** Newmar 40 amp battery charger mounted fwd engine compartment bulkhead, found to be operable with a serviceable installation.

**CHARGING SYSTEM (ALTERNATOR):** Alternators on main diesel engines, Valeo 60 amp. Operable during the seatrial.

**MAIN BATTERY SWITCHES:** None observed

### ELECTRICAL SYSTEM (A.C. SYSTEM)

**SHORE POWER INLET:** One each 50 amp/250 volt inlet located port forward, and also starboard amidships topsides. Glendinning Cablemaster 50 amp/250 volt inlets, both were operable.

**SHORE POWER:** Shore power cords and inlets were inspected for burnt pins/receptacles and cracked insulation and were found to be serviceable.

**AC SOURCE SELECTOR SWITCH:** Rotary source switches at the main electrical panel.

- \* **MAIN BREAKER: [B13]** In the main AC panel, along with individually labeled branch breakers. Fuses were noted adjacent to the shore power inlets.

**CIRCUIT LOAD MONITORS:** Voltage and amperage analog gauges in the main electric panel.

**CONNECTIONS (TYPE):** Captive lug type. Appears serviceable where sighted.

# III. SYSTEMS

## ELECTRICAL SYSTEMS

### ELECTRICAL SYSTEM (A.C. SYSTEM)(continued)

**WIRE TYPE (SIZE AND RATING):** Size and rating, where sighted, appears well routed and supported, serviceable for intended use.

- \* **OUTLETS: [B14]** Various A.C. outlets available throughout yacht, appear adequate and conveniently located. Tested ok for proper polarity. GFCI (ground fault circuit interrupter) protected outlets sighted at engine compartment, galley and heads, would not test OK.

**GALVANIC ISOLATOR:** Two each, 50 amp galvanic isolators adjacent to the main electrical panel, serviceable installation.

### GENERATORS AND INVERTERS

#### TYPE:

MANUFACTURER	MODEL	SERIAL	KW/Voltage	FUEL	HOURS
Westerbeke	15.0BTDB	396332-D608	15	diesel	1208

**LOCATION:** Port forward engine compartment.

**FLUID LEVELS:** Coolant normal. Oil normal.

**COOLING SYSTEM:** Closed coolant and raw water exhaust type. System needs attention, collapsed hose and leaking noted.

**FUEL FILTER:** Remote mounted Racor 500, with engine mounted secondary.

- \* **EXHAUST SYSTEM: [B15]** Aqualift type with rubber hose, double clamped and supported, serviceable except as noted. Exits port topsides.

**NOTE:** Generator was operated during this survey, output measured under load and found to be normal in polarity, voltage, and cycles.

- \* **DC/AC INVERTER: [B16]** A 2000 watt inverter has been installed on top of starboard battery box, system needs attention.

## STEERING SYSTEM

### STEERING SYSTEM

**TYPE:** Hydraulic, by Capilano with one station at the bridge deck helm

**MOUNTING:** Cylinder and ram actuator are well secured.

**RUDDER POSITION INDICATOR:** Autopilot display, operable.

**UPPER RUDDER BEARING SUPPORT:** Stainless steel channel, aft bilge area, serviceable and secured to stringer structure.

**PACKING GLAND:** Double bolt and flange type, serviceable.

## ELECTRONICS AND NAVIGATION EQUIPMENT

### ELECTRONICS AND NAVIGATION EQUIPMENT

**VHF:** Icom IC-M125 at bridge deck, powers up.

**RADAR:** Furuno radar installed, inoperable.

**GPS:** Raymarine Dragonfly 7 gps/plotter, powered up.

- \* **AUTOPILOT: [C9]** Simrad AP22, operable during the seatrial, appears serviceable.

**DEPTH:** Raymarine ST60 depth, faded display.

### III. SYSTEMS

#### ELECTRONICS AND NAVIGATION EQUIPMENT

##### ELECTRONICS AND NAVIGATION EQUIPMENT *(continued)*

**FUEL MANAGEMENT:** Sight tubes with valves noted on each tank, serviceable.

**COMPASS:** 4" Ritchie, serviceable.

**ANTENNAS:** All antennas sighted appear to be well mounted and serviceable.

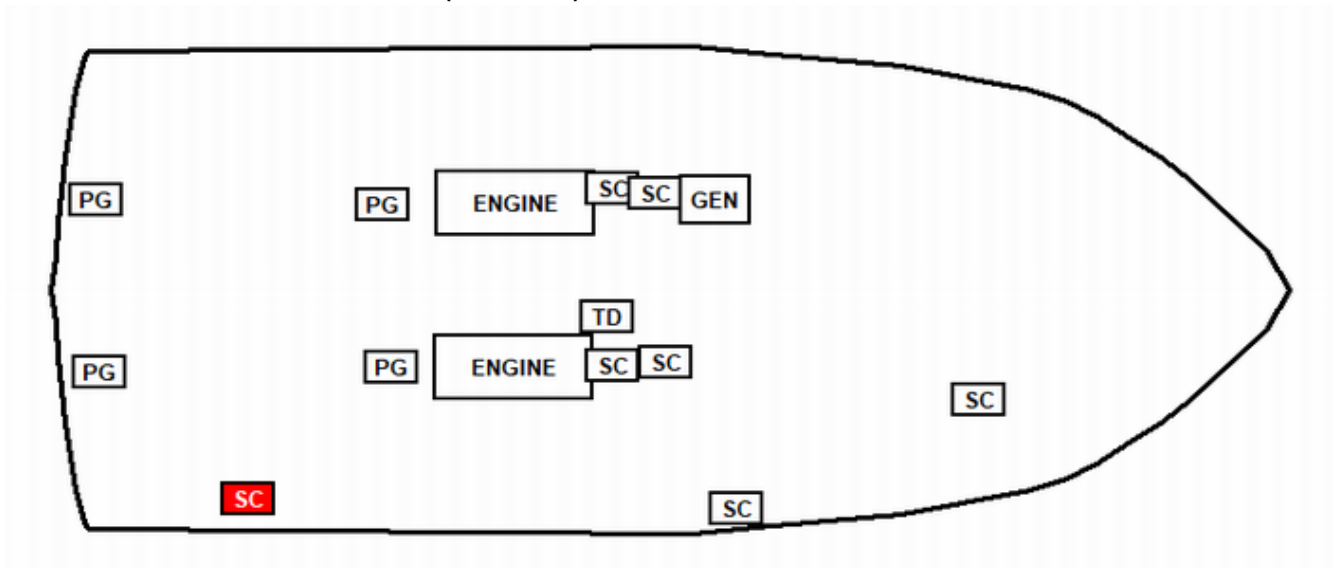
**OTHER:** Bennett trim tab electric hydraulic system. Operable. Double cylinder tabs.

