

REPORT OF THE MARINE SURVEY

Survey completed: September 23, 2015

Report: September 24, 2015

Final Report: September 24, 2015

As requested, a Pre-purchase Survey was conducted of

"Fortuna"



1986 Shannon Brenden 32

PREPARED EXCLUSIVELY FOR:

**Ethan Granoff
39 Evans Street
Watertown, MA 02472**

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 Ethan Granoff. 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 Ethan Granoff 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..

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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: 092315shannon32granoff.
1.4 Inspection date: September 23, 2015.
1.5 Report date: September 24, 2015.
1.6 Final Report date: September 24, 2015.
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, Ethan Granoff, 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. Sport fishing. Coastal sport fishing 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.).

1.12 Seller statement: The owner/ seller or representative is asked by the surveyor if there is any known history of damage due to allision, collision, explosion, full or partial submersion, fire, etc. or awareness of any known defects in this vessel besides what is discovered by this survey, and denies knowledge of such.

SURVEY REQUESTED BY

- 1.13 Client's name:** Ethan Granoff.
- 1.14 Client address:** 39 Evans Street Watertown, MA 02472.
- 1.15 Cellular phone:** 508-397-8320.
- 1.16 Customer experience:** TMS does not have knowledge of this customer's level of experience.

VESSEL INFORMATION

- 1.17 Year /Make /Model:** 1986 Shannon Brenden 32.
- 1.18 Vessel name:** Fortuna.
- 1.19 Description:** Manufactured by: **Description:** This power vessel is of molded fiberglass (FRP) construction with a planing modified-V single- monohull. As designed, the hull has a hard chine molded-in at the turn of the bilge and a single lifting strake or chine molded-in each side. Vessel has a conventional sheer and is of open sport fisherman style. The vessel's **LOA: 32' 10", Beam:12', Draft: 2' 9", and Displacement: 11,500 LBS.** (Dimensions as per BUC Research). **Hull Identification Number: NHN320071686. (There are 3 more "6"s stamped at the end of the displayed HIN. The first 12 digits would be the true number).** A true digital photograph of the hull ID number of the referenced vessel is displayed. This vessel is **Documented by the USCG and the number is: 922410.** The documentation is in order based on the documentation sighted or researched from the internet. And the document# is appropriately and permanently affixed to the hull per USCG 33CFR Subpart I regulations. The vessel is documented as a **Recreational Vessel. The Documented hailing port is Harwichport, MA. Her Documented length is: 32.9', Breadth: 12', Depth: 5.3', Gross tons (GRT):14, Net tons (NET):11. Date of Manufacture: 1986. Documented Owner: Eugene Terrenzi, 6 Sterling Road/ Box 851, South Harwich, MA 02661.**

1.20 NOTE: The buyer is aware of the potential to increase the value of this fine vessel with upgrading and TLC. It is a fine example of a New England style open sportfisherman.



VESSEL CONDITION & VALUE

- 1.21 Cond. per BUC:** AVERAGE CONDITION This vessel is ready for commissioning or sale requiring TLC, little, or no additional work and normally equipped for her size.
- 1.22 Book values:** BUC ValuePro used: \$43,500 to \$48,400 .
- 1.23 Market value:** Market value: \$40,000. Refer to Section 1.1 "Value reconciled"
- 1.24 Explanation:** Valued at \$40,000 using BUC ValuPro and Soldboats.com among others as guides. Value reconciliation and methodology: Yachtworld currently lists 2 comparable 1986 and 1987 models, (in the US), asking \$39,450 and \$39,900. Other listings sighted range up to \$70,000 asking. Soldboats.com currently lists 9 comparable 1985-1988 models that sold for \$23,500 to \$48,000 in the last 5 years, (1 sold this season so far). Eliminating the unusually high and/or low values this calculates a mean market value as \$35,000. Given the age and condition of this vessel, equipment offered (newer engines) and systems repairs needed to be fully operational, I contend this valuation is fair. 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).
- 1.25 Replace cost:** \$586,500 per BUCValuPro.com.
- 1.26 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 reinforced with a synthetic foam core and with a tabbed-in longitudinal and transverse framing system. **Keel:** A full, non ballasted keel is integral with the hull, No abnormal cracks between the keel and hull stub sighted. **Below waterline machinery includes:** 2 prop shafts of 1-3/4" and stainless steel stock. The shaft(s) pass through a single well mounted strut in a V-Strut style, made from what appears to be a bronze alloy, and the cutlass bearing(s) is/are in



good condition with no excessive play or binding felt. No cracks or wear sighted all props turn easily and smoothly. **Propeller(s) is/are:** Three blades fixed and made of bronze alloy. Props are counter-rotating. Size: Diameter 21" and Pitch 21". **Rudder(s) is/are:** Spade style design and made of stainless steel. Both rudders appear well secured. No abnormal horizontal or fore/aft movement. **This vessel also has:** Apparently functional trim tabs. **The decks and house are constructed of:** Molded reinforced fiberglass (FRP) and reinforced with a synthetic foam core. Mooring fittings include heavy duty well mounted bow cleat(s), a metal Sampson post well mounted to the foredeck, cleats amidships on each sidedeck, and inboard cleats at the stern quarters with hawse holes. Strafe protection appears adequate. The hull to deck joint is protected by: a plastic rub rail and metal rub strake system. 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(s), 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 an opening through the transom to access the swim platform and/or to bring fish on board and 2 apparently functional and appropriate clearing ports and/or drain.

2.2 Integrity

2.3 Thru-hulls

Thru hull fittings: All sighted appear to be serviceable and properly installed at reinforced locations in the hull and include- A mix of properly mounted threaded barrels and through bolted flanged seacocks at reinforced spots in the hull with bronze ball valves and bronze barrel 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 but with exceptions noted.

HULL EXTERIOR

2.5 Hull cosmetics:



Hull cosmetics are in fairly good condition-minor nicks and scratches. *Two identical areas amidships both sides show a rectangular area with stress cracking, slight discoloration, and high moisture levels. Cause unknown. When tapped, sounds solid.*

2.6 Bow:

Moderate flared bow- appears solid on external inspection.



2.7 Transom:



Flat transom. Tuna door in transom. Door is solid, hinges tight, latch secure, opens and closes easily and tightly. Appears serviceable. Transom is well secured, no cracks or defects sighted. Moisture readings were relatively dry. No soft or delaminated areas revealed when tapped. *Stress cracks sighted surrounding the tuna door.*

2.8 Anchor platform:

Wooden anchor platform with roller assembly bolted to foredeck. Appears to be teak. Well secured, solid, no major cracks.

