

TIPTON MARINE SURVEYS



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A LIMITED LIABILITY COMPANY

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Report of Survey of the M/V Boat Name

A

2007 Four Winns 358 Vista

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Report of Survey of the M/V Boat Name

A

2007 Four Winns 358 Vista

Conducted by

James R. Tipton, Surveyor Associate. SAMS®
Member, International Association of Marine Investigators
Member, American Boat & Yacht Council

Prepared Exclusively for

John Doe

July XX, 20XX

Vessel Description

Introduced in 2005 to replace the original Four Winns 348 Vista (2001–04), the 348 Vista became the V358 in 2007 as a well-equipped and appointed express cruiser. The cockpit and cabin accommodations of the V358 are roomy and well designed for comfort and maximization of storage space. The salon table has fold-up ends for easy stowage. The sculptured cabin overhead has both direct and indirect lighting. Accommodations consist of a forward v-berth using curtains for privacy and separation, a foldout sofa that converts to a bed, and an aft conversation/sitting area that converts to a second sleeping berth. A central vacuum system is installed. Space has been well organized and used for storage wherever possible. Topsides, the helm layout provides good visibility with space for electronics, a double helm seat with flip-up bolsters. The spacious cockpit exits to an extended swim platform with a transom storage locker. Access to the engines is via power engine hatch. The vessel is powered by twin Volvo 5.7 GXI engines.



CONTENTS

Vessel Description	3
Scope of Survey	6
Conduct of Survey	7
Definition of Terms	8
Vessel Identification	9
General Information	11
Vessel & Report Information	11
Valuation	11
Vessel Specifications	12
Systems	13
Hull, Deck & Superstructure	13
Cabin & Interior	16
Propulsion	18
Fuel	20
AC Electrical	20
DC Electrical	22
Generators & Inverter	24
Fresh Water System	24
Sanitation Systems	24
Steering System	25
Ground Tackle	25
Electronics – Navigation & Communication	25

Electronics – Entertainment	25
Thru-Hulls	26
Bilge Pumps	27
Bonding System	27
Safety Equipment	27
Air Conditioning & Heating	28
Out of Water Inspection	28
Sea Trial	28
Notes	30
Findings & Recommendations	31
<hr/>	
Safety Deficiencies	31
Other Deficiencies requiring Attention	31
Surveyor’s Observations & Recommendations	32
Summary & Valuation	34
<hr/>	
Statement of Overall Vessel Rating & Condition	34
Statement of Valuation	34
Replacement Cost	35
Surveyor’s Summary	35
Surveyor’s Certification	36

Scope of Survey

Acting at the request of John Doe, the attending surveyor conducted a Pre-Purchase Marine Survey of the Boat Name a 2007 Four Winns 358 Vista, beginning on July XX, 20XX at 12:30 P.M. through 6:00 P.M. that day where she was docked at XXXXXXXX Marina in XXXXXXXX, TN. The weather was sunny and hot with temperatures in the high eighties to low nineties. The ship's papers were available, although the Certificate of Documentation as presented was expired. The owner stated the current one was at home. Verification of a current Certificate of Documentation was accomplished after the survey. The Hull Identification Number (HIN) GFNCW028D707 as stated on the vessel's Certificate of Documentation was able to be verified on the transom. A sea trial was accomplished as part of the survey. The vessel's owner Mr. Smith was present for portions of the survey.

An out of water inspection of the vessel's wetted surface and underwater machinery was not conducted at the buyer's discretion.

The reason for the survey was to ascertain the physical condition and value of the vessel for John Doe for potential purchase. AC and DC power was used to check the operation of the electrical systems specified in this report only. Electronic equipment was checked for "power up" only. No reference or information should be construed to indicate evaluation of the internal condition of the engines or the propulsion system's operating capacity.

This 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. The owner is advised to open up all such areas for further inspection. Further, no determination of stability characteristics or inherent structural integrity has been made and no opinion is expressed with respect thereto. This survey report represents the condition of the vessel on the above dates, and to be considered an inventory or a warranty either specified or implied.

Conduct of Survey

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

Any moisture readings taken and referenced within the body of the report, were taken using a Aquant Surveymaster (BLD5760) and/or a GE Aquant Moisture meter. Electrical readings were taken using a Fluke 77 IV multimeter, Hyoki 3280-20 Digital Clamp On meter and an ExTech CT-70 AC Circuit Load Tester.

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

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

Where installation of double hose clamps are recommended throughout this report, it is understood that double clamps should only be installed where there is sufficient length of tailpiece / pipe available and hose length overlap to allow correct installation. No clamp shall be installed closer than 1/4" to the end of the hose and must fully engage the tailpiece / pipe or fitting. Any clamp extending over the end may cause the hose to be cut internally or force the hose off the fitting and is an incorrect installation.

Definition of Terms

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

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

FIT FOR INTENDED USE - Suitable for use intended by Survey Purchaser (present or prospective owner).

SERVICEABLE or ADEQUATE - Sufficient for a specific requirement.

POWERS UP - Power was applied only to determine if the system or component would energize. It does not validate the operation of any system or component unless specifically indicated.

EXCELLENT CONDITION - New or like new.

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

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

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

USE OF * - The use of * in the body of this report will indicate that a finding will be listed in the "Findings and Recommendations" section pertaining to the * item.

Vessel Identification

Photographs of HIN, Registration, Documentation etc...



Figure 1 - Hull ID Number from Transom



Figure 2 - Certificate of Documentation (Expired)



Figure 3 - Official Number in Engine Compartment



Figure 4 - Stern View



Figure 5 - Starboard Quarter



Figure 6 - Port Quarter



Figure 7 - Starboard Bow



Figure 8 - Port Bow

General Information

Vessel & Report Information	
File Number:	John Doe Survey 2007 Four Winns 358 Vista
Prepared for:	John Doe
Type of Survey:	Pre-Purchase for Buyer
Place & Date of Survey:	XXXXXXXXX Mariina, XXXXXXXXX, TN – July XX, 20XX
Name of Vessel:	Boat Name
Year / Make / Model:	2007 Four Winns 358 Vista, manufactured in April, 2007
Vessel Manufacturer:	Four Winns, 425 Frisbie St., Cadillac MI
Hull Identification Number (HIN):	GFNCWXXXXXXXX
Official Number:	1202445
Home & Hailing Ports:	XXXXXXXX, TN
Vessel Owner & Address:	Smith Main Street Anytown, Anystate
Intended Use of Vessel:	Recreation
Valuation	
Overall Vessel Condition Rating (per BUC):	Above Average
Estimated Market Value:	\$XXX,XXX
Estimated Replacement Cost:	\$XXX,000 per BUC.com

Rating & Value Method:	
Vessel Specifications	
Hull Type and Description:	Deep V planning hull with 19° Deadrise Aft
Vessel Dimensions (Length / Beam / Draft):	37' / 12'0" / 3' 4" per Powerboat Guide
Displacement / Clearance:	14,600 Lbs / 11' 2" per Powerboat Guide
Propulsion:	Twin Volvo-Penta 5.7 Gxi Gasoline Engines
Fuel Type & Capacity:	230 Gallons per Powerboat Guide
Water Tankage:	51 Gallons per Powerboat Guide
Waste Tankage:	30 Gallons per Powerboat Guide
AC Electrical:	Two 120VAC 30A inlets
DC Electrical:	12 VDC

Systems

Hull, Deck & Superstructure

HULL DESCRIPTION & CONDITION / HULL CONSTRUCTION / DECK CONSTRUCTION / DECK FITTINGS / SUPERSTRUCTURE / COCKPIT / BRIDGE DECK AND HELM / ADDITIONAL EQUIPMENT & ACCESSORIES / FISHING EQUIPMENT

The hull of the Boat Name’s hull is fiber reinforced plastic (FRP) and is in very good condition with a high gloss to the topsides which are black and white with red and gray accent striping. The striping and gelcoat is in like new condition. The stem of the vessel is smooth and without damage, a padeye is located at the stem. The chain locker drains to both port and starboard topsides.

Six acrylic portals are located on the topsides and provide light and ventilation to the vessel’s interior. All portholes appear to be in very good condition with no sign of age or sealant breakdown. A stainless steel rub rail encircles the vessel and is anchored with stainless steel screws approximately 6” apart. The rub rail appears to be in like new condition with no sign of impact or other damage.

The Thru-Hulls appeared to be in very good condition with no signs of UV deterioration.



Figure 9 - Topsides



Figure 10 - Thru-Hulls and Striping

The interior of the hull is composed of a FRP liner atop stringers that provide longitudinal strength. The engine compartment is gelcoated making it very easy to see and also keep clean. Where sighted the limber holes throughout the vessel were adequately sized and free of debris. A solid full width bulkhead separates the engine compartment from the forward section of the vessel and provides lateral strength to the hull. Additional partial bulkheads are located forward of the aft berth and between the sofa in the saloon and the forward berth. Where sighted these bulkheads appeared to be solid and in good condition.

The vessel’s superstructure is made of molded FRP and is white gelcoat. Anti-slip texturing is rolled into the FRP. Two catwalks provide outside access to the vessel’s bow from the cockpit at both quarters. A one inch tubular bow rail encloses

the bow beginning at the base of the radar arch on the port side running forward to the bow and then aft again to the same station on the starboard side. The railing is in like new condition and solidly mounted.



Figure 11 - Foredeck



Figure 12 - Windshield

The windshield and side windows are in good condition and display proper alignment. The walk-thru hatch opens and closes without difficulty and the rubber seals appear to be in good condition. The windshield wipers (both sides) operate normally.

Twelve inch stainless steel cleats and other stainless steel deck fittings are positioned around the vessel to provide adequate hand holds, and tie down capability for the vessel as it is needed. A windlass with foot controls and what appears to be a 15lb (approximate) delta style anchor is affixed at the bow controlled by a Maxwell windlass.

The decks of the vessel are in very good condition with no indication of damage or defect with the exception of the port side gunwhale beginning about six feet from the stem. The FRP gunwhale at that location appears to have been cracked due to compression with associated ripples extending forward along the gunwhale about six feet. The main or heaviest damage is directly above the 'Sling Here' placard on the port side forward.* The sunpad cushions on the foredeck are in good condition with tight threads and snaps that appear to be complete and intact.*



Figure 13 - Damage to Gunwhale



Figure 14 - Span of Damage to Gunwhale (Yellow Tape)

Three Bomar acrylic and aluminum circular hatches are located on the foredeck with two of the hatches being smaller for ventilation of the saloon. The third larger hatch is located over the v-berth and is used as an escape route from the saloon. All three hatches have screens and light darkening shades that are in very good condition.



Figure 15 - Swim Platform



Figure 16 - Cockpit

A radar or spreader arch spans the width of the vessel with a swept forward style. The arch is in very good condition as well as the antennae and lights mounted atop.



Figure 17 - Helm



Figure 18 - Companionway

Cabin & Interior

INTERIOR DESCRIPTION / SALOON / ACCOMODATIONS / HEAD(S) / GALLEY

The interior of the vessel is comfortably sized with adequate standing height even for a tall man. Forward is the v-berth, a pull out sofa is located to port, the galley to starboard with the head located aft of that. At the aft end of the saloon is the second berthing area which can be converted to a conversation/dining area as it was at the time of survey. The cabin is appointed in cherry veneers finished with a very high gloss.

The entry into the saloon from the cockpit is a three step companionway in matching cherry wood with anti-skid placed strategically, however the companionway is steep and as with all ladders on a vessel, care should be taken when ascending or descending a ladder.

The cabin sole is covered in beige pile carpeting bound around the edges in a hard to see binding. The carpeting is in very good condition with no visible wear or staining present. The fabrics used for bed coverings and curtains are clean, tasteful and well fitting. No staining, tearing or other damage was noted. The saloon sofa is covered in a tan leather like material that was also free of damage. The bolsters that are needed to convert the sofa into a sleeper were not present on the vessel at time of survey. There is a removable table that can be positioned in front of the sofa, as well as the removable table that was in place at the aft berth at time of survey. The table for the sofa was not inspected.

The galley is equipped with a two burner Kenyon smooth top electric range, a Microwave oven, and a Nova Kool dual voltage refrigerator with freezer compartment. All appliances appear to function well and powered up when activated. The galley is also equipped with black granite like countertops and under-counter flush mount composite sink with stainless steel faucet.



Figure 19 - Saloon Pull-Out Sofa



Figure 20 - Galley



Figure 21 - V-berth



Figure 22 - Head



Figure 23 - Aft Berth



Figure 24 - Companionway

Storage in the saloon is ample, and utilizes space efficiently. There are several cabinets at least three are hanging. Several drawers and many small cubbies that can be used for odds and ends. All interior woodwork is well-crafted and in like new condition with fully operational hardware. The only deficiency noted in the cabin of the Boat Name was the lack of a latching mechanism to hold the door to the head open. This would be useful for ventilation when the boat is not in use.*

Propulsion

MAIN ENGINES / SERIAL NUMBERS & HOURS / ENGINE ALARMS / COOLING SYSTEM / EXHAUST / IGNITION PROTECTION / TRANSMISSIONS / THRUSTERS

The Boat Name is powered by twin gasoline driven Volvo-Penta 5.7 Gxi engines in a V-8 configuration. The engines are rated at 320 Horsepower.

	Port	Starboard
Model Number	5.7 GXI-H	5.7 GXI-H
Serial Number	4012219552	4012219696
Hours	415.5	415.9
Transmission Model Number	n/a	n/a
Transmission Serial Number	n/a	n/a
Transmission Type & Ratio	n/a	n/a

Engine overheat and low oil pressure alarms are provided by aural alarm. The alarm sounds when the engines are first turned on at the helm. The engine cooling is accomplished by raw water drawn through the outdrive via front mounted raw water pump, circulated through the engine and into cast iron exhaust risers where it is then released via flexible rubber exhaust connections leading to a central exhaust bellows in the outdrive.



Figure 25 - Port Engine



Figure 26 - Starboard Engine

The engines appeared to be in like new condition, with paint, placards, hoses and belts in very good to excellent condition. The engine mounts are of the adjustable type and appeared to be in very good condition. The engine compartment was extremely clean. The engines are controlled via a Volvo-Penta electronic throttle command system. The system operated well during the sea trial but is sensitive and extreme care should be used in learning how to pilot the vessel.

Ignition protection protocols appeared to be in place and being followed.

During the course of the survey a Marine Technician from Marine Contractors Inc. of Jacksboro, TN to perform an engine scan and compression test of both engines. The scan verified the hours on the panel and showed no engine exceedances. The Compression testing yielded the following results:

Port				Starboard			
Cylinder	PSI	Cylinder	PSI	Cylinder	PSI	Cylinder	PSI
1	180	2	180	1	180	2	180
3	180	4	180	3	180	4	180
5	180	6	180	5	180	6	180
7	180	8	180	7	180	8	180

Condition and level of engine fluids was normal.

Fuel

FILL SYSTEM / TANKAGE / DISTRIBUTION / FILTRATION

The fuel system of the vessel is built around two 5052 aluminum gasoline fuel tanks located to port and starboard forward in the engine compartment. The tanks are in very good condition and have the ABYC recommended labels affixed to their upper surfaces. The capacity of each tank is 115 gallons per label. The fittings are all atop the tank, the fuel vents are through the port and starboard topsides where vents with flame arrestors are located just below the gunwhale.

Fuel fills is accomplished via deck fills marked 'GAS' on the port and starboard catwalks at about the midships position. The fill lines are of USCG approved material and are properly double clamped and electrically grounded.

Fuel distribution is via USCG approved lines properly supported and clamped where visible. The fuel distribution manifold is installed on the forward bulkhead of the engine compartment and is properly labeled. Filtration of fuel is accomplished via engine mounted spin-on/off fuel filters at each engine and the generator.

AC Electrical

SHORE POWER / AC ELECTRICAL CONTROL PANEL / REVERSE POLARITY / OVERCURRENT PROTECTION / CURRENT LEAKAGE / POWER DISTRIBUTION / WIRING & CONNECTIONS / OUTLETS / GFI PROTECTION / GALVANIC ISOLATOR

The shore power system for the vessel is fed from two 120 volt / 30 amp inlets which connect to the vessel via connectors in a locker on the starboard side of the swim platform. The upper boat side connector is in good condition while the lower connector (used for the Air Conditioning System) exhibits indications of excessive heat most likely caused by age and a resistive connection.* The shore power cables themselves are in serviceable condition, although the older looking cable which is in use on the Air Conditioning Circuit will also require a new connector at the boat side due to the previously mentioned excessive heat.*



Figure 27 - Air Cond Shore Power Cable connector excessive heat damage



Figure 28 - Air Cond Shore Power Inlet connector excessive heat damage



Figure 29 - Main Electrical Panel

The AC Electrical system is monitored and controlled via the Main Electrical Panel in the saloon. The panel is located behind a closeable panel door in the port bulkhead at the base of the companionway. The panel is equipped with an analog voltage indicator, reverse polarity indicators, Galvanic Isolator status lights. AC source selection is accomplished

via a mechanical slide which prevents both the generator and shore circuit breakers from being energized at the same time.

Overcurrent protection is accomplished via 30 amp main breakers adjacent to each input line at the stern and twelve individual branch breakers for the vessel's systems. All breakers appeared to be functional and accurately labeled.

Remote start for the generator is also available through this panel.

Where sighted, the electrical distribution and wiring throughout the vessel appeared to be properly supported and of adequate sized. All outlets were tested for proper wiring and grounding. GFI outlets were present in both the galley and head and tested satisfactorily. The outlet in the head was appropriately covered with a weathertight cover.

The vessel was also tested for current leakage and yielded satisfactory results.

DC Electrical

BATTERY SYSTEM & CONDITION / DC CONTROL PANEL / OVERCURRENT PROTECTION / POWER DISTRIBUTION / WIRING & CONNECTIONS / OUTLETS / CHARGING SYSTEMS

The DC systems of the vessel are built around a three bank battery system; Port Engine, Starboard Engine and House (Ship Systems) Battery. Both engine batteries are size 27 lead-acid batteries located portside in the engine compartment. The House battery is a size 31 Absorbed Glass Mat (AGM) type battery located to port in the engine compartment but inboard of the engine batteries. According to the owner, all three batteries were replaced in 2015. The batteries appear to be in good condition, but all three were improperly installed. Federal regulations require that all batteries be installed in acid resistant containers, secured against unwanted movement up to 100 lbs force in any direction and with the ungrounded terminal (+) protected.*



Figure 30 - Port Engine battery



Figure 31 - Starboard Engine battery



Figure 32 - DC Control Panel in Cockpit

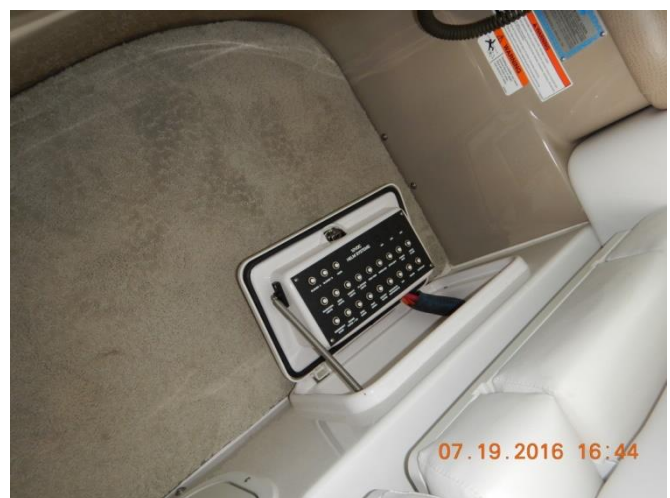


Figure 33 - DC Breaker Panel below helm seat

The Batteries are controlled via a DC control panel located in the port quarter of the cockpit behind the entrance door from the swim platform.

Control of the DC system is accomplished via the Main Electrical Panel located in the saloon. The bottom section of the panel is devoted to DC circuits only. Additional overcurrent protection of the DC system is accomplished via a pull out drawer below the helmsman's seat at the bridge.

DC outlets were noted at the Helm and galley but were not tested for operation.

Wiring for the DC system appeared to be appropriately sized, routed and protected where sighted.

Charging of the DC batteries is accomplished via a Charles 40 Amp three bank battery charger mounted to the port bulkhead in the engine compartment. Additional charging is accomplished via belt driven engine mounted Volvo-Penta alternators.

Generators & Inverter

GENERATOR SYSTEM / SPECIFICATIONS / CONTROLS / INVERTER SYSTEM / SPECIFICATIONS / CONTROLS

The generator system on board the Boat Name is a Kohler gasoline driven four cylinder unit located in the aft part of the engine compartment on the port side. The Model # is 5E and the serial number is 2141017. The unit has 692.3 hours on it according to the meter mounted at the generator. Capable of producing 5KW at 120 volts the unit can be started at the generator or remotely through the Main Electrical Panel in the Saloon. Both systems were tried successfully. The generator was placed under load using the Hot Water heater, the Air Conditioning system and the electric range (both burners) and operated without laboring. Access is poor.

The raw water supply for the generator's cooling is via a seacock located below the sole in the saloon. The hose is only single clamped when it should be double clamped.*

Condition and level of fluids was normal.

AC Source selection between generator and shore power is via mechanical slide located at the Main Electric Panel.

Fresh Water System

POTABLE WATER / HOT WATER / WATER MAKING

Potable water onboard is provided via shore water connection located in the locker at the swim platform, or via the 51 gallon tank onboard. The onboard tank is filled through deck fill marked 'WATER' located towards the bow at the starboard gunwhale. Water Distribution is accomplished via red/blue polyethylene tubing throughout the vessel. Tubing and connections appear to be in very good condition. A DC voltage water pump is located somewhere forward but was not sighted during the survey. The pump did struggle with maintaining flow when using a single faucet.*

Hot water is provided by a marine grade hot water heater manufactured by Atwood. The unit is 120 Volt, 1400 watts and has a 10 gallon capacity and is located in the aft starboard corner of the engine compartment. The unit functioned well when tested.

Sanitation Systems

BLACK WATER / GREY WATER

Black water on board is captured via a Sea-Land Vacu-flush head that is in very good condition. The system uses white sanitation grade hoses for the entire system. The hoses leading from the head to the vacuum/macerator unit are permeated and have a sewage smell that is present when the access hatch is lifted in the saloon sole.* The system functioned well and includes an indicator light system in the head to provide status information on water and waste levels.

Grey water is disposed of via thru-hull located in the vessel topsides near their source or via a sump located below the sole in the saloon. This sump is equipped with a Rule 800 GPH bilge pump activated by a Rule float switch. Tests OK.

The owner stated that originally the galley sink was plumbed to use the sump. However, it led to strong odors so the sink was replumbed to a new thru-hull in the starboard topsides.

Steering System

SYSTEM TYPE / CONDITION / PERFORMANCE

Steering on board the vessel is accomplished via a hydraulic Volvo-Penta system. All hoses and components appear to be in good condition. Steering wheel movement was easy and no restrictions or interference was noted.

Ground Tackle

ANCHOR / RODE / LINE / WINDLASS

Ground tackle on Boat Name consists of a 15 Lb (estimated) Delta style anchor that appears to be in good condition. The anchor rode consists of approximately 10' of G4 Chain and approximately 50' of braided line. No residual water was noted inside the chain locker. The anchor clevis is not seized or safety wired.*

The anchor is weighed by a Maxwell windlass installed at the bow. Foot switch activation at the bow operated well. Operation is also possible from the helm which also performed without flaw.



Figure 34 - Delta Anchor at bow



Figure 35 - Anchor Rode

Electronics - Navigation & Communication

VHF / RADAR / GPS / CHART PLOTTER / AUTO HELM / SPEED LOG / DEPTH SOUNDER / FISH FINDER / COMPASS(ES) / ANTENNAS / BAROMETERS / SHIPS CLOCK / HAILER / WATER TEMPERATURE GAUGE / ALARM SYSTEM (FIRE/BURGLAR)

The electronics suite onboard Boat Name consists of a Raymarine C80 GPS and a Raymarine RAY215 OSC VHF radio. The GPS plotter system displays chart position, speed and depth information and functioned well during the sea trial. The VHF radio powers up. A three inch Danforth compass is located atop the helm console and is in like new condition.

Electronics - Entertainment

STEREO SYSTEMS / TV / DVD / SPEAKERS

The stereo system on board the vessel is built off of a Clarion CMD4A stereo system with CD-Changer, and Sirius Radio. Remote control heads are located at the swim platform and at the helm. JL Audio speakers are installed both above and below. The system operated satisfactorily when powered up.

A flat screen TV is located above the galley sink and is installed on a swing out panel which allows the unit to be viewed from the v-berth. The unit powers up.

A DVD player is installed, but does not operate according to the owner.*

Thru-Hulls

ABOVE WATERLINE LOCATIONS & CONDITIONS / BELOW WATERLINE LOCATIONS & CONDITIONS

Thru-hulls are listed below first for above waterline and are shown using a number to indicate its placement from the bow (i.e. the number 1 would be the Chain Locker drain.) Other thru-hulls on that side would be listed in ascending numerical order.

Seacocks were operated to insure they were free and operable.

Above Waterline Thru-hulls	
Port Side	Starboard Side
1 Chain Locker	1 Chain Locker
2 Air Conditioner Discharge	2 Water Vent
3 Fuel Vent	3 Galley Sink
4 Cockpit sink drain	4 Sump Drain
5 Generator Exhaust Port	5 Fuel Vent
	6 Forward Bilge Pump Drain
	7 Deck Drain
	8 Aft Bilge Pump Drain

Below Waterline Thru-Hulls	
Function	Location

Generator Raw Water Seacock	Saloon below cabin sole. (Access panel).
Air Conditioning Raw Water Seacock	Saloon below cabin sole. (Access panel).
Head Raw Water Seacock	Saloon below cabin sole. (Access panel).
Depth Transducer	Engine Compartment starboard side.

Bilge Pumps

LOCATION, SIZE, DRAINAGE & CONDITION

Forward Bilge Pump – Rule 1100 GPH with Rule float switch located below sole in saloon. Installation is satisfactory. Operated when tested in both auto and manual modes. Pump drains to starboard topsides.

Aft Bilge Pump – Rule 1500 GPH with Rule float switch located in engine compartment between engine inboard stringers. Installation is satisfactory. Operated when tested in manual mode, auto mode would not function. Pump drains to starboard topsides.

Bonding System

OVERALL SYSTEM & CONDITION

The bonding system is mostly well established where sighted. A separate bonding system was not performed and I did not use a corrosion meter to establish the level of protection. However the bonding system is using individual green insulated wire and appears to be serviceable were sighted.

Safety Equipment

WEARABLE PFD'S / THROWABLE PFD'S / FIRE EXTINGUISHERS / FIXED FIRE EXTINGUISHING SYSTEMS / VISUAL DISTRESS SIGNALS / SOUND DEVICES / FLAME ARRESTORS / POWER EXHAUST BLOWERS / NAVIGATION LIGHTS / INLAND NAVIGATION RULE BOOK / REQUIRED PLACARDS / FCC LICENSING / FIRE, SMOKE & CARBON MONOXIDE ALARMS / FUME SNIFFER ALARM SYSTEMS / BILGE ALARM / SEARCH LIGHT / MAN OVERBOARD SYSTEM / LIFE RAFT / EPIRB / FIRST AID KIT

Three wearable PFD's were located below the sofa in the main saloon, two others were located below the seat bottom adjacent to the helm on the port side. The PFD's appear to be in like new condition. A throwable PFD was also located below the seat bottom adjacent to the helm on the port side.

Two fire extinguishers were located on board. Both were located at the helm, although both units are serviceable it is recommended that they be mounted in an open location for ease of access in an emergency. One unit should be located in the galley area, the other at the helm.*

A Fireboy Fixed Fire Extinguishing System (FFE) is installed in the engine compartment on the forward bulkhead. The system uses FE-241 as a suppression agent. According to the indicator light at the helm the system is functional and armed. The bottle has an inspection tag, but the tag does not show any history of inspection.

A Xintex M-1 Gasoline Fume Detector is installed with the sensor in the forward section of the engine compartment and the indicator/control panel located at the helm. The system self-tests OK.

No visual distress signals were sighted onboard.* Flame arrestors were sighted on both engines, generator and fuel vents.

An electric horn is installed and tests good. Navigation lights are all operational and clear. The owner stated that he had converted all of the lights over to LED type bulbs.*

The placards required by CFR33 regarding NO OIL DISCHARGE and TRASH DISPOSAL were sighted in the engine compartment and galley respectively. No INLAND NAVIGATION RULES book was sighted during the survey.*

Carbon Monoxide detectors were sighted at both berths and appear operational. However, based on the vessel's age the sensors of these units are most likely past their planned life. No smoke detectors were sighted.*

The Boat Name is equipped with a Bilge Alarm system to detect rising water levels in the bilge. The unit is located in the engine compartment between the engine inboard stringers and tests OK by sounding an aural alarm at the helm.

A GUEST manufactured searchlight is installed at the bow. Remote controls are located at the starboard side of the helm. The light illuminates and travels up/down vertically, but the horizontal rotation is only to one side. When touched the light assembly rotates freely without resistance.*

A first aid kit was not sighted during the survey, but is highly recommended that a small kit be obtained and kept supplied for minor emergency treatment.*

Air Conditioning & Heating

SYSTEM TYPES / CAPACITY / LOCATION & CONDITION

The Boat Name uses a raw water fed Marine Air system manufactured by Marine Air Systems. The unit is 16,000 BTU's and is located to port of the companionway. Access is very limited as the unit is behind the vacuum cleaner system as well as being deep within the cabinetry. Full inspection could not be accomplished. The filter appeared to be recently serviced and the unit functioned very well despite the high humidity and heat on the day of the survey. The control pad is in like new condition and is located in the main saloon below and slightly forward of the Main Electric Control panel. The raw water intake is only single clamped at the seacock.*

Out of Water Inspection

DATE & LOCATION OF HAULOUT / BELOW WATERLINE MACHINERY / CONDITION OF THE HULL'S WETTED SURFACE

An Out of Water Inspection was not conducted.

Sea Trial

DATE & LOCATION OF SEA TRIAL / DESCRIPTION OF SEA TRIAL, CONDITIONS, OBSERVATIONS & PERFORMANCE DATA

The Boat Name was taken out of the slip for sea trial beginning at approximately 3:45 PM. She was piloted by the owner, Mr. Smit. No other parties were on board. Winds were calm, fuel tankage was about ½ tank.

Sea state was calm with wakes present from other traffic intermittently. The throttles appeared to be sensitive, not jumpy but requiring some knowledge of the boats performance to manipulate them smoothly and safely. The engines shifted smoothly from forward to neutral to reverse smoothly and without any mechanical grind or chatter.

The engines started quickly, with no smoke or oily discharge in the water. Idle was smooth at around 800 RPM. The pilot was briefed on the desired sea trial plan and as we were leaving the Marina readings were taken at escalating throttle settings as outlined below.

Port Engine					
RPM	Speed	Oil Press	Temp	Voltage	Riser Temps Inbrd/Outbrd
900	4.6	50	160	13	110/120
1200	6.2	50	160	13	118/118
1400	7.4	60	160	13	117/115
2500	10.6	60	170	13	118/117
(80%) 3,800	30.0	60	165	13	129/123
(WOT) 4,600	36.0	60	170	13	140/144

Starboard Engine					
RPM	Speed	Oil Press	Temp	Voltage	Riser Temps Inbrd/Outbrd
900	4.6	SUN	SUN	SUN	110/120
1200	6.2	60	170	13.2	112/120
1400	7.4	60	170	13	115/125
2500	10.6	60	170	13	116/124
(80%) 3,800	30.0	65	270	25	125/129
(WOT) 4,600	36.0	60	175	13	140/132

Following the speed runs, the trim tabs were tested and a demonstration of the engine synchronization was conducted. Backdown tests were made consecutively for both engines. Engines remained solid in mounts with no lifting or racking.

The cruise back to the marina was done at approximately 3,800 RPM as that is about the most comfortable cruise band for the vessel. A calm 93 – 95 db was measured in the saloon.

Notes

The owner provided the following information as maintenance tasks that have been accomplished within the last three years. By including this information, the surveyor does not endorse its validity.

- Replaced anodes for stern drives & Generator – 2013
- Replaced stern drive boots and bellows – 2013
- Stern drive oil service – 2014
- Duck Bill valves on Vacuflush 2015
- Install Shadow Caster lights – 2014
- Bottom Paint – 2014
- New stripes – 2014
- Septic Charcoal filter -2016
- Water separators – 2016
- Oil – 2016
- Impeller for motors – 2014
- Impeller for Generator 2016 (Do this every year)
- Engine tune-up – April, 2016
- All batteries - 2015

Findings & Recommendations

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

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

Items noted as "**SURVEYOR'S OBSERVATIONS & RECOMMENDATIONS**" are informational in nature and provide knowledge to improve the safety, comfort and material condition of the vessel.

Safety Deficiencies

1. FEDERAL REGULATIONS REQUIRE THAT ALL BATTERIES BE INSTALLED IN ACID RESISTANT CONTAINERS, SECURED AGAINST UNWANTED MOVEMENT OF UP TO 100 LBS FORCE IN ANY DIRECTION AND WITH THE UNGROUNDED TERMINAL (+) PROTECTED. – *COMPLY WITH FEDERAL REGULATIONS BY PROPERLY INSTALLING BATTERIES.*
2. HANDHELD FIRE EXTINGUISHERS ARE NOT MOUNTED. – *MOUNT FIRE EXTINGUISHERS IN LOCATIONS THAT ARE EASILY ACCESSIBLE IN THE EVENT OF A FIRE. RECOMMEND AN EXTINGUISHER BE MOUNTED AT THE GALLEY AND ANOTHER AT THE HELM.*
3. NO VISUAL DISTRESS SIGNALS WERE SIGHTED ONBOARD. – *OBTAIN AND MAINTAIN CURRENT VISUAL DISTRESS SIGNALS TO COMPLY WITH FEDERAL REGULATIONS.*
4. NAVIGATION AND ANCHOR LIGHTS HAVE BEEN CONVERTED TO LED BULBS. NOTE THAT THE USE OF LED BULBS MAY NOT MEET THE BRIGHTNESS STANDARDS REQUIRED BY CFR₃₃. – *RELAMP NAVIGATION AND ANCHOR LIGHTS WITH APPROPRIATE BULB TO INSURE COMPLIANCE WITH FEDERAL REGULATIONS.*
5. NO INLAND NAVIGATION RULES BOOK AS REQUIRED BY CFR₃₃ WAS SIGHTED DURING THE SURVEY. – *PROCURE INLAND NAVIGATION RULES BOOK TO COMPLY WITH FEDERAL REGULATIONS.*

Other Deficiencies requiring Attention

6. . THE FRP GUNWHALE APPEARS TO HAVE BEEN CRACKED DUE TO COMPRESSION WITH ASSOCIATED RIPPLES EXTENDING FORWARD ALONG THE GUNWHALE ABOUT SIX FEET. THE MAIN OR HEAVIEST DAMAGE IS DIRECTLY ABOVE THE 'SLING HERE' PLACARD ON THE PORT SIDE FORWARD. – *OBTAIN ESTIMATES OF REPAIR FROM SEVERAL REPUTABLE FRP REPAIR SHOPS, AND REPAIR AS SOON AS POSSIBLE.*
7. AIR CONDITIONING SHORE POWER RECEPTACLE SHOWS SIGNS OF EXCESSIVE HEAT. BOAT SIDE OF SHORE POWER CABLE ON SAME CIRCUIT ALSO EXHIBITS SIGNS OF EXCESSIVE HEAT. – *REPLACE CONNECTORS ON BOAT AND ON CORD TO REMOVE BURNED COMPONENTS.*
8. THE RAW WATER INTAKE FOR THE GENERATOR IS ONLY SINGLE CLAMPED AT THE SEACOCK. AS A BELOW THE WATERLINE THRU-HULL, THIS INTAKE SHOULD BE DOUBLE CLAMPED IF THE LENGTH OF THE TAILPIECE ALLOWS. – *INSTALL SECOND CLAMP IF SPACE ALLOWS.*

9. WATER PUMP STRUGGLES TO MAINTAIN FLOW WHEN USING A SINGLE FAUCET. - *INVESTIGATE AND REPAIR AS NEEDED.*
10. THE HOSES LEADING FROM THE HEAD TO THE VACUUM/MACERATOR UNIT ARE PERMEATED AND HAVE A SEWAGE SMELL THAT IS PRESENT WHEN THE ACCESS HATCH IS LIFTED IN THE SALOON SOLE. - *REPLACE SANITATION HOSES.*
11. AFT BILGE PUMP WILL NOT OPERATE WHEN TESTED IN AUTO MODE. – *INVESTIGATE AND REPAIR AS NEEDED.*
12. THE RAW WATER INTAKE FOR THE AIR CONDITIONING SYSTEM IS ONLY SINGLE CLAMPED AT THE SEACOCK. AS A BELOW THE WATERLINE THRU-HULL, THIS INTAKE SHOULD BE DOUBLE CLAMPED IF THE LENGTH OF THE TAILPIECE ALLOWS. – *INSTALL SECOND CLAMP IOF SPACE ALLOWS.*
13. THE SEARCHLIGHT ILLUMINATES AND TRAVELS UP/DOWN VERTICALLY, BUT THE HORIZONTAL ROTATION IS ONLY TO ONE SIDE. WHEN TOUCHED THE LIGHT ASSEMBLY ROTATES FREELY WITHOUT RESISTANCE. – *INVESTIGATE AND REPAIR OR REPLACE SEARCHLIGHT AS REQUIRED.*
14. A DVD PLAYER IS INSTALLED, BUT DOES NOT OPERATE ACCORDING TO THE OWNER. - *INVESTIGATE AND REPAIR OR REPLACE AS NEEDED.*

Surveyor's Observations & Recommendations

15. SUNPAD CUSHIONS ON THE STARBOARD SIDE OF THE FOREDECK HAVE A VERY SMALL ABRASION WHERE SOMETHING APPEARS TO HAVE BEEN DRUG ACROSS IT LIGHTLY SCRAPING THE SURFACE. – *INFORMATIONAL ONLY.*
16. THERE IS NO LATCHING MECHANISM TO HOLD THE DOOR TO THE HEAD OPEN. THIS WOULD BE USEFUL FOR VENTILATION WHEN THE BOAT IS NOT IN USE. – *INSTALL LATCH.*
17. THE ENGINE BATTERY CONNECTIONS ARE IMPROPERLY MADE. SOME OF THE CONNECTIONS ARE MADE WITH THE SMALLER LUGS ON THE BOTTOM OR CLOSEST TO THE BATTERY. IT IS RECOMMENDED THAT THE HEAVIEST AND LARGEST CONNECTIONS BE PLACED CLOSEST TO THE BATTERY. SMALLER CONNECTIONS (LUGS) SHOULD BE PLACED AT THE TOP BECAUSE THEY HAVE LESS CONNECTING SURFACE THEREFORE CAUSING MORE RESISTANCE AND HIGHER CURRENT DRAW. – *CORRECT BATTERY CONNECTIONS TO INSURE MAXIMUM METAL TO METAL CONTACT AREA.*
18. THE ANCHOR CLEVIS IS NOT SEIZED OR SAFETY WIRED. – *SAFETY WIRE ANCHOR CLEVIS TO PREVENT LOSS.*
19. FIRE EXTINGUISHERS SHOULD BE INSPECTED ON A PERIODIC BASIS AND A RECORD OR TAG SHOULD BE AFFIXED TO THE UNIT TO RECORD THE INSPECTION DATE. – *INITIATE A PROGRAM TO INSPECT FIRE EXTINGUISHERS ON AT LEAST A MONTHLY BASIS.*
20. FIXED FIRE EXTINGUISHING SYSTEMS (FFES) SHOULD BE INSPECTED ANNUALLY. – *ARRANGE TO HAVE SYSTEM INSPECTED BY A QUALIFIED TECHNICIAN AS SOON AS POSSIBLE.*
21. CARBON MONOXIDE DETECTORS WERE SIGHTED AT BOTH BERTHS AND APPEAR OPERATIONAL. HOWEVER, BASED ON THE VESSEL'S AGE THE SENSORS OF THESE UNITS ARE MOST LIKELY PAST THEIR PLANNED LIFE. NO SMOKE DETECTORS WERE SIGHTED. – *RECOMMEND THE REMOVAL OF CURRENT CARBON MONOXIDE DETECTORS WITH NEW COMBINATION SMOKE/CARBON MONOXIDE DETECTORS TO MAXIMIZE SAFETY.*
22. A FIRST AID KIT WAS NOT SIGHTED DURING THE SURVEY. - *RECOMMENDED THAT A SMALL KIT BE OBTAINED AND KEPT SUPPLIED FOR MINOR EMERGENCY TREATMENT.*

23. BUYER HAS DISCLOSED TO THE SURVEYOR THAT HIS EXPERIENCE WITH BOATS IS LIMITED. – *RECOMMEND BUYER JOIN A LOCAL CHAPTER OF US POWER SQUADRONS. THESE CLUBS/ORGANIZATIONS OFFER A BROAD NETWORK OF EXPERIENCE AND TRAINING OPPORTUNITIES TO BROADEN BOATING SKILLS AND ABILITIES.*
24. SURVEYOR RECOMMENDS THAT ALL SEA COCKS, GATE VALVES AND OTHER MECHANICALS BE EXERCISED PERIODICALLY TO MAINTAIN OPERATION. IT IS A GOOD PRACTICE TO MAINTAIN A SET OF PLUGS NEARBY ALL SEACOCKS TO ALLOW THE PROMPT PLUGGING OF A HOLE IN THE EVENT A SEACOCK OR OTHER THRU-HULL FAILS.

Summary & Valuation

Statement of Overall Vessel Rating & Condition

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

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

The following is the accepted marine grading system of condition. (Source: BUC website.)

"EXCELLENT (BRISTOL) CONDITION" - Maintained in mint or Bristol fashion - usually better than factory new - and loaded with extras - a rarity.

"ABOVE AVERAGE (BUC) CONDITION" - Has had above average care and equipped with extra electrical and electronic gear.

"AVERAGE (BUC) CONDITION" - Ready for sale requiring no additional work and normally equipped for its size.

"FAIR CONDITION" - Requires usual maintenance to prepare for sale.

"POOR CONDITION" - Substantial yard work required and devoid of extras.

"RESTORABLE CONDITION" - Enough of hull and engine exists to restore the boat to usable condition.

As a result of my investigation, as shown in the FINDINGS AND RECOMMENDATIONS section of this REPORT OF SURVEY and by virtue of my experience and training it is my opinion that the subject vessel should be considered to have a rating of condition as AVERAGE (BUC) Condition.

Statement of Valuation

The "FAIR MARKET VALUE" is the most probable price in terms of money which a vessel should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- a. Buyer and seller are typically motivated.
- b. Both parties are well informed or well advised, and each is acting in what they consider their own best interest.

- c. A reasonable time is allowed for exposure in the open market.
- d. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- e. The price represents a normal consideration for the vessel sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

APPRAISAL METHODOLOGY:

The following method of valuation was used to obtain the FAIR MARKET VALUE (FMV) of the vessel. Soldboats, BUC and ABOS valuation data (provided via subscription) were used to determine the FMV of the vessel. Soldboats.com was queried for sales of this vessel manufacturer, model and year over the past 24 month period producing a field of nine vessels. Of the nine vessels returned by Soldboats, four were disqualified due to damage, condition or different engine configurations. The remaining five vessels yielded an average list price of \$ XXX,XXX and an average sale price of \$ XXX,XXX.

BUC was also queried and returned a value range of \$ XXX,XXX - \$ XXX,XXX. This value is low and does not reflect the value a freshwater vessel has over a saltwater vessel. Consequently, a 10 % premium was added for freshwater raising this value range to \$ XXX,XXX - \$ XXX,XXX.

ABOS returned a value range of \$ XXX,XXX - \$ XXX,XXX.

Bringing these value sources together through averaging places the vessel value at \$XXX,XXX.

The subject vessel has been well maintained and is in excellent condition with the exception of the damage to the gunwhale. Were it not for this, the vessel's condition and value would have been rated at ABOVE AVERAGE. To take into account the loss of value in the boat due to the damaged gunwhale a deduction of \$3,000 is taken as an estimated loss of value.

Therefore, after consideration of the reliability of the data, the extent of the necessary adjustments and condition of the vessel as detailed by BUC, it is your surveyor's opinion that the "FAIR MARKET VALUE" of the Boat Name is \$XXX,XXX.

Replacement Cost

SOURCE AND METHODOLOGY OF REPLACEMENT COST CALCULATION

Replacement cost for the Boat Name was obtained through BUC.com and is \$ XXX,XXX (US).

Surveyor's Summary

In accordance with the request for a marine survey of the subject vessel for the purpose of evaluating its present condition and estimating its Fair Market Value and Replacement Cost, I herewith submit my conclusion based on the preceding report. The subject vessel was personally inspected by the undersigned on July XX, 20XX and was found to be a well constructed, appointed and comfortable vessel.

The vessel has been very capably captained and well-kept. Subject to correction of deficiencies listed in section IV A. (Safety), the vessel is considered to be suitable for its intended use. Other deficiencies list should be attended to in a timely fashion.

Surveyor's Certification

I certify that, to the best of my knowledge and belief:

The statements of fact contained in this report are true and correct.

The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions.

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

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

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

This report is submitted without prejudice and for the benefit of whom it may concern and only for the use of the specified benefit of the person (or persons) named as the requesting party in the Scope of Survey, and his or her assurers and or lenders. Accordingly, others are not to use this report without the express written consent of the undersigned surveyor.

SIGNATURE BLOCK

James R. Tipton, Surveyor Associate, SAMS®