#### THRU-HULLS

##### THRU-HULLS:

**NOTE:** Above the water line thru hulls are in the immediate vicinity of the appliance or fixture they serve, all were inspected and found to be serviceable.

##### THRU-HULLS BELOW WATER LINE (DIAGRAM):



Abbreviation	Description
ENGINE	Engine
GEN	Generator
PG	Pkng Gland
SC	Seacock
TD	Transducer

**\*\* Red Icon(s) with white text indicates inoperable item.**

**NOTE:** The below the water line thru-hull valves on this vessel were ball valve type, bronze, bonded, with securely clamped hoses and were all operable except as noted in the findings/diagram.

# III. SYSTEMS

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## BONDING SYSTEM

### BONDING SYSTEM

- \* **MAIN BONDING CONDUCTOR: [B17]** The bonding system is mostly well established where sighted. A separate bonding survey was not performed and I did not use a corrosion meter to establish the level of protection. However the bonding system is using individual green insulated wire and copper bonding straps and appeared to be serviceable were sighted. Monitor all zincs for deterioration, if a more detailed analysis is required this surveyor recommends a complete separate bonding system survey. Propeller shafts are equipped with riding brushes, connected to the bonding system, brush material was worn/gone.

## SAFETY EQUIPMENT

### SAFETY EQUIPMENT (UNITED STATES COAST GUARD)

**NUMBER AND TYPE OF PFD'S:** Five USCG type II, serviceable.

**NUMBER OF THROWABLE PFD'S:** One USCG type IV boat cushion, serviceable.

- \* **FIRE EXTINGUISHERS: [B18]** Two USCG size BC1 noted. Gauges showed charged. No labeling of recent inspection.
- \* **VISUAL DISTRESS SIGNALS: [B19]** No visual distress signals (flares, meteors) sighted on the vessel with a current expiration date.

**SOUND DEVICES:** Hand held horn, operable. Disconnected hose for the installed unit.

- \* **NAVIGATION LIGHTS: [B20]** Navigation lighting was found to be operable. Anchor lighting was inoperable.

**INLAND NAVIGATION RULE BOOK< (12M-39'4"):** None observed.

**"NO OIL DISCHARGE" PLAQUE:** Yes, observed on vessel.

**TRASH DISPOSAL PLACARD:** Yes, observed on vessel.

**WASTE MANAGEMENT PLAN (OVER 40'):** A written waste management plan was not sighted on the vessel, not the same as a trash placard.

### AUXILIARY SAFETY EQUIPMENT

**LIFE RAFT:** None sighted

**E.P.I.R.B.:** None sighted, highly recommended.

**SMOKE DETECTOR:** A battery powered smoke detector was noted on the vessel, tested OK when pushing the unit's test button, monitor battery condition often.

- \* **BILGE WATER ALARM AND SAFETY SWITCHES: [B21]** None sighted, highly recommended.
- \* **FIXED FIRE EXTINGUISHING SYSTEM (HALON TYPE): [B22]** Located engine compartment type FE241 by Fireboy. Automatic thermal activation switch as well as manual pull cable. Inspection tag is not current.

**SEARCH LIGHT:** None sighted.

**FIRST AID KIT:** Basic kit, serviceable.

- \* **CARBON MONOXIDE DETECTORS: [B23]** No carbon monoxide detectors observed on vessel.

**REBOARDING MEANS:** Swim ladder at the swim platform.

### BILGE PUMPS

**LIST:** Three 12 volt submersibles with float switches noted.

# III. SYSTEMS

## SAFETY EQUIPMENT

### BILGE PUMPS(*continued*)

TABLE:

MFG	Capacity	Location	Type	Status
Rule	1500	Fwd bilge	Submersible w/float switch	Operable
Rule	1500	Aft bilge	Submersible w/float switch	Operable

**NOTE:** Indicators for automatic bilge pump operation were sighted to be red lights at the main helm panel, operable. Hoses, clamps, and discharge fittings appear serviceable.

## OUT OF WATER INSPECTION

### BELOW WATERLINE MACHINERY

**PROPELLER(S):** Two each, four bladed bronze wheels with a labeled size of 28 x 24, serviceable condition. Two each spare four bladed wheels also noted stored below the forward berth.

**PROPELLER SHAFT(S):** Stainless steel 2 1/4", serviceable.

- \* **SHAFT BEARING (CUTLESS BEARING): [C10]** Cutless bearings showed slight looseness port and starboard struts.

**STRUTS:** Single V bronze type strut per shaft aft, I beam bronze intermediate strut forward, shows to be serviceable.

**RUDDER(S) MATERIAL:** Stainless steel, serviceable.

- \* **TRIM TABS: [B24]** Stainless steel trim tabs by Bennett, serviceable.

