

## **REPORT OF THE MARINE SURVEY**

Survey completed: December 06, 2016

Report: December 06, 2016

Final Report: December 07, 2016

**As requested, a Pre-purchase Survey was conducted of:**



**2012 Cruisers 310 Express**

**PREPARED EXCLUSIVELY FOR:**

**Al Sorbello**

**28 Lady Slipper Lane Marstons Mills, MA 02648.**

**CONDUCTED BY:**

**Peter J. Spang, SAMS® AMS®**



## GLOSSARY

*The terms and words used in this report have the following meanings...*

### ACRONYMS:

**ABYC** - American Boating and Yacht Council    **AF** - Appraisal Foundation    **CE** - European Certification  
**CFR** - US Code of Federal Regulations    **COLREGS** - International Regulations for Preventing Collisions at Sea  
**ISO** - International Organization for Standardization    **NFPA** - National Fire Protection Agency    **UL** - Underwriters Laboratory  
**USPAP** - Uniform Standards of Professional Appraisal Practices

**ADEQUATE:** Sufficient for a specific requirement.

**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).

### CONDITIONS (Descriptive- different from vessel value):

**EXCELLENT or BRISTOL:** New or like new.

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

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

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

**INTENDED SERVICE:** Use of vessel that is intended by Survey Purchaser (present or prospective owner).

**MATERIALS: FRP:** (Fiber Reinforced Plastic) Typical fiberglass laminate construction.    **SS:** (Stainless Steel)

**NA:** Not applicable to this vessel.

**POWERS UP:** Power was applied only and system appeared to react properly. This does not refer to the operability of any system or component unless specifically indicated.

**SERVICEABLE:** Sufficient for a specific requirement.

### TERMINOLOGY:

**ABAFT:** Towards aft    **ATHWART:** Across the vessel    **AWL:** Above waterline    **BWL:** Below waterline

**LOA:** Length overall    **LWL:** Length at waterline    **Stbd:** Starboard    **Port:** Port    **Topsides:** Hull sides (not deck)

**Terms used in USCG Documentation: GRT:** Gross tonnage    **NET:** Net tonnage    **BREADTH:** Beam

**DEPTH:** This is *not* draft. Note: GRT and NET are calculated from hull volumes. *Do not confuse with displacement or weight of the vessel.*

**PRIORITY I - SAFETY & REGULATORY RECOMMENDATIONS:** (*MAY BE MANDATORY*) The deficiencies listed as Priority I are required by state laws or CFR -federal laws enforced by the U.S.C.G. or are considered by the attending surveyor to represent unsafe operating conditions. Response by the vessel caretaker should be before next use of vessel.

**PRIORITY II - MAINTENANCE & STANDARDS RELATED:** (*NOT NORMALLY MANDATORY*)

These are important maintenance items sighted which in this surveyor's opinion need to be rectified. They may also include recommendations to conform to current ABYC and NFPA-302 voluntary standards which may not have been in effect or may not have been adhered to by the builder when the vessel was constructed. Some of these, if not addressed, could lead to a Priority I safety issue and/or may result in a reduced vessel market value. Response by the vessel caretaker should be ASAP.

**OTHER RECOMMENDATIONS:** (*SUGGESTIONS IN THE WAYS OF A PRUDENT MARINER*)

These are other less significant maintenance items or observations that if not addressed, could lead to more important priority issues and/or could lead to a reduced vessel market value. The cost of addressing these recommendations is generally minimal. Might include suggestions in the context of FYI, ways of a prudent mariner, etc.



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**Please note:** This survey is prepared for the exclusive use of Al Sorbello. This report by itself does not contain all the components necessary for a prepurchase decision. The intended users of this report and appraisal are the client and those lenders and underwriters who may finance or insure this vessel for Al Sorbello only. This report is not transferable to any other person or entity, therefore, other potential buyers are specifically excluded as third party users of this report.

*Vessel owner is responsible for research of warranties and/or defect recalls. As well as conscientiously having defects quickly repaired when recalled. TMS takes no responsibility for any problems stemming from these issues.* © Copyright 2016, Turnstone Marine Survey, LLC. All rights reserved



## GENERAL SURVEY INFORMATION

### SURVEY STANDARDS

**1.1 Standards followed:** This survey was completed using as reference the federal regulations and amendments issued and enforced by the United States Coast Guard under the authority of Title 33 and Title 46 of the United States Code of Federal Regulations (CFR's). In addition the American Boat and Yacht Council (ABYC) and National Fire Protection Association (NFPA-302) voluntary standards were used as reference during the survey. These ABYC and NFPA voluntary standard practices are generally followed by most vessel manufacturers today. Marine Pollution Act, MARPOL, International ISO, and COLREGS also apply.

### SURVEY INSPECTION COMMENTS

- 1.2 Comments:**
- All systems and components inspected and described herein are considered serviceable and/or functional except as indicated in the survey report and recommendations section. Electronic devices and instruments were checked for power up only - not for functionality unless a sea trial was performed. The vessel was surveyed without removal 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. Buyer/owner is advised to open all such areas for further inspection. Furthermore, 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 not to be considered an inventory or a warranty either specified or implied.
  - "Priority I Recommendations" are related to Safety & Regulatory findings and are listed in **RED** in the report.
  - "Priority II Recommendations" are related to Maintenance & Standards findings and are listed in **ORANGE** in the report.
  - "Other Recommendations" are suggestions "in the ways of a prudent mariner" or findings that are relatively minor in nature and are listed in **BLUE** in the report.
  - It is the nature of marine vessels that deterioration, wear and accidents do occur and as such, this report therefore represents the condition of the vessel only at the time the survey was conducted.

### SCOPE OF SURVEY

- 1.3 Report file no:** 120616cruisers310sorbello.
- 1.4 Inspection date:** December 06, 2016.
- 1.5 Report date:** December 06, 2016.
- 1.6 Final Report date:** December 07, 2016.
- 1.7 Type of survey:** As requested, a Pre-purchase Survey was conducted. The agreed scope of work is to thoroughly establish and report the overall condition, then appraise the fair market value of this vessel for pre-purchase decision making. The report may also be used for insurance underwriting and/or financial decision making.
- 1.8 Conducted by:** Peter J. Spang, SAMS® AMS®
- 1.9 Requested by:** This survey was performed at the request of the purchaser, Al Sorbello, who was present at the time of the survey.
- 1.10 Survey conditions** Equipment used for electrical systems testing: True RMS Multimeter by Klein



Tools model CL2000, True RMS Ideal Sure Test Circuit Analyzer model 61-164, Fluke networks Pro3000 circuit tracer, SPX OTC Digital Battery Tester, HM Digital COM-100 salinity meter, CEM AT-6 Tachometer, Fluke VT04 visual IR thermometer. A calibrated Electrophysics moisture meter, model GRP 33 or model "Dolphin", was used to obtain laminate moisture readings used in this report. A self calibrating Delmhorst J-Lite probing moisture meter would be used for wood applications. The vessel was commissioned and hauled at some point during the survey for a complete inspection. Electrical systems checked: The vessel's (12-24) volt DC system was checked using the ship's batteries and the vessel's AC (shore power) system was powered up using available shore power. Weather conditions for the survey were moderate temperatures and dry weather. A complete survey was possible. A sea trial was performed as part of this survey.

**1.11 Intended use:** Pleasure cruising. Coastal cruising of the US not to exceed 20 miles from land. (This limit may be extended by providing means of long range weather and safety communications, (i.e. Marine SSB radio, SATellite COMMunications system, offshore satellite telephone, etc.).)

**SURVEY REQUESTED BY**

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**1.12 Client's name:** Al Sorbello.  
**1.13 Client address:** 28 Lady Slipper Lane Marstons Mills, MA 02648.  
**1.14 Cellular phone:** 508-367-5400.  
**1.15 Customer experience:** Customer admits to 7 years of pleasure boating experience in this class of boat. *Survey purchaser has admitted limited boating experience. It would be wise to attend a boater's safety course. Call the local Coast Guard Auxiliary for more information.*

**VESSEL INFORMATION**

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**1.16 Year /Make /Model:** 2012 Cruisers 310 Express.  
**1.17 Description:** Manufactured by: Cruisers Yachts, Oconto, WI. **Description:** This power vessel is of molded fiberglass (FRP) construction, with a planing modified-V single-monohull. The hull primary color is: Black and white. As designed, the hull has a hard chine molded-in at the turn of the bilge, double lifting strakes or chines molded-in each side. Vessel has a reverse sheer and is of an open express cruiser style. The vessel's **LOA: 31' 3"**, **Beam: 10'**, **Draft: 3'**, and **Displacement: 10,300 LBS.** (Dimensions as per BUC Research). **Hull Identification Number: CRSEA102F112.** A true digital photograph of the hull ID number of the referenced vessel is displayed. The Hull Identification No (HIN) is in agreement with the vessel's Documentation papers. This vessel is **Documented by the USCG and the number is: 1239564.** *The documentation paperwork was not sighted on vessel as required by law* but the document# is appropriately and permanently affixed to the hull per USCG 33CFR Subpart I regulations. The documentation is in order based on the documentation sighted or researched from the internet. The vessel is documented as a **Recreational Vessel. The Documented hailing port is Boston.** Her **Documented length is: 31.2'**, **Breadth: 10'**, **Depth: 5.7'**, **Gross tons (GRT): 11**, **Net tons (NET): 9**, **Date of Manufacture: 2011**, and **Documented Owner: Blank-** Vessel is dealer owned.  
**1.18 NOTE:** A well kept file with manuals for all or most of the ship's systems, propulsion and electronics is on board.

**VESSEL CONDITION & VALUE**

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**1.19 Cond. per BUC:** ABOVE AVERAGE CONDITION This vessel appears to have had above average care and/or is equipped with extra options and electronic gear.



**1.20 Book values:**

**1.21 Market value:**

**1.22 Explanation:**

BUC ValuePro and ABOS values used: \$104,000 to \$137,000.

Market value: Boat \$120,000. Refer to Section 1.1 "Value reconciled"

Valued at \$120,000 using BUC ValuPro, ABOS, NADA and [Soldboats.com](http://Soldboats.com) among others as guides. Value reconciliation and methodology: Yachtworld currently lists 8 comparable (Cruisers 310, Bayliner 310, and Rinker 310) 2011-2013 models, (in the US), asking \$99,000 to \$149,000. [Soldboats.com](http://Soldboats.com) currently lists 9 comparable 2011-2013 Cruisers and Rinker 310 models that sold for \$82,400 to \$13,000 in the last year, (5 sold this season so far). Eliminating the unusually high and/or low values this calculates a mean market value as \$103,600. Given the age and condition (+10%) of this vessel, equipment offered and systems repairs needed (if any) to be fully operational, I contend this valuation is fair and is **also based upon correction of Type I and II Recommendations cited in this report.** Comparables used for this valuation are on file and available by request. (The Business Method of Appraisal was not used in this instance as this vessel is used for recreational purposes only. The Cost Method was not used as there were sufficient recent sales of this model to determine a Current Market Value using the Market Method of Appraisal). *This valuation also assumes engines and other untested systems etc. are in good /operable condition as represented.*

**1.23 Replace cost:**

\$210,000 per [BUCValuPro.com](http://BUCValuPro.com). (MSRP was \$205,950 per ABOS).

**1.24 NOTE:**

The "MARKET VALUE" is the most probable price, in terms of money

- Buyer and seller are typically motivated.
- Both parties are well informed or well advised, and each acting in what they consider their own best interest.
- A reasonable time is allowed for exposure in the open market.
- Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- 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.

The overall vessel condition and value was established after a complete inspection of stated vessel, the results of which are included in this report of survey. The estimated fair market value and replacement cost includes all listed auxiliary equipment. See "Condition & Value Summary" section for additional details. Vessel was then compared to similar vessels for sale or sold, using all available resources including listed book values. Valuations are determined using 2008-2009 USPAP (Uniform Standards of Professional Appraisal Practice) standards for personal property in which the surveyor has been trained and tested by the ASA (American Society of Appraisers).

**HULL INSPECTION**

**HULL Summary**

**2.1 Hull Construction**

**Construction methods and materials used:** This vessel has a molded reinforced fiberglass (FRP) hull with a tabbed-in longitudinal and transverse framing system and with a bonded inner and outer hull monocoque system. **Below waterline machinery includes:** 2 I/O propulsion units. **Propeller(s) are:** Three blades fixed and made of stainless steel. This is a Counter-rotating Duo Props system. **This vessel also has:** Apparently functional trim tabs. **The decks and house are constructed of:** Molded reinforced fiberglass (FRP) and reinforced with an



unknown coring material. Mooring fittings include heavy duty well mounted bow cleat(s), cleats amidships on each sidedeck, and cleats on each of the stern quarterdecks. Strafe protection appears adequate. **The hull to deck joint:** A deck overlapping or shoe box configuration well sealed and fastened to the hull with mechanical fasteners and an unknown adhesive bonding compound. The hull to deck joint is protected by: a plastic rub rail and metal rub strake system. A swim platform is integrally molded into the transom. A boarding ladder or some other means of access from the water is provided as recommended by ABYC H-41.

## 2.2 Integrity

**This hull** is a watertight compartment divided by non-watertight bulkheads. There is a self draining anchor locker in the forepeak. **Hatches**, doors, windows and port lights opening to exterior decks are apparently watertight types, meeting ABYC H-3.5.2 standards, except for the only weathertight, companionway, engine /machinery space hatch, and cockpit locker hatches. **Enclosed accommodation spaces** each have a means of escape at least 14 1/2" by 18 1/2" meeting standards of ABYC H-3.4. **The cockpit** has a 10" (approximate) high step to the bridge deck, an opening through the transom to access the swim platform, and 1 apparently functional and appropriate drain plus gap beneath the transom door.

## 2.3 Thru-hulls

**Thru hull fittings:** All sighted appear to be serviceable and properly installed at reinforced locations in the hull and include- threaded barrels with and bronze ball valves. All hose fittings below water line are double clamped as recommended by ways of a prudent mariner. *A bag of emergency bungs was not sighted on board and recommended in the ways of a prudent mariner.*

## 2.4 Condition summary

Components of the hull and deck structure are built and installed to ABYC standards and appear serviceable.

# HULL EXTERIOR

## 2.5 Hull cosmetics:



Excellent condition-well protected and no severe external scratches chips or abrasions were sighted except for stbd aft corner-vinyl bootstripe damaged.

## 2.6 Bow:

Moderate flared bow- appears solid on external inspection. Solid, no cracks visible on external inspection. Moisture readings are relatively dry. Bow eye is secure.

## 2.7 Rub rail:

In good condition- well secured.

## 2.8 Port Lights:

Oval portlights with screens apparently tight and functional, both sides.

## 2.9 Transom:

Euro style with swim platform and access door. Transom is well secured, no cracks or defects sighted. Moisture readings were relatively dry. No soft or delaminated areas revealed when tapped.

## 2.10 Anchor platform:

SS bolted on with an anchor roller forward. Well secured, solid, no major cracks.

## 2.11 Boarding ladder:

Stainless steel ladder securely mounted in swim platform pocket.



**2.12 Moist./Delam.:**

Moisture meter readings on topsides near the water line and surrounding thru hull fittings are relatively dry. A moisture meter was used to measure hull moisture in the wetted surface in a 6" grid pattern and around all thru hull fittings. All readings show relatively dry readings. Percussion testing with a phenolic hammer on a 6" grid pattern reveals: What appears to be solid laminate.

**2.13 Condition summary:**

No evidence of damage or blistering. Wetted surface is clean, fair, and has recent anti-fouling paint.

**ABOVE WATER LINE THRU-HULLS**

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**2.14 -->STEM:**

Anchor/chain locker drains thru side of stem.

**2.15 -->HULL SIDES:**

Bronze mushroom head fittings. Used for; Cockpit /deck drains, bilge /sump drains, sink drains, A/C and shower sump discharge drain, and generator exhaust. Vents for: Fuel tank(s) and waste tank.

**HULL BOTTOM**

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**2.16 Osmotic blistering:**

No evidence of blistering was visible on hull bottom at the time of inspection. *Blisters are an unknown factor on all boats and if not currently present, there is no guarantee that they will not appear in the future. Blisters have a tendency to dry out over winter storage unless severe or large. Blisters (if any) best appear after vessel has been in water for an entire season. In addition, the symptomatic evidence of blistering can be obscured by bottom coatings, a dry storage period during which blisters spontaneously depressurize, bottom laminate sanding, and other conditions or actions. Recommend full inspection for blisters immediately after haulout and power wash. Surveyor has no firsthand knowledge of the history of bottom maintenance, blistering, repairs or prophylactic coatings on this vessel.*

**2.17 Thru Hulls**

All thru-hull fittings were adequately sealed and bonded to hull as sighted from exterior. Clear of debris.

**2.18 Transducers**

Transom mounted speed and depth transducer well mounted. Appears serviceable.

**2.19 Drain Plugs:**

Transom mounted bronze drain plug fitting.

**2.20 Damage sighted:**

No damage visible.

**INBOARD PROP(S)**

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**2.21 Prop manufacturer:**

By Volvo Penta.

**2.22 Diameter and pitch:**

Unknown- marking is illegible or not visible.

**2.23 Prop condition:**

Prop(s) in good condition with no visible cracks, corrosion or bent blades. No nicks nor dents are seen and props appears serviceable.

**TRIM TABS, STABILIZERS AND THRUST SYSTEMS**

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**2.24 Trim tabs:**

Bennett single ram hydraulic trim tabs. Hydraulic. System powers up & appears functional. Controls at the helm.

**ANODES**

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**2.25 General**

Good condition, very little wasting, zinc(s) remain serviceable. Wire brush before spring commissioning.

**2.26 Outdrive(s):**

Outdrive transom bracket and lower unit anodes in good condition- serviceable.

**2.27 Bonding:**

Bonding wires on the outdrive are appropriate and well connected.

**2.28 Results**

No evidence of abnormal galvanic or stray current corrosion is evident on the underwater metals. Sacrificial anodes are wasting normally.

**BELOW WATER LINE THRU-HULLS**

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**2.29 ENGINE BILGE :**

Bronze seacock ball valve installed. Sea valve is accessible and functional. **Thru hull valve used for:** Generator raw water intake. **Sea valve is piped with:** Marine rubber covered reinforced hose. Hose connections are double clamped. **Sea**



**strainer installed in the area for:** Generator raw water cooling. Sea strainer appear clear of debris/ winterized.

**2.30 HEAD/FWD BILGE:** Bronze seacock ball valve(s) installed. Sea valve(s) are accessible and functional. **Thru hull valves used for:** Air conditioning heat exchanger raw water intake and toilet flush water intake. **Sea valve(s) are piped with:** Marine rubber covered reinforced hose. Hose connections are double clamped. **Sea strainer installed in the area for:** Air conditioner heat exchanger pump/ winterized. Sea strainer appear clear of debris.

**HULL INTERIOR**

**2.31 Bilge(s):**



Aft bilge is clean with some standing clear water. Forward bilge has rusty colored water. *Clean properly with regards to environmental pollution -- Keep bilge areas as clean as possible to more quickly identify leaks as soon as they occur.*

**2.32 Stringers:** Hull stiffness provided by FRP (unknown core or no core) longitudinal stringers that run the length of the vessel. Complete inspection not possible due to limited access. Stringers are sighted in the engine compartment and under cabin sole and are well glassed into hull where sighted. Stringers were sounded with hammer where accessible and appear very sound. No soft spots, separation, cracks rotting or splitting sighted. Limber holes appear to be adequately sealed where sighted. Stringers checked with moisture meter where accessible and all readings are relatively dry.

**2.33 Trnsvrse members:** Inspected where accessible and found to be dry and solid.

**2.34 Inside of transom:** Reinforced. Secure-no cracks or separation sighted where visible.

**2.35 NOTE:** *All thru-valves need to be worked routinely to be kept serviceable. Simply open and close the valve several times.*

**TOP DECK & SUPERSTRUCTURE**

**DECK Summary**



### 3.1 Ground tackle



Ground tackle includes; A single capstan electric windlass. Anchor(s) include: One and plow style. *There is no secondary or backup anchor and rode as recommended in the ways of a prudent mariner. Check to see if the bitter end of the anchor rode is secured to the boat. Anchor locker hatch release is broken- cannot open hatch to*

*survey rode or windlass. Repair latch.*

### 3.2 Safety holds

Grab rails are well mounted to the weatherdeck structures in the cockpit, bridge deck, on the swim platform, in the cabin, and for the companionway. Safety rails include: A bow rail, at an approximate height of 12", made from a single course, of welded SS 1" tubing, with side rails leading aft. System is sturdy and well secured.

### 3.3 Ladders and stairs

Below decks and companionway stairs are well mounted and sturdy with provided handholds and non-skid treads. A boarding ladder is provided. It is always available or deployable by a person in the water. ABYC H-41.9.1.

### 3.4 Miscellaneous

Canvas covers or convertible enclosures or tops include: A bridge enclosure with zip open isinglass panels, a cockpit enclosure with zip open isinglass panels and screens, and as observed, the convertible and soft enclosures and covers are in good condition, do not obscure field of vision and the frames are well mounted and solid.

The windshield is of a typical marine style and quality utilizing safety glass of a sufficient thickness, gaskets are in good condition, the framework is solid and well mounted. The field of vision from the helm is unobstructed apparently meeting standards of ABYC H-1.5 to 1.8. The radar arch is solid and well mounted.

### 3.5 Condition summary

Components of the top deck and/or superstructure system are built and installed to ABYC standards appear serviceable.

## MAIN DECK & FITTINGS

### 3.6 Deck Surface:

White gelcoat with molded non skid fiberglass surface.

### 3.7 Moist /Delam:

Moisture meter readings were all acceptably dry over the deck and cockpit surfaces. When percussed with the phenolic hammer in a 6" grid pattern, all surfaces of the deck and cockpit sounded solid. All areas of deck and cockpit felt solid underfoot and when tapped sounded solid.

### 3.8 Windshield:

Three piece aluminum framed with tapered side panels. Center section opens for access to foredeck or ventilation. High impact shatterproof glass is appropriate and labeled as such. Windshield wiper(s) are installed. Pilot side only. Windshield wiper(s) power up and appear serviceable. Windshield is of marine quality and apparently meets range of visibility standards of ABYC H-1.5 to 1.8. and is glazed appropriately to standards of H-3. Glazing has manufacturers marks.

### 3.9 Radar arch:

Molded FRP, well secured and sturdy.

### 3.10 Port(s) /port light(s):

Opening portlights in cabin structure. Opening portlights include screens. Latches and hardware in place. Portlights open easily and appear serviceable.

### 3.11 Deck Hatches:

Maxwell round hatch with translucent lexan is well secured, seals in good



condition, support arm(s) in place. This hatch over the v-berth area is large enough for emergency egress. Meets ABYC standards.

**3.12 Ventilation:**

Opening deck hatches.

**3.13 Scuppers /drains:**

Deck drains are (partially) clogged with leaves/ debris. **RECOMMENDATION: Clear cockpit/deck drains of all debris.**

**3.14 Transom shower:**

Pullout handheld with hot and cold control valves. Not tested-no water in fresh water system.

**3.15 Other deck fittings:**

Sunpad forward of windshield. In good condition.

**3.16 Condition summary:**

Unless otherwise noted, deck system and related fittings meet ABYC standards and appear serviceable.

## GROUND TACKLE

**3.17 Anchor locker:**

In the forepeak, with deck access and with access from the V-berth. For anchor rode only.

**3.18 Windlass:**



Maxwell, with chain /rope gypsy. Foot controls on the foredeck are operational for raising or lowering anchor. Helm controlled switch is functional. **Foot control covers are broken-replace.**

**3.19 Recommend:**

*Ground tackle appears adequate and serviceable. Recommend laying out for closer inspection and installation of fathom markers to identify length. Rode should be adequate for at least a 4:1 scope of anchorage in home waters.*

## BRIDGE DECK / COCKPIT

**3.20 Cockpit /Helm:**

Helm is in the bridge.

**3.21 Top /superstructure:**

Open- convertible express model.

**3.22 Sole:**

FRP with molded non skid surface. Fitted carpet, snaps.



### 3.23 Cockpit Equipment:



Cockpit has courtesy lights that power up. Cockpit flood lights installed, power up and appear serviceable. Sink/Wet bar, Refrigerator/ice maker: Nova Kool AC/DC, Handheld shower installed, with hot and cold water. Not tested. (No water in system). Stowaway cockpit pedestal table. **Nova Kool refrigerator did**

**not power up- repair if necessary.**

### 3.24 Door(s):

Sliding lexan companionway pocket door. Door has a locking device.

### 3.25 Storage:

Transom trunk compartment. Under seat(s).

### 3.26 Seating:

U-Shaped seating in open cockpit area. Vinyl stand/sit padded bolster seat at helm and portside settee. Vinyl in excellent condition. Vinyl cockpit cushions in excellent condition.

### 3.27 Engine hatch(es):

Single access hatch in cockpit sole.

### 3.28 Condition summary:

Unless otherwise noted, appears serviceable and built to ABYC standards.

## CABIN INTERIOR APPOINTMENTS

### CABIN Summary

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#### 4.1 Heat and AC

Vessel has (1) 120 VAC central air conditioning units with an adequately wired power supply. System includes a raw water thru-hull fitting with operating valve and a 120 VAC raw water pump. Vessel has heat provided by an AC reverse cycle heat exchanger (Central air). ***System is winterized and could not be fully tested. It does power up and raw water pump appears functional. System should be guaranteed to work properly when commissioned.***

#### 4.2 Galley



Galley is well equipped and clean. Galley appliances include: A single burner Euro Kera Gourmet all electric powered galley stove with a ceramic cooking surface and with power on indicator lights. A SS Contoure microwave oven with carousel. Refrigeration is a Norcold model DE0751BB, AC or DC powered, undercounter

refrigeration /freezer unit with an air cooled heat exchanger. Corian countertop area and storage space is adequate. Galley basin has hot and cold pressurized



### 4.3 Accommodations

### 4.4 Entertainment

water. All systems powered up and appear serviceable.

There are sleeping facilities for (4-5) persons located in the V-berth and a midships cabin. The enclosed head has: A basin, with hot and cold pressurized fresh water, a flushing marine toilet, and a convertible shower with hot and cold fresh water.



Entertainment includes: An AM/FM/CD/Satellite/MP3 stereo by Fusion, Model MS-IP76. Appears serviceable- CD player not tested. **Remote pad at the helm has moisture behind the bezel.** A LCD Flatscreen TV by Sony, Model Bravia/ KDL-22BX320, Serial # 7806002. Glomex amplified TV antenna. Cable inlet in the transom. DVD player by Fahrenheit- not tested but powers up. **Unable to get sound from bridge deck speakers. Repair if necessary.**

### 4.5 Condition summary

Components of the cabin system are built and installed to ABYC standards and appear serviceable.

## MAIN SALOON

- 4.6 Style: Contemporary.
- 4.7 Headliner: Clean and well attached.
- 4.8 Doors: Open and close easily and latch properly.
- 4.9 Water intrusion: No evidence of water intrusion sighted.
- 4.10 Fabric & cushions: Matching fabric covered cushions in V-berth. Vinyl covered in saloon and mid cabin berth. Cushions and coverings are in excellent condition.
- 4.11 Curtains: Portlights have curtains.
- 4.12 Sole: FRP inner hull liner with a non-skid surface. Removable carpeting installed.
- 4.13 Light fixtures: 12 volt cabin lights throughout the vessel. Lamps power up and appear serviceable.
- 4.14 Storage: Hanging lockers and storage drawers. Shelves over V-berth.
- 4.15 Condition: Interior is in well kept condition. Clean and odor free. Maintenance is obvious.

## DINETTE

- 4.16 Table type: Removable with pedestal base.



**4.17 Seating:**



Settee.

**BERTHS / STATEROOMS**

**4.18 Berths:**



Mid cabin

V-berth sleeps two.  
Convertible mid cabin/aft berth sleeps two.

**HEAD(S)**

**4.19 Number /Location:**



One enclosed head.  
Located on the port side.



**4.20 Toilet(s):**



Electric flush pump. Flush appears to be jammed. **Toilet does not appear to be serviceable. Renew or repair as soon as possible** so as not to be in violation with CFR33 Part 159. System is winterized. **Replace broken toilet seat.**

**4.21 Toilet raw water:**

Raw water intake thru bronze seacock. Hose is secure with clamp.

**4.22 Sink:**

Solid surface counter with molded in basin. Water source is from pressurized system. Appears serviceable. Supplied with hot and cold water.

**4.23 Shower(s):**

Handheld, pull out shower fixture.

**4.24 Vent fan:**

Functional.

**4.25 Shower pump:**

Located in sump tank with auto float. Not tested. Power not available or winterized.

**4.26 NOTE:**

The head is clean and odor free. As new condition.

**AC System(s)**

**4.27 Manufacturer:**

Unit was not sighted. Behind a screwed down panel. Powers up and sounds normal. System winterized.

**4.28 Temp Controls:**

Digital temperature controls.

**STEERING SYSTEM**

**STEERING Summary**

**5.1 System**

The vessel has a flexible cable system, (Teleflex style) wheel controlled. Steering is accomplished, by steering the IO units.

**5.2 Condition summary**

Components of the steering system are built and installed to ABYC standards and appear serviceable.

**PROPULSION SYSTEM**

**PROPULSION Summary**



### 6.1 Propulsion:



The vessel is propelled by a twin engine, gasoline fueled, 4 stroke, V8 cylinders configuration, and naturally aspirated. Inboard/outdrive(s) system installation manufactured by: **Volvo Penta. Engine year: 2012 and Model: 5.0 GXi. Producing: 270 HP rated @4800 to 5200 RPM. Serial #(s)- Port engine: A177485 Outdrive: A178164. Starboard engine: A177484 Outdrive: A178162. Hours: 325 both.** (Hours read from onboard instruments).

### 6.2 Controls:

Manual type, -dual outboard style controls with tilt and trim switch on the handle. On this vessel is one control station located at and the bridge deck helm. Flame arrestor(s) are installed and appropriate for the gasoline engine(s). Ignition protection is offered on all electrical appliances in the machinery space.

### 6.3 Exhaust:

The wet exhaust system is constructed of: Reinforced rubber hose. Exhaust piping is of appropriate type hose and double clamped at all connections.

### 6.4 Alarms

There are alarms for: Low oil pressure and high coolant temperature. The alarms are: Audible and appear to be operating satisfactorily when the engine(s) started. Backed up with gauges for tachometer, oil pressure, coolant temperature, and DC voltage.

### 6.5 Shutdown

No emergency shutdown system available.

### 6.6 Start-in-gear

Start-in-gear protection is appropriate for this boat and operational.

### 6.7 Ventilation

Ventilation of the machinery space is appropriate for this vessel and operational and is comprised of natural ventilation ducted to appropriate areas for each of the engines and with power blower assist.

### 6.8 Condition summary

Components of the propulsion system are built and installed to ABYC standards and appear serviceable.

### 6.9 NOTE:

*It is good practice when buying a used vessel with an inboard/outboard propulsion system, (and maintenance records are not available), that all filters, fluids (Lower unit gear case) be changed, and the raw water cooling impeller(s) also be changed. Furthermore, the outdrive maintenance program should be followed to avoid costly repairs or damage. This includes routine removal of the outdrive to check gimbal bearings, hydraulics, bellows, universal joints, raw water passages, etc. As stated in the Terms and Conditions agreement, It is understood that the attending surveyor is not an engine/transmission surveyor. As such, I recommend if any doubt, that all engines be inspected by a qualified engine surveyor/mechanic to determine the internal condition of the engine(s) and outdrive unit(s), etc.*

## MAIN ENGINE(S)



6.10 Make /Model:

Volvo Penta 5.0 GXi,  
with a GM block.



- 6.11 Hoses and clamps: Serviceable condition. No soft spots or cracks sighted. Clamps appropriate and in good condition.
- 6.12 Belts and pulleys: Serpentine belt(s) appear serviceable. No cracks or splits sighted. Pulleys/belts appear to be in line. *Belt on port engine is noisy.*
- 6.13 Cooling system(s): Propulsion unit(s) are raw water cooled. Raw water intake through outdrives lower unit, circulated through engine, combined with engine exhaust and routed through outdrive props.
- 6.14 Oil level: **Oil appears dirty. RECOMMENDATION: Change crankcase oil and filter(s) if applicable.** *An oil sample was drawn from each/the engine for independent lab analysis. Engine(s) operated for at least 20 minutes and/or until coolant reached 140 degrees. Sample was carefully and cleanly aspirated from the sump via the dipstick opening. Care was taken to avoid contamination. Results to be emailed separately. Surveyor supports the recommendations of the spectrographic analysis report from the HO Penn laboratory- if any- and does not comment separately.*
- 6.15 Fuel pump(s): Engine mounted mechanical or vacuum operated.
- 6.16 Fuel supply lines: USCG type A1 or A2. Fuel lines and hoses appear appropriate and serviceable.
- 6.17 Oil filter(s): Remote mounting enabling easy access.
- 6.18 Fuel filter(s): Engine mounted filter/separator by Volvo.
- 6.19 Drip pad available: *No active leaks sighted but measures should be taken to contain any possible leaks. RECOMMENDATION: Install drip pads beneath each engine to catch fluid drippings and rapidly identify leaks of any kind.*
- 6.20 Engine mounts: Engine mounts appear to be well secured to the support stringers.
- 6.21 Engine ground: Engines are grounded together with an appropriately sized conductor cable.
- 6.22 Engine space: Compartment is large enough or accessible enough to properly maintain installed machinery. Ventilation is acceptable and to ABYC and CFR regulations. Lighting is available and serviceable. Sound and heat insulation is installed:
- 6.23 Engine(s) operated: Engines observed on sea trial. Go to "Sea Trial" section for details.
- 6.24 Fresh water flush: Available for both engines. Not tested.
- 6.25 Condition summary: Appearance leads one to believe these engines have been well maintained. Engine(s) is clean, started easily without excessive smoke, ran smoothly without load, no leaks were sighted. Engine(s) installed to ABYC standards and appear serviceable.
- 6.26 Damage sighted: None.

**DRIVE(S)**

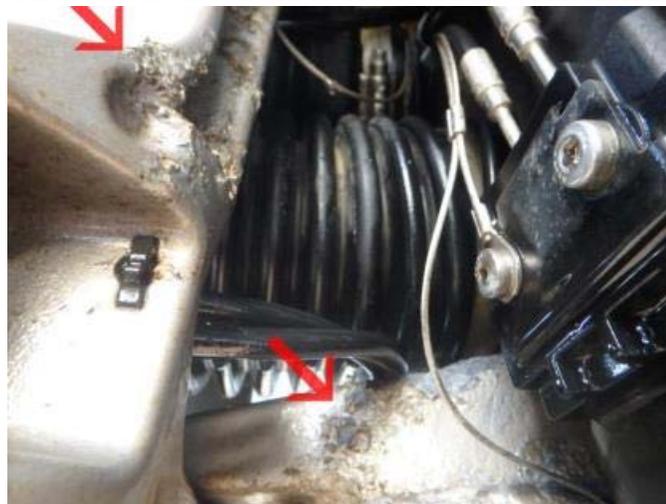


6.27 No /Make /Model:



Two Volvo Penta model DPS-A Duoprop.

6.28 Appearance:



Apparently in good condition by appearance. *Some corrosion noted on transom bracket.*

6.29 Serial number(s):

Drive plates match decals on engines.

6.30 Gimball housing(s):

**RECOMMEND: Monitor anodes for excessive wasting. Galvanic study of vessel might be indicated.**

6.31 Lower housing(s):

Sound- no external damage visible.

6.32 Tilt /trim /trailer:

Powers up & appears functional. No leaks seen. Trim indicators at the helm are operational. Braided bonding wires are attached, appropriate and apparently serviceable.

6.33 Upper bellows:

No cracks or wear areas sighted on bellows where visible. Appear to be in good condition.

6.34 Lower bellows:

No cracks or wear areas sighted on bellows where visible. Appear to be in good condition.

6.35 Hydraulic lines:

Hydraulic lines are secured and show no signs of leakage. Trim/ tilt hydraulic lines and rams are secure and show no signs of leakage.

6.36 Gear Noise:

**While underway, starboard outdrive is rumbling when turning. RECOMMENDATION: Have the drives removed and inspect all gears, u-joints, gimball bearing, bellows, engine coupler and shaft alignment for excess wear. Repair as necessary to prevent further internal damage.**

6.37 Anti-cavitation plate(s):

Sound, no cracks or separation.

6.38 Lube oil condition:

*Note that lower unit gear lube should be drained then renewed to full each season.*



*Discoloration, evidence of water, shiny metallic flakes, and/or loss of fluid indicates service needs to be performed immediately.*

- 6.39 Skeg condition:** Good condition. No excessive areas of bare metal. No chipped or damaged areas sighted.
- 6.40 Prop(s):** "Duo-Props" Dual counter-rotating propellers on each outdrive. Three blades fixed, stainless steel. Excellent condition.
- 6.41 NOTE:** *Recommend complete service of outboard lower unit(s) be performed including water pump impeller.*

## ENGINE INSTRUMENTS AND CONTROLS

- 6.42 Blowers:** Engine room blower(s) power up and are fully functional. One blower per engine. Ductwork appropriately placed and in serviceable condition.
- 6.43 Gauge cluster:** Gauges include: Tachometer, engine temperature, engine oil pressure, DC voltmeter, engine hour meter, fuel gauge for each tank, power trim indicator, and are available for each propulsion system. LED monitor(s) each engine as installed is/are part of a; vessel manufacturer's custom installation.
- 6.44 Fuel use monitoring:** *Not available- recommend fuel monitoring system installation for maximum efficiency while underway.*
- 6.45 Condition summary:** Installed to ABYC and USCG standards. Appears serviceable. Gauges power up when power is applied.
- 6.46 NOTE:** OEM Faria Instruments.

## NAVIGATION ELECTRONICS

### NAVIGATION EQUIPMENT Full and Summary

- 7.1 Navigation station:** All navigational instruments are at the helm.
- 7.2 Compass(es):**



Ritchie. With a 4" card. Lighted and shaded. Located on the helm dash. The compass appears functional.



**7.3 VHF radio(s):**



Raymarine. *This VHF radio has a NMMEA interface and is DSC capable- register the vessel and owner with the USCG. Go to <http://www.boatus.com/MSI/> to obtain a MMSI number- it's free. Radio powers up. (no answer from radio check- tested from my walkie talkie only).*

**7.4 Depth sounder(s):**



Faria digital readout with shallow alarm. Instrument powers up.

**7.5 Speed /log:**

Speed given over land by GPS unit.

**7.6 Chart plotter(s):**



Garmin GPSmap 531s. The GPS map instrument powers up.

**7.7 Antenna(s):**

There are antennae for: VHF, GPS, and TV.

**7.8 Spotlight:**

Golight remote control spotlight with joystick control at the helm. Spotlight is mounted on the bow rail. **The spotlight is not operational**  
**RECOMMENDATION: Repair or replace spotlight as necessary. (Moves properly, but no light).**



**7.9 Condition summary:**

Vessel is well equipped for its' intended service. Buyer plans to install multi-function system including radar.

**ELECTRICAL SYSTEMS**

**ELECTRICAL SYSTEMS Summary**

- 8.1 House Batteries:** There is/are one Interstate 12 volt, wet cell lead acid, Group 27 size deep cycle battery installed for house functions. Passed 600 amp Cold Crank Amp test.
- 8.2 Starting batteries:** There are: two NAPA 12 volt, wet cell lead acid, Group 27 size cranking battery(s). **When tested, the port battery showed only 175 cold cranking amps and the stbd battery showed 650 CCA as rated. Port engine battery should be replaced.**
- 8.3 Genset /Windlass:** Genset battery disconnected for layup. Not tested.
- 8.4 Battery installation:** Batteries are secured: In boxes and with straps. The terminals are protected from accidental short circuiting. Apparently meets standards of ABYC E-10 and 33CFR Sec. 183.420.
- 8.5 DC system:** There are on / off switches for each battery bank. They are appropriate, accessible and functional. Panels and meters are marine appropriate and appear functional. Overcurrent current protection is installed at the house battery bank per ABYC E-11. Overcurrent protection is installed on each branch of the DC system. The DC electrical system utilizes appropriate marine grade UL approved wire, properly bundled and supported wherever sighted. Battery charging via engine alternator, and a shore power converter by Intelli-Power 3-bank, (30 amp). DC system appears serviceable and meets ABYC standards as outlined in E-10 and E-11.
- 8.6 AC system:** The shore power inlet: uses two 120 VAC /30 amps receptacles, and is marine grade and in good condition. Shore power cables are appropriate and apparently in serviceable condition. AC system utilizes marine grade UL approved wire, properly bundled, protected and supported wherever sighted. Wiring sighted is in good condition. The AC panel is appropriate, well labeled with branch breaker switches and has reverse polarity indication. GFCI is installed in all appropriate locations, and trips when a tester is inserted in the outlet.
- 8.7 Generator:** Kohler generator is cooled by: raw water to coolant heat exchanger, Wet type marine grade reinforced hose, double clamped at all connection. Wet muffler exhausts to topsides thruhull outlet. System installed to ABYC recommendations. **Not tested- winterized. Assure proper operation when commissioned.**
- 8.8 Bonding /galvanics** The vessel is partially, but satisfactorily bonded. Sacrificial anodes have been placed on the vessel's underwater machinery.
- 8.9 Condition summary** Components of the ship's electrical system are built and installed to ABYC standards and appear serviceable.

**D.C. ELECTRICAL SYSTEMS**

- 8.10 Battery isolator(s):** No isolator.
- 8.11 Battery monitor:** Voltmeter/ammeter part of the OEM propulsion gauge cluster and a switched analog/digital voltmeter on the panel.



**8.12 Charging system:**



AC to DC battery converter/charger: Intel-power Marine. 30 amp total for 3 banks. Ammeter and indicator light. Charger is ignition protected. All power up and appear serviceable. Installed to ABYC standards.

**8.13 DC panel:**



Yes, located in the main saloon and the helm. Each branch switch is clearly labeled as to purpose. Backside of panel is appropriately protected. Combined AC/DC/ and genset controls.

**8.14 Breaker /fuse:**

All D.C. circuits are adequately protected by branch breakers.

**8.15 Wiring secured:**

All wiring runs are properly bundled and secured every 18" per ABYC E-11 recommendations as sighted.

**8.16 Condition summary:**

The DC system installed to ABYC E-10 and 11 standards. Appears serviceable. Screwed down panel was not opened for close inspection.

**A.C. ELECTRICAL SYSTEMS**

**8.17 A.C. system:**

Vessel has two 30 Amp inlets - 120 Volt system.

**8.18 Shore pwr. inlet(s):**

Located in transom trunk.

**8.19 Shore pwr. cord:**

Two 30 AMP, Cord(s) appear serviceable with no burnt or corroded fittings & cord shows no cracks.

**8.20 AC selector switch:**

Shore power or Generator or Inverter manual break before make switch located on the main AC panel.

**8.21 AC panel(s):**

Each branch switch is clearly labeled as to purpose. AC panel and wiring is protected to prevent accidental contact with open wiring per ABYC recommendations.

**8.22 Reverse polarity:**

Appears functional and outlets tested OK for proper polarity. Reverse polarity indicator is sighted but not tested. AC power was not available at the time of the survey.

**8.23 GFCI protection:**

A GFCI equipped 110V outlet has been installed as the first in line for the circuit requiring protection. Appears serviceable. *An equipment Leakage Circuit*



*Interrupter (ELCI) installed with, or in addition to the main shore power disconnect circuit breaker(s) is now the preferred installation .*

*RECOMMENDATION: Install ELCI protection as currently recommended by ABYC E-11.11.1 and NFPA 302 to minimize electrocution danger.*

- 8.24 A.C. meter(s): Analog type ammeter gauge is installed and voltmeter gauge is installed.
- 8.25 Wiring secured: Where sighted the AC wiring is secured every 18" and bundled per ABYC and NFPA recommendations.
- 8.26 Wire type: Stranded and tinned copper boat cable- size and rating, where sighted, appears correct and serviceable for intended use.
- 8.27 Galvanic Isolator: *None installed. If this vessel commonly uses marina supplied shore power, a galvanic isolator is strongly recommended to protect this vessel's underwater machinery. Isolators protect your vessel from electrical problems aboard other boats or the marina itself from coming aboard through the shore power cable. An isolation transformer is recommended over a galvanic isolator.*
- 8.28 Condition summary: AC system and equipment is installed to ABYC E-11 standards. Appears serviceable. The AC panel is screwed down and not opened for close inspection.

## GENERATOR

- 8.29 Manuf. /Model: Kohler label not sighted.
- 8.30 Hour meter: Not sighted.
- 8.31 Location(s): Engine space.
- 8.32 Installation: In an enclosed and insulated cabinet.
- 8.33 Ventilation: Genset shares engine compartment ventilation system.
- 8.34 Accessibility: Genset is easily accessed for maintenance and repair.
- 8.35 Generator tested: Not operated for purposes of this survey. Vessel in winter storage or out of the water.

## TANKAGE

### TANKAGE Summary

- 9.1 Marine Sanitation An electric pump flush toilet is connected to: A Type IIIB MSD system, that apparently meets 33CFR159 requirements as long as the seacock or Y-valve is locked closed while in protected waters. Poly plastic holding tank with a capacity known to be 23 gallons per Power Boat Guide. Dockside pumpout or overboard discharge via macerator pump and thru-hull fitting. As mentioned, toilet needs repair, macerator not tested. Contents level panel in the head.
- 9.2 Water Heater 6 gallon Kuuma water heater with a 120 VAC element and with an engine coolant heat exchanger. Includes a 75 psi relief valve, drain spigot, and is built and installed to ABYC standards and CFR requirements. *Relief valve releases to an AWL thru-hull on the port topside as ABYC recommends. Beware of this outlet as it could without warning release superheated water and steam..*
- 9.3 Fuel Tanks There are 2 fuel tank(s) made from, 5052 aluminum with a capacity of 63 gallons each. Tanks meet accessibility requirements. Deck fill plate, hoses, vent, supply and return lines and fittings inspected and tank has: A fuel gauge sending unit. Fuel piping is: USCG Type A-1 fuel hose and vent hose application. Metallic fuel fill deck plate is attached to grounding/bonding as recommended. Hoses are double clamped at all connections. Tank is manufactured and properly labeled by: KCS International, Oconto, Wisconsin. System is built and installed to ABYC standards and CFR requirements.
- 9.4 LPG/CNG System There is no LP or CN gas system on this vessel.



### 9.5 Water Tanks

Fresh non-potable water storage tank is made of, poly-plastic material, and has a total capacity of 30 gallons per Power Boat Guide. Piping throughout the vessel is color coded, (red=hot / blue=cold), Water is pumped by a system's pressure regulated 12 VDC pump. System is installed and maintained to ABYC H-23 standards. Appears to be serviceable. There is a pressure regulated city water inlet to the vessel on the transom. **Note: Disconnect city water when not on the vessel.** Briefly powered up but not tested as it is winterized.

### 9.6 Condition summary

Components of the ship's tankage and related components systems are built and installed to ABYC standards and appear serviceable.

## GENERAL TANKAGE COMMENTS

- 9.7 Access: Good.
- 9.8 Tank monitoring system: Holding tank monitor signal. Functional.
- 9.9 NOTE: Tankage only inspected visually, not pressure tested.

## AUXILIARY EQUIPMENT

### MISCELLANEOUS EQUIPMENT & ACCESSORIES

- 10.1 Canvas/Covers: Vinyl covers for all removable tables. All others in good condition. Isinglass clear, zippers and snaps functional.
- 10.2 Cockpit cushions: Yes available- Appear to be in good condition.
- 10.3 Cockpit table: Pedestal table available.
- 10.4 Cup Holder: Molded-in drink holders place throughout vessel.
- 10.5 Cable TV: Multidirectional TV antenna mounted with outlets in vessel cabin area. Cable TV inlet shore connection. Outlets in vessel cabin area.
- 10.6 Deck light: Spreader flood lights underside of radar arch available. Cockpit courtesy lights installed. All functional.
- 10.7 Docking lines: Yes, assorted size and length both braided and twisted nylon.
- 10.8 Fenders: Yes, inflatable docking fenders are available.
- 10.9 Hatch screens: Hatch screens available for all hatches.
- 10.10 Spotlight: Mounted directional spotlight with hand or remote control for pilot.
- 10.11 US Flag: *Not sighted- please display colors.*

## SEA TRIAL

### SEA TRIAL DETAILS

- 11.1 Date & Time: December 06, 2016 noontime.
- 11.2 Operated from /to: Marina to Waquoit Bay, where the maneuvers were performed.
- 11.3 Attendees: Sea trial attended by- buyer: Al Sorbello, Bosun's representative, and myself.
- 11.4 Vessel operated by: Bosun's.
- 11.5 Sea conditions: Calm, inland bay waters.
- 11.6 Weather/temp: Cool and fair.

### SEA TRIAL OBSERVATIONS

- 11.7 Start test: Start in gear protection is appropriate and operational. Tested with engine start.
- 11.8 Cranking: The engine(s) started without excessive cranking.
- 11.9 Exhaust smoke: The engine exhaust smoke was nonexistent throughout the sea trial.
- 11.10 Cooling water: NA with outdrives. Unable to see flow.



- 11.11 Instruments:** The engine instruments all operated within normal operating limits at idle, cruising speed, and maximum throttle.
- 11.12 Max throttle:** Manufacturer's recommended max RPM is 4800-5200. Both engines reached 5000 RPM at full throttle.
- 11.13 Steering:** The steering system operated normally/ smoothly from stop to stop. Vessel made sharp turns at high speed without cavitating or skidding.
- 11.14 Throttle levers:** The throttles operated normally/smoothly.
- 11.15 Transmission(s):** The transmissions operated normally/smoothly.
- 11.16 Backdown test:** The backdown test was satisfactory. Engine mounts secure & No unusual movement of the engine(s) was sighted. Seawater did not enter the cockpit.
- 11.17 Vibrations:** There were no excessive vibrations noted at any time during the sea trial run except in reverse. Normal cavitation.
- 11.18 Leaks:** There were no oil, coolant or other leaks observed during or after the sea trial.
- 11.19 Observations:** Rumble as mentioned, from starboard drive.

### RELATIVE TEMPERATURE READINGS

- 11.20 Risers:** The temperature readings and the differentials are within normal range.
- 11.21 Manifold:** The temperature readings and the differentials are within normal range.
- 11.22 Oil:** Oil filter temperature reading(s): 175F.
- 11.23 Coolant:** Thermostat housing temperature: 165F. Thermostat housing temperature and temperature gauge readings matched. (Gauge slightly higher).
- 11.24 Comments:** All above relative temperatures are considered to be within normal levels and were obtained with engine(s) RPM at 1500 after high speed run.

### SEA TRIAL ENGINE INSTRUMENT READINGS

- 11.25 RPM /Speed:** IDLE: 600 rpm. SLOW: 1000 rpm/ 6 kts. CRUISE: 3000 rpm/ 26 kts. WOT: 5000 rpm/ 37 kts. Speed readings by GPS. SOG (Speed over ground)
- 11.26 Volts DC:** 13.4 VDC at all throttles.
- 11.27 Water temp:** 165-170F. Within normal limits for both engines at all throttles.
- 11.28 Oil pressure:** Within normal limits for both engines at all throttles. 40 psi.
- 11.29 Comments:** All above readings of instruments were within normal range unless otherwise specified in Sea Trial Section.

## SAFETY EQUIPMENT

### DEWATERING PUMPS

- 12.1 Forward bilge:** There is one pump, by Johnson, and powered by 12 VDC, It is a centrifugal style pump rated at 2200 GPH and with a separate float switch. Manual override at the helm operational. High water alarm is installed, tested and found operational.
- 12.2 Aft bilge:** There is one pump, by Johnson, and powered by 12 VDC, It is a centrifugal style pump rated at 2200 GPH and with a separate float switch. *Float switch not tested. The pump and its' float, sensor or switch could be not accessible as mounted. Monitor pump for proper operation.* Manual override at the helm operational. High water alarm is installed, tested and found operational.

### U.S.C.G. REQUIRED

- 12.3 Required equipment:** *\*\*Be aware that State and Local regulations concerning mandatory safety equipment might differ from the Federal regulations enforced by the Coast Guard. They are usually more specific and comprehensive than the Federal regulations. For instance in Massachusetts; ALL power boats must carry an anchor and line, boats longer than 26' must have a bell in addition to the horn or whistle, toilet*



waste cannot be discharged in any inshore State waters except a small area in Nantucket Sound and the ferry channel between Woods Hole and Martha's Vineyard, etc. These are examples and not conclusive. As you know, "Ignorance of the law is not excuse". When you register your boat, you will be given a copy of the State Regulations. Take a few minute to read the booklet and make sure when you are boarded by Local, State, or Federal Authorities your boat will be compliant. That said, the following is to meet USCG CFR 33 and 46 regulations only. **Safety notice:** Please read this important notice of a recall for some fire extinguishers with plastic valves made by Kidde. Go to:

<http://marinesurvey.us8.list-manage2.com/track/click?u=be99d3cfe0e55e99f3413d7e8&id=0b03df0333&e=dc9600d0ec>. **Visual and pyrotechnic signals: Visual or pyrotechnic emergency signal devices not included with sale- must provide.**

**Navigation lights:** The vessel's navigational lighting is appropriate and fully operational. **Sound devices:** This vessel has an **electric horn**, - appears functional, and **no ships bell** sighted. Required for vessels over 12 meters (39.4') USCG Inland rules, (Massachusetts requires a bell on all vessels 26' and longer).

**RECOMMENDATION: Recommend compliance with Commonwealth regulations by installing a ships bell with bell size not less than 7.9" diameter.**

**USCG Placards:** Both USCG 33CFR 151 mandated placards (Oil & Garbage) are properly posted. **PFDs and Life Jackets:** PFDs are not included in the sale of this vessel. **This vessel must be properly equipped with PFDs per USCG Required**

**Equipment chart before leaving dock. Coast Guard approved Type IV (Throwable):** There is/are: No throwable flotation device sighted on board. **33**

**CFR 46 sec 25.25-5d states all vessels >26' must carry an approved throwable flotation device: life ring, buoy, cushion. And it must be readily accessible at all times.**

**Fire Fighting Equipment:** Vessel meets requirements and extinguishers sighted appear serviceable. Appropriate **B-I dry powder** style sighted: Three USCG Approved. Extinguisher(s) adequately pressurized per gauge.

**NOTE: Fire extinguisher(s) not mounted. RECOMMEND: Mount loose fire extinguisher in V-berth with available bracket, easily accessible and in the USCG required location(s).** Fixed fire extinguishers appear serviceable and installed to ABYC recommendations and meet requirements of the USCG.

Appropriate **Fixed Fire Size I** sighted: One USCG Approved. Halon 1301 type manual/ automatic system, located:, and in the engine and machinery space. Gauge reads full. "Ready" light is on indicating full charge. **Extinguisher has outdated or no certification tag.**

**RECOMMENDATION: ABYC A-4 and NFPA 12A recommends that fixed fire protection systems be checked and reweighed at one year intervals per manufacturers recommendations, and tagged accordingly. This is especially important when no gauge is installed. Service or replace as necessary immediately.**

## AUXILIARY SAFETY EQUIPMENT

### 12.4 Recommended

The following safety equipment is strongly recommended in the ways of a prudent mariner: **First aid kit: No first aid kit sighted. Highly recommended.** **Smoke detector: None sighted. RECOMMENDATION: NFPA 12.3 Smoke Detection - All vessels 26 ft (8m) or more in length with accommodation spaces intended for sleeping shall be equipped with a single station smoke alarm that is listed to UL 217, Standard for Single and Multiple Station Smoke Alarms, for recreational vehicles and is installed and maintained according to the manufacturer's instructions. Recommend compliance with NFPA 302 and install a smoke detector in EACH enclosed sleeping space.** **CO detector:** Yes, an appropriate



*Carbon Monoxide detector is installed- unplugged for storage. Assure it is working before using vessel. Gas fume detector and alarm: Gasoline vapor detector not sighted. Not required, but highly recommended on any gasoline powered vessel with an enclosed machinery or tank space. Emergency shutdown: Not installed- lanyard style with clip recommended for safety. Deck lighting available: Cockpit courtesy lights installed- and spreader lights installed- and apparently operational. Search light: Mounted searchlight available. Not serviceable- repair as needed or replace. Man overboard: No, design MOB (Man Over Board) system and provide necessary equipment. Drill with all hands. Deficiencies: **USCG required safety equipment deficiencies on this vessel must be amended before putting to sea. Refer to Safety Equipment section for specific deficiencies, then refer to the USCG Safety Equipment Chart following this section to properly equip this vessel.***



## RECOMMENDATIONS:

### **PRIORITY I - SAFETY & REGULATORY RECOMMENDATIONS:** (MAY BE MANDATORY)

#### **CABIN INTERIOR APPOINTMENTS**

##### HEAD(S)

##### *4.20 Toilet(s):*

1. Toilet flush does not appear to be serviceable. Renew or repair as soon as possible.

#### **SAFETY EQUIPMENT**

##### U.S.C.G. REQUIRED

##### *12.3 Required equipment:*

2. Visual or pyrotechnic emergency signal devices not included with sale- must provide.

RECOMMENDATION: Recommend compliance with Commonwealth regulations by installing a ships bell. This vessel must be properly equipped with PFDs per USCG Required Equipment chart before leaving dock. 33 CFR 46 sec 25.25-5d states all vessels >26' must carry an approved throwable flotation device: life ring, buoy, cushion. And it must be readily accessible at all times. RECOMMEND: Mount loose fire extinguisher in V-berth with available bracket, easily accessible and in the USCG required location(s). Engine room extinguisher has outdated certification tag. Service (Ralph Perry) or replace extinguisher as necessary immediately.

##### AUXILIARY SAFETY EQUIPMENT

##### *12.4 Recommended*

3. Recommend compliance with NFPA 302 and install a smoke detector in EACH enclosed sleeping space. USCG required safety equipment deficiencies on this vessel must be amended before putting to sea. Refer to Safety Equipment section for specific deficiencies, then refer to the USCG Safety Equipment Chart following this section to properly equip this vessel.

### **PRIORITY II - MAINTENANCE & STANDARDS RELATED:** (NOT NORMALLY MANDATORY)

#### **TOP DECK & SUPERSTRUCTURE**

##### DECK Summary

##### *3.1 Ground tackle*

1. Anchor locker hatch release is broken- cannot open hatch to survey rode or windlass. Repair latch.

##### GROUND TACKLE

##### *3.18 Windlass:*

2. Foot control covers are broken- replace.

##### BRIDGE DECK / COCKPIT

##### *3.23 Cockpit Equipment:*

3. Nova Kool refrigerator did not power up- repair if necessary.

#### **CABIN INTERIOR APPOINTMENTS**

##### CABIN Summary

##### *4.4 Entertainment*

4. Unable to get sound from bridge deck speakers. Repair if necessary.

##### HEAD(S)

##### *4.20 Toilet(s):*

5. Replace broken toilet seat.

#### **ELECTRICAL SYSTEMS**

##### ELECTRICAL SYSTEMS Summary

##### *8.2 Starting batteries:*

6. Port engine battery should be replaced.



**OTHER RECOMMENDATIONS:** (SUGGESTIONS IN THE WAYS OF A PRUDENT MARINER)

**GENERAL SURVEY INFORMATION**

SURVEY REQUESTED BY

*1.15 Customer experience:*

1. Survey purchaser has admitted limited boating experience. It would be wise to attend a boater's safety course. Call the local Coast Guard Auxiliary for more information.

VESSEL INFORMATION

*1.17 Description:*

2. The documentation paperwork was not sighted on vessel as required by law.

**HULL INSPECTION**

HULL INTERIOR

*2.31 Bilge(s):*

3. Clean forward bilge properly with regards to environmental pollution.

*2.35 NOTE:*

4. All thru-valves need to be worked routinely to be kept serviceable. Simply open and close the valve several times.

**TOP DECK & SUPERSTRUCTURE**

DECK Summary

*3.1 Ground tackle*

5. There is no secondary or backup anchor and rode as recommended in the ways of a prudent mariner. Check to see if the bitter end of the anchor rode is secured to the boat.

**CABIN INTERIOR APPOINTMENTS**

CABIN Summary

*4.1 Heat and AC*

6. System is winterized and could not be fully tested. It does power up and raw water pump appears functional. System should be guaranteed to work properly when commissioned.

*4.4 Entertainment*

7. Remote pad at the helm has moisture behind the bezel.

**PROPULSION SYSTEM**

MAIN ENGINE(S)

*6.12 Belts and pulleys:*

8. Belt on port engine is noisy.

*6.19 Drip pad available:*

9. RECOMMENDATION: Install drip pads beneath each engine.

DRIVE(S)

*6.28 Appearance:*

10. Some corrosion noted on transom bracket.

*6.41 NOTE:*

11. Recommend complete service of outboard lower unit(s)

ENGINE INSTRUMENTS AND CONTROLS

*6.44 Fuel use monitoring:*

12. Not available- recommend fuel monitoring system installation for maximum efficiency while underway.

**ELECTRICAL SYSTEMS**

ELECTRICAL SYSTEMS Summary

*8.7 Generator:*

13. Not tested- winterized. Assure proper operation when commissioned.

A.C. ELECTRICAL SYSTEMS



*8.27 Galvanic Isolator:*

14. None installed. If this vessel commonly uses marina supplied shore power, a galvanic isolator is strongly recommended to protect this vessel's underwater machinery. Isolators protect your vessel from electrical problems aboard other boats or the marina itself from coming aboard through the shore power cable. An isolation transformer is recommended over a galvanic isolator.

**TANKAGE**

TANKAGE Summary

*9.2 Water Heater*

15. Relief valve releases to an AWL thru-hull on the port topside as ABYC recommends. Beware of this outlet as it could without warning release superheated water and steam.

**SAFETY EQUIPMENT**

AUXILIARY SAFETY EQUIPMENT

*12.4 Recommended*

16. No first aid kit sighted. Highly recommended. Carbon Monoxide detector is installed- unplugged for storage. Assure it is working before using vessel. Not installed- lanyard style with clip recommended for safety. No, design MOB (Man Over Board) system and provide necessary equipment. Drill with all hands.



**US COAST GUARD  
Enforced minimum safety equipment requirements**

<b>U. S. COAST GUARD MINIMUM REQUIREMENTS FOR RECREATIONAL VESSELS</b>				
<b>EQUIPMENT</b>	<b>CLASS A</b> Less than 16ft/4.9m	<b>CLASS 1</b> 16 to less than 26 ft/7.9m	<b>CLASS 2</b> 26 to less than 40 ft/12.2m	<b>CLASS 3</b> 40 to not more than 65 ft/19.8m
 <b>Personal Flotation Devices (PFDs)</b>	One approved Type I, II, III or V (must be worn) PFD for each person on board or being towed on water skis, tubes, etc.	One approved Type I, II or III PFD for each person on board or being towed on water skis, etc.; and one throwable Type IV device. ( A type V PFD may be used in lieu of any wearable PFD, if approved for the activity in which it is being used. <b>A TYPE V HYBRID MUST be worn to be legal.</b> )		
<b>Check state laws for PFD requirements for children and certain water craft &amp; sports.</b>				
<b>Bell,</b>  <b>Whistle</b>	Every vessel less than 39.4 ft (12 meters) in length must carry an efficient sound producing device.	Every vessel 39.4 ft (12 meters) or larger in length must carry a whistle and a bell. The whistle must be audible for 1/2 nautical mile. The mouth of the bell must be at least 7.87 inches (200mm) in diameter.		
<b>Visual Distress Signals</b> (Coastal Waters, the Great Lakes & US owned boats on the high seas)	Required to carry approved visual distress signals for night-time use.	Must carry approved visual distress signals for both daytime and night-time use.		
 <b>Fire Extinguisher</b> (Must be Coast Guard approved)	One B-I type approved hand portable fire extinguisher. (Not required on outboard motorboats less than 26 ft in length if the construction of the motorboat is such that it does not permit the entrapment of explosive or flammable gases or vapors and if fuel tanks are not permanently installed.)	Two B-I type OR one B-II type approved portable fire extinguishers.	Three B-I type OR one B-I type PLUS one B-II type approved portable fire extinguishers.	
<b>When a fixed fire extinguishing system is installed in machinery spaces it will replace one B-I portable fire extinguisher.</b>				
<b>Ventilation</b> (Boats built on or after 8/1/80)	At least two ventilation ducts capable of efficiently ventilating every closed compartment that contains a gasoline engine and/or tank, except those having permanently installed tanks which vent outside of the boat and which contain no unprotected electrical devices. Engine compartments containing a gasoline engine with a cranking motor are additionally required to contain power operated exhaust blowers which can be controlled from the instrument panel.			
<b>Ventilation</b> (Boats built before 8/1/80)	At least two ventilation ducts fitted with cowls (or their equivalent) for the purpose of efficiently and properly ventilating the bilges of every closed engine and fuel tank compartment using gasoline as fuel or other fuels having a flashpoint of 110 degrees or less. Applies to boats constructed or decked over after April 25, 1940.			
<b>Back-fire Flame Arrestor</b>	One approved device on each carburetor of all gasoline engines installed after April 25, 1940, except outboard motors.			
<b>Note: Some states have requirements in addition to the federal requirements. Check your state's boating laws.</b>				



**DECLARATION:**

Rating of vessel condition was determined upon completion and review of all reported survey information including recommendations and comparing vessel to the same or similar age models. BUC condition ratings are defined as:

- **EXCELLENT /BRISTOL** - Essentially as new in appearance- loaded with extras. A rarity.
- **ABOVE AVERAGE** - Above average care- no obvious defects or limitations. Optional electronics or systems.
- **AVERAGE** - Ready for sale needing no repairs, updates or cleaning.
- **FAIR** - Needs the usual maintenance, TLC, repair or service to prepare for sale
- **POOR** - Requires substantial yard work and is devoid of extras.
- **RESTORABLE** - Enough of the hull and engine exists to restore the boat to usable condition.

**RESULTS:**

- **THIS VESSEL'S CONDITION.....ABOVE AVERAGE CONDITION** This vessel appears to have had above average care and/or is equipped with extra options and electronic gear.
- **ESTIMATED MARKET VALUE.....Market value: Boat \$120,000. Refer to Section 1.1 "Value reconciled"**
- **APPROXIMATE REPLACEMENT COST.....\$210,000 per [BUCValuPro.com](http://BUCValuPro.com). (MSRP was \$205,950 per ABOS)**
- **INTENDED USE OF VESSEL .....Pleasure cruising. Coastal cruising of the US not to exceed 20 miles from land. (This limit may be extended by providing means of long range weather and safety communications, (i.e. Marine SSB radio, SATellite COMMunications system, offshore satellite telephone, etc.)**
- **SUITABILITY FOR INTENDED SERVICE: Vessel IS considered fit for it's intended service upon correction of all listed Priority I and specific Priority II recommendations.**

**NOTE1:** All "Priority II" and "Other Recommendations" should be thoroughly reviewed to bring vessel up to current standards and or improve the value of the vessel.

**NOTE2:** The vessel owner is solely responsible for researching and knowledge of manufacturers' warranties and recalls for any and all components of this vessel and responsibly responding to same.

**NOTE3: Estimated replacement cost** was determined using information obtained from BUC [ValuPro.com](http://ValuPro.com) and dealer prices using the same or similar make and model with similar equipment options.

**CLOSING STATEMENT & SIGNATURE:**

**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, impartial, and unbiased professional analyses, opinions and conclusions.*
- *I have no, (or the specified), present or prospective interest in the property that is the subject of this report, and I have no, (or the specified), personal interest with respect to the parties involved.*
- *I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.*
- *my engagement in this assignment was not contingent upon developing or reporting predetermined results.*
- *my compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.*
- *my analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice, (USPAP).*
- *no one provided significant business and /or intangible asset appraisal assistance to the person signing this certification. (If there are exceptions, the name of each individual providing significant business and/or intangible asset appraisal assistance must be stated).*

This report is submitted in confidence for the exclusive use of without prejudice to the rights and/or interests of other concerned parties and may not be used for any other purpose or relied upon by any other person.




Peter J. Spang, SAMS® AMS® (Society of Accredited Marine Surveyors #987)