

Ulrick Marine
MARINE SURVEYOR AND CONSULTANT

47 Leopard Catamaran

"Sample"



MEMBER OF SOCIETY OF ACCREDITED MARINE SURVEYORS

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Report of Marine Survey

Of The Vessel

"Sample"

47 Leopard Catamaran

Conducted by
Charles Ulrick

INDEPENDENT (SAMS # 906) MARINE SURVEYOR

PREPARED FOR:

Sample

October 04, 2014

MEMBER OF SOCIETY OF ACCREDITED MARINE SURVEYORS

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I. INTRODUCTION

SCOPE OF SURVEY

Acting at the request of Sample, the attending surveyor did attend onboard the 47 Leopard Catamaran, "Sample" beginning on September 30, 2014 where an "in-the-water-survey" was conducted at , Solomon's Island MD. The ship's papers were on board and appeared to be in order. The Hull Identification Number RAC47 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. 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 Tramex Skipper 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.

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.

This vessel was manufactured prior to enactment of some of the current USCG CFR regulations and NAPA and ABYC standards . Compliance with those currently in force through necessary for the safety of the vessel and those on board results in entries in Section

I. INTRODUCTION

IV A and/or Section IV B of the Findings and Recommendations Section of this report. Others left to the discretion of the owner are in Section IV C. Thus the report does not suggest complete compliance with all current requirements, standards or practices.

I. INTRODUCTION

VESSEL DESCRIPTION

SMPLE was originally a charter boat at the Moorings, she was then purchased for private use to do a extend cruise. She is a four cabin layout and well equipped with several recent up grades. The vessel is powered with twin Yanmar diesels.

II. GENERAL INFORMATION

GENERAL INFORMATION

SURVEY PREPARED FOR:	Sample
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NAME OF VESSEL:	"Sample"
TYPE OF SURVEY:	Pre-Purchase for Buyer
OVERALL VESSEL RATING:.....	**** AVERAGE
ESTIMATED REPLACEMENT COST:	\$1,085,000.00
BUILDER:	Robertson and Caine
YEAR BUILT:	*** 2003
MODEL YEAR:	2004
MODEL OF VESSEL:	47 Catamaran
HULL IDENTIFICATION NUMBER (HIN):	RAC47
HAILING PORT:	*** Solomon's Island Md.
USCG DOCUMENTED FOR:	Recreational
DATE/TIME OF SURVEY:	October 04, 2014
HULL MATERIAL:	Fully Cored FRP (fibre Reinforced Plastic)
HULL TYPE:	Catamaran
LENGTH OVER ALL (L.O.A):	47'
(LOAD) LENGTH WATERLINE (L.W.L):	42.67'
BEAM:	24.25'
DRAFT:	4' 4"
DEPTH:	*** 9.3
DISPLACEMENT:	21,600 lbs
OVERHEAD CLEARANCE:	71'
GROSS TONS:	*** 24 Tons
NET TONS:	*** 22 tons
PROPULSION SYSTEM:	Sail and twin diesels.
FUEL TYPE:	Diesel.
FUEL CAPACITY:	158 Gallons
AC POWER:	2-125 volt 30 amp
DC POWER:	12 Volt system

II. GENERAL INFORMATION

FRESH WATER CAPACITY:	210 Gallons
HOLDING TANK:	Estimated at 30 gallons
INTENDED USE/BUYER:	Recreational cruising
INTENDED CRUISING AREA:	Near coastal and inland water ways

II. GENERAL INFORMATION

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.

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

* Per Manufacturer's Specifications

**Refer to Summary and Valuation Section

II. GENERAL INFORMATION

DEFINITION OF TERMS: *(continued)*

*** Per USCG Documentation

**** Per Buc Book

III. SYSTEMS

HULL DECK AND SUPERSTRUCTURE

HULL CONSTRUCTION

TYPE:

Catamaran, full displacement

MATERIAL:

FRP (fiber reinforced plastic). Assorted mats, chopped strand mat, resins and gelcoat, cored with end grain balsa.

EXTERIOR HULL:

A large repair was sighted at the starboard quarter, There are cracks in the paint starboard side forward and port side forward on the inner side of the hull. The hull has been painted and is flaking in some areas and has faded.

PORTLIGHTS:

10 Portlights in aluminum frames in serviceable condition.

BULKHEADS:

*A1

Athwartships reinforcement enhanced by bulkheads to the hull with FRP (fiber reinforced plastic). There are repairs under the forward berths and there are cracks at the bulkhead to the cross over section.

STRINGERS:

Hull stiffness provided by FRP encapsulated longitudinal stringers. Serviceable condition. Low moisture readings no delamination was detected in the engine spaces

STEM:

*B1

Raked fiberglass stems with some minor damage and repairs, high moisture was detected port and starboard.

TRANSOM:

*B2

Large transom with multilevel platforms/steps, port board ladder, faux teak vinyl over fiberglass. The vinyl covering is loose in several areas and there are gelcoat cracks along the lower transom radius. Some minor gelcoat damage starboard side. Note: large hatches to the engine spaces.

BILGE:

Bilge area provides the area for most boat systems and tankage generally clean and dry..

CHAIN LOCKER (DRAINAGE):

*B3

The anchor locker is located in the foredeck and is a large square shaped locker drain out the bottom. There is a small repair that is leaching rust through the fiberglass.

KEEL:

Fiberglass keels secured with eight bolts each, some minor movement was detected. Reportedly sacrificial designed

III. SYSTEMS

HULL DECK AND SUPERSTRUCTURE

HULL CONSTRUCTION (*continued*)

KEEL EXTERNAL:

*B4

There is loose caulking at the port side joint. No damage or repairs were sighted.

LIMBER HOLES:

Limber holes are of adequate size and clear.