**THRU-HULLS:** All thru hull fittings were inspected and appear serviceable, found to be bronze in material.

**TRANSDUCERS:** Transducers and blocks were inspected and found to be serviceable.

**ZINCS:** Shaft zincs, hull zinc centerline aft, trim tab zincs, serviceable. Shaft zinc was missing port side, starboard hull zinc was wasted. Monitor often.

### CONDITION OF HULL (WETTED SURFACE)

**BLISTERS:** None sighted. There was no readily detectable visual evidence of hull bottom blistering. Symptomatic evidence can be obscured by fresh bottom coatings, a dry storage period during which the blisters spontaneously depressurize, bottom laminate sanding, and other conditions or actions. Surveyor has no firsthand knowledge of the history of bottom maintenance, blistering, repairs or prophylactic coatings. Random percussion soundings made over the hull molding gave no readily detectable evidence of structurally significant laminate debonding or voids.

**CONDITION OF BOTTOM PAINT:** Bottom paint was in fair condition

## SEATRIAL REPORT

### INTRODUCTION

- \* **INTRODUCTION: [B25]** The WEGO was operated from her slip in Apollo Beach between the hours of 10:30 to 2:00 on May 14, 2019, exclusive of the time spent in the slings at the Elite Marine Service Boatyard in Salt Creek, St. Petersburg for bottom inspection. The vessel was operated by the owner. Also attending the sea trial were Bob Gassert, Lin Earley, Jerry Wheeler, Jonathan Marquette - engine surveyor and myself.

# III. SYSTEMS

## SEATRIAL REPORT

### OBSERVATIONS

**OBSERVATIONS:** 1. The engines started without excessive cranking.

2. The engine exhaust appeared normal.

3. The cooling water exhaust appeared adequate and normal.

4. The engine instruments operate within normal operating limits at idle, cruising speed, and maximum throttle.

5. Manufacturer's recommended max RPM is 2600

Engines reached 2700 -P, 2701-S RPM at full throttle, per the engine surveyor's photo tachs.

6. The steering system operated normally.

7. The throttles operated normally.

8. The transmissions operated normally/smoothly.

9. The backdown test was satisfactory except as noted.

10. There were no excessive vibrations noted.

11. The autopilot operated normally, the trim tabs operated normally.

12. There were no major oil or coolant leaks observed. (On main engines or in exhaust water)

13. The single hourmeter was observed to be operable during the seatrial.

Note that the RPM readings shown in the below table were estimates based upon the engine surveyor's photo tach readings that stated both engines were running at approximately the same rpm.

The water temperature is in Fahrenheit. The oil pressure is in pounds per square inch. RPM refers to revolutions per minute. Batts are in volts of charge from the alternator. Speed is read from a GPS. These figures are comprised of data read from the vessels gauges while underway on the above stated date and time of the sea trial.

### TRIAL RUN DATA

#### PORT ENGINE:

RPM	OIL PRESSURE	VOLTAGE	TEMPERATURE	SPEED
600	40	12	150	3.8 knots
1200	55	12	160	8.2
2000	60	12	160	12.2
2200	70	12	160	16.0
2600	65	12	165	17.9
2700	65	12	191	18.9



### III. SYSTEMS

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#### SEATRIAL REPORT

##### TRIAL RUN DATA(*continued*)

###### STARBOARD ENGINE:

RPM	OIL PRESSURE	VOLTAGE	TEMPERATURE	SPEED
600	45	12.5	150	3.8 knots
1200	58	12.5	155	8.2
2000	60	12.5	160	12.2
2300	80	12.5	160	16.0
2600	85	12.5	165	17.9
2701	85	12.5	188	18.9

**GENERATOR:** Generator gauges showed 45 psi oil pressure, 12.5 volts DC, and 170 degrees operating temperature. Output was measured as 60.5 cycles, 119.4 volts at a 35 amp load.

**NOTE:** Knot to statute miles per hour conversion is  $(\text{knots} \times 1.15) = \text{statute miles per hour}$ , this report is not intended to replace a full engine survey report.

# IV. FINDINGS AND RECOMMENDATIONS

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Deficiencies noted under "SAFETY" should be addressed before vessel is next underway. These findings represent an endangerment to personnel and/or the vessel's safe and proper operating condition. Findings may also be in violation of U.S.C.G. regulations.

Deficiencies noted under "OTHER DEFICIENCIES" should be corrected in the near future so as to maintain standards and to help the vessel to retain it's value.

Deficiencies will be listed under the appropriate heading:

- A. SAFETY DEFICIENCIES
- B. OTHER DEFICIENCIES NEEDING ATTENTION
- C. SURVEYOR'S NOTES AND COSMETIC ITEMS

THERE WERE NO "A" SAFETY DEFICIENCIES NOTED ON THIS VESSEL

## B. OTHER DEFICIENCIES NEEDING ATTENTION:

### FINDINGS

### RECOMMENDATIONS

#### B.1 (PAGE 4) BILGE:

Bilge areas throughout vessel showed oily residue and heavy debris.

*Clean bilge area often, oil, debris and trash represent potential bilge pump obstructions as well as potential environmental hazards/fines.*

#### B.2 (PAGE 4) SCUPPERS:

Deck drain hoses were noted to be showing age/jacket cracking throughout vessel, as observed engine compartment and aft in the master stateroom.

*Renew deck drain hoses*

#### B.3 (PAGE 4) WINDLASS/GROUND TACKLE SYSTEM:

Windlass motor housing was showing heavy corrosion.

*May want to clean and paint to protect and prevent further corrosion.*

#### B.4 (PAGE 4) ANCHOR PLATFORM:

Pulpit was cracked/soft both port and starboard at the deck to pulpit joint. Water was dripping off of the fasteners in the chain locker overhead.

*Remove pulpit and obtain FRP repair, reseal/rebed all deck hardware as needed.*

#### B.5 (PAGE 4) DAVITS:

Davit was inoperable on the day of survey, owner reported cable was broken. No record of last service.

