

RIO DULCE MARINE SURVEYORS

MARINE SURVEYOR AND CONSULTANT

Auxiliary Sailing Catamaran

"Boat for Sale"



Rio Dulce Marine Surveyors

Aldea Rio Dulce Livingston Izabal, GUATEMALA
(502) 5732-0219

Report of Marine Survey

Of The Vessel

"Boat for Sale"

Auxiliary Sailing Catamaran

Conducted by
Captain John M. Brandes II, AMS
SAMS Accredited Marine Surveyor

PREPARED FOR:

Sail Boat Buyer

August 24, 2015

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I. INTRODUCTION

SCOPE OF SURVEY

Acting at the request of Sail Boat Buyer, the attending surveyor did attend onboard the *Auxiliary Sailing Catamaran, "Boat for Sale"* on , August 20, 2015 where an "in-the-water-survey" WAS conducted at The Moorings Marina, Placencia, Stann Creek District, Belize. The ship's papers were on board and appeared to be in order. The Hull Identification Number (**HIN**) 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 August 20, 2015 at Thunderbird Marina, Placencia, Stann Creek District, Belize. The reason for the survey, was to ascertain the physical condition and value of the vessel. Moisture readings taken and referenced throughout the body of the report, were taken with the GE Protometer moisture meter. 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.

Images supplied with this report were produced with an Samsung WB2100 digital camera and represent a true and accurate representation of the subject at the time the image was taken.

NOTE: It is recommend and understood that all DIESEL/GAS engines be surveyed by a qualified Engine Surveyor to determine the condition of the engines, gears and pumps, heat exchangers, coolers, etc.

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.

I. INTRODUCTION

Use of asterisks * followed by the letter A, B, C 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. The deficiencies reported herein reflect the conditions observed at the time the survey was conducted.

NOTE:

1. This report is issued for the exclusive use of the individual(s), financial institution(s) and/or insurance company (ies) as may be specifically identified (named) upon this surveyor's report and may contain information that is privileged, confidential and exempt from disclosure under applicable law. Any entities or persons that are not identified herein are hereby advised that any dissemination, distribution or copying of this report is strictly prohibited; no such entity or person shall have any right to rely upon the contents of this surveyor's report.
2. In the event that this surveyor is called upon, after rendering a Marine Survey Report, to explain, modify or supplement the report, or its contents, or should the surveyor be called upon to render expert advise, testimony or to provide survey expertise in any dispute in litigation (or not), the surveyor will be compensated by the owner/insured in accordance with the fees customarily charged in the surveying industry.

LIMITED LIABILITY:

1. The survey, which is the subject of this report, was conducted in accordance with generally accepted marine standards and criteria utilized in the marine surveying industry. Persons or entities entitled to rely upon this report are advised that this surveyor is not an engineer nor does he posses any specialized knowledge beyond the degree of skill commonly possessed by others in the same employment.
2. Surveyor shall have no liability for consequential damages, no liability for personal injury damages, and no liability for property loss damages, no liability for punitive damages, all of which shall be deemed to have been knowingly and voluntarily waived upon use of this survey report.
3. In no event shall the legal liability of the undersigned exceed the fee paid for this survey report, regardless of claims or suits and regardless of whether under theory of tort, contract, products liability, admiralty, or otherwise.

II. GENERAL INFORMATION

GENERAL INFORMATION

SURVEY PREPARED FOR:	Sail Boat Buyer
NAME OF VESSEL:	"Boat for Sale"
TYPE OF SURVEY:	Off Charter for Owner
OVERALL VESSEL RATING:.....	**** ABOVE AVERAGE
ESTIMATED MARKET VALUE:	\$331,750 US Dollars
ESTIMATED REPLACEMENT COST:	\$643,500 US Dollars
YEAR/MAKE/MODEL OF VESSEL:	2011 Robertson & Caine Leopard 38
BUILDER:	Robertson & Caine, Ltd Portsmouth, England
HULL IDENTIFICATION NUMBER (HIN):	ZA-RACA*****
HAILING PORT:	Nice Port
OFFICIAL NUMBER:	12345678
OWNER:	Sail Boat Seller
PLACE OF SURVEY:	The Moorings Marina Placencia, Stann Creek District Belize
DATE/TIME OF SURVEY:	August 20, 2015
HULL MATERIAL:	FRP (Fiber Reinforced Plastic).
HULL TYPE:	Auxiliary Sail Catamaran
LENGTH OVER ALL (L.O.A.):	11.43 Meters
(LOAD) LENGTH WATERLINE (L.W.L.):	10.97 Meters
BEAM:	6.02 Meters
DRAFT:	1.12 Meters
DISPLACEMENT:	8,977 Kgs
OVERHEAD CLEARANCE:	19.10 Meters
PROPULSION SYSTEM:	Sail and Twin (2) Yanmar Diesel Engines
FUEL TYPE:	Diesel.
FUEL CAPACITY:	350 Liters in Two (2) Tanks
AC POWER:	120 VAC

II. GENERAL INFORMATION

DC POWER: 12 VDC
FRESH WATER CAPACITY: 780 Liters in Three (3) tanks
HOLDING TANK: Yes
INTENDED USE: Offshore cruising.

DEFINITION OF TERMS:

The terms and words used in this report have the following meanings as used in this Report of survey:

APPEARS:

Indicates that a very close inspection of the particular system, component or item was not possible due to constraints imposed upon the surveyor(e.g. no power available, inability to remove panels, or requirements not to conduct destructive tests).

FIT FOR INTENDED USE:

Use which is intended by Survey Purchaser(present or prospective owner).

SERVICEABLE: ADEQUATE:

Sufficient for a specific requirement.

POWERS UP:

Power was applied only. This does not refer to the operation of any system or component unless specifically indicated.

EXCELLENT CONDITION:

New or like new.

GOOD CONDITION:

Nearly new, with only minor cosmetic or structural discrepancies noted.

FAIR CONDITION:

Denotes that system, component or item is functional as is with minor repairs. (MONITOR OFTEN)

POOR CONDITION:

Unusable as is. Requires repairs or replacement of system, component or item to be considered functional.

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.

III. SYSTEMS

HULL DECK AND SUPERSTRUCTURE

HULL CONSTRUCTION

TYPE:

Auxiliary Sailing Catamaran

MATERIAL:

FRP (fiber reinforced plastic)

EXTERIOR HULL:

White gelcoat.

PORT LITES:

Two (2) fixed windows

One (1) opening port lite

BULKHEADS:

Athwartships reinforcement enhanced by wood bulkheads bonded to the hull with FRP (fiber reinforced plastic).

STEM:

Slightly raked stem.

TRANSOM:

Reverse transom with molded steps.

BILGE:

Clean and dry where sighted

CHAIN LOCKER (DRAINAGE):

Chain locker has overboard drainage.

LIMBER HOLES:

Limber holes are of adequate size and clear where sighted.

MOISTURE CONTENT:

Moisture readings were taken at random locations and all were seen in normal range.

DECK CONSTRUCTION

TYPE:

Molded FRP (fiber reinforced plastic) with white gelcoat and non-skid surface.

MATERIAL:

Cored FRP (fiber reinforced plastic) with white gelcoat, molded non-skid surface.

COCKPIT:

Molded FRP aft cockpit

HULL-TO-DECK JOINT

TYPE:

Molded construction.

DECK FITTINGS

STANCHIONS:

Stainless steel stanchions and cable lifelines, run perimeter of deck from boarding gate to boarding gate port to starboard. Appears serviceable.

III. SYSTEMS

HULL DECK AND SUPERSTRUCTURE

DECK FITTINGS (*continued*)

BOW PULPIT (BOW RAIL):

Stainless steel rail system at both bows seen in good and serviceable condition.

TOE RAILS:

Molded FRP toe rails, part of deck layup.

VENTILATION:

Provided by portlights and deck hatches.

SCUPPERS:

Decks drain overboard.

CHOCKS AND CLEATS:

Aluminum cleats sighted foreward, midships, and aft seen well thru-bolted and secured.

WINDLASS/GIPSY:

Quick windlass was operated in the down and up modes and seen in serviceable condition.

PUSHPIT (STERN PULPIT):

Double welded stainless steel rails securely mounted port and starboard with vinyl coated lifeline gate amidships.

DECK SURFACE:

White gel coat with molded in non-skid. Condition is good and serviceable.

HATCHES:

Six (6) Lewmar aluminum frame with acrylic lite's are mounted on the deck and house top.

GRAB RAIL:

Stainless hand rails along sides of super structure and others at various locations on vessel, all seen well secured and serviceable.

LIFE LINES:

Stainless steel stanchions with stainless steel cable safety lines all seen in good and serviceable condition.

CLEATS:

Aluminum cleats of adequate size were seen fore and aft port and starboard in good and serviceable condition.

ANCHOR PLATFORM:

FRP platform and stainless steel bow roller. Appears serviceable.

DAVITS:

Manually operated stainless steel dingy davit system mounted on stern. Appears serviceable.

SUPERSTRUCTURE

MATERIAL:

FRP (fiber reinforced plastic).

DECK HATCHES:

Two (2) opening hatches in front section of superstructure both are clear plastic with aluminum frames. Seen in good and serviceable condition.

III. SYSTEMS

HULL DECK AND SUPERSTRUCTURE

SUPERSTRUCTURE (*continued*)

WINDOWS/PORTS/DOORS:

Fixed windows in front face and port and starboard sides of super structure all seen in good and serviceable condition.

FITTINGS AND HARDWARE:

Various stainless steel handles mounted in strategic places. Appears serviceable.

JOINERY STRESS:

None Sighted.

CANVAS AND SUPPORT STRUCTURE:

No sail cover or stack pack was seen (photo SAM_8977).

Canvas over helm station seen weathered (photo SAM_8990).

SUPERSTRUCTURE HOUSE TO DECK JOINT:

Molded FRP

MOISTURE CONTENT:

Moisture readings were taken at random locations and all were seen in normal range.

ADDITIONAL EQUIPMENT AND ACCESSORIES

ACCESSORIES:

Vessel is equipped for LPG Bar B Que at starboard stern rail. Bar B Que not seen reported stored.

DINGHY/TENDERS:

None

FENDERS:

Adequate number of fenders seen in serviceable condition.

DOCK LINES:

All seen in good and serviceable condition.

CABIN APPOINTMENTS

INTERIOR DESCRIPTION:

JOINERY AND FINISH:

In keeping with the contemporary attitude of more light and low maintenance the interior of this vessel is a blend of white FRP and teak plywood. The joinery and finish are well designed and constructed. All seen in good and serviceable condition.

CABIN BRIGHT WORK:

***C1**

Satin varnish finish seen in good condition.

INTERIOR BULKHEADS:

The interior teak bulkheads were finely fit where sighted.

WATER INTRUSION SIGNS:

None Sighted.

III. SYSTEMS

CABIN APPOINTMENTS

INTERIOR DESCRIPTION: *(continued)*

STORAGE AREAS:

Numerous storage areas under berths, settee's, in cabinets, drawers, and lockers.

HEADLINERS:

Molded FRP

DOORWAYS:

Solid wood cabin and head doors throughout vessel. Seen in good and serviceable condition.

FABRIC AND CUSHIONS:

All seen in good and serviceable condition.

FLOOR AND WINDOW COVERINGS:

Floor panels of a laminated material with a wood pattern were seen in good condition throughout.

ACCOMMODATIONS:

Port and starboard hulls have sleeping cabins fore and aft with a head amidships. Main salon area consists of U shape dining area seating forward and galley to port aft. Sliding glass doors for main entry from aft cockpit area.

HEADS:

Two heads with showers one (1) each port and starboard amidships.

SHOWERS:

There are stand up shower enclosures in the heads and they drain to shower sumps near each. They operate and appears serviceable.

FAUCET FIXTURES:

All seen in good and serviceable condition.

LIGHT FIXTURES:

12 volt cabin lights throughout the vessel were seen operable.

SALON FURNISHINGS:

All seen in good and serviceable condition.

CABIN SOLE:

Laminated wood panels seen in serviceable condition.

VENTILATION:

Provided by numerous opening hatches, portlights, and main entry companionway.

AIR CONDITIONING UNITS:

Two (2) Marine Air self contained units, and digital controls, one in each hull.

CABIN HEATING:

The Marine Air units are reverse cycle for heat.

STEREO, ETC.:

Sony MP3 WMA AAC stereo

CONDITION AND DEFICIENCIES:

The overall house keeping for this vessel was above average. It reflects the care of a conscientious crew.

III. SYSTEMS

CABIN APPOINTMENTS

GALLEY

LOCATION:

Port side in salon area.

SINKS:

Single stainless steel sink. Molded FRP sinks in the heads all appear serviceable.

REFRIGERATION:

Vitrifrigo DT Series drawer type with separate freezer and refrigerator sections seen operating and in good condition.

STOVE/OVEN:

Two (2) burner Force 10 LPG with oven.

ACCESSORIES:

Numerous galley cooking utensils and cookware, plates, and flatware seen in good condition.

PROPULSION

MAIN ENGINES

TYPE:

Two (2) diesel auxiliary

MANUFACTURER:

Yanmar

SERIAL NUMBERS:

Port: E16407

Starboard: E16408

HORSE POWER:

28.55 HP @ 3600 RPM

NUMBER OF CYLINDERS:

Three (3) in line configuration.

INDICATED HOURS:

Port: 2992 Hours

Starboard: 2879 Hours

THROTTLE CONTROLS:

Morse mechanical lever/cable type, at helm station.

ENGINE MOUNTS AND BED:

***B1**

Engines are mounted in a Yanmar Sail Drive mounting system. All seen in good and serviceable condition except as noted.

DRIP PANS:

Integrated as part of the hull structure, all seen clean with no sign of oil leakage.

VENTILATION:

Power blowers with flex tubing and natural flow ventilation appears adequate.

III. SYSTEMS

PROPULSION

MAIN ENGINES (*continued*)

EXHAUST SYSTEM:

The Aqua lift type exhaust system was serviceable where sighted.

INSULATION:

None sighted.

ENGINE ALARMS:

Low oil pressure alarm and coolant over heat warning both visual and audible at helm station. Appears serviceable.

ENGINE SHUT DOWN:

Shut down at helm station.

CONDITION AND DEFICIENCIES:

Except as noted, auxiliary propulsion system appears to be well installed and maintained.

COOLING SYSTEM

TYPE:

Freshwater reservoir type cooling with raw water cooled wet exhaust.

RAW WATER STRAINERS:

Plastic Vetus strainers seen in serviceable condition.

HOSES AND CLAMPS:

All seen in serviceable condition.

BELTS AND PULLEYS:

Belts condition appears serviceable.

TRANSMISSIONS

TYPE:

***B2**

Saildrive

MANUFACTURER:

Yanmar

CONTROLS:

Morse type mechanical cable and linkage.

FUEL SYSTEM

MAIN ENGINE(S) FUEL SYSTEM

FUEL TYPE:

Diesel.

MATERIAL:

Aluminum tanks

NUMBER OF TANKS:

Two (2)

III. SYSTEMS

FUEL SYSTEM

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

TANKS CAPACITY:

350 liters total capacity (175 liters each tank)

SECURED:

Yes, seen in good and serviceable condition.

LOCATION:

Under each aft cabin berth.

MANUFACTURING LABEL:

The ABYC required lables were sighted on the fuel tanks.

FILL PIPE LOCATIONS:

Port and starboard side decks marked for diesel.

FILL PIPE MATERIAL:

Approved neoprene hose. Appears serviceable.

HOSE CONNECTIONS, CLAMPS:

Appears serviceable and approved where sighted.

FUEL LINES AND FITTINGS:

Approved type neoprene hose, well clamped, routed, and secured. Appears serviceable where sighted.

RETURN LINES:

Approved type neoprene hose, well clamped, routed, and secured. Appears serviceable where sighted.

SHUT-OFF VALVE:

Ball type valves were seen on all supply and return lines at tanks. All were seen in good and serviceable condition.

FUEL FILTERS:

Yes. Both remote mounted Racor filter/water separator type and engine mount spin on/off type.

ELECTRICAL SYSTEMS

ELECTRICAL SYSTEM (D.C. SYSTEM)

VOLTAGE:

12 VDC

III. SYSTEMS

ELECTRICAL SYSTEMS

ELECTRICAL SYSTEM (D.C. SYSTEM) *(continued)*

BATTERIES:

*B3

One (1) Group 31 size lead acid battery located in each engine room seen properly secured in acid proof boxes.

One (1) 8D side AGM battery located under cockpit seating area was seen properly secured.

Batteries were tested with a Cen-Tech Digital Battery Analyzer as follows:

Port starting battery: Rated Good at 100% (photo SAM_9031)

Starboard starting battery: Rated OK at 70% (photo SAM_9046)

Main house batteries: One (1) tested - Rated Good at 100%

MAIN BATTERY SWITCHES:

Rotary type main on / off switch for each engine starting battery and house battery circuit.

PANEL:

Main electrical panel is located in the salon area with circuit breakers to provide circuit protection. All seen in good and serviceable condition.

BREAKERS/FUSES:

Circuit breakers for both AC and DC branch circuits.

TYPE CONNECTORS:

Round Lugs: Captive type, where sighted. Condition: Appears serviceable.

ROUTING/SUPPORT:

Well supported and secured where sighted.

CHARGING SYSTEM:

Alternators on main diesel engines, battery charger, and solar panels. All appears serviceable.

CHARGING SYSTEM (BATTERY CHARGER):

Victron Energy Centaur 40 amp battery charger.

CHARGING SYSTEM (ALTERNATOR):

One (1) Yanmar supplied alternator on each engine.

TERMINAL BLOCKS:

Located under galley sink seen with cover to provide terminal protection.

ELECTRICAL SYSTEM (A.C. SYSTEM)

SHORE POWER INLET:

One (1) 50' Marincor shore cord with 30 amp twist lock connector direct wired to onboard main circuit breakers.

MAIN BREAKER:

Main breaker at shore cord connection to vessel in aft cockpit locker.

BRANCH BREAKERS:

Yes in the main electrical panel.

III. SYSTEMS

ELECTRICAL SYSTEMS

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

CIRCUIT LOAD MONITORS:

Yes voltage and amperage analog gauges in the main electric panel. For both the AC and DC systems.

CONNECTIONS (TYPE):

Captive lug type. Appears serviceable where sighted.

WIRE TYPE (SIZE AND RATING):

Size and rating, where sighted, appears well routed and supported, serviceable for intended use.

ROUTING:

Well routed and supported where sighted.

OUTLETS:

Various A.C. outlets available throughout yacht, appear adequate and conveniently located. Tested ok for proper polarity. GFCI (ground fault circuit interrupter) outlets sighted tested OK, all seen in good and serviceable condition.

POLARITY:

Polarity checked normal at all A.C. outlets.

GALVANIC ISOLATOR:

None Sighted.

FRESH WATER SYSTEM

FRESH WATER SYSTEM: (POTABLE WATER)

STORAGE TANKS:

Three (3) tanks of potable water grade plastic secured in forward deck lockers port and starboard seen in good and serviceable condition.

CAPACITY:

Reported 780 liters

ACCESS:

Good access to tanks in foredeck lockers.

LOCATION:

In forward deck lockers

INSPECTION/CLEANING ACCESS:

Yes, serviceable.

MATERIAL:

Potable water approved plastic

FILL PIPE LOCATION:

Directly to tanks.

ACCUMULATOR TANK:

Hydrocel accumulator tank 12 volt demand type water pump. It is operable and Appears serviceable.

III. SYSTEMS

FRESH WATER SYSTEM

FRESH WATER SYSTEM: (POTABLE WATER) *(continued)*

PUMPS:

12 volt demand type water pump seen in serviceable condition.

FILTERS:

Yes, in line at pump.

HOSES AND CLAMPS:

Potable water grade plastic tubing all seen well routed, secured, and double clamped where sighted.

FRESH WATER SYSTEM (HOT WATER SYSTEM)

TYPE:

Two (2) 110 electric marine grade one (1) each located under berth in port and starboard aft staterooms.

MANUFACTURER:

Kuuma

CAPACITY:

6 US gallons.

PRESSURE RELIEF VALVE:

***C2**

Bronze pressure relief valve set to 150 lbs

SANITATION

SANITATION (BLACK WATER)

MANUAL OR ELECTRIC TYPE:

Manual, not checked for operation.

NUMBER OF HEADS:

Two (2) heads on vessel.

LOCATION OF HEADS:

Port and starboard amidships.

M.S.D TYPE USCG SYSTEM:

Certification Type: MSD U.S.C.G. Type I. and holding tanks.

RAW WATER SUPPLY AND CLAMPS:

All appear in good and serviceable condition where sighted.

DISCHARGE HOSES AND CLAMPS:

All appear in serviceable condition.

PUMP-OUT LOCATION:

Port and starboard side decks, all marked for "Waste"

VENT LOOP:

Yes, appeared serviceable.

SYSTEM INSTALLATION:

All appears good and serviceable.

III. SYSTEMS

SANITATION

SANITATION (BLACK WATER) (*continued*)

HOLDING TANK:

Located in port and starboard head locker.

SANITATION (GREY WATER)

BASINS, SHOWERS, HOSES AND CLAMPS:

The basins on the vessel drain to thru-hulls in immediate area of basin. The showers drain to sumps and is pumped overboard.

SUMP TANK LOCATION:

Port and starboard midships bilge area.

SHOWER DRAIN PUMPS:

Par sump pumps with remote manual switch all seen operable.

STEERING SYSTEM

STEERING SYSTEM

TYPE:

Cable and Quadrant.

NUMBER OF STATIONS:

One, aft cockpit.

LOCATIONS:

Single helm starboard in cockpit.

PULLEYS, CABLE AND CHAIN CONDITION:

Appeared serviceable where sighted.

MOUNTING:

Appeared serviceable.

RUDDER STOCK:

Stainless steel rudder stock.

RUDDER POSITION INDICATOR:

Incorporated in autopilot.

UPPER RUDDER BEARING SUPPORT:

Well mounted, appears in good and serviceable condition.

GROUND TACKLE

GROUND TACKLE

ANCHORS:

One (1) Lewmar anchor of adequate size.

RODE MATERIAL:

All 3/8" chain. Appears in good and serviceable condition.

Length of chain not determined but appears to be of adequate length for vessel service.

WINDLASS:

Quick windlass seen in serviceable condition.

III. SYSTEMS

ELECTRONICS AND NAVIGATION EQUIPMENT

ELECTRONICS AND NAVIGATION EQUIPMENT

VHF:

Raymarine VHF

CHART PLOTTER:

Raymarine C80 Chartplotter / GPS

AUTOHELM:

Raymarine Smartpilot with ST6002 control head

SPEED LOG:

Displayed on Tridata display and part of Raymarine ST60+ system

DEPTH SOUNDER:

Displayed on Tridata display and part of Raymarine ST60+ system

COMPASSES:

Plastimo "Contest 130" with 3" card at cockpit helm

ANTENNAS:

All antennas sighted appear to be well mounted and serviceable.

ELECTRONICS (ENTERTAINMENT)

STEREO SYSTEM:

Sony MP3 WMA AAC stereo system

SPEAKERS:

Salon and cockpit

THRU-HULLS

THRU-HULLS:

NOTE:

The below the water line thru-hull valves on this vessel were ball valve type.

All were seen well installed and in good and serviceable condition.

All were tried successfully for normal operation.

BONDED:

No

CONDITION:

All seen in good and serviceable condition.

OPERABLE:

Yes

GALVANIC ISOLATION:

None Sighted.

BONDING SYSTEM

BONDING SYSTEM

MAIN BONDING CONDUCTOR:

There is no main bonding conductor on the vessel.

III. SYSTEMS

BONDING SYSTEM

BONDING SYSTEM (*continued*)

LIGHTNING PROTECTION:

There is no known system that will completely protect a vessel from lightning strike damage. A bonding system provides a path to ground in the event of a lightning strike however this cannot fully protect the vessel. The high energies created in a lightning strike can sometimes exceed the capability of the bonding system to carry the charge ground.

SAFETY EQUIPMENT

SAFETY EQUIPMENT (UNITED STATES COAST GUARD)

NUMBER AND TYPE OF PFD'S:

Eleven (11) Type II approved seen in good and serviceable condition.

NUMBER OF THROWABLE PFD'S:

One (1) Type IV-U.S.C.G. approved throwable device with attached heaving line.

FIRE EXTINGUISHERS:

*A1

Type BI (2lbs) dry chemical with gauges seen serviceable.

One (1) located in port hull amidships

One (1) Unmounted in galley locker under sink.

VISUAL DISTRESS SIGNALS:

None seen.

Not permitted in Belize

SOUND DEVICES:

None Sighted.

NAVIGATION LIGHTS:

Lights were not tested due to daylight conditions, all reported operational.

"NO OIL DISCHARGE" PLAQUE:

Yes, found properly displayed in engine space.

TRASH DISPOSAL PLACARD:

*B4

Not seen

AUXILIARY SAFETY EQUIPMENT

LIFE RAFT:

*B5

Transocean 10 person life raft located in aft cockpit locker.

No indication of last service date.

E.P.I.R.B.:

None Sighted. But highly recommended.

SMOKE DETECTOR:

None Sighted. Highly recommended.

III. SYSTEMS

SAFETY EQUIPMENT

AUXILIARY SAFETY EQUIPMENT (*continued*)

FIRST AID KIT:

No. This is highly recommended.

MAN OVERBOARD SYSTEM:

No. This item is highly recommended.

BILGE PUMPS

LIST:

One (1) automatic / manual submersible electric bilge pump in each engine space port and starboard.

One (1) automatic / manual submersible electric bilge pump in each midship bilge section port and starboard.

One (1) Whale Gusher type manual bilge pump in each midship bilge section port and starboard.

All seen in good and serviceable condition.

NOTE:

Note: All bilge pumps have remote auto float switches. Manual operating switches are well marked and are operable.

OUT OF WATER INSPECTION

BELOW WATERLINE MACHINERY

PROPELLER(S):

Two (2) blade aluminum sail drive props seen in serviceable condition.

RUDDER(S) MATERIAL:

FRP with unknown core material seen in good and serviceable condition.

RUDDER(S) MOUNTING:

Spade hung rudder all seen in good and serviceable condition.

THRU-HULLS:

All through-hulls seen in good and serviceable condition.

TRANSDUCERS:

All seen in good and serviceable condition.

STRAINERS/SCOOPS/SCREENS:

***B6, C3**

All seen in good and serviceable condition except as noted.

GROUNDING PLATES:

None Sighted.

ZINCS:

Propeller Zincs seen in serviceable condition.

Sail drive collar zincs on port sail drive in serviceable condition.

Sail drive collar zinc on starboard sail drive seen deteriorated and should be replaced.

III. SYSTEMS

OUT OF WATER INSPECTION

CONDITION OF HULL (WETTED SURFACE)

BLISTERS:

None Sighted.

CONDITION OF BOTTOM PAINT:

Bottom well painted. Condition good.

NOTE:

Moisture readings were taken at random locations on both hulls and all seen in normal range.

It appears that the starboard keel has previously been repaired. The repair appears to be well done to best marine practices. A high moisture reading was seen at one small location on this keel but as this is a repaired area the finding is not considered significant.

AIR CONDITIONING AND HEAT (AIR CONDITIONING)

AIR CONDITIONING AND HEAT (AIR CONDITIONING)

TYPE:

Unitized self contained reverse cycle type.

MANUFACTURER:

Cruise Air.

NUMBER OF UNITS:

Two (2) self contained (2) digital controls.

LOCATION:

Port and starboard hulls.

THRU-HULL STRAINER:

Seen in serviceable condition in midships bilge area of each hull.

HOSES, CLAMPS AND CONNECTORS:

Appear to be adequately sized and serviceable for application.

RAW WATER COOLING PUMP:

110 volt electric pump system is equipped with a seacock and sea strainer assembly, all seen in good and serviceable condition.

DRIP TRAYS:

Yes, one for each unit. Appear serviceable.

CONDENSATE DRAIN:

To bilge.

AIR CONDITIONING AND HEAT (HEAT)

TYPE:

Reverse cycle.

III. SYSTEMS

LIQUIFIED PETROLEUM GAS SYSTEM (LPG)

LIQUIFIED PETROLEUM GAS SYSTEM (LPG)

TYPE:

LPG.

LOCATION:

Starboard cockpit locker.

MOUNTING:

Appears serviceable.

REGULATOR:

Yes, appears serviceable, passed leak test.

PRESSURE GAUGE:

Yes

VENTILATION:

Overboard

SHUT-OFFS:

Yes, electrically operated remote shutoff at locker.

LINES AND FITTINGS:

***C4**

All appear serviceable where sighted.

SEATRIAL REPORT

INTRODUCTION

INTRODUCTION:

The "Boat for Sale" was operated from The Moorings Marina to the haul out facility at Thunderbirds Marina.

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 3600
Engines reached 3100 RPM at full throttle.
6. The steering system operated normally.
7. The throttles operated normally.
8. The transmissions operated normally/smoothly.
9. The back down test was satisfactory.
10. There were no excessive vibrations noted.
11. There were no oil or coolant leaks observed. (On main engines or in exhaust water)

TRIAL RUN DATA

PORT ENGINE:

Appears to operate normally, there was no excessive smoke, oil pressure and water temperature were within normal ranges.

STARBOARD ENGINE:

Appears to operate normally, there was no excessive smoke, oil pressure and water temperature were within normal ranges.

STANDING RIGGING

STANDING RIGGING

MAST:

Z. Diffusion Aluminum Mast and Boon seen in good and serviceable condition.

SPREADERS:

Single spreader diamond stay rig.

SHROUDS AND STAYS:

1x19 Stainless steel wire rigging all appears in serviceable condition.

BOOMS:

Aluminum boom and vang. Seen in good and serviceable condition.

III. SYSTEMS

STANDING RIGGING

STANDING RIGGING (*continued*)

TURNBUCKLES:

Stainless turnbuckles of the open design appeared serviceable.

TOGGLES:

Stainless steel toggle appeared serviceable.

TANG ENDS:

Appeared serviceable where sighted.

CHAIN PLATES:

External chain plates bolted to hull where sighted appeared serviceable.

NOTE:

An aloft inspection of masts and rigging was not performed and all were inspected from deck level only. All rigging appeared to be in good and serviceable condition however a full rigging inspection can be performed by a qualified rigger at a later date if desired.

RUNNING RIGGING

RUNNING RIGGING

WINCHES:

Two (2) Harkin self tailing halyard winches at main mast

Two (2) Harkin self tailing sheet winches at cockpit helm

All seen in good and serviceable condition

TRACKS AND CARS:

All see in good and serviceable condition.

BLOCKS:

All see in good and serviceable condition.

TOPPING LIFT:

Seen in serviceable condition.

MAIN SHEET TRAVELER:

Harkin main sheet traveler well mounted and secured on hard top seen in good and serviceable condition.

HALYARDS:

Halyards are braided dacron seen in good condition.

SHEETS:

Sheets are braided dacron seen in good condition.

ROLLER FURLING GEAR:

Harkin roller furler seen in serviceable condition.

CAM CLEATS:

All seen in good and serviceable condition.

III. SYSTEMS

SAILS

SAILS

MAINSAIL:

Main sail was seen in good and serviceable condition.

HEADSAIL:

Head sail was stored and not seen for this inspection.

SAIL COVERS & BOOTS:

***B7**

Stack pack has been removed and not seen.

HEAD:

Appears in good condition.

TACK:

Appears in good condition.

CLEW:

Appears in good condition.

SEAMS:

No frayed seams were observed.

NOTE:

Head sail was not aboard the vessel and main sail was not spread for this inspection.

IV. FINDINGS AND RECOMMENDATIONS

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. SURVEYORS NOTES AND OBSERVATIONS

Category C notations are for vessel owner information purposes only and are not considered a threat to safe vessel operation at the time of this survey inspection.

A. SAFETY DEFICIENCIES:

A.1 (PAGE 17) FIRE EXTINGUISHERS:

Type BI (2lbs) dry chemical with gauges seen serviceable. One (1) located in port hull amidships One (1) Unmounted in galley locker under sink.	
FINDINGS	RECOMMENDATIONS
One (1) fire extinguisher was missing from area in starboard midships hull where a tag indicating that a fire extinguisher should be mounted. Fire extinguisher seen unmounted and lying in galley locker under sink (photo SAM_9097)	<i>Comply with ABYC and NFPA recommended standards for fire protection.</i>

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.1 (PAGE 9) ENGINE MOUNTS AND BED:

Engines are mounted in a Yanmar Sail Drive mounting system. All seen in good and serviceable condition except as noted.	
FINDINGS	RECOMMENDATIONS
Port side engine mounts on both port and starboard engines were seen in failed condition and secured with twine (photo SAM_9048)	<i>The Moorings service manager stated that new mounts are on order and broken mounts will be replaced upon receipt.</i>

IV. FINDINGS AND RECOMMENDATIONS

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.2 (PAGE 10) TYPE:

Saildrive	
FINDINGS	RECOMMENDATIONS
Sail drive upper bellows seal is deteriorated.	<i>The Moorings service manager indicates new seals are on order and will be replaced upon arrival</i>

B.3 (PAGE 12) BATTERIES:

One (1) Group 31 size lead acid battery located in each engine room seen properly secured in acid proof boxes. One (1) 8D side AGM battery located under cockpit seating area was seen properly secured. Batteries were tested with a Cen-Tech Digital Battery Analyzer as follows: Port starting battery: Rated Good at 100% (photo SAM_9031) Starboard starting battery: Rated OK at 70% (photo SAM_9046) Main house batteries: One (1) tested - Rated Good at 100%	
FINDINGS	RECOMMENDATIONS
Provision for three (3) 8D size batteries exists in the area for the house batteries however only one (1) battery was installed at time of this survey inspection (photo SAM_9056)	<i>Install additional house system batteries as required.</i>

B.4 (PAGE 17) TRASH DISPOSAL PLACARD:

Not seen	
FINDINGS	RECOMMENDATIONS
Not properly displayed in the main salon. No trash dumping plan sighted onboard.	<i>Comply with international regulations (MARPOL) for display of trash disposal placard.</i>

B.5 (PAGE 17) LIFE RAFT:

Transocean 10 person life raft located in aft cockpit locker. No indication of last service date.	
FINDINGS	RECOMMENDATIONS
No service tag was seen indicating when last serviced.	<i>Life rafts must be serviced according to manufacturer's recommendation or International requirements.</i> <i>Note: A life raft is not required equipment for the current service of this vessel</i> <i>Note 2: It is not possible to service life rafts in Central America. Life raft should be serviced at next available port.</i>

IV. FINDINGS AND RECOMMENDATIONS

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.6 (PAGE 18) STRAINERS/SCOOPS/SCREENS:

All seen in good and serviceable condition except as noted.	
FINDINGS	RECOMMENDATIONS
Speed scoop through hull for starboard air conditioner seen slightly damaged with dents (photo SAM_9216)	Clean and straighten damaged speed scoop through hull.

B.7 (PAGE 23) SAIL COVERS & BOOTS:

Stack pack has been removed and not seen.	
FINDINGS	RECOMMENDATIONS
No main sail cover or stack pack to prevent sun damage to main sail (photo SAM_8977).	Reported to be removed for service and to be returned to vessel in near future.

C. SURVEYOR'S NOTES AND OBSERVATIONS:

C.1 (PAGE 7) CABIN BRIGHT WORK:

Satin varnish finish seen in good condition.	
FINDINGS	RECOMMENDATIONS
Some minor finish wear was noted in high traffic areas. Note corner molding in bottom left of photo SAM_9086 and entry to bed in photo SAM_9110	All seen is expected as normal wear and tear.

C.2 (PAGE 14) PRESSURE RELIEF VALVE:

Bronze pressure relief valve set to 150 lbs	
FINDINGS	RECOMMENDATIONS
Pressure relief valve set to 150 PSI on both units.	ABYC 23.7.2 states that pressure relief valves should be set to a pressure not to exceed 150% of normal operating pressure of the system. This is recommended to prevent water lines from bursting due to excessive pressure.

IV. FINDINGS AND RECOMMENDATIONS

C. SURVEYOR'S NOTES AND OBSERVATIONS:

C.3 (PAGE 18) STRAINERS/SCOOPS/SCREENS:

All seen in good and serviceable condition except as noted.	
FINDINGS	RECOMMENDATIONS
Air conditioner raw water speed scoop through hull fittings seen installed backwards .	<i>Speed scoops should be installed with slots facing forward. The purpose of these fittings is to create positive pressure on the raw water inlet when vessel is underway to prevent pump from becoming air locked.</i> <i>This finding is for information purposes only. These speed scoops were apparently installed as currently seen by the vessel manufacturer and their installation is not the fault of The Moorings.</i>

C.4 (PAGE 20) LINES AND FITTINGS:

All appear serviceable where sighted.	
FINDINGS	RECOMMENDATIONS
Some corrosion was seen on regulator and fittings (photo SAM_9063)	<i>Recommend cleaning fittings</i>

NOTE: If cruising more than 25 nautical miles offshore it is also recommended that a USCG approved self-inflating life raft be fitted to the vessel. And a first aid kit and small manual watermaker be added to the ships safety gear.

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", ready for sale requiring no additional work and normally equipped for her size.

"FAIR CONDITION", requires usual maintenance to prepare for sale.

"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:

ABOVE AVERAGE

V. SUMMARY AND VALUATION

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 knowledgeable 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:

\$331,750

Three Hundred Thirty One Thousand Seven Hundred Fifty Dollars

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:

\$643,500

Six Hundred Forty Three Thousand Five Hundred Dollars

V. SUMMARY AND VALUATION

SUMMARY:

In accordance with the request for a marine survey of the "Boat for Sale", 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 **August 20, 2015** and was found to be a well constructed, appointed and comfortable vessel. The vessel has been very well maintained. Subject to correction of deficiencies listed in section IV A. (Safety), the vessel is considered to be suitable for its intended use. Other deficiencies list 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 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.

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 benefit of whom it may concern.

ATTENDING SURVEYOR:




SAMS
Captain John M. Brandes II, AMS®
SAMS® Accredited Marine Surveyor 1137

VI. PHOTOGRAPHS



SAM_8977.JPG

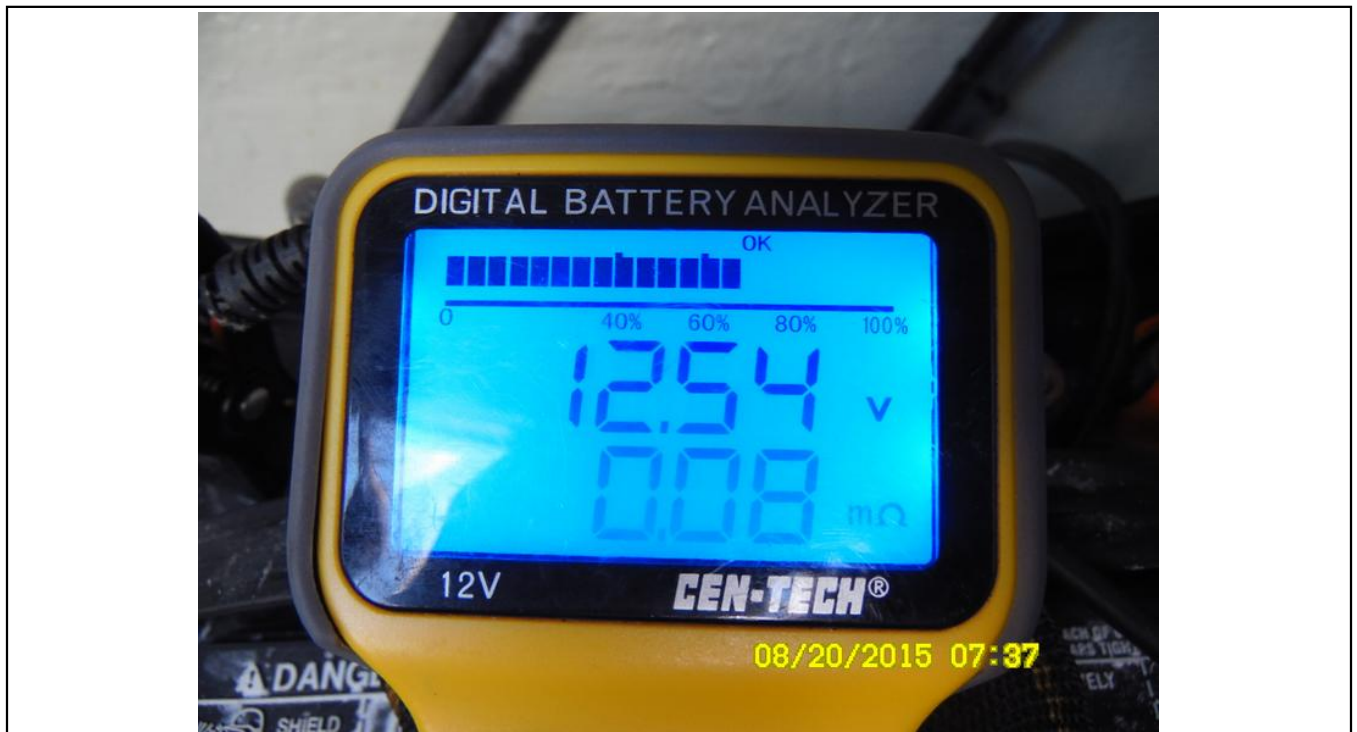


SAM_8990.JPG

VI. PHOTOGRAPHS



SAM_9031.JPG



SAM_9046.JPG

VI. PHOTOGRAPHS



SAM_9048.JPG



SAM_9056.JPG

VI. PHOTOGRAPHS



SAM_9063.JPG



SAM_9086.JPG

VI. PHOTOGRAPHS



SAM_9097.JPG



SAM_9110.JPG

VI. PHOTOGRAPHS



SAM_9216.JPG