

# Marine Survey Report For Sample Survey

# "1997 Tiara 4000 Express"



Membership with the Society of Accredited Marine Surveyors and the American Boat & Yacht Council

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# INTRODUCTION

#### CERTIFICATION

This Is To Certify that the undersigned Marine Surveyor acting on behalf of Sun Coast Marine Surveying & Consulting, LLC inspected the referenced twin screw fiberglass motor vessel on the dates specified.

#### PURPOSE OF SURVEY

The survey was made at the request of the named client Sample Survey for his/her account, in order to ascertain the vessel's general condition and valuation for pre-purchase consideration.

#### CIRCUMSTANCES OF SURVEY

The vessel was inspected while afloat in its berth and later hauled for an inspection of the waterline hull, appendages, and machinery. All accessible compartments were entered but do to paneling, liner, tanks, and installed equipment only about 20 percent of the hulls interior surface could be observed. Any reference to bronze, aluminum or stainless steel metals is a color reference for convenience only, as the actual metallurgy cannot be determined without laboratory testing. The specific materials and layup schedule for the fiberglass moldings could not be determined with the non-destructive techniques available for inspection. A formal sea trial was performed. Machinery and equipment were inspected while operating unless specifically noted. Electrical power was available and used during the inspection. The deck and superstructure were examined visually and by way of ransom percussion testing, random moisture meter readings, and thermal imaging. The below draw waterline hull and appendages were examined visually and by of random percussion testing, the use of digital moisture meter and thermal imaging were applicable.

NOTE: Ownership, HIN and Official numbers from documents. Numbers verified on the hull. All specifications included in the report are from official documents or sources such as USCG Documentation, state registration, manufacturer's data or other reference materials and were not measured during the inspection.

#### **REPORT FILE NO**

18-315 1997 Tiara 4000 Express

#### SURVEYOR QUALIFICATIONS

The surveyor is a member of SAMS (Society of Accredited Marine Surveyors) with the designation of AMS (Accredited Marine Surveyor), and a Certified Standards Technician with ABYC (American Boat and Yacht Council)



INTENDED USE Recreational

GENERAL VESSEE INFORMATION		
	DATE OF SURVEY:	10/16/2018
	FILE NUMBER:	18-315 1997 Tiara 4000 Express
	CUSTOMER NAME:	Sample Survey
	CUSTOMER ADDRESS:	Sample Survey
	VESSEL BUILDER:	Tiara Yachts, Holland MI.
	HIN (HULL IDENTIFICATION NUMBER):	Sample Survey A true digital photograph of the hull ID number of the referenced vessel is shown in the report. The photograph has been enhanced for the purposes of this report to provide maximum visibility.
	MODEL YEAR:	1997
	LENGTH OVERALL (LOA):	43'6" Per Power Boat Guide
	LENGTH ON DECK (LOD):	40'6" Per Power Boat Guide
	BEAM:	14'6" Per Power Boat Guide
	DRAFT:	4'0" Per Power Boat Guide
	DISPLACEMENT:	26500 Lbs Per Power Boat Guide
	VESSEL NAME:	BULLDOG
	FUEL CAPACITY:	444 Gallons Per Power Boat Guide
	WATER CAPACITY:	160 Gallons Per Power Boat Guide
	HOT WATER TANK CAPACITY:	Unknown
	HOLDING TANK CAPACITY:	57 Gallons Per Power Boat Guide
	LOCATION OF SURVEY INSPECTION:	Pasadena Yacht & Country Club 2795 Kipps Colony Drive South, Gulfport, FL 33707
	LOCATION OF BOTTOM INSPECTION:	Maximo Marine 4801 37Th St S, St. Petersburg, FL 33711

# **GENERAL VESSEL INFORMATION**

# **HULL, DECK & SUPERSTRUCTURE**

#### DESIGN

Standard manufacture's hull, deck & superstructure.

HULL: Planing type hull with moderately raked bow, vertical with increasing flare forward, straight reverse sheer and square stern with dive platform. The bottom is a modified V design, with a reported 18-degree deadrise aft, lifting strakes and prop pockets steered by twin inboard rudders.