*Service/rebuild as needed.*

#### B.6 (PAGE 5) HEAD/BLACKWATER SYSTEM:

Holding tank vent hose was showing heavy age/jacket cracks. White sanitation hose at the tank top was showing staining/salt permeation type. Wire nuts noted in the wiring for the macerator pump.

*Renew hoses. Remove wire nuts from vessel and renew wiring connections for the macerator using generally accepted wire connection practices.*

#### B.7 (PAGE 6) AIR CONDITIONING UNITS:

Raw water hose for air conditioning supply, from pump to manifold is dry with a cracked surface. Intake air filters on the air conditioning evaporators were dirty or non existent. Master stateroom unit showed a minimal drop down temperature differential.

*Renew hose with marine grade reinforced hose, renew hose clamps with 100% marine grade stainless steel. Renew/clean AC filters. Investigate master stateroom unit further and repair as needed.*

# IV. FINDINGS AND RECOMMENDATIONS

---

## B. OTHER DEFICIENCIES NEEDING ATTENTION:

### FINDINGS

### RECOMMENDATIONS

#### B.8 (PAGE 7) EXHAUST SYSTEM:

The engine exhaust hose clamps in the aft engine bilge area were showing rust/corrosion.

*Renew and double clamp with marine grade full stainless steel clamps.*

#### B.9 (PAGE 7) HOSES AND CLAMPS:

Port and starboard engine raw water hoses at the seacocks were showing age/jacket cracking.

*Renew hoses and clamps, using reinforced marine hose and 100% marine grade stainless steel hose clamps.*

#### B.10 (PAGE 7) SEACOCKS AND STRAINERS:

Port and starboard engine raw water intake seacocks would not operate with normal pressure.

*Service, repair, or renew as necessary all below the waterline thru hull valves to provide smooth/dependable operation.*

#### B.11 (PAGE 7) PACKING GLAND:

Water injection hoses (port and starboard) for the packing gland lube/cooling water were noted to be showing age/jacket cracks at the exhaust risers.

*Renew hoses.*

#### B.12 (PAGE 8) VOLTAGE:

The generator starting battery was factory date coded D6 (April 2016).

*Renew based upon age.*

#### B.13 (PAGE 8) MAIN BREAKER:

Main breakers were not "double pole" type, adjacent to the shore power inlets were fuses.

*Per ABYC standard E-11.7.2.2.1.1 the shore grounded (white) and ungrounded shore current carrying conductors are connected from the shore power inlet to the boat's AC electrical system through an overcurrent protection device that simultaneously opens "both" current carrying conductors. Fuses shall not be used instead of simultaneous trip devices. Consideration should be given to upgrading vessel to meet these current standards.*

#### B.14 (PAGE 9) OUTLETS:

The GFCI outlets on board the vessel failed to trip when tested with a ground fault tester.

*Investigate further, repair/renew as needed to provide GFCI protection. Per ABYC standard E-11.15.3.5 all receptacles installed in a head, galley, machinery space, or on weather deck, shall be protected by a Type A (nominal 5 milliamperes) Ground Fault Circuit Interrupter (GFCI).*

#### B.15 (PAGE 9) EXHAUST SYSTEM:

Generator's exhaust hose showed heavy cracking at the exhaust pot. The exhaust hose for the generator to have no support from waterlift pot to topsides fitting.

*Renew exhaust hose, support discharge hose to prevent pulling on discharge fitting.*

#### B.16 (PAGE 9) DC/AC INVERTER:

The inverter's DC supply wiring was direct to 8D battery with no battery switch or inline overcurrent protection installed. Extension cords were draped across the engine compartment for the AC output side of inverter.

*Remove this installation. Should an inverter be desired, install out of engine compartment in a cool location. Provide grounding conductor for cabinet, inline overcurrent protection and on/off switching for DC supply. Route AC output wiring and support every 18", using 600V boat cable.*

# IV. FINDINGS AND RECOMMENDATIONS

---

## B. OTHER DEFICIENCIES NEEDING ATTENTION:

### FINDINGS

### RECOMMENDATIONS

#### B.17 (PAGE 11) MAIN BONDING CONDUCTOR:

Heavy corrosion noted for most of the bonding wire connections in the aft bilge/rudder post area.

*Investigate entire bonding system further, disassemble, clean, renew connections as necessary*

#### B.18 (PAGE 11) FIRE EXTINGUISHERS:

No inspection tags observed on fire extinguishers. Minimal in number.

*Per ABYC standard A-4, ap.5.4.2, at least once a year, a full maintenance check should be made by a qualified fire extinguishing service facility in accordance with the maintenance instructions on the name plate of the fire extinguisher. A tag should be attached showing the date of such maintenance. Carry at least 4 hand held units on 48' vessel.*

#### B.19 (PAGE 11) VISUAL DISTRESS SIGNALS:

Visual distress signals (flares) were out of date.

*Comply with USCG regulations for Visual Distress Signals. Obtain VDS before vessel is next underway.*

#### B.20 (PAGE 11) NAVIGATION LIGHTS:

The all around anchor light would not prove operable.

*Investigate further and repair, replace fixtures, wiring or bulbs as necessary to make navigation/anchor lights operable.*

#### B.21 (PAGE 11) BILGE WATER ALARM AND SAFETY SWITCHES:

Vessel was not equipped with a high bilge water alarm.

*Consideration should be given to the addition of an audible high water alarm. ABYC standard H-22.7.3 states on boats with an enclosed accommodation compartment, an alarm shall be installed indicating that bilge water is approaching the maximum bilge water level.*

#### B.22 (PAGE 11) FIXED FIRE EXTINGUISHING SYSTEM (HALON TYPE):

Inspection tag on Halon system is not current, labeled as last performed 2008.

*Obtain state certified fire extinguishing company to inspect and recertify Halon system.*

#### B.23 (PAGE 11) CARBON MONOXIDE DETECTORS:

There were no carbon monoxide detectors observed on vessel.

*Install CO detectors in each sleeping space, and in main cabin area.*

#### B.24 (PAGE 12) TRIM TABS:

Port side trim tab was bent.

*Investigate further and repair as needed.*

#### B.25 (PAGE 12) INTRODUCTION:

Starboard engine tachometer was inoperable.

*Repair/renew to provide normal operation.*

## C. SURVEYOR'S NOTES AND OBSERVATIONS:

### FINDINGS

### RECOMMENDATIONS

#### C.1 (PAGE 4) PORTLIGHTS:

Latching dogs were broken off on the forward portlights, port and starboard.

*Renew latching dogs or portlights as needed.*

# IV. FINDINGS AND RECOMMENDATIONS

---

## C. SURVEYOR'S NOTES AND OBSERVATIONS:

### FINDINGS

### RECOMMENDATIONS

#### C.2 (PAGE 4) TRANSOM:

Swim platform was noted to be cracking with wet/soft core, as observed from underneath during the out of water inspection.

*Obtain FRP repair using generally accepted marine practices.*

#### C.3 (PAGE 5) MATERIAL:

Water spots noted to be dripping out of the aft deck hard top overhead light fixtures. Moisture meter readings were pegged for the forward trim at the slide back top centerline.

*Investigate further and repair/reseal/renew as desired.*

#### C.4 (PAGE 5) WINDOWS/PORTS/DOORS:

Side window felt sliders were deteriorating, drainage was poor in side windows due to this.

*Clean window frames now, consideration could be given to renewal of felt, keep frame drains clean and free flowing always.*

#### C.5 (PAGE 5) WINDOWS/PORTS/DOORS:

Cracked window pane noted starboard salon

*Repair or renew as desired.*

#### C.6 (PAGE 5) SEATS:

Surface bubbles/blisters noted below the bridge deck cushions.

*Sand down, fill and repair as needed.*

#### C.7 (PAGE 6) FAUCETS/FRESHWATER SYSTEM:

Corrosion and dampness noted at the base of water heater. Pressure relief valve is plumbed to the bilge.

*Investigate further and repair as needed following a thorough cleaning and repair of generator leaks as well (water could be coming from elsewhere). Per ABYC standards, vessels with dockside water hook ups shall have the water heater's pressure relief valve plumbed overboard in case of discharge.*

#### C.8 (PAGE 6) LIGHT FIXTURES:

Starboard forward engine compartment lighting, DC, was inoperable. Headliner and aft deck light fixtures were missing lenses. Twisted connections noted for the rope lighting below the berth.

*Investigate further and repair/renew as necessary.*

#### C.9 (PAGE 9) AUTOPILOT:

Autopilot would show rudder failure alarm intermittently.

*Investigate further and recalibrate or repair as necessary.*

#### C.10 (PAGE 12) SHAFT BEARING (CUTLESS BEARING):

Cutless bearings were slightly loose on both the port and starboard shafts.

*Renew cutless bearings.*

# V. SUMMARY AND VALUATION

---

## STATEMENT OF OVERALL VESSEL RATING OF CONDITION:

It is the surveyor's experience that develops an opinion of the OVERALL VESSEL RATING OF CONDITION after the survey has been completed and the findings have been organized in a logical manner.

The grading of condition, developed by BUC RESEARCH, and accepted in the marine industry, for a vessel at the time of survey, determines the adjustment to the range of base values in the BUC USED BOAT PRICE GUIDE, for a similar vessel sold within a given time period, as a consideration to determine the Market Value.

The following is the accepted marine grading system of condition:

"EXCELLENT (BRISTOL) CONDITION", is a vessel that is maintained in mint or bristol fashion - usually better than factory new - loaded with extras - a rarity.

"ABOVE AVERAGE CONDITION", has had above average care and is equipped with extra electrical and electronic gear.

"AVERAGE CONDITION", requires usual maintenance and normally equipped for her size.

"POOR CONDITION", substantial yard work required and devoid of extras.

"RESTORABLE CONDITION", enough of hull and engine exists to restore the boat to usable condition.

As a result of my investigation, as shown in the SYSTEMS AND FINDINGS AND RECOMMENDATIONS section of this REPORT OF SURVEY, and by virtue of my experience, my opinion is

**OVERALL VESSEL RATING:** \*\*\*\* AVERAGE

## STATEMENT OF VALUATION:

1. The "FAIR MARKET VALUE" is the most probable price in terms of money which a vessel 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 conditions whereby:

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

Therefore, after consideration of the reliability of the data, the extent of the necessary adjustments and condition of the vessel, it is your surveyor's opinion that the "FAIR MARKET VALUE" of the subject vessel is:

**\$135,000.00**

*One Hundred Thirty Five Thousand Dollars and Zero cents*

2. The "ESTIMATED REPLACEMENT COST" indicates the retail cost of a new vessel of the same make/model with similar equipment offered by the same manufacturer. "ESTIMATED REPLACEMENT COST" of the subject vessel is:

**\$890,000.00**

*Eight Hundred Ninety Thousand Dollars and Zero cents*

# V. SUMMARY AND VALUATION

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## SUMMARY:

In accordance with the request for a marine survey of the WEGO, for the purpose of evaluating its present condition and estimating its Fair Market Value and Replacement Cost, I herewith submit my conclusion based on the preceding report. The subject vessel was personally inspected by the undersigned on May 14, 2019 and was found to be a well constructed, appointed and comfortable vessel. The vessel is capably captained and well-kept. Subject to correction of deficiencies listed in section IV A. (Safety), the vessel is considered to be suitable for its intended use. Other deficiencies listed should be attended to in a timely fashion.

## SURVEYOR'S CERTIFICATION:

I certify that, to the best of my 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 my personal, unbiased professional analyses, opinions, and conclusions.

I have no present or prospective interest in the vessel that is the subject of this report, and I have no personal interest or bias with respect to the parties or property involved.

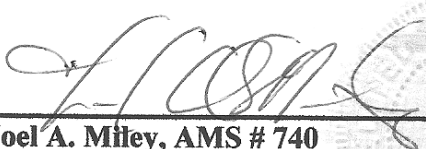
My compensation is not contingent upon the reporting of a predetermined value or direction in value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulate result, or the occurrence of a subsequent event.

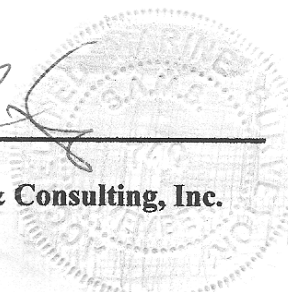
My analysis, opinions, and conclusions were developed and this report has been prepared in conformity with the UNIFORM STANDARDS OF PROFESSIONAL APPRAISAL PRACTICE using methods recognized by the AMERICAN SOCIETY OF APPRAISERS, leading to an educated, unbiased, and defensible opinion.

I have made a personal inspection of the vessel that is the subject of this report.

This report is submitted without prejudice and for the sole and exclusive use by Bob Gassert. This report should be considered as an entire document. No single section is meant to be used except as part of the whole. This report does not constitute a warranty, either expressed, or implied, nor does it warrant the future condition of the vessel. This report is a statement of the condition of the vessel at the time of survey only.

ATTENDING SURVEYOR:

  
**Noel A. Miley, AMS # 740**  
**Miley Marine Surveying & Consulting, Inc.**  
**Member, SAMS, ABYC**

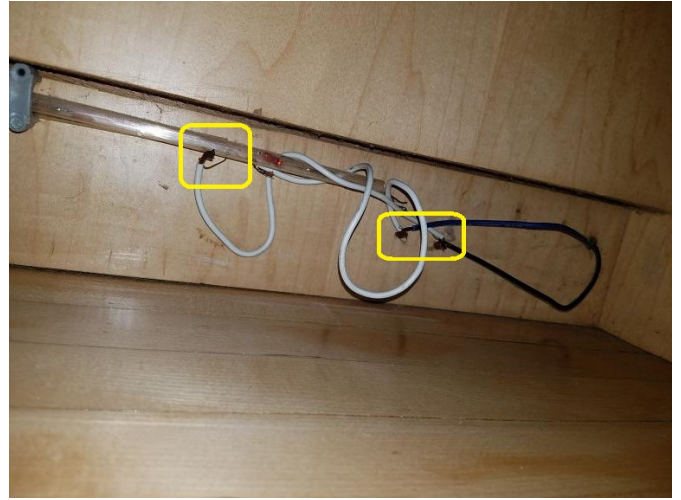


## VI. PHOTOGRAPHS

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Looking up, starboard aft salon corner water damages from above



Rope lighting below berth, twisted wire connections



Master stateroom sole soft, supported by wedged 4 x 4



Deteriorated shelf, inside aft marine head vanity



## VI. PHOTOGRAPHS

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**Heavy corrosion noted for most bonding wire connections**



**Moisture meter pegged 999 (0-999) scale, slider for bridge / aft deck access**



**Moisture inside aft deck hardtop lighting**



**Helm**

## VI. PHOTOGRAPHS

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Age/jacket cracks for aft deck drain hose, port aft corner



Port running gear



Starboard running gear



Cracked pulpit, port and starboard



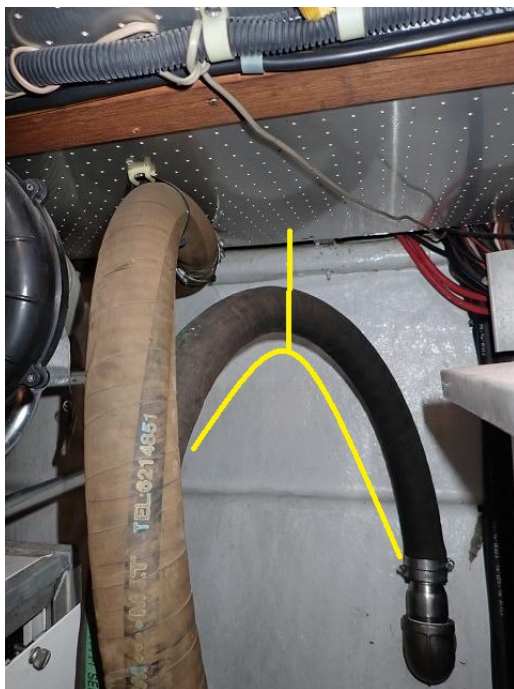
## VI. PHOTOGRAPHS



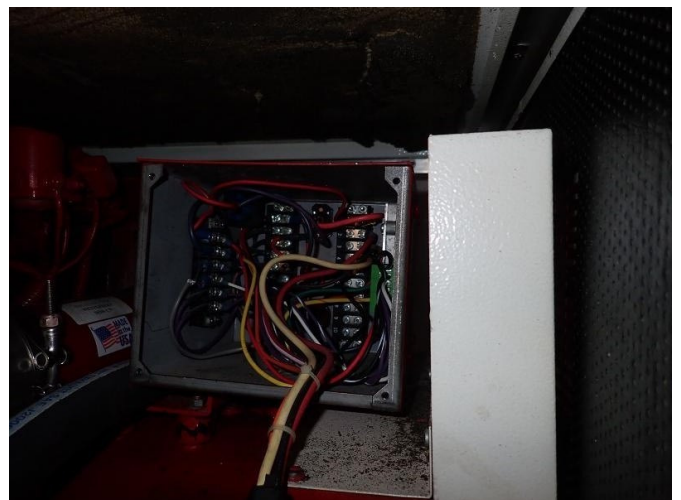
Out of water



Generator exhaust hose age cracking at waterlift



No support for generator exhaust hose



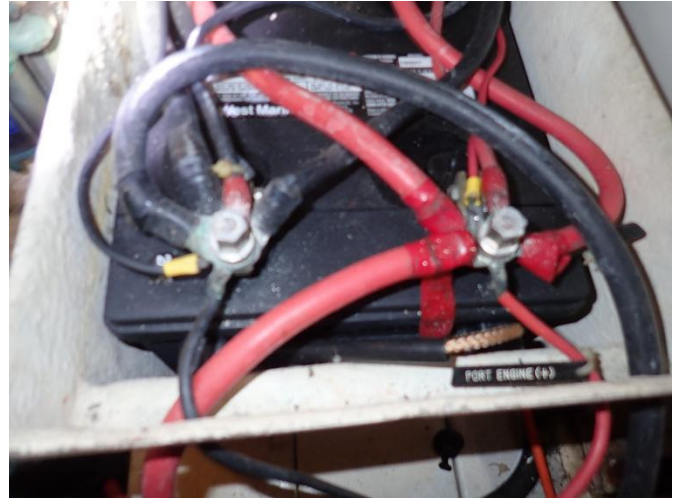
Exposed wiring connections, generator

## VI. PHOTOGRAPHS

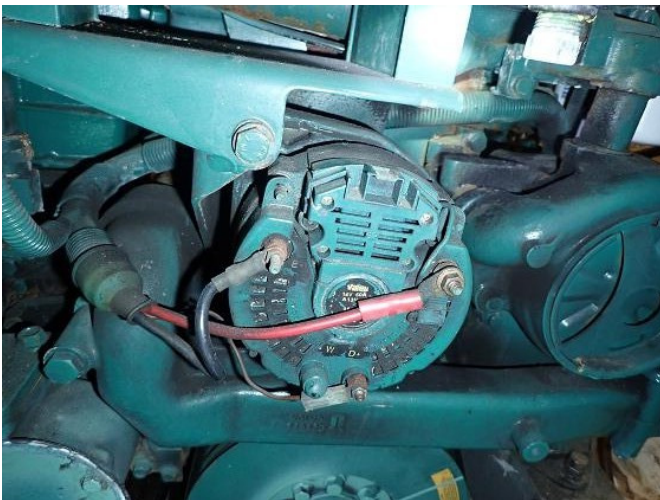
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**D6 (April 2016) date code for generator lead acid battery**



**Excessive connections per terminal**



**No covers on hot/ungrounded connections for alternators/starters**



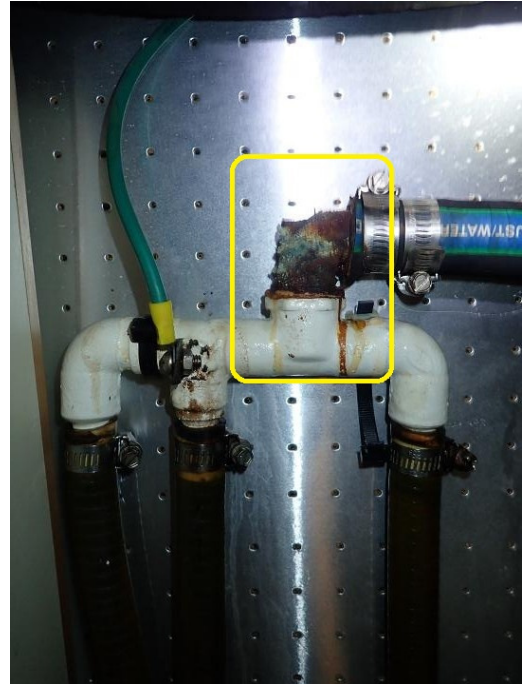
**Port engine**



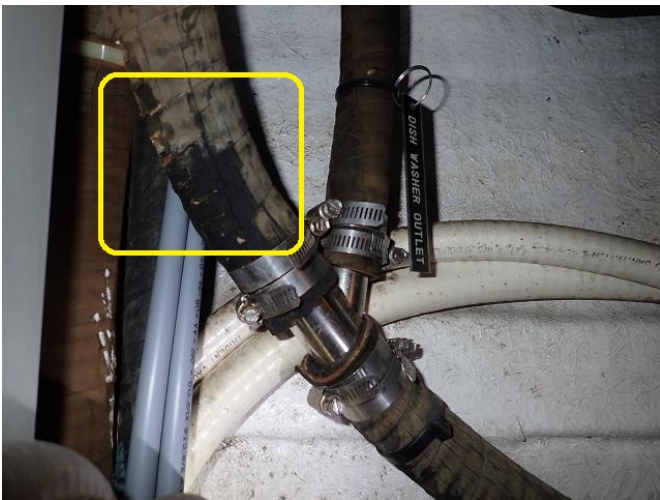
## VI. PHOTOGRAPHS



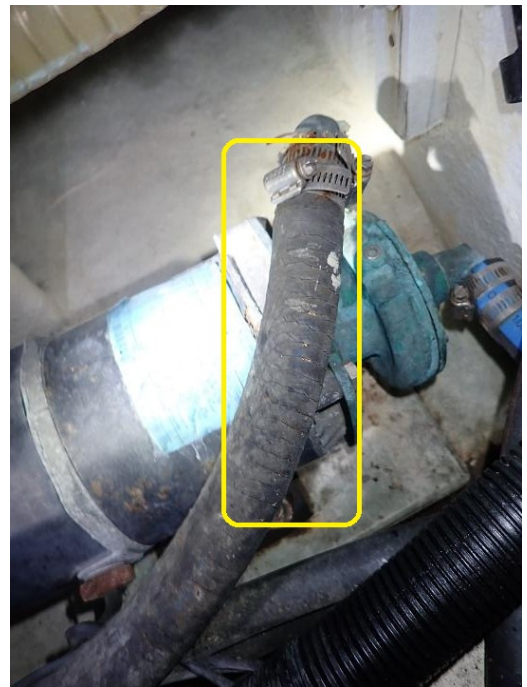
Starboard engine



Corrosion/weepage, Air Conditioning raw water manifold



Age/jacket cracks, Stbd fwd engine compartment drain hoses



Age/jacket cracks, Air conditioning raw water supply hose

## VI. PHOTOGRAPHS

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**Wet and rust noted base of water heater**



**Inverter direct to battery, no over current protection, no grounding of cabinet, loose extension cords**



**Engine raw water supply hose age/jacket cracks**

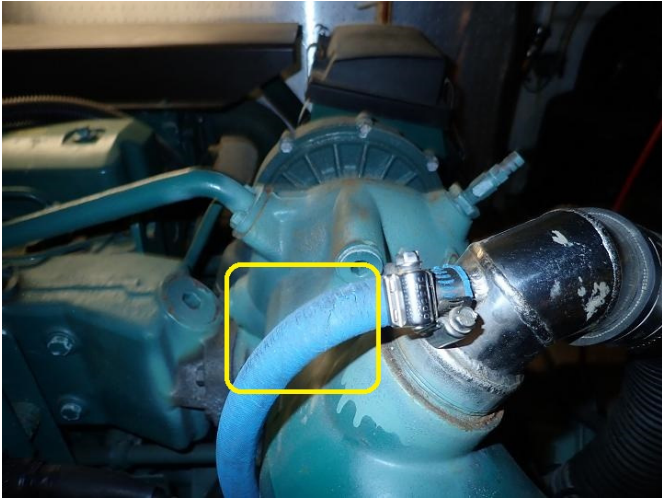


**Exhaust hose clamp corrosion, port aft**



## VI. PHOTOGRAPHS

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Water hoses for prop shaft glands, jacket cracking at risers, p/s



Drain assembly homemade/leaking, aft engine compartment note corroded exhaust hose clamps



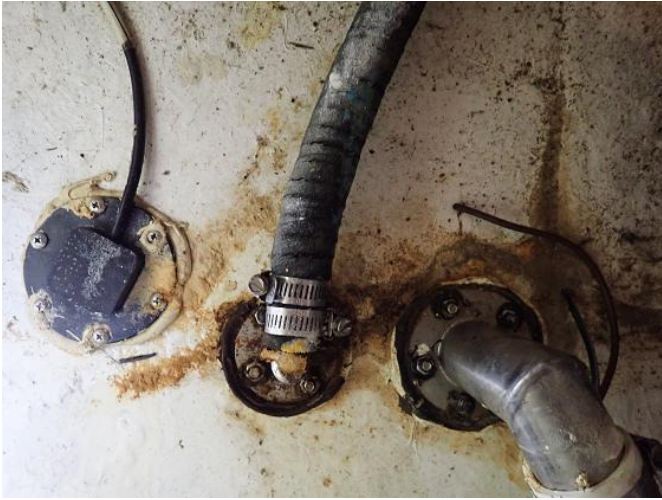
Generator corrosion/collapsed hose



Wire nuts for macerator

## VI. PHOTOGRAPHS

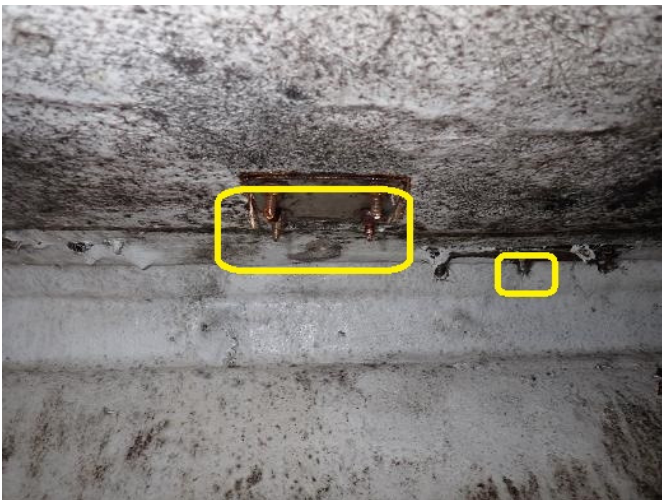
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**Holding tank vent hose age/jacket cracks**



**Windlass motor, heavy corrosion**



**Water dripping off deck hardware, inside chain locker**



**Felt track deterioration, slider windows**

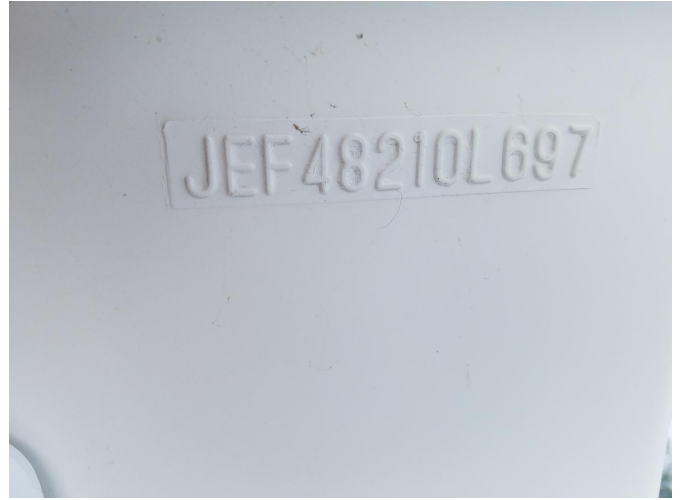


## VI. PHOTOGRAPHS

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**Felt tracks deterioration, slider windows**



**HIN - JEF48210L697**