MOISTURE CONTENT:

Low moisture readings and good soundings at topside's and transom

DECK CONSTRUCTION

TYPE:

Raised cabin with louvered steps forward, with aft cockpit/bridge deck.

MATERIAL:

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

HULL-TO-DECK JOINT

TYPE:

Visible from the forepeak the hull to deck joint was of the deck inward flange type.

FASTENERS:

Thru-bolted stainless steel nut and bolts

BEDDING COMPOUND:

Heavy duty marine adhesive.

NOTE:

No leaks were sighted at the hull joint .

DECK FITTINGS

STANCHIONS:

1" Stainless steel stanchions well secured to the side decks.

BOW RAIL:

1" Welded stainless steel with rail seats well secured.

TOE RAILS:

Aluminum toe rails. Well secured

SCUPPERS:

The scuppers are adequate and are clear of debris.

STERN RAILS:

Port and starboard stern rails are well secured

III. SYSTEMS

HULL DECK AND SUPERSTRUCTURE

DECK FITTINGS (*continued*)

DECK SURFACE:

*B5

Mold non slip surfaces with several gelcoat cracks and crazing areas(port side deck and at the port and starboard cleats) with some painted areas through out the vessels deck surfaces. High moisture was detected at the port and starboard sail track area (more so port side) no delamination was detected. Large trampoline forward in good condition.

HATCHES:

*C1

Large hatches at the foredeck to the water tanks, the starboard hinge is loose.

GRAB RAIL:

1" Stainless hand rails at various locations on vessel. Adequate and secured.

LIFE LINES:

Stainless steel stanchions with double stainless steel cable safety lines and boarding gates. Good condition.

CLEATS:

All cleats are secured.

ANCHOR PLATFORM:

Stainless steel anchor roller. Serviceable condition.

DAVITS:

*C2

Laminated wood davit's in aluminum footings. Some minor corrosion at the footings. Serviceable condition.

SUPERSTRUCTURE

MATERIAL:

Molded FRP with windows.

WINDOWS:

Tape was observed around the perimeters of both the port and starboard windows. No leaks were sighted

FITTINGS AND HARDWARE:

Aluminum and stainless steel throughout the vessel. Some corrosion was sighted at the aluminum latches.

SUPERSTRUCTURE HOUSE TO DECK JOINT:

Molded seamlessly no damage was observed.

MOISTURE CONTENT:

Low moisture readings and good soundings.

BRIDGE DECK/COCKPIT

MATERIAL:

Molded FRP

III. SYSTEMS

HULL DECK AND SUPERSTRUCTURE

BRIDGE DECK/COCKPIT (*continued*)

TYPE:

Large open cockpit with the helm to starboard

COCKPIT:

Large cockpit with a open transom, Faux teak vinyl over fiberglass sole, dinette with custom table port side(convert to a berth) and seating and helm starboard, in sole cockpit locker. Some black spray paint over spray was sighted on the cockpit sole

SEATS:

*C3

U-shaped seating port and bench and helm seat starboard, white vinyl cushions in good condition. The seats have storage lockers below (the port aft latch is missing)

BIMINI:

*C4

Tan Sunbrella with stainless steel supports and side curtains. There is a tear at the port side forward.

DODGER:

*B6

Clear dodger with duct tape across the top.

HELM:

Helm to starboard with gauge package and electronics. Good field of vision.

ADDITIONAL EQUIPMENT AND ACCESSORIES

GENERAL EQUIPMENT:

*B7

Factory arch with high moisture and cracks at the port and starboard radius. Transom shower worked when tested. 12 Volt cabin fans are operable

ACCESSORIES:

Boat hook, lots of spare parts and filters, Magma grill, assort guide/chart books, navigation tools, deck light worked when tested.

DINGHY/TENDERS:

2013 Ocean Runner Mercury 350 11 ft 6 inch(HIN # USA39034C212, registration MD 2217 CG) 2009 Mercury 15hp 4-stroke engine Model15M 4STR serial # 1B5244265

CANVAS AND COVERS:

Tan mess window covers in good condition.

FENDERS:

Assorted fenders. Serviceable condition

DOCK LINES:

Assorted dock lines were observed. Adequate

III. SYSTEMS

CABIN APPOINTMENTS

INTERIOR DESCRIPTION:

JOINERY AND FINISH:

The joinery and finish of the Beachwood interior was in good condition.

CABIN BRIGHT WORK:

Satin varnish finish on all doors, cabinetry and trim. Good condition.

INTERIOR BULKHEADS:

The interior bulkheads fit well throughout the vessel.

WATER INTRUSION SIGNS:

After through visual inspection no water intrusion was sighted.

STORAGE AREAS:

The cabinets, lockers, drawers, and shelving were well crafted and finely fit and provide adequate storage.

HEADLINERS:

All in good condition

DOORWAYS:

All teak doors fit and close properly.

FABRIC AND CUSHIONS:

Tuscan Leatherette in good condition

FLOOR AND WINDOW COVERINGS:

Teak and holly sole and roll up blinds in good condition.

ACCOMMODATIONS:

The vessel sleeps eight plus.

HEADS:

*C5

4 Heads on vessel. The port aft head cabinet door hinges are broken

SHOWERS:

Shower stalls in each head and transom shower.

FAUCET FIXTURES:

The faucet fixtures and sinks were operable

LIGHT FIXTURES:

12 Volt cabin lights throughout the vessel were operable. A floor light port side and a forward reading light port side did not work

SALON/DINETTE:

Raised dinette U-shaped on the centerline with newer cushions and storage below.
Converts to a berth

CABIN FURNISHINGS:

Each of the four cabins has a double berth, private head with shower stall, lockers and drawers and reading lamps.

VENTILATION:

Adequate ventilation using the hatches and companion way door and Portlights.