2.9 Boarding ladder:

Install boarding steps on the transom or a boarding ladder as recommended.

2.10 Moist./Delam.:



Moisture meter readings on topsides near the water line and surrounding thru hull fittings are relatively dry. Cuprous anti-fouling paint gave false high readings by the moisture meter and but small areas of bare hull show dry readings. Percussion testing with a phenolic hammer on a 6" grid pattern reveals: *What appears to be solid laminate except in one area forward the trim tab recess. Corresponding area inside the bilge shows high moisture. Watch this area for cracking or blisters.*

2.11 Condition summary: No evidence of damage or blistering. Wetted surface is clean, fair, and has last year's ablative anti-fouling paint.

HULL BOTTOM



2.12 Thru Hulls



All thru-hull fittings were adequately sealed and bonded to hull as sighted from exterior. **Raw water baitwell intake screen damaged. Paddlewheel transducer damaged.**

2.13 Drain Plugs:

Bronze bottom mounted drain plug under engine. In place and secure.

KEEL

2.14 Keel type:

Small molded-in stability keel.

2.15 Keel condition:

No damage or problems sighted.

INBOARD PROP(S)

2.16 # of blades:

Props mounted are 3 blade, bronze. There is another set in the cabin- 4 blade. Owner feels 3 blade props are faster- 4 blade are smoother.

2.17 Prop condition:

Prop(s) in good condition with no visible cracks, corrosion or bent blades. A few minor nicks and dents are seen but prop appears serviceable. Prop nuts are secure and properly cotter pinned.

RUDDER(S)

2.18 Rudder type:



Custom made hollow stainless steel with 1 1/4" SS stock. Both rudders appear well secured. No excessive vertical or fore/aft movement.

2.19 Condition:

Rudders appear to be in serviceable condition.

TRIM TABS, STABILIZERS AND THRUST SYSTEMS

2.20 Trim tabs:

Bennett single ram hydraulic trim tabs. System powers up & appears functional. No leaks seen. Hull pockets molded in for the tabs when retracted.

2.21 Condition summary:

Trim tabs power up and appear serviceable. Controls at the helm.

ANODES

2.22 General

2 of the shaft zinc(s) are wasted. **RECOMMENDATION: Replace shaft zinc(s) as deemed necessary.**

2.23 Hull mounted:

Hull zinc is totally wasted. RECOMMENDATION: Replace hull zinc- suggest



2.24 Bonding:

larger size.

Hull zincs are connected to vessel's bonding system.

2.25 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

2.26 ENGINE BILGE :

Newer bronze seacock ball valve(s) installed. Sea valve(s) is/are accessible and functional. **Thru hull valve used for:** Engine(s) raw water intake(s), **Sea valve(s) is/are piped with:** Marine rubber covered reinforced hose. Hose connections are double clamped. **Sea strainer(s) installed in the area for:** Engine raw water cooling. Sea strainer(s) appear clear of debris.

2.27 AFT BILGE :



No valve(s) installed on washdown thru-hull -- installation required per ABYC H-27.5.1 on all penetrations at or below waterline.

2.28 HEAD/FWD BILGE:

Bronze barrel valve(s) installed beneath vanity sink in head. **Valve in this section is not operational -- servicing or replacement required.** Thru hull valve used for: Waste holding tank(s) discharge and sink drain. **Sea valve(s) is/are piped with:** white sanitation hose.

HULL INTERIOR

2.29 Bilge(s):

Clean with some standing clear water.

2.30 Stringers:

Hull stiffness provided by FRP covered wooden longitudinal stringers that run the length of the vessel. Complete inspection not possible due to limited access. Stringers sighted in the engine compartment and under cabin sole and are well glassed into hull where sighted. Stringers 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.

2.31 Trnsvrse members:

Inspected where accessible and found to be dry and solid.

2.32 Bulkheads:

Sound (where accessible) by visual inspection. Athwartships reinforcement enhanced by plywood structural bulkheads bonded to the hull with FRP (fiber reinforced plastic). All tabbing appears serviceable and sound with no cracks or separation of tabbing sighted in any compartments. No visual evidence of movement sighted in any bulkhead.

2.33 Stem:

Solid stem, no cracks, damage, or separation sighted inside or out.

TOP DECK & SUPERSTRUCTURE

DECK Summary



3.1 Ground tackle

Ground tackle includes; a chain leader to 3 strand nylon line, (unknown length) with spliced eyes. Shackles and swivels appear serviceable and are safety wired. Anchor(s) include one Danforth or danforth style, *There is no secondary or backup anchor and rode. Recommend in the ways of a prudent mariner.* The bitter end of the rode is properly secured to vessel. System is installed and maintained to ABYC standards. Appears to be serviceable.

3.2 Safety holds

Grab rails are well mounted to the weatherdeck structures in the cockpit, bridge deck and helm, t-top support structure, and in the cabin. Safety rails include: A bow rail, at a minimum height of 24", made from a single course, of welded SS 1" tubing, System is sturdy and well secured.

3.3 Ladders and stairs

Integral ladders both sides are provided to access the tuna tower. Well mounted and sturdy with provided handholds. Below decks and companionway stairs are well mounted and sturdy with provided handholds and non-skid treads.

3.4 Miscellaneous

Canvas covers or convertible enclosures or tops include: A bridge enclosure with zip open isinglass panels 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 or windscreen is of a typical marine style and quality utilizing safety glass or lexan 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.

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.

3.8 Windshield:

Three piece aluminum framed with tapered side panels. High impact shatterproof glass is appropriate and labeled as such. Windshield wiper(s) are installed. Pilot side only. Made by AFI. 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 Deck Hatches:

FRP hatches in cockpit sole. Bowmar opening hatch-aluminum frame. Hatch is well secured, seals in good condition, support arm(s) in place. Hatch(es) over accommodation area(s) is/are large enough for emergency egress. Meets ABYC standards.

3.10 Ventilation:

Solar-powered fan vent- not functional.

3.11 Exterior brightwork:

All exterior teak is in need of cleaning and protection from elements.--Recommendation: Clean and protect teak to prolong life and value of vessel.

GROUND TACKLE

3.12 Anchor locker:

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

3.13 Hawse pipes:

Stainless steel with hinged cover.

3.14 Windlass:

None.

3.15 Recommend:

Ground tackle appears adequate and serviceable. Recommend laying out for closer inspection and installation of fathom markers to identify length.

BRIDGE DECK / COCKPIT

3.16 Cockpit /Helm:

Helm is in the bridge. Open aft cockpit.



- 3.17 Top /superstructure:** Tournament FRP hard top with what appears to be brushed aluminum support that is well secured. With a full soft enclosure. Tuna tower with bimini over upper helm..
- 3.18 Cockpit Equipment:** Cockpit flood lights installed, power up and appear serviceable. Leaning post with rocket launcher, folding foot rest, tackle station and storage. Vinyl coaming pads are in good condition.
- 3.19 Seating:** Pedestal seat for pilot only.
- 3.20 Engine hatch(es):** Two large access hatches in bridge sole.

FLYBRIDGE

3.21 Helm & Seat(s):



Upper helm is not functional. All gauges need to be replaced. Throttle and shift not functional. VHF radio not functional. Steering works and compass OK.

- 3.22 Canvas:** Soft bimini top OK.
- 3.23 Accessed by:** Stairs in tower.
- 3.24 Condition summary:**



Padding good. No seat.

FISHING EQUIPMENT

FISHING GEAR

- 4.1 Outriggers:** Rigged and ready.
- 4.2 Live bait wells:** Portable livewell for cockpit- not on the boat for the survey. Plumbing intact, pump functional.
- 4.3 Rod holders:** There are rocket launcher style rod holders.
- 4.4 Ice locker:** Large cooler. Appears recent.



4.5 Tuna tower:

Welded aluminum tubing. Appears secure and rugged. No cracked welds or tubing sighted.

4.6 Washdown system:

There is a raw water washdown system provided. The washdown system is operational.

CABIN INTERIOR APPOINTMENTS

CABIN Summary

5.1 Heat and AC

Vessel has heat provided by engine coolant bus heater.

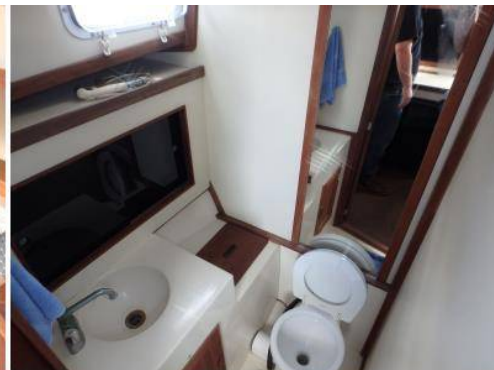
5.2 Galley



Galley is well equipped and clean. Galley appliances include: A clean Hillerange LP gas powered galley stove and pot retainers- (not tested- no gas). A microwave oven. A toaster oven. Refrigeration is a Norcold Model DE-490 AC or DC powered, undercounter, refrigeration /freezer unit with an air cooled heat exchanger. Countertop

area and storage space is adequate. Galley basin has hot and cold pressurized water. All systems powered up and appear serviceable.

5.3 Accommodations



There are sleeping facilities for (3-4) persons located in the V-berth and the main cabin's convertible dinette with drop down table. 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.

5.4 Entertainment

Entertainment includes: An older stereo- does not power up.

5.5 Condition summary

Components of the cabin system are built and installed to ABYC standards and appear serviceable but with exceptions noted.

MAIN SALOON

5.6 Water intrusion:

No evidence of water intrusion sighted.

5.7 Fabric & cushions:

Matching fabric covered cushions throughout cabin(s). Cushions and coverings are in good condition.

5.8 Framing Trim:

Teak trim throughout cabin. *Brightwork is in need of TLC. Paint, varnish or oil as needed to renew appearance and maintain condition.*



- 5.9 Sole: Parquet flooring with a fitted carpet over.
- 5.10 Light fixtures: 12 LED volt cabin lights throughout the vessel. Lamps power up and appear serviceable.
- 5.11 Storage: Hanging lockers and storage drawers.
- 5.12 Condition: Interior is in good condition for its age.

DINETTE

- 5.13 Table type: Table drops down to convert to additional sleeping berth.
- 5.14 Seating: Two side bench seating.

STEERING SYSTEM

STEERING Summary

- 6.1 System The vessel has a hydraulic steering system without power assist and wheel controlled. Steering stations are located at: A helm on the bridge deck and a helm on the sighting tower. Steering is accomplished through SS rudder(s)
- 6.2 Condition summary Components of the steering system are built and installed to ABYC standards and appear serviceable.

STEERING SYSTEM

- 6.3 Lines and fittings: Flexible hydraulic lines from steering head to ram(s). No leaks sighted.
- 6.4 Reservoir tank: Lower helm steering fluid reservoir is full.
- 6.5 Mounting(s): Cylinder & ram actuator well secured-no leaks sighted.
- 6.6 Rudder stock(s): Stock(s) appear visually sound and is constructed of 1 1/4" stainless steel.
- 6.7 Rudder post: Wooden plank with bearings. Appears solid.



- 6.8 Steering tie bar: Well mounted with rudder steering arms connected by a stainless steel lateral bar.
- 6.9 Packing gland(s): *No sign of excessive leakage or water tracks sighted. Monitor rudder packing gland frequently for leaks.*
- 6.10 Condition summary: Steering system meets ABYC standards, turns smoothly and easily, appears serviceable.

PROPULSION SYSTEM

PROPULSION Summary



7.1 Propulsion:



Port and stbd

The vessel is propelled by dual engines, diesel fueled, 6 cylinders inline, and turbocharged with aftercooling. Inboard(s) system installation manufactured by: **Cummins- Engine year:** Factory remanufactured installed 2010 and **Model: 6BT. Producing: 220 hp @ 2600 rpm. Serial #(s)- Port engine:60254968 Starboard engine: 60271495. Hours: Port engine: 968 Starboard engine: 956.**

7.2 Controls:

Manual type, with individual levers for each engine throttle and reverse gear, On this vessel are two control stations located at, the bridge deck helm, and a helm on the tuna/marlin tower.

7.3 Exhaust:

The wet exhaust system is constructed of: Reinforced rubber hose and FRP muffler(s). Exhaust piping is of appropriate type hose, double clamped at all connections, insulated at bulkheads, routed high as possible, and exits through the transom.

7.4 Shafting:

There are two, stainless steel 1 3/4" diameter prop shaft(s) passing through a driplless teflon shaft seal shaft gland attached to the shaft tube with a double-clamped reinforced accordion hose.

7.5 Alarms

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

7.6 Start-in-gear

Start-in-gear protection is necessary on this vessel as equipped. System has noted problems. Refer below.

7.7 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.

7.8 Condition summary

Components of the propulsion system are built and installed to ABYC standards and appear serviceable with exceptions noted below.

7.9 NOTE:

• It is good practice when buying a used vessel, and maintenance records are not available, that all filters, fluids (Engine and Transmission) be changed, and the raw water cooling impeller(s) also be changed.

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 gasoline or diesel engines and transmissions be inspected by a qualified engine surveyor/mechanic to determine the internal condition of the engine(s), transmission gears, and pumps, heat exchangers, coolers, etc.

MAIN ENGINE(S)

7.10 Hoses and clamps:

Serviceable condition. No soft spots or cracks sighted.

7.11 Belts and pulleys:

Serpentine belt(s) appear serviceable. No cracks or splits sighted. Pulleys/belts



- appear to be in line.
- 7.12 Cooling system(s):** Fresh water / raw water heat exchanger cooled. Raw water strainer(s) installed. Coolant is full.
- 7.13 Oil level:** Clean & full on dipstick. (For both engines). *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.*
- 7.14 Fuel pump(s):** Engine mounted mechanical or vacuum operated.
- 7.15 Fuel supply lines:** USCG type A1 or A2. Fuel lines and hoses appear appropriate and serviceable.
- 7.16 Fuel shutoff:** Located at the fuel manifold.
- 7.17 Oil filter(s):** Spin-on cartridge style. Located on engine block but accessible.
- 7.18 Air filter(s):** Clean and serviceable.
- 7.19 Fuel filter(s):** Remote mounted separator/filter, by Racor. **Sediment noted in bowl.**
RECOMMENDATION: Clean bowl and check again after next operation.
- 7.20 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.
- 7.21 Engine mounts:** Engine mounts appear to be well secured to the support stringers.
- 7.22 Engine ground:** Engines are grounded together with an appropriately sized conductor cable.
- 7.23 Engine space:** Compartment is large enough or accessible enough to properly maintain installed machinery.
- 7.24 Engine(s) operated:** Engines observed on sea trial. Go to "Sea Trial" section for details.
- 7.25 Condition summary:** Appearance leads one to believe these engines have been well maintained.

DRIVETRAIN

- 7.26 Transmission** ZF Hurth Marine Model # 63A-1.6, hydraulic clutch reverse reduction gear transmission raw water heat exchangers. Gear ratio: 1.56:1. Transmissions' fluid level and condition: Gear oil is full and clean.
- 7.27 Propeller shaft(s):** Appears to be in serviceable condition, no pitting, cracks or corrosion sighted.

ENGINE INSTRUMENTS AND CONTROLS

- 7.28 Start in gear** **System is available but not functioning properly for the port engine. Engine started in gear. Start in gear protection is not operational. 33CFR Sec. 183.710 states any outboard motor or jet drive capable of 115 lbs of thrust or more, must have built-in start-in-gear protection. Compliance with this regulation for safety and to avoid penalty. RECOMMEND: Service and repair port engine start in gear protection.**
- 7.29 Gauge cluster:** Gauges include: Tachometer, engine temperature, engine oil pressure, DC voltmeter, engine hour meter, and fuel gauge for each tank.
- 7.30 Fuel gauge:** **Not working port tank. Repair as necessary.**
- 7.31 Fuel use monitoring:** *Not available- recommend fuel monitoring system installation for maximum efficiency while underway.*

NAVIGATION ELECTRONICS

NAVIGATION EQUIPMENT Full and Summary

- 8.1 Navigation station:** All navigational instruments are at the helm.



8.2 Compass(es):



Ritchie. Powerdamp. and with a 3" card. Lighted and shaded. Located on the helm dash. The compass appears functional. **The compass' fluid has leaked out. RECOMMENDATION: Repair or replace compass to restore full functionality.**

8.3 VHF radio(s):



Ross DSC 500. *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/MMSI/> to obtain a MMSI number- it's free.* Radio powers up. At sea trial radio powers up and transmits/receives- appears serviceable.

8.4 Autopilot(s):



SIMRAD AP35 model. Unit powers up.

8.5 Depth sounder(s):

See multi-function.



8.6 Fish finder(s):

See multi-function.



8.7 Speed /log:

Furuno GP-36.

8.8 GPS:

Furuno GP-36.

8.9 Multi-function:

Furuno FCV 585.

8.10 Radar:

Furuno. Model 1715 The radar powers up.

8.11 Antenna(s):



There are antennas for: VHF (2), Radar, GPS, and adjustable mount(s).

Noted the port side VHF antenna stabilizer is very loose- tighten or repair as necessary.

8.12 Spotlight:

Jabsco remote with controls on helm, Powers up and turns properly port/starboard/up/down.

8.13 Condition summary:

Vessel is well equipped for its' intended service.

ELECTRICAL SYSTEMS

ELECTRICAL SYSTEMS Summary

9.1 Starting batteries:

There is/are: four, 12 volt, wet cell lead acid, Group 27 size, cranking batteries dedicated to engine starting. Batteries installed sharing house loads and engine starting functions. Batteries are set up in two banks, wired in parallel. The batteries are a mix of manufacturers and are of different ages.

9.2 Battery installation:

Installed in a boxed area between the stringers with plywood secured covers. Problems are noted with the battery installation to comply with ABYC E-10 and 33CFR Sec. 183.420. Refer below.



9.3 DC system:



There are two 4 position rotary switches. They are appropriate, accessible and functional. Panels and meters are marine appropriate and appear functional. 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 Guest Charge Pro (2 bank/20 amp)- appears recent.

9.4 AC system:

The shore power inlet: is rated for 120 VAC at 30 amps, and is marine grade and in good condition. Shore power cable is appropriate and apparently in serviceable condition. The AC panel is appropriate, well labeled with branch breaker switches and has reverse polarity indication.

9.5 Generator:

No generator on this vessel.

9.6 Bonding /galvanics

A complete bonding system is installed on the vessel. Twin engines are properly connected to each other by a common conductor circuit. The remaining bonding system is well established where sighted; electrical system, seacocks, shaft logs, rudders, sea strainers, fuel system/tanks, hull dynaplate and hull zincs are all bonded. The bonding system uses individual 8 gauge green insulated wire. A hull zinc has been placed and connected to the bonding system.

9.7 Lightning protection

None installed.

9.8 Condition summary

Components of the ship's electrical system are built and installed to ABYC standards and appear serviceable but with exceptions noted below.

SHIP'S BATTERIES

9.9 Storage:

Battery terminals are not protected as required. Code of Federal Regulations - CFR33.183.420 mandates that ALL non-grounded battery (+) and DC circuit terminals be protected against accidental shorting by the use of insulation barriers or sleeves or compliant battery boxes with covers. Recommend compliance with CFR and insulate all non-grounded battery and DC terminals.

D.C. ELECTRICAL SYSTEMS

9.10 Cables /wiring:

Appropriate marine type and gauge- appears in serviceable condition. (For vessels built or reconfigured after 8/1/1985) A primary circuit breaker is not installed within limits defined by 33CFR Sec. 183.460. (Preferably at the battery terminal or within 7". If the wire is sheathed, then within 72"). **RECOMMEND: Compliance with the law and install primary breaker as required.**

9.11 Battery monitor:

Switched analog/digital voltmeter.

9.12 DC panel:

Yes, located in the main salon. Each branch switch is clearly labeled as to purpose.

9.13 Condition summary:

The system is original but well done originally. *Recommend removing or securing and properly labeling any non-used wires in the ways of a prudent mariner.*

A.C. ELECTRICAL SYSTEMS

9.14 Shore pwr. breaker:

A dual pole breaker for shore power is at the AC distribution panel (within 10' of



- inlet) per ABYC recommendations.
- 9.15 Shore pwr. cord: 30 AMP.
- 9.16 AC selector switch: Shore power or Generator or Inverter manual break before make switch located on the main AC panel.
- 9.17 Branch breakers: All A.C. circuits are adequately protected by branch breakers and/or fuses.
- 9.18 AC panel(s): AC panel and wiring is protected to prevent accidental contact with open wiring per ABYC recommendations, Each branch switch is clearly labeled as to purpose.
- 9.19 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.
- 9.20 GFCI protection: No GFCI protection sighted for 110V outlets in/near wet locations (galley, head). **RECOMMENDATION: Provide GFCI protection** as currently recommended by ABYC E-11.15.3.5 and NFPA 302 to minimize electrocution danger. (install a GFCI equipped breaker in each wet location or as first outlet from power source in each circuit.)
- 9.21 A.C. meter(s): *There are no AC meter or gauges installed. RECOMMEND: Install instrument to check for appropriate voltage from source so as not to damage vessel's AC equipment.*
- 9.22 A.C. grounding: Testing shows a failed vessel AC ground. **RECOMMEND: Disconnect shore power until a qualified marina tech or electrician can diagnose and repair problem.**
- 9.23 Wire type: Some of the AC wiring sighted is solid copper household type wiring, (Romex). Only stranded copper approved marine cable should be used that is sized appropriately for each circuit per 33CFR Sec. 183.425 and ABYC E-11, Table VII and Table XII. **Recommend a qualified boat electrician re-wire the AC circuits as required by law.**
- 9.24 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.*
- 9.25 Condition summary: *The AC system on this vessel is outdated but appears serviceable. For reliability and safety sake, recommend upgrade following standards in ABYC E-11.*

INVERTER/CONVERTER

- 9.26 NOTE: *Space is available for additional house batteries if inverter power is desired for all AC appliances. Newer automatic inverter / chargers are desirable over costs and problems associated with gensets.*

TANKAGE

TANKAGE Summary

- 10.1 Marine Sanitation Poly plastic holding tank. Dockside pumpout or overboard discharge via macerator pump and thru-hull fitting.
- 10.2 Water Heater 6 gallon water heater, 120 VAC, with engine coolant heat exchanger, showing problems as noted below.
- 10.3 Fuel Tanks There is/are 2 fuel saddle tank(s) made from, ? aluminum with a capacity of 260 gallons per Power Boat Guide. Tank meets 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-2 fuel hose for fill hose and



vent applications. Hoses are double clamped at all connections. Problems sighted with this system as noted below.

10.4 LPG/CNG System

LPG appliances connect via dedicated, flexible copper tubing and high pressure rubber hose to twin tanks with an electrical solenoid shut off valve, pressure regulator in a vented locker. The secured tanks are made of, Problems with this system are noted below.

10.5 Water Tanks

Fresh non-potable water storage tank is made of, poly-plastic material, and has a total capacity of 80 gallons per Power Boat Guide. Piping throughout the vessel is with copper tubing. 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 no city water inlet to the vessel.

10.6 Condition summary

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

FUEL TANK(S)

10.7 Tank(s) location(s):

Installed in the engine space, port and starboard sides.

10.8 Tank material:

Appears to be aluminum. No manufacturers label could be sighted.

10.9 Manuf. label(s):

The manufacturer's label is not sighted on the fuel tank(s). An unlabeled tank is a violation of 33CFR Sec. 183.514. Recommend owner verify that the fuel tank meets all USCG 33CFR Sec. 183 requirements.

10.10 Tank(s) grounded:

Tanks are grounded properly.

10.11 Access:

Access to tank(s) and fuel system meets standards of ABYC H-24 and 33CFR Sec. 183.554.

10.12 Tank(s) condition:

Visually good, (where accessible)

10.13 Fuel supply lines:

USCG type A1 flex hose is installed from tank to fuel pump.

10.14 Shut off valve(s):

Fuel tank manifold and feed lines are at all points higher than the fuel tank(s) outlets and the ball valves are operational.

10.15 Vent line/location:

Fuel tank vent(s) sighted on hull sides and appear serviceable.

10.16 Fuel fills located:

On the side decks, The deck plate is clearly labeled, appears weather- tight and serviceable. **Broken tether on the fuel fill cap. ABYC H-24.13.5 recommends the fill cap be permanently tethered or somehow attached to the deck plate. Repair or replace.** O-ring on cap is in good condition.

10.17 Fill pipe:



Could not see entire length of fill hose thru access port. Fill hose is properly double clamped at both ends of fill hose. **Stbd flex fuel fill hose is damaged from abrasion and appears to be original. RECOMMENDATION: Replace damaged fuel fill hose with USCG approved Type A fuel fill hose and double clamp.**



10.18 NOTE:



AC wire laying on top of tank stbd side. This is a fire hazard- reroute wire.

FRESH WATER TANK(S)

10.19 Accumulator(s): *No accumulator installed. Pump will cycle on and off more frequently. RECOMMEND Installation.*

10.20 Condition summary: System appears serviceable and installed to ABYC H-23 standards.

HOLDING TANK(S) - BLACK WATER

10.21 Sanitation Device: Type III-B. A collection, holding, and transfer (CHT) system, consisting of: drain piping, holding tanks, pumps, valves, connectors, and other equipment used to collect and hold shipboard sewage waste for subsequent transfer to a shore sewage system, sewage barge, or for overboard discharge in unrestricted waters.

10.22 # /Loc. of tanks: Installed under the V-berth area.

10.23 Capacity: Unknown.

10.24 Access: Available.

10.25 Waste plumbing: Common white flexible PVC sanitation hose. Mostly double clamped where visible.

10.26 Discharge located: Deck plate for dockside pumpout or overboard discharge controlled by a Y-valve.

10.27 Condition summary: Components of this system are built to ABYC standards and appear serviceable.

10.28 USCG Note **USCG promulgates MARPOL regulations which state discharge of waste in protected waters is illegal. If equipped, the thru-hull discharge fitting or Y-valve must be locked in the closed to discharge position (or handle removed). If no valves installed, macerator switch must be of the key switch type or in a location where accidental powering-on would be unlikely. RECOMMEND compliance with this law as the penalties can be severe.**

10.29 NOTE: *Recommend removing the overboard discharge option as there are few places where sewage can be released in coastal New England. A simple system with deck pumpout is simpler to maintain.*

WATER HEATER(S)

10.30 Manuf /Capacity: US Marine Water Heaters. 6 US gallons.

10.31 How powered: 110VAC and an engine heat exchanger from stbd engine.

10.32 Supply lines: Flexible copper tubing installed.

10.33 Heat exchanger hoses: Heat exchanger hoses are appropriate type and appear to be in good condition where sighted. No cracks or leaks sighted.

10.34 Jacket material: Stainless steel cabinet.

10.35 Tank(s) secured: Yes, tank is well secured to vessel.



- 10.36 Access:
- 10.37 Condition:
- 10.38 Relief valve(s):
- 10.39 Drain /plug(s):
- 10.40 Ignition protected:
- 10.41 Condition summary:

Good.
 Old.
 None sighted on the hot water heater. **RECOMMEND: A pressure relief valve should be installed on the water heater** for safety Plumb to either an external thru-hull fitting or a harmless area of the bilge. ABYC H-23.7.2.
 Yes.
 Did not observe label on water heater as being ignition protected. The water heater is not in an explosive environment.



Hot water heater is old and replacement should be considered. Water heater AC wiring is not compliant.

10.42 NOTE: Not powered up because of AC ground problem. Water already hot from sea trial.

LPG (PROPANE) TANK(S)

- 10.43 Tank condition: Two tanks, made of aluminum alloy.
- 10.44 Secured: Yes, tanks are properly secured.
- 10.45 Tank location(s): Locker in the cockpit area.
- 10.46 Locker(s) vented: Unable to sight vent.
- 10.47 OPD valves: *No Overflow Protection Device (OPD) valve is fitted on LPG tank. This tank is illegal to refill per DOT. RECOMMEND: Must replace LPG tank once emptied.*
- 10.48 Regulator(s): Yes-Appropriate LPG regulator is installed.
- 10.49 Pressure gauge: **No pressure gauge, or installed in the wrong place. ABYC A-1.5.2 is enforced by the USCG. RECOMMEND: Install pressure gauge to read cylinder pressure.**
- 10.50 Shut off valve(s): LPG shut off valve at the tank top. In addition an LPG electrical solenoid shut off valve switch is available near the galley and is functional.
- 10.51 Access: Good.
- 10.52 Warning label(s): **No LPG warning labels sighted at tank. RECOMMENDATION: LPG Gas systems are required to have a warning label affixed to tank compartment area that complies with ABYC recommendation A1.11. The label contains a warning about connecting LPG system to CNG as well as proper use of LPG ignition sources, shutoff valve and leak testing.**
- 10.53 NOTE: **Disable LPG system until appropriate corrections have been made:**
 - Replace tanks with new including proper OPD valves.
 - Place gasket around the locker hatch cover.
 - Label the locker with an appropriate hazard label.
 - Install a pressure gauge as required. Check the serviceability of the locker vent.



AUXILIARY EQUIPMENT

MISCELLANEOUS EQUIPMENT & ACCESSORIES

- 11.1 Boat hook:** Boat hook sighted.
- 11.2 Boarding ladder:** *None sighted on board -- provide a boarding ladder or other means for easily retrieving someone who has fallen overboard. Reboarding vessel from the water should be possible by a solo sailor per ABYC H-41.9.*
- 11.3 Canvas/Covers:** Bridge enclosure.
- 11.4 Cup Holder:** Yes, drink holders sighted.
- 11.5 Deck light:** Cockpit flood lights mounted on superstructure. Foredeck floodlight(s) available.
- 11.6 Docking lines:** Yes, assorted size and length both braided and twisted nylon.
- 11.7 Fenders:** *No docking fenders sighted. Provide docking fenders to protect topsides.*
- 11.8 Ice Chest:** Insulated ice chest available.
- 11.9 Spotlight:** Mounted directional spotlight with hand or remote control for pilot.
- 11.10 US Flag:** *Not sighted- please display colors.*

SEA TRIAL

SEA TRIAL DETAILS

- 12.1 Date & Time:** September 23, 2015.
- 12.2 Operated from /to:** Allen Harbor to Nantucket Sound, where the maneuvers were performed.
- 12.3 Attendees:**



Sea trial attended by-current owner: Eugene Terrenzi, buyer: Ethan Granoff, and myself.

- 12.4 Vessel operated by:** The owner. Ethan also took the helm.
- 12.5 Sea conditions:** Calm.
- 12.6 Weather/temp:** Winds light from North (offshore). Temp moderate. Weather sunny.

SEA TRIAL OBSERVATIONS

- 12.7 Start test:** *Start in gear protection is not working port engine. 33CFR Sec. 183.710 states any propulsion system, outboard motor or jet drive capable of 115 lbs of thrust or more, must have built-in start-in-gear protection. Compliance with this regulation for safety and to avoid penalty. RECOMMEND: Vessel requires operating start in gear protection.*
- 12.8 Cranking:** The engine(s) started without excessive cranking.
- 12.9 Exhaust smoke:** The engine exhaust smoke was nonexistent throughout the sea trial.
- 12.10 Cooling water:** The cooling water exhaust appeared adequate and normal.
- 12.11 Instruments:** The engine instruments all operated within normal operating limits at idle, cruising



speed, and maximum throttle.

12.12 Max throttle:



Manufacturer's recommended max RPM is 2600- Engines reached 2600 RPM at full throttle.

12.13 Steering:

The steering system operated normally/ smoothly from stop to stop. Vessel made sharp turns at high speed without cavitating or skidding.

12.14 Throttle levers:

The throttles operated normally/smoothly.

12.15 Transmission(s):

The transmissions operated normally/smoothly. No shaft creep in neutral.

12.16 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.

12.17 Vibrations:

There were no excessive vibrations noted at any time during the sea trial run except when backing down.

12.18 Dead engine test

With one engine shut down, (simulating a dead engine), the vessel remained easily navigable and should be able to return to port.

12.19 Shaft log:

Dripless shaft log remained dry and within normal temperature range throughout the seatrial.

12.20 Leaks:

There were no oil, coolant or other leaks observed during or after the sea trial.

RELATIVE TEMPERATURE READINGS

12.21 Risers:

The temperature readings and the differentials are within normal range. Both engines 168F.

12.22 Manifold:

Temps even across all exhaust outlets. 190-210F.

12.23 Oil:

175F Oil filter temperature reading(s): Both.

12.24 Coolant:

Expansion tank temperature: 180F. Thermostat housing temperature and temperature gauge readings matched.

12.25 Blower turbine:

180F- both.

12.26 Transmission:

110F- both.

12.27 Comments:

All above relative temperatures are considered to be within normal levels and were obtained with engine(s) off immediately following sea trial. (Engine hatches could not be opened underway).

SEA TRIAL ENGINE INSTRUMENT READINGS

12.28 RPM /Speed:

IDLE: 600 rpm. SLOW: 600 rpm/ 7 kts. WOT: 2600 rpm/ 23 kts. CRUISE: 2200 rpm/ 18 kts. Speed readings by GPS. SOG (Speed over ground)

12.29 Fuel usage:

Owner states 14 gph total at 2200 rpm cruise.

12.30 Volts DC:

13.6 VDC at all throttles both engines.

12.31 Water temp:

196F both engines.

12.32 Oil pressure:

40 psi all throttles both engines.



SAFETY EQUIPMENT

DEWATERING PUMPS

- 13.1 Forward bilge:** There is one pump, by Rule, and powered by 12 VDC. It is a centrifugal style pump rated at 1500 GPH and with a separate float switch. Pump powers up and float switch is operational. Manual override at the helm operational.
- 13.2 Aft bilge:** There is one pump, by Rule, and powered by 12 VDC, It is a centrifugal style pump with a separate float switch. Pump powers up and float switch is operational.

U.S.C.G. REQUIRED

- 13.3 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:** There is a distress kit containing at least 3- 12 Ga pistol fired **aerial flares** and at least 3 red **hand held flares** on board. **Navigation lights:** The vessel's navigational lighting is appropriate and fully operational. **Sound devices:** This vessel has an **electric horn-** appears functional, but **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 State 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:** Vessel has sufficient and appropriate PFDs on board. **Fire Fighting Equipment:** This vessel's fire extinguishing equipment is surveyed to the mandatory requirements promulgated by the USCG as outlined in 46CFR Chapter I Subchapter C Part 25.30, also ABYC A-4 and NFPA 12, 12A, 12B and 2001. Vessel meets requirements. Appropriate **B-II dry powder** style sighted: One USCG Approved located in the main saloon. Extinguisher adequately pressurized per gauge. Halon 1301 type automatic system, located in the engine and machinery space. "Ready" light is on indicating full charge. **Extinguisher has outdated 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

- 13.4 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.** **CO detector:** A carbon monoxide fume detector was not sighted but is/are highly recommended by NFPA for all gasoline powered vessels of any age with enclosed sleeping space(s) especially if a genset is installed or non-vented flame producing heating and/or cooking devices. Internal battery combination smoke and CO alarms are readily available. This is an ABYC Standard A-24 for all vessels constructed after July 31, 2008. **RECOMMEND compliance with ABYC A-24 and NFPA 302. Install a CO or SMOKE/CO detector alarm.** **Deck lighting available:** Mast mounted foredeck light installed- and aftdeck or cockpit floodlight(s) installed- and apparently operational. **Search light:** Mounted searchlight available. **EPIRB:** *No EPIRB on board. Recommended for all offshore ventures. Units may be rented from BoatUS.* **Man overboard:** Man overboard equipment sighted includes: A GPS or chart plotter has a MOB (Man Over Board) button and throwable life ring etc. with secured line attached. *Understand how this equipment is used. Practice with all hands for proficiency in an emergency.* 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)

HULL INSPECTION

HULL EXTERIOR

2.9 Boarding ladder:

1. Install boarding steps on the transom or a boarding ladder as recommended.

BELOW WATER LINE THRU-HULLS

2.27 AFT BILGE :

2. No valve(s) installed on washdown thru-hull -- installation required per ABYC H-27.5.1 on all penetrations at or below waterline.

2.28 HEAD/FWD BILGE:

3. Valve in this section is not operational -- servicing or replacement required.

PROPULSION SYSTEM

ENGINE INSTRUMENTS AND CONTROLS

7.28 Start in gear

4. RECOMMEND: Service and repair port engine start-in-gear protection.

ELECTRICAL SYSTEMS

SHIP'S BATTERIES

9.9 Storage:

5. Battery terminals are not protected as required.

D.C. ELECTRICAL SYSTEMS

9.10 Cables /wiring:

6. RECOMMEND: Compliance with the law and install primary breaker as required.

A.C. ELECTRICAL SYSTEMS

9.20 GFCI protection:

7. RECOMMENDATION: Provide GFCI protection.

9.22 A.C. grounding:

8. RECOMMEND: Disconnect shore power until diagnosed and repaired.

9.23 Wire type:

9. Recommend a qualified boat electrician re-wire the AC circuits as required by law.

TANKAGE

FUEL TANK(S)

10.18 NOTE:

10. AC wire laying on top of tank stbd side. This is a fire hazard- reroute wire.

WATER HEATER(S)

10.38 Relief valve(s):

11. RECOMMEND: A pressure relief valve should be installed on the water heater.

10.41 Condition summary:

12. Water heater AC wiring is not compliant.

LPG (PROPANE) TANK(S)

10.53 NOTE:

13. Disable LPG system until appropriate corrections have been made.

SAFETY EQUIPMENT

U.S.C.G. REQUIRED

13.3 Required equipment:

14. RECOMMENDATION: Recommend compliance with State regulations by installing a ships bell. Extinguisher has outdated 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

13.4 Recommended

15. Install a CO or SMOKE/CO detector alarm. 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)*

HULL INSPECTION

HULL BOTTOM

2.12 Thru Hulls

1. Raw water baitwell intake screen damaged. Paddlewheel transducer damaged.

TOP DECK & SUPERSTRUCTURE

FLYBRIDGE

3.21 Helm & Seat(s):

2. Upper helm is not functional. All gauges need to be replaced. Throttle and shift not functional. VHF radio not functional.

PROPULSION SYSTEM

ENGINE INSTRUMENTS AND CONTROLS

7.30 Fuel gauge:

3. Not working port tank. Repair as necessary.

NAVIGATION ELECTRONICS

NAVIGATION EQUIPMENT Full and Summary

8.11 Antenna(s):

4. Noted the port side VHF antenna stabilizer is very loose- tighten or repair as necessary.

TANKAGE

FUEL TANK(S)

10.16 Fuel fills located:

5. Broken tether on the fuel fill cap. ABYC H-24.13.5 recommends the fill cap be permanently tethered or somehow attached to the deck plate. Repair or replace.

10.17 Fill pipe:

6. RECOMMENDATION: Replace damaged fuel fill hose for stbd tank.

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

GENERAL SURVEY INFORMATION

VESSEL INFORMATION

1.19 Description:

1. Hull Identification Number: NHN320071686. (There are 3 more "6"s stamped at the end of the displayed HIN. The first 12 digits would be the true number).

HULL INSPECTION

HULL EXTERIOR

2.5 Hull cosmetics:

2. Two identical areas amidships both sides show a rectangular area with stress cracking, slight discoloration, and high moisture levels. Cause unknown. When tapped, sounds solid.

2.7 Transom:

3. Stress cracks sighted surrounding the tuna door.

2.10 Moist./Delam.:

4. What appears to be solid laminate except in one area forward the trim tab recess. Corresponding area inside the bilge shows high moisture but sounds solid when tapped. Watch this area for cracking or blisters.



TOP DECK & SUPERSTRUCTURE

DECK Summary

3.1 Ground tackle

5. There is no secondary or backup anchor and rode. Recommend in the ways of a prudent mariner.

MAIN DECK & FITTINGS

3.11 Exterior brightwork:

6. Recommendation: Clean and protect teak to prolong life and value of vessel.

CABIN INTERIOR APPOINTMENTS

MAIN SALOON

5.8 Framing Trim:

7. Brightwork is in need of TLC. Paint, varnish or oil as needed to renew appearance and maintain condition.

PROPULSION SYSTEM

MAIN ENGINE(S)

7.20 Drip pad available:

8. RECOMMENDATION: Install drip pads beneath each engine.

ENGINE INSTRUMENTS AND CONTROLS

7.31 Fuel use monitoring:

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

ELECTRICAL SYSTEMS

D.C. ELECTRICAL SYSTEMS

9.13 Condition summary:

10. Recommend removing or securing and properly labeling any non-used wires in the ways of a prudent mariner.

A.C. ELECTRICAL SYSTEMS

9.21 A.C. meter(s):

11. RECOMMEND: Install instrument to check for appropriate voltage from source so as not to damage vessel's AC equipment.

9.24 Galvanic Isolator:

12. If this vessel commonly uses marina supplied shore power, a galvanic isolator is strongly recommended.

TANKAGE

FUEL TANK(S)

10.9 Manuf. label(s):

13. Recommend owner verify that the fuel tank meets all USCG 33CFR Sec. 183 requirements.

HOLDING TANK(S) - BLACK WATER

10.29 NOTE:

14. Recommend removing the overboard discharge option.

WATER HEATER(S)

10.41 Condition summary:

15. Hot water heater is old and replacement should be considered.

LPG (PROPANE) TANK(S)

10.47 OPD valves:

16. RECOMMEND: Must replace the LPG tanks once emptied.

AUXILIARY EQUIPMENT

MISCELLANEOUS EQUIPMENT & ACCESSORIES

11.2 Boarding ladder:

17. None sighted on board -- provide a boarding ladder or other means.

SAFETY EQUIPMENT

AUXILIARY SAFETY EQUIPMENT






13.4 Recommended

18. No first aid kit sighted. Highly recommended. No EPIRB on board.



US COAST GUARD

Enforced minimum safety equipment requirements

U. S. COAST GUARD MINIMUM REQUIREMENTS FOR RECREATIONAL VESSELS				
EQUIPMENT	CLASS A Less than 16ft/4.9m	CLASS 1 16 to less than 26 ft/7.9m	CLASS 2 26 to less than 40 ft/12.2m	CLASS 3 40 to not more than 65 ft/19.8m
 Personal Flotation Devices (PFDs)	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. A TYPE V HYBRID MUST be worn to be legal.)		
Check state laws for PFD requirements for children and certain water craft & sports.				
Bell,  Whistle	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.	
Visual Distress Signals (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.		
 Fire Extinguisher (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.	
When a fixed fire extinguishing system is installed in machinery spaces it will replace one B-I portable fire extinguisher.				
Ventilation (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.			
Ventilation (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.			
Back-fire Flame Arrestor	One approved device on each carburetor of all gasoline engines installed after April 25, 1940, except outboard motors.			
Note: Some states have requirements in addition to the federal requirements. Check your state's boating laws.				



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.....AVERAGE CONDITION** This vessel is ready for commissioning or sale requiring TLC, little, or no additional work and normally equipped for her size.
- **ESTIMATED MARKET VALUE.....Market value: \$40,000. Refer to Section 1.1 "Value reconciled"**
- **APPROXIMATE REPLACEMENT COST.....\$586,500 per BUCValuPro.com**
- **INTENDED USE OF VESSELPleasure cruising. Sport fishing. Coastal sport fishing 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 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)