DECK(S) & SUPERSTRUCTURE: Single level deck with raised foredeck and recessed cabin house superstructure with Bimini top.

WATERTIGHT INTEGRITY: A single watertight compartment divided into separate cabins by apparently nonwatertight bulkheads and an overboard self-draining anchor locker at the forepeak. The hatches and portholes opening to the exterior hull, weather decks, and cockpit were apparently water tight types (ABYC Standards H-3) except for the companionway, cockpit locker hatches which were apparently water tight. The companionway was equipped with a sill and the cockpit was a self-draining type via scuppers located at the aft outboard corners of the cockpits engine compartment hatch gutters.

#### HULL, DECK & SUPERSTRUCTURE

Conventional fiberglass reinforced plastic (FRP) moldings with unknown core material, white gel coat exterior shell below the waterline and white gel coat above the waterline with bulkheads grafted to the hull with FRP laminates. Deck has unknown core with white exterior gel coat surfaces and molded in anti-skid texture in tread areas. Hulldeck joint is a shoe box design sealed with an elastomeric type compound and secured with stainless steel fasteners and FRP tabbing where observed. Joint protection provided by an external type plastic rub rail with a stainless steel striker molding and stainless steel fasteners. See Findings & Recommendations.

# FINDING C-1

### STRUCTURAL MEMBERS

The longitudinal and athwartship framing system comprised of FRP encapsulated longitudinal box stringers and frames of an unknown core material. Both stringers and frames laminated to the hull's interior along with full and partial plywood bulkheads and plywood floors grafted to the hull with FRP laminates and full and partial plywood bulkheads secured with mechanical fasteners. See Findings & Recommendations.

#### FINDING C-2

#### BOTTOM PAINT

Bottom paint is in serviceable condition showing minimal wear and tear.

#### **BLISTER COMMENT**

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

#### TRANSOM

Well secured, no cracks or defects sighted. Moisture readings were relatively Dry. No delamination when checked with a percussion hammer.





# **ABOVE WATER LINE HULL, DECK SUPERSTRUCTURE, HARDWARE & FITTINGS**

# DECK FLOOR PLAN

Standard manufactures deck layout with no modifications to the original design.

#### ANCHOR PLATFORM

FRP bow pulpit with stainless steel insert with single roller in serviceable condition.

#### **TOE RAILS & STANCHIONS & LIFELINES**

Molded FRP toe rail, part of deck lay up, polished stainless steel bow and side rails mounted to the deck with stainless steel fasteners. Firmly mounted and serviceable except as otherwise noted.

#### MOORING HARDWARE

Polished stainless steel horn cleats firmly attached with stainless steel fasteners.

#### HATCHES, PORTHOLES, PORTLIGHTS, DOORS & WINDOWS

Glass cabin trunk windows and sliding companionway door and aluminum framed hatch with Lexan type window at the forward end of the coach roof. Hatch sufficiently sized to act as a fire escape per NFPA 302. Stainless steel framed portholes with Lexan type windows at the ADWL hull and cord FRP hatches. Intact and serviceable except as otherwise noted.

### **EXTERIOR SEATING & TABLES**

The exterior seat structures were firmly mounted and the upholstery was serviceable showing average wear and tear for age of the vessel.

### COCKPIT EQUIPMENT

The aft deck has a Raritan ice maker refrigerator and sink with pressurized cold water and transom shower. See Findings & Recommendations.

#### FINDING B-1

#### ENGINE HATCH

Engine access is from the aft deck seating with manual lift with gas struts that were functional when opened.

#### **BOARDING LADDER**

A folding rubber coated aluminum ladder in platform pocket that was functional and secure.

#### SWIM PLATFORM

Molded in FRP swim platform with welded stainless steel supports. Serviceably showing moderate wear and tear from normal use except as noted in the findings.

#### ABOVE DRAW WATER LINE (ADWL) THRU HULLS

Marelon, and Bronze, a were secure and in serviceable condition.





# **BELOW DRAW WATER LINE SKIN FITTINGS, MACHINERY & FITTINGS**

#### BELOW DRAW WATER LINE THRU HULL FITTINGS

Bronze fittings that appear to be in serviceable condition showing average wear and tear for the age of the vessel and secure.