III. SYSTEMS

CABIN APPOINTMENTS

INTERIOR DESCRIPTION: *(continued)*

CONDITION AND DEFICIENCIES:

The vessels interior is well kept and clean.

GALLEY

LOCATION:

Galley up

SINKS:

Double rectangular stainless steel sinks.

REFRIGERATION:

Nova Kool with seperate freezer. Worked when tested

STOVE/OVEN:

Gimbale Force10 3 burner propane stove with oven. Worked when tested.

ACCESSORIES:

Assorted cooking supplies and dishes, glasses and utensils. Corian surfaces, cutting boards. Adequate storage

PROPULSION

MAIN ENGINES

TYPE:

Twin fuel injected four cycle naturally aspirated engines.

MANUFACTURER:

Yanmar 4JH3E

SERIAL NUMBERS:

Port # E27037 Starboard # E27043

HORSE POWER:

Approximately 56 rated hp.each

NUMBER OF CYLINDERS:

Four (4) in -line configuration.

INDICATED HOURS:

Port hours 5006. Starboard hours 4898

THROTTLE CONTROLS:

Mores Lever-cable type operable.

AIR FILTERS:

The filters are clean

EMERGENCY SHUT DOWN:

Fuel shut off cable.

ENGINE MOUNTS AND BED:

Mounted to steel adjustable mounts with rubber isolators bolted to the main stringers. Serviceable.

III. SYSTEMS

PROPULSION

MAIN ENGINES (*continued*)

DRIP PANS:

None Sighted. Engine fluid and loose debris falls into bilge area. a oil absorbing clothe is recommended to be USCG compliant.

LUBRICATION:

Internal oil pump with engine mounted spin off filters. The oil is full and clean

VENTILATION:

Natural, flow ventilation.

BILGE BLOWERS:

12 Volt bilge blowers . Power up.

EXHAUST SYSTEM:

*B8

Raw water cooled with approved type exhaust hoses doubled clamped and extra wide single clamps (CFR requires double clamps on all connections) Stainless steel mufflers exiting the port and starboard sides. Some corrosion was sighted at the exhaust flange hardware starboard

OIL COOLERS:

*A2

Corrosion was sighted at both coolers the starboard appears to be leaking.

ENGINE ALARMS:

Audible alarm worked when tested.

STUFFING BOX:

Rubber boots in good condition

CONDITION AND DEFICIENCIES:

Serviceable condition

COOLING SYSTEM

TYPE:

Closed fresh water reservoir type cooling system

COOLANT LEVEL:

The coolant is full

HOSES AND CLAMPS:

*A3

Reinforced rubber hose well routed and supported. There is a corroded hose clamp and possible leak at the starboard sea strainer.

BELTS AND PULLEYS:

The belts and pulleys are in serviceable condition.

SEACOCKS AND STRAINERS:

The strainers were clear and valves operable.

III. SYSTEMS

PROPULSION

COOLING SYSTEM (*continued*)

NOTE:

I recommend changing the impellers and zincs as a maintenance item unless they were recently serviced.

TRANSMISSIONS

TYPE:

Manual gear box

MANUFACTURER:

Kanzaki KM4A

DRIVE TYPE:

Shaft drive with coupler no excessive corrosion was sighted.

GEAR RATIO:

Transmission tag states 2:14:1 ratio.

FLUID LEVEL AND CONDITION:

Both transmissions are full.

CONTROLS:

Mores mechanical cable and linkage. Works smoothly

PROP SHAFT:

1 1/4" Stainless steel

COUPLER (SAFETY WIRE):

Properly secured

FUEL SYSTEM

MAIN ENGINE(S) FUEL SYSTEM

FUEL TYPE:

Diesel.

MATERIAL:

Aluminum fuel tanks.

NUMBER OF TANKS:

Two (2) Tanks

TANKS CAPACITY:

158 Gallons total

SECURED:

Nylon straps with chafe protection. Well secured.

LOCATION:

Port and starboard under the companion way sole.

MANUFACTURING LABEL:

The ABYC required label was sighted on the fuel tanks.

FILL PIPE LOCATIONS:

Port and starboard side decks marked for diesel.

III. SYSTEMS

FUEL SYSTEM

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

FILL PIPE GROUNDED:

The fills do not appear grounded, ABYC recommend grounding all fuel fill fittings

FILL PIPE MATERIAL:

USCG A2 hose

FILL PIPE FITTINGS:

Plastic fittings

HOSE CONNECTIONS, CLAMPS:

Doubled clamped.

FUEL LINES AND FITTINGS:

Copper tubing and USCG type A1. Properly clamped. Serviceable condition

RETURN LINES:

Copper tubing and Grade USCG type A1. Serviceable where sighted.

FUEL MANIFOLD VALVES:

Ball type valves properly marked, operable.

VENT LOCATION:

Port and starboard topside's.

SHUT-OFF VALVE:

Ball valve type shut off at each tank.

FUEL FILTERS:

Racor 1000 and engine mounted secondaries.

FILTER/FUEL CONDITION:

*B9

Some debris was sighted in the starboard fuel filter

NOTE:

A complete inspection of the entire fuel system was not possible due to access.

ELECTRICAL SYSTEMS

ELECTRICAL SYSTEM (D.C. SYSTEM)

VOLTAGE:

AGM battery powered 12 volt system

BATTERIES:

*B10

5 Batteries. The engine batteries are not properly secured

BANKS:

3 House batteries (2 -200 AH) (1 -100 AH) 2 Engine batteries.

MAIN BATTERY SWITCHES:

3 Rotary switches

PANEL:

The 12 volt panel is at the nav. station

III. SYSTEMS

ELECTRICAL SYSTEMS

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

BREAKERS/FUSES:

The vessel uses circuit breaker and fuse protection.

ROUTING/SUPPORT:

Well supported and secured where sighted meets ABYC standards. Fit for intended use.

CHARGING SYSTEM (BATTERY CHARGER):

Magnum Energy with Magnum battery monitor, worked when tested

CHARGING SYSTEM (ALTERNATOR):

*B11

Belt driven alternators. Serviceable. The starboard amp meter would fluctuate during the sea trail

OUTLETS:

12 Volt outlets were sighted and were of cigarette socket type. Appeared serviceable.

ELECTRICAL SYSTEM (A.C. SYSTEM)

SHORE POWER INLET:

Two Marincó weather proof inlets at the helm.

SHORE POWER:

2 Vinyl shore cords 125v/30 amp. Approved type.

AC SOURCE SELECTOR SWITCH:

Double pole slide switches at panel with safety guard.

MAIN BREAKER:

Double pole breakers at panel.

BRANCH BREAKERS:

Well marked breakers with indicator lights

CIRCUIT LOAD MONITORS:

*C6

Analog volt meter and polarity lights. One indicator light did not work

WIRE TYPE (SIZE AND RATING):

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

OUTLETS:

Various A.C. outlets throughout vessel, adequate and conveniently located.

POLARITY:

Checked: At A.C. outlets, polarity normal.

GALVANIC ISOLATOR:

Zinc Saver galvanic isolator.

III. SYSTEMS

ELECTRICAL SYSTEMS

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

OTHER:

I recommend installing an ELCI in the AC electrical system per current ABYC standards
See attached. 11.11 GROUND FAULT PROTECTION - AC

SYSTEMS

11.11.1

An Equipment Leakage Circuit Interrupter (ELCI) or Type A Residual Current Device (RCD) shall be installed with or in addition to the main shore power disconnect circuit breaker(s) or at the additional overcurrent protection as required by E-11.10.2.8.3 whichever is closer to the shore power connection.

GENERATORS AND INVERTERS

TYPE:

Generator driven by diesel powered internal combustion engine,

MANUFACTURER:

Westerbeke

KILOWATT RATING:

7.6 kw.

VOLTAGE RATING:

110 /220 AC.

NUMBER OF CYLINDERS:

Three (3) cylinders

INDICATED HOURS:

5797 Hours on the meter

LOCATION:

Starboard engine space in hush box (the box is secured with nylon straps)

FLUID LEVELS:

The fluids are full

COOLING SYSTEM:

Closed coolant with raw water cooled heat exchanger. I recommend changing the impeller unless it was recently serviced.

FUEL SUPPLY:

Electric fuel pump with copper tubing and A1 hose

FUEL FILTER:

Engine mount spin on/off type.

LUBRICATION SYSTEM:

Engine mounted mechanical oil pump with spin on/off type filter. The oil is full.

EXHAUST SYSTEM:

*A4

Raw water cooled metal aqua lift type muffler. Marine grade flex hoses are singled clamped. Some cracks were sighted in the exhaust hose

III. SYSTEMS

ELECTRICAL SYSTEMS

GENERATORS AND INVERTERS (*continued*)

ACCESSIBILITY:

Good.

OTHER:

*A5

The generator started quickly , ran normally and handled a load maintaining 120 volts and 20 amps. The generator was not charging according to the volt gauge

NOTE:

The vessel is equipped with four 100 watt solar panels connected to a Morningstar MPPT 45 controler/charger

FRESH WATER SYSTEM

FRESH WATER SYSTEM: (POTABLE WATER)

STORAGE TANKS:

2 Fresh water tanks

CAPACITY:

210 Gallons total

ACCESS:

Good access

LOCATION:

In the foredeck lockers

MATERIAL:

Polyethylene tanks

FILL PIPE LOCATION:

Top of the tanks

VENT PIPE LOCATION:

Port and starboard topside's.

ACCUMULATOR TANK:

Jabsco accumulator tank

PUMPS:

2 Shur Flo 12 volt on demand. Located under the galley sink. Worked when tested.

FILTERS:

Yes, in line at pumps.

HOSES AND CLAMPS:

Color coded plastic tubing and rubber hoses. Fit for intended use. No leaks detected.

FRESH WATER SYSTEM (HOT WATER SYSTEM)

TYPE:

Single 110 Electric. Marine grade.

MANUFACTURER:

Atwood Model EHM6 SM. Worked whentested

III. SYSTEMS

FRESH WATER SYSTEM

FRESH WATER SYSTEM (HOT WATER SYSTEM) (*continued*)

CAPACITY:

10.5 Gallons

PRESSURE RELIEF VALVE:

Yes, copper pressure relief valve built into tank.

HEAT EXCHANGER AND PLUMBING:

Connected to port engine. Serviceable.

SANITATION

SANITATION (BLACK WATER)

MANUFACTURER:

Jabsco

MANUAL OR ELECTRIC TYPE:

Manual, all worked when tested.

NUMBER OF HEADS:

4 Heads

LOCATION OF HEADS:

One in each cabin

M.S.D TYPE USCG SYSTEM:

Certification Type: MSD U.S.C.G. Type III. (Holding tanks)

RAW WATER SUPPLY AND CLAMPS:

Reinforced marine type rubber hoses properly clamped. Serviceable.

DISCHARGE HOSES AND CLAMPS:

White Santi type hoses. Serviceable.

PUMP-OUT LOCATION:

Port and starboard side decks marked waste.

MACERATOR:

Gravity drains.

"Y" VALVES:

Y-valves are operable.

VENT LOOP:

Yes, appeared serviceable.

SYSTEM INSTALLATION:

Well installed.

HOLDING TANK:

*C7

Plastic located port and starboard compartments in the forward heads

CAPACITIES:

Estimated at 15 gallons each

III. SYSTEMS

SANITATION

SANITATION (BLACK WATER) (*continued*)

OTHER:

The heads can dump directly overboard.

NOTE:

THE CAPTAIN IS RESPONSIBLE FOR LOCAL ORDINANCE REGARDING SANITATION.

SANITATION (GREY WATER)

BASINS, SHOWERS, HOSES AND CLAMPS:

The basins on the vessel drain to thru-hulls with seacocks in area of basins.

SHOWER DRAIN PUMPS:

Jabsco shower pumps all worked when tested.

STEERING SYSTEM

STEERING SYSTEM

TYPE:

Quadrant type steering with linkage between the rudders

PULLEYS, CABLE AND CHAIN CONDITION:

Appeared serviceable where sighted.

RUDDER STOCK:

2 " Stainless steel

UPPER RUDDER BEARING SUPPORT:

Serviceable condition.

EMERGENCY TILLER:

Located in starboard engine space.

GROUND TACKLE

GROUND TACKLE

ANCHORS:

*A6

Primary Rocna plow type # 73, secondary # 50 CQR. # 33 with chain (the anchor and chain are excessively corroded) Bruce # 23 Fortress

RODE MATERIAL:

250 ' G-4 galvanized chain

RODE CONSTRUCTION:

U- shackle. Serviceable.

WINDLASS:

Lofrans with remote worked when tested.

III. SYSTEMS

ELECTRONICS AND NAVIGATION EQUIPMENT

ELECTRONICS AND NAVIGATION EQUIPMENT

VHF:

Garmin 200 with distress and Garmin hand set at the helm Worked when tested.
Reportedly Uniden hand held VHF not sighted

RADAR:

Garmin with 18" monitor

GPS/CHART PLOTTER:

Garmin GPS 740s closed array multifunction unit recently upgraded. Worked when tested

AUTOHELM:

Raymarine ST 7001

SPEED/DEPTH/WATER TEMP/WIND:

Raymarine ST 60 worked when tested

COMPASSES:

Plastimo. Serviceable condition.

ANTENNAS:

All antennas well mounted and serviceable.

SHIPS CLOCK:

Clock in cabin

SATELLITE PHONE:

Reportedly Iridium 9555 not sighted

ELECTRONICS (ENTERTAINMENT)

STEREO SYSTEM:

Kenwood am fm with CD and aux connections. Sirius ready. Worked when tested

SPEAKERS:

Weather proof speakers. Serviceable.

TELEVISION(S):

23" Polaroid Flat screen with DVD in salon and 18" JVC Flat screen in starboard forward cabin. Both powered up.

THRU-HULLS

THRU-HULLS:

NOTE:

The above water line thru hulls are metal fittings in good condition.

MATERIAL:

Bronze

TYPE:

Ball valve

BONDED:

Not bonded

III. SYSTEMS

THRU-HULLS

THRU-HULLS: *(continued)*

CONDITION:

*A7

The head seacock forward port side appears to be leaking slightly. The others are in serviceable condition.

OPERABLE:

The valves were operable

BONDING SYSTEM

BONDING SYSTEM

MAIN BONDING CONDUCTOR:

No system was sighted. ABYC recommends bonding below waterline thru-hull fittings.

RIGGING, DECK FITTINGS, AND MAST:

Mast appears to be bonded, shrouds and stays not observed.

SAFETY EQUIPMENT

SAFETY EQUIPMENT (UNITED STATES COAST GUARD)

NUMBER AND TYPE OF PFD'S:

Meets USCG requirements. 4 Type II and 2 type III

NUMBER OF THROWABLE PFD'S:

One (1) Type IV-U.S.C.G. approved throwable device .Meets USCG requirements.

FIRE EXTINGUISHERS:

*C8

Three Kidde size 1 (1 ABC and 2 BC)

VISUAL DISTRESS SIGNALS:

Meets USCG requirements.

SOUND DEVICES:

Bell: Yes, operable and hand held air horn.

NAVIGATION LIGHTS:

Properly located and power up.

INLAND NAVIGATION RULE BOOK (12M-39'4" OR LONGER):

None sighted

"NO OIL DISCHARGE" PLAQUE:

Properly displayed

TRASH DISPOSAL PLACARD:

Properly displayed

WASTE MANAGEMENT PLAN (OVER 40'):

Yes, found properly displayed in main salon area.

III. SYSTEMS

SAFETY EQUIPMENT

AUXILIARY SAFETY EQUIPMENT

LIFE RAFT:

Viking 8 person life raft transom mounted. Serial # 11587291 inspected good through 09-2015

E.P.I.R.B.:

ARC 2DCC6 AE662 FFBFF

SMOKE DETECTOR:

None Sighted. Highly recommended.

SEARCH LIGHT:

Hand held spot light worked when tested

FIRST AID KIT:

Yes, appears adequate.

FUME SNIFFER ALARM SYSTEMS:

I recommend a propane detector.

MAN OVERBOARD SYSTEM:

Part of the GPS system. Boarding ladder. IV Throwable

BINOCULARS:

Bushnell Marine. Good condition.

BILGE PUMPS

LIST:

Four bilge pumps with float switches (3 Rule 2000 and 1 Sea Choice 1100) All powered up. 2 Whale manual pumps worked when tested.

OUT OF WATER INSPECTION

BELOW WATERLINE MACHINERY

PROPELLER(S):

2 - Three blade 16" bronze props. Painted. serviceable condition both are slightly out of tune.

PROPELLER SHAFT (LOGS):

Bronze fittings in good condition.

SHAFT BEARING (CUTTLESS BEARING):

Cutlass bearing showed no signs of sloppiness or end play.

RUDDER(S) MATERIAL:

*B12

Fiberglass rudders. The starboard has high moisture and delamination was detected.

RUDDER(S) MOUNTING:

Skeg mounted well secured

SKEGS:

Good condition.

III. SYSTEMS

OUT OF WATER INSPECTION

BELOW WATERLINE MACHINERY (*continued*)

TRANSDUCERS:

Well installed.

ZINCS:

New prop zincs

CONDITION OF HULL (WETTED SURFACE)

BLISTERS:

No blisters were sighted, this is not a guarantee that blisters won't form in the future.

CONDITION OF BOTTOM PAINT:

Blue ablative bottom paint in fair condition. Recommend sanding and repainting for next season.

NOTE:

No moisture readings were taken the vessel was short hauled, the sounding were good. No damage or repairs were sighted.

AIR CONDITIONING AND HEAT (AIR CONDITIONING)

AIR CONDITIONING AND HEAT (AIR CONDITIONING)

TYPE:

3 Unitized self contained units.

MANUFACTURER:

Westerbeke

NUMBER OF UNITS:

*B13

3 Units. The aft unit did not work when tested

LOCATION:

2 Units under the dinette and a unit in the port aft compartment behind the locker.

BTU CAPACITY:

17,000 BTU and 2 -10000 BTU

THRU-HULL STRAINER:

Perko sight style. Clear of debris.

HOSES, CLAMPS AND CONNECTORS:

Appear to be adequately sized and serviceable for application.

RAW WATER COOLING PUMP:

2 Pumps both worked when tested. Located port and starboard in the forward head compartments.

DRIP TRAYS:

Drip tray under unit

CONDENSATE DRAIN:

Draining overboard under each unit.

III. SYSTEMS

AIR CONDITIONING AND HEAT (AIR CONDITIONING)

AIR CONDITIONING AND HEAT (HEAT)

TYPE:

Reverse cycle.

LIQUIFIED PETROLEUM GAS SYSTEM (LPG)

LIQUIFIED PETROLEUM GAS SYSTEM (LPG)

TYPE:

LPG.

LOCATION:

The locker is under the starboard cockpit seat.

MOUNTING:

Well secured in approved locker

REGULATOR:

Serviceable, passed leak test.

PRESSURE GAUGE:

Yes, at tank.

VENTILATION:

Properly ventilated meets ABYC standards

SHUT-OFFS:

Yes at tank and electric solenoid.

LINES AND FITTINGS:

Appears serviceable and approved were sighted.

NOTE:

*A8

The portable propane bottles for the grill are excessively corroded.

SEATRIAL REPORT

INTRODUCTION

INTRODUCTION:

The "Sample" was operated on the Patuxent River between the hours of 11 to 12 on September 30, 2014. The vessel was operated by Chris, Attending the sea trial were Gary, Paul and myself. There was no wind the tide was running out at about 1 knot, the river was calm and no boat traffic.

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 3450 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. The autopilot responded normally
12. There were no oil leaks sighted

The water temperature is in Celsius. The oil pressure is in pounds per square inch. Revs refers to revolutions per minute. Batts are in volts of charge from the alternator. 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	AMPS	TEMP
1000	30	20	60
2800	30	20	80
3450	30	20	80

III. SYSTEMS

SEATRIAL REPORT

TRIAL RUN DATA (*continued*)

STARBOARD ENGINE:

RPM	OIL	AMPS	TEMP
1000	30-40	10	60
2800	40	10	80
3450	40	10	80

NOTE:

The readings were taken from the vessels gauges, speed was checked using a Garmin hand held GPS. A Craftsman inferred thermometer was used to also check the engine temp 162-165 Heat Exchangers 110-115 along with the oil filters 125-145 oil coolers 110-115

PERFORMANCE DATA

HEADLINE WORDS:

The fuel and water were full

DETAILS:

The vessel cruised at 8-8.5 knots

SPEED DATA:

RPM	KNOTS
1000	4.6
2000	6.3
3000	8.5
3450	9

STANDING RIGGING

STANDING RIGGING

MAST:

Sparcraft anodized aluminum swept back mast fractional rigged. No damage or corrosion was sighted. Viewed with binoculars from the deck.

MAST STEP:

*B14

Deck step with compression post. Some elevated moisture was detected at the mast step

SPREADERS:

*B15

Double spreader swept back rigged. The port lower end cap is missing.

SHROUDS:

Stainless steel wire with Noresman type fittings rigged. Rigging is in good condition.

BOOMS:

Anodized aluminum. Good condition.

III. SYSTEMS

STANDING RIGGING

STANDING RIGGING (*continued*)

TURNBUCKLES:

Stainless turnbuckles of the open design with swage fittings are serviceable condition.

CHAIN PLATES:

The chain plates are in good condition viewed externally.

MAST SUPPORTERS:

Internal bulkhead (compression post), no depression was observed.

NOTE:

The standing rigging does not appear to have been stressed or abused.

RUNNING RIGGING

RUNNING RIGGING

WINCHES:

2 Lewmar # 54 ST Genoa, 2 Lewmar # 44 ST halyard, Single Lewmar # 44 ST traveler winches. All are in good condition.

SAIL TRACK:

Two deck mounted sail tracks with swivel blocks both port and starboard. Serviceable condition.

TRACKS AND CARS:

Antal cars and track in good condition

BLOCKS:

All are serviceable

TOPPING LIFT:

Serviceable condition

MAIN SHEET TRAVELER:

Lewmar arch mounted traveler worked smoothly.

REEFING SYSTEM:

Slab reefing with 2 points

HALYARDS:

*B16

Halyards were braided and color coded. The main halyard is frayed in areas.

SHEETS:

Color coded braided nylon. Serviceable condition

ROLLER FURLING GEAR:

The roller fuller work smoothly when tested.

CLUTCHES:

The clutches are serviceable

III. SYSTEMS

SAILS

SAILS

MAINSAIL:

Quantum fully battened in good condition with stack pack. The stack pack battens were laying on the starboard side decks.

HEADSAIL:

Quantum head sail with some wear at repair was sighted at the lower spreader area. The each is also worn in the same area

BATTENS:

Good condition

BATTEN POCKETS:

Good condition

HEAD:

Good condition

TACK:

Good condition

CLEW:

Good condition

GROMMETS:

Good condition

REEF POINTS:

2 Reef points. Serviceable condition

SEAMS:

Seams and stitching are in good condition.

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

A. SAFETY DEFICIENCIES:

A.1 (PAGE 8) BULKHEADS:

Athwartships reinforcement enhanced by bulkheads to the hull with FRP (fiber reinforced plastic). There are repairs under the forward berths and there are cracks at the bulkhead to the cross over section.	
FINDINGS	RECOMMENDATIONS
There is appears to be repairs under the forward berths and there are cracks at the bulkhead to the cross over section.	Consult a fiberglass expert for estimate and repairs

A.2 (PAGE 14) OIL COOLERS:

Corrosion was sighted at both coolers the starboard appears to be leaking.	
FINDINGS	RECOMMENDATIONS
Corrosion was sighted at both coolers the starboard appears to be leaking.	Investigate further and repair or renew as necessary.

A.3 (PAGE 14) HOSES AND CLAMPS:

Reinforced rubber hose well routed and supported. There is a corroded hose clamp and possible leak at the starboard sea strainer.	
FINDINGS	RECOMMENDATIONS
There is a corroded hose clamp and possible leak at the starboard sea strainer.	Further investigate and repair with like kind materials in keeping with accepted marine repair practices.

A.4 (PAGE 18) EXHAUST SYSTEM:

Raw water cooled metal aqua lift type muffler. Marine grade flex hoses are singled clamped. Some cracks were sighted in the exhaust hose	
FINDINGS	RECOMMENDATIONS
Marine grade flex hoses are singled clamped. Some cracks were sighted in the exhaust hose	Repair with like kind materials in keeping with accepted marine repair practices.

IV. FINDINGS AND RECOMMENDATIONS

A. SAFETY DEFICIENCIES:

A.5 (PAGE 19) OTHER:

The generator started quickly , ran normally and handled a load maintaining 120 volts and 20 amps. The generator was not charging according to the volt gauge	
FINDINGS	<i>RECOMMENDATIONS</i>
The generator was not charging according to the volt gauge	Further investigate and repair as necessary.

A.6 (PAGE 21) ANCHORS:

Primary Rocna plow type # 73, secondary # 50 CQR. # 33 with chain (the anchor and chain are excessively corroded) Bruce # 23 Fortress	
FINDINGS	<i>RECOMMENDATIONS</i>
secondary # 50 CQR. # 33 with chain (the anchor and chain are excessively corroded)	Replace secondary anchor and chain.

A.7 (PAGE 23) CONDITION:

The head seacock forward port side appears to be leaking slightly. The others are in serviceable condition.	
FINDINGS	<i>RECOMMENDATIONS</i>
The head seacock forward port side appears to be leaking slightly.	Further investigate and repair with like kind materials in keeping with accepted marine repair practices.

A.8 (PAGE 26) NOTE:

The portable propane bottles for the grill are excessively corroded.	
FINDINGS	<i>RECOMMENDATIONS</i>
The portable propane bottles for the grill are excessively corroded.	remove the portable propane bottles

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.1 (PAGE 8) STEM:

Raked fiberglass stems with some minor damage and repairs, high moisture was detected port and starboard.	
FINDINGS	<i>RECOMMENDATIONS</i>
Raked fiberglass stems with some minor damage, high moisture was detected port and starboard.	Contact a FRP expert for estimate and repairs.

IV. FINDINGS AND RECOMMENDATIONS

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.2 (PAGE 8) TRANSOM:

Large transom with multilevel platforms/steps, port board ladder, faux teak vinyl over fiberglass. The vinyl covering is loose in several areas and there are gelcoat cracks along the lower transom radius. Some minor gelcoat damage starboard side. Note:large hatches to the engine spaces.

FINDINGS	<i>RECOMMENDATIONS</i>
The vinyl covering is loose in several areas and there are gelcoat cracks along the lower transom radius. Some minor gelcoat damage starboard side	Repair as necessary.

B.3 (PAGE 8) CHAIN LOCKER (DRAINAGE):

The anchor locker is located in the foredeck and is a large square shaped locker drain out the bottom. There is a small repair that is leaching rust through the fiberglass.

FINDINGS	<i>RECOMMENDATIONS</i>
There is a small repair that is leaching rust through the fiberglass.	Further investigate and repair as necessary.

B.4 (PAGE 9) KEEL EXTERNAL:

There is loose caulking at the port side joint. No damage or repairs were sighted.

FINDINGS	<i>RECOMMENDATIONS</i>
There is loose caulking at the port side joint.	Further investigate and repair as necessary.

B.5 (PAGE 10) DECK SURFACE:

Mold non slip surfaces with several gelcoat cracks and crazing areas(port side deck and at the port and starboard cleats) with some painted areas through out the vessels deck surfaces. High moisture was detected at the port and starboard sail track area (more so port side) no delamination was detected. Large trampoline forward in good condition.

FINDINGS	<i>RECOMMENDATIONS</i>
High moisture was detected at the port and starboard sail track area (more so port side) no delamination was detected	Contact a marine fiberglass expert for estimate.

B.6 (PAGE 11) DODGER:

Clear dodger with duct tape across the top.

FINDINGS	<i>RECOMMENDATIONS</i>
Clear dodger with duct tape across the top.	Repair or replace as necessary

IV. FINDINGS AND RECOMMENDATIONS

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.7 (PAGE 11) GENERAL EQUIPMENT:

Factory arch with high moisture and cracks at the port and starboard radius. Transom shower worked when tested. 12 Volt cabin fans are operable	
FINDINGS	<i>RECOMMENDATIONS</i>
Factory arch with high moisture and cracks at the port and starboard radius	Contact a fiberglass expert for estimate.

B.8 (PAGE 14) EXHAUST SYSTEM:

Raw water cooled with approved type exhaust hoses doubled clamped and extra wide single clamps (CFR requires double clamps on all connections) Stainless steel mufflers exiting the port and starboard sides. Some corrosion was sighted at the exhaust flange hardware starboard	
FINDINGS	<i>RECOMMENDATIONS</i>
Some corrosion was sighted at the exhaust flange hardware starboard	Further investigate and repair as necessary.

B.9 (PAGE 16) FILTER/FUEL CONDITION:

Some debris was sighted in the starboard fuel filter	
FINDINGS	<i>RECOMMENDATIONS</i>
Some debris was sighted in the starboard fuel filter	Clean filter housing

B.10 (PAGE 16) BATTERIES:

5 Batteries. The engine batteries are not properly secured	
FINDINGS	<i>RECOMMENDATIONS</i>
The engine batteries are not properly secured	Secure battery. CFR 183.420 NFPA 302 7-43.

B.11 (PAGE 17) CHARGING SYSTEM (ALTERNATOR):

Belt driven alternators. Serviceable. The starboard amp meter would fluctuate during the sea trail	
FINDINGS	<i>RECOMMENDATIONS</i>
The starboard amp meter would fluctuate during the sea trail	Further investigate and repair as necessary.

B.12 (PAGE 24) RUDDER(S) MATERIAL:

Fiberglass rudders. The starboard has high moisture and delamination was detected.	
FINDINGS	<i>RECOMMENDATIONS</i>
The starboard has high moisture and delamination was detected.	Investigate further and repair or replace as necessary.

IV. FINDINGS AND RECOMMENDATIONS

B. OTHER DEFICIENCIES NEEDING ATTENTION:

B.13 (PAGE 25) NUMBER OF UNITS:

3 Units. The aft unit did not work when tested	
FINDINGS	<i>RECOMMENDATIONS</i>
The aft unit did not work when tested	Further investigate and repair as necessary.

B.14 (PAGE 28) MAST STEP:

Deck step with compression post. Some elevated moisture was detected at the mast step	
FINDINGS	<i>RECOMMENDATIONS</i>
Some elevated moisture was detected at the mast step	Further investigate and repair as necessary.

B.15 (PAGE 28) SPREADERS:

Double spreader swept back rigged. The port lower end cap is missing.	
FINDINGS	<i>RECOMMENDATIONS</i>
The port lower end cap is missing.	Replace the end cap.

B.16 (PAGE 29) HALYARDS:

Halyards were braided and color coded. The main halyard is frayed in areas.	
FINDINGS	<i>RECOMMENDATIONS</i>
The main halyard is frayed in areas.	Replace main halyard

C. SURVEYOR'S NOTES AND OBSERVATIONS:

C.1 (PAGE 10) HATCHES:

Large hatches at the foredeck to the water tanks, the starboard hinge is loose.	
FINDINGS	<i>RECOMMENDATIONS</i>
Large hatches at the foredeck to the water tanks, the starboard hinge is loose.	Repair as necessary

C.2 (PAGE 10) DAVITS:

Laminated wood davit's in aluminum footings. Some minor corrosion at the footings. Serviceable condition.	
FINDINGS	<i>RECOMMENDATIONS</i>
Some minor corrosion at the footings.	Take measures to prevent further corrosion, sand and paint

C.3 (PAGE 11) SEATS:

U-shaped seating port and bench and helm seat starboard, white vinyl cushions in good condition. The seats have storage lockers below (the port aft latch is missing)	
FINDINGS	<i>RECOMMENDATIONS</i>
The seats have storage lockers below (the port aft latch is missing)	Replace latch

IV. FINDINGS AND RECOMMENDATIONS

C. SURVEYOR'S NOTES AND OBSERVATIONS:

C.4 (PAGE 11) BIMINI:

Tan Sunbrela with stainless steel supports and side curtains. There is a tear at the port side forward.	
FINDINGS	RECOMMENDATIONS
There is a tear at the port side forward.	Repair or replace as necessary

C.5 (PAGE 12) HEADS:

4 Heads on vessel. The port aft head cabinet door hinges are broken	
FINDINGS	RECOMMENDATIONS
The port aft head cabinet door hinges are broken	Repair as necessary

C.6 (PAGE 17) CIRCUIT LOAD MONITORS:

Analog volt meter and polarity lights. One indicator light did not work	
FINDINGS	RECOMMENDATIONS
One indicator light did not work	Further investigate and repair as necessary.

C.7 (PAGE 20) HOLDING TANK:

Plastic located port and starboard compartments in the forward heads	
FINDINGS	RECOMMENDATIONS
No holding tank monitor sighted.	Comply with CFR 33 part 159.83. Install level indicator .

C.8 (PAGE 23) FIRE EXTINGUISHERS:

Three Kidde size 1 (1 ABC and 2 BC)	
FINDINGS	RECOMMENDATIONS
Not properly inspected and tagged.	Comply with ABYC and NFPA recommended standards for fire protection. Yearly inspection.

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 a 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, ABOS, Yacht World.com, NADA, The Power Boat Guide and Internet listings 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:

_____ 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, 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:

Zero 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:

\$1,085,000.00

One Million Eighty Five Thousand Dollars and Zero cents

V. SUMMARY AND VALUATION

SUMMARY:

In accordance with the request for a marine survey of the "Sample", 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 September 30, 2014 and was found to be a well constructed, appointed and comfortable vessel. 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:



Charles Ulrich (SAMS Y,SC) # 906



VI. PHOTOGRAPHS



IMGP4634.JPG