#### THRU HULL STRAINERS & SCOOPS

Bronze slot style thru hull strainer covers, appear to be in serviceable condition with limited wastage.

#### TRANSDUCER(S)

Plastic type, intact.

#### FAIRING BLOCK(S)

Fairing block was secure and no evidence of wastage.

#### SEA VALVES/SEA COCK TYPE

Bronze sea cocks with mounting flanges. Valves were exercised and found to be functional.

## FINDING A-1 FINDING A-2 FINDING A-3

#### SEA STRAINERS

Bronze Internal strainer(s) installed. Strainers were inspected visually for cracks or any evidence of blockage. Strainers were not opened and inspected due to destructive testing restrictions. It is recommended the buyer open and inspect each strainer prior to taking delivery.

#### **TRIM TABS**

Bennett brand 12VDc hydraulic trim tabs with reinforced flex piping, composite struts, stainless steel trim blades. Operable. No hydraulic fluid leaks found.

#### NOTE

This company suggests the sea cock/ sea valves be serviced according to the manufactures recommendations as a preventative measure upon purchasing a used vessel and thereafter as recommended by the sea cock/ sea valve manufacturer or more frequently as a part of the vessel's regular maintenance program. We also strongly recommend that if the vessel is left unattended that all below waterline sea valves be closed with the exception of scuppers, bilge pump discharge, or other valves that are required to be in the open position to prevent flooding of the vessel during inclement weather. This provides an extra measure of safety for the vessel as well as the added benefit of familiarizing the crew with safety valve locations and to exercise the valves to prevent seizure. Moreover, if not already done so, it is strongly suggested that properly sized tapered wooden plugs be kept in the vicinity of each sea cock/sea valve/thru hull to be used as a plugging device in the case of an emergency. Finally, when renewing the vessels protective coatings, it must be kept in mind that antifouling paints containing copper or other metals must not be applied to metal fittings and/or machinery without first having an insulated coating such as underwater metal primer or epoxy barrier coat applied. Failure to do so can result in harmful galvanic corrosion damage to the fittings and/or machinery.

#### CONDITION & COMMENTS

In apparent serviceable condition except as noted in the Findings & Recommendations.





# CATHODIC PROTECTION

#### **BONDING SYSTEM**

The bonding system was found to be using an individual green insulated bonding wire. Appeared to be serviceable were sighted except as indicated otherwise in this report. See Findings & Recommendations.

#### FINDING B-2

#### LIGHTING PROTECTION

None, but not normally found on boats of this type.

Note: Few boats are actually wired for lightning protection from the manufacture. There is no known way to ensure complete protection for personnel and equipment from a lightning strike. However, we suggest that any owner review the information at www.marinelightining.com and ABYC TE\_4.

#### ADDITIONAL REMARKS

A separate bonding system survey was not performed, and a corrosion meter was not used to establish the level of protection. If a more detailed analysis is required, a complete separate bonding system survey is recommended.

#### NOTE

A vessels bonding system should be checked as part of the vessel's regular maintenance program. Each bonding wire should be checked regularly for corrosion, and its connection should be checked for connectivity. Resistance should be less than one (1) Ohm.

# **HELM STATION & NAVIGATIONAL ELECTRONICS**

#### HELM STATION

Electronics mounted on cockpit bulkhead. A 6" Richie compass in serviceable condition. The accuracy of the compass was not verified. A Raymarine 2Ray 49 VHF radio, powered up. Unable to receive transmission when tested using the Sea Tow automated service. A RaymarineC120 chart plotter with navigational charts. A Raymarine ST6002 smart pilot autohelm system that was operational. A Raymarine ST60 speed and depth log that was functional. A Raytheon Raypilot 650. See Findings & Recommendations.



#### **THROTTLE & SHIFT CONTROLS**

Teleflex Separate levers for each engine throttle and shift control that were functional.

#### ENGINE ROOM BLOWERS

Engine room blower(s) power up and are fully functional.

#### ENGINE STATUS

All engine instruments are OEM VDO brand analog gauges that were functional.

# **CABIN INTERIOR APPOINTMENTS**

### MANUFACTURES IMAGE

Standard manufacture layout, no interior changes to the original factory designed interior. Not to scale. For general information purposes only.



### ENTERTAINMENT BERTHING & SALON

Bulkhead mounted 120 VAc Samsung brand flat screen TVs in the salon and V Berth. A forward V berth, an aft berth located below the cockpit sleeps two. The appliances powered up and appeared to function normally and showed negligible wear and tear. Furthermore, the berthing and entertainment provisions were considered to be satisfactory for the vessels type. See Findings & Recommendations.

## **FINDING C-4**

#### INTERIOR LIGHTING

12 VDc. Operable except as noted in the findings.

### GALLEY/DINETTE & ACCESSORIES

The galley was fitted with a Corian like counter top, storage lockers, cabinets and drawers. A dual stainless steel sink and piped with flex type drain hose secured with hose clamp and polished stainless steel faucet. Cabinet mounted Panasonic microwave, fixed mounted Origo three burner electric stove, cabinet mounted Sun Zero 120 VAc/12VDc upright refrigerator/freezer with door lock and U Line ice maker. All of the galley appliances and equipment operated normally and presented low exterior wear and tear. The galley arrangement was also considered adequate for the vessel type.

#### WATER CLOSET(S)

One water closet formed with pre-molded FRP liner module with gelcoat and exterior surfaces and Corian type counter. Wash basin piped with flex hose and secured with a hose clamp to polished stainless steel faucet. Integrated shower stall with drain on sole. 12VDc exhaust fan. A Sealand brand marine head (Toilet) that operates on a vacuum flush system piped with reinforced hoses and secured with hose clamps. The installed equipment operated normally and presented low wear and tear.

#### CLIMATE CONTROL

The vessel was equipped with two 115 VAc Cruise Air brand units. The salon unit was 16000 BTU, unknown BTU for the forward cabin air conditioner. The systems were functional.





# **ELECTRICAL SYSTEMS**

#### DIRECT CURRENT SYSTEM(S) TYPE

The vessel was equipped with a single 12VDc system consisting of two battery banks. (4) Group 31 and (1) Group 24 12VDc wet cell lead acid batteries are located in the engine compartment on the port and starboard outer sides and are in plastic battery trays and secure. The batteries provide power to all 12 V systems to include the engine start batteries, generator start battery, house electrical and anchor windlass. Two Guest rotary switches are located in the engine compartment. Where visible the vessel was wired with multi-stranded copper conductors with plastic-type insulation. Much of the wire did not appear to have been modified from its factory installation. Furthermore, were observed, no indications of overheating conductor insulation was observed. The terminals where splices could be seen consisted of ring terminals, terminal plugs, spade and blade terminals, fork terminals, common butt splices, and waterproof butt splices. Battery charging was accomplished by 12 VDc unknown amperage alternators on each engine, the onboard generator and shore power by two Charles 5000 Series 50 Amp battery chargers that powered up. The main DC panel board is located on the starboard side wall of the main salon. All panels were clearly marked for voltage. Overcurrent protection of the system was provided by a variety of in-line fuses of different types, push-button thermal reset breakers and circuit breakers.

Check all battery dates prior to purchase to determine any batteries that are older than 3 years, It is recommended any battery over 3 years be replaced. Batteries are not load tested as a part of the survey and often battery dates are not visible. Verify this information prior to closing.



#### ALTERNATIVE CURRENT (A.C.) SYSTEM(S)

The vessel was equipped with one 240 VAc Glendinning50 amp single phase Ac system with power Cablemaster. The vessel shore power connections were located on the starboard transom. The operable main shore power circuit breaker is located at the AC distribution panel in the main salon. All breakers were operable and analog volt and amp gauges were installed at the power panel. Overcurrent protection was provided for with individual branch circuit breakers in addition to the main shore power circuit breaker installed on the panel board. An operable main circuit breaker was also installed at the generator, and the generator/shore power selector switch at the panelboard in the salon was an operable make or break type switch. Where accessible and visible, the shore powers system's consisted of multi-stranded copper conductors with plastic-type insulation, and the terminal's consisted of ringing terminals and butt slices. The system's wiring in so far as could be determined did not appear to be modified from its factory installation, and no indications of overheating of the visible portion's of the wiring insulation was found. The Ac panel board was fitted with reverse polarity indicators which were functioning. GFCI protected AC receptacles were installed in the vessel. The systems impedance, voltage drop, polarity and GFCI function were tested at each Ac receptacle with a Suretester device with shore power and generator supplied power and tested normal except as indicated in the Findings & Recommendations. As far as could be determined by general examination without making disassemblies, the system was found to be in apparently good working order.



#### GENERATOR

Located in the engine room is an Onan 7.5KW 4 cylinder diesel generator. The generator is a freshwater cooled unit, coolant levels were full. The oil level was full when checked. All hoses appeared to be serviceable. The generator started and functioned by holding a full load, all air conditioning units, stove burners, oven and microwave were powered on, the generator maintained voltage. See Findings & Recommendations.

Serial Number: G100137257 Generator Hours: 333.6



**INBOARD PROPULSION SYSTEM** 

#### ENGINE(S)

Two Caterpillar 3208TIA in-line six-cylinder diesel engines with raw water cooled closed loop cooling system and wet type of exhaust with 435 rated horsepower. The engines were secured to the vessels longitudinal main stringers made fast by stainless steel engine mount fasteners. No drip pads available, fluid and the debris fall into the bilge area beneath the engines. The engines cooling systems were equipped with engine mounted heat exchangers, engine mounted raw water cooling pumps, engine mounted closed system circulating pumps, remotely mounted closed system expansion bottles and pipe with reinforced hard wall marine water hoses secured with hose clamps, engine mounted OEM type cooling system hoses secured with hose clamps and metal piping. Bronze raw water strainers with site glass were incorporated into the raw water intake hoses, and the raw water was discharged to the exhaust at the mixing elbows. The exhaust systems were wet type with approved high-temperature silicon wet exhaust hose sections, common approved type wet exhaust hoses, metal exhaust tubing and discharged to the aft stern quarters through FRP exhaust tubing laminated into the hull. All sighted exhaust hose connections were made fast with double hose clamps per ABYC recommendations. All hoses appear to be in serviceable condition. Belt condition appears to be serviceable with no cracks or evidence of belt dust sighted. See Findings & Recommendations. The engines were inspected by EngineSurveyor.com who will issue a report under separate cover.



#### SERIAL NUMBERS

Port Engine: 01Z29970 Starboard Engine: 01Z29950

#### ENGINE(S) HOURS

Port Engine: 1225 Starboard Engine: 1225

#### OTHER NOTE

It is good practice when buying a used vessel that all fluids (Engine/Transmission or Outdrive ) 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 that all engines and transmissions be inspected by a qualified expert engine surveyor/mechanic to determine the internal condition and any repairs necessary of the engine(s), transmission gears, and pumps, heat exchangers, coolers, etc.

#### REVERSE GEAR(S)

ZF 302B transmission. Transmissions were inspected by Engine Surveyor.com who will issue a report under sperate cover.

Port Transmission Number: 95-13870 Starboard Transmission Number: 95-13881

#### SHAFTING & PROPELLER(S)

The shafts were stainless steel shafts that were 2" in diameter, the shaft seals were raw water cooled and showed no excessive leakage. The struts are P-type struts with three bladed bronze props that showed no evidence of damage. Spare props were sighted in the engine room.



OIL CHANGE SYSTEM See Findings & Recommendations



# **STEERING SYSTEM**

MANUFACTURE Seastar-Teleflex

#### STEERING SYSTEM COMPONENTS

Helm pump wheel assembly, reinforced steering system hoses, hydraulic ram, stainless steel drag link with clevis ends, autopilot reference sensor, bronze tiller arms with set screws, bronze upper rubber and bear cross members secured to the longitudinal stringers with stainless steel fasteners, bronze rudder ports/packing glands secured to the hull using stainless steel fasteners, and bronze rudders with stainless steel stocks secured by the tiller arms and fitted with stainless steel cotter pins at the top to act as safety' s. Where visible the components were adequately mounted and no indication of fluid leaks was noted. The system operated normally, and no evidence of damage was found on the rudders. Furthermore, none were found at the packing glands.

Note: Upon purchase of a used vessel this company suggests, the steering system is serviced according to the manufacturer's recommendations as a preventive measure and inspected regularly thereafter as part of a regular on-going maintenance program.





# TANKAGE

#### FUEL TANK(S) & PIPING

Three tanks, two located in engine space and one in the center below the salon sole, with visible manufactures labels at the inboard sides of the engine compartment. The tanks were secured with metal straps and due to their location access was very limited and only part of the inboard sides and tops could be observed. Grounding conductors were observed at the tanks and both pipe to weather deck mounted stainless steel pipes marked for diesel. Continuity testing was performed using a multimeter and the results were consistent with tanks and fills that are grounded. The fill hoses were USCG approved Type A hoses secured with double hose clamps where visible. The tanks were vented to topside mounted fittings with flame screens and were plumbed with SAE j1527 hoses secured with hose clamps. The fuel supply and return hoses were also SAEj1527 with swaged mechanical fittings, and the engines were equipped with OEM type flexible fuel lines and metal fuel tubing. Fuel filtration was provided by two remotely mounted Raycor primary fuel filters and engine mounted OEM type fuel filters. Fuel shutoff valves were sighted on tank tops and three shut off valves are located in the aft cockpit area. Tanks appear to be original and in serviceable condition.

#### POTABLE WATER SYSTEM

The potable water system consists of a single aluminum water tank secured below the cabin sole. The system was equipped with one ShurFlo brand 12 VDc on demand water pump installed in the engine room. The water pump functioned when tested. The water heater itself was a marine grade Atwood brand 120 VAc water heater with engine heat exchanger provision. The water heater was located in the engine room below the cabin sole and the unit was fitted with a pressure relief valve. The water heater was functional and no leaks were sighted. The system's piping was made of semi-flexible polyethylene tubing with compression fittings as well as reinforced vinyl type hose sections secured with hose clamps. A municipal pressure water supply hook up with regulator was also installed in the transom locker but was not proven. The system was operable.

#### HOLDING TANK(S)-BLACK WATER

One Sealand brand 12VDc Vacu Flush system with one vacuum pump and reservoir located below the cabin sole. An operable 12VDc Sealand macerator was also installed forward of the holding tank. The holding tank itself was aluminum and was located below the cabin sole. The systems plumbing consisted of polyethylene semi-flexible tubing with compression fittings at the flushing side and PVC fittings and reinforced sanitation type hose secured with hose clamps at the discharge side. No waste odors were noted within the confined spaces of the vessel, and the system was operable. The visible portions of the holding tank were intact as was the port side plastic vacuum reservoir. No active leaks were observed in the visible portions of the systems components.



# SAFETY EQUIPMENT

#### NAVIGATIONAL LIGHTS

Red/Green navigation lights tested and are functional. See Findings & Recommendations.

#### FINDING A-6

#### LIFE JACKETS (P.F.D,'S)

The following USCG approved life jackets were sighted on board: (8) U.S.G.G. Type II and (6) U.S.G.G. Type III All appear to be in serviceable condition showing minimal wear and tear.

THROWABLE TYPE P.F.D. See Findings & Recommendations.

VISUAL DISTRESS SIGNALS See Findings & Recommendations.

### **FINDING A-7**

SOUND DEVICES 12 VDc horn, functional.

U.S.C.G. PLACARDS

See Findings & Recommendations.



#### ENGINE VENTILATION

Power exhaust ventilation blower(s) are installed and fully operational.

#### FIRE FIGHTING EQUIPMENT

Fixed firefighting system was located in the engine room and was an HF C227 type. See Findings & Recommendations.

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FINDING A-9 FINDING A-10
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#### **BILGE PUMPS**

Engine Room Bilge: One Rule 2000 GPH bilge pump that was operational when tested.

Aft Bilge: One Rule 2000 GPH bilge pump that was operational when tested.

Forward Bilge: One Rule 2000 GPH bilge pump that was operational when tested.

Sump Tanks: Two sump tanks, the aft has a Rule 500 GPH and forward is an Atwood 750 GPH. See Findings & Recommendations.

#### FINDING B-8

#### **GROUND TACKLE & WINDLASS**

(The anchor rodes were inspected as stored without ranging)

Primary: A galvanized steel 44lb Blue Star anchor is mounted at the anchor platform with an undetermined length of raw chain and considered serviceable other than noted in the Findings & Recommendations, showing excessive wear and wastage. See Findings & Recommendations.

Windlass: A Maxwell windlass is mounted on the platform. See Findings & Recommendations.



AUXILIARY SAFETY EQUIPMENT See Findings & Recommendations.



# **SEA TRIAL**

#### OBSERVATIONS

A formal sea trial was conducted while in route back from the vessel haul out. Weather conditions were partly cloudy skies, a temperature of approximately 95°F and a moderate chop on the waterway. The vessel was operated by the seller. The sea trai was managed by the engine surveyor who will issue a report under separate cover.

# **A: SAFETY DEFICIENCIES**

## FINDING A-1 SEA VALVES/SEA COCK TYPE

The port engine raw water intake hose going to the strainer is wasted.

# RECOMMENDATION

Replace raw water intake hose.



# FINDING A-2 SEA VALVES/SEA COCK TYPE

The generator raw water intake hose going to the strainer is wasted.

RECOMMENDATION

Replace wasted hose.



# FINDING A-3 SEA VALVES/SEA COCK TYPE

Sea valves are seized.

### RECOMMENDATION

Lubricate and exercise sea valves to enable ease of operation.

## FINDING A-4 GENERATOR

Exhaust hose leaving the muffler to overboard discharge is wasted and corroded hose clamps have corrosion.

#### RECOMMENDATION

Replace any corroded hose clamp and wasted exhaust hose.



# FINDING A-5 ENGINE(S)

Starboard side overboard exhaust discharge hose is wasted.

### RECOMMENDATION

Replace exhaust discharge hose.



## FINDING A-6 NAVIGATIONAL LIGHTS

The all around/anchor and stern lights were not operational.

### RECOMMENDATION

Further investigate and repair Nav lights as necessary to comply with 33 USC 2020/Colregs 20 if plan to use vessel between dusk and dawn or before using the vessel in limited light conditions.

### FINDING A-7 VISUAL DISTRESS SIGNALS

Expired and or no visual distress signals are onboard the vessel.

#### RECOMMENDATION

Ensure visual distress signals are aboard to comply with USCG regulations 33 CFR 175.110 for visual distress signals prior to using the vessel. You must have at least three aerial or three red handheld signals that are current.

### FINDING A-8 U.S.C.G. PLACARDS

No placards sighted for oil or garbage. These are required for any vessel 26' or longer.

#### RECOMMENDATION

To avoid a potentially large fine, install a USCG "No Discharge of Oil" placard in or near engine space to comply with - 33 CFR 155.450 and post a trash disposal placard near the waste area to comply with USCG 33 CFR 151.59.

# Findings & Recommendations

### FINDING A-9 FIRE FIGHTING EQUIPMENT

An insufficient number of fire extinguishers for a vessel this size.

#### RECOMMENDATION

USCG standards for vessels 26 to 40 feet require two (2) BI extinguishers or one (1) BI and (1) one Fixed system. ABYC A4.6.3 and NFPA 10.2.1 recommend three (3) extinguishers: one(1) outside the engine compartment, One at steering position and One near the galley or passenger cockpit. Recommend compliance with ABYC and NFPA for this size vessel.

#### FINDING A-10 FIRE FIGHTING EQUIPMENT

Fixed fire extinguisher in engine space has outdated or no certification tag.

#### RECOMMENDATION

ABYC A-4 and NFPA 302 recommends that fixed fire protection systems be inspected and reweighed at one year Recommend compliance. NOTE: Halon or other "clean agent" type fire extinguishers must be weighed to determine true contents. Monitor lights and gauges only show there is pressure available and do not reflect the quantity available. Annual inspection and a tag to show date is recommended to meet ABYC A-4 and NFPA 302 standards.

## FINDING A-11 GROUND TACKLE & WINDLASS

The chain appeared to be so heavily corroded that unsure if usable.

#### RECOMMENDATION

Replace anchor chain.



# FINDING A-12 GROUND TACKLE & WINDLASS

Anchor shackle is not seized.

### RECOMMENDATION

Seize anchor rode shackles with galvanized or monel seizing wire to help prevent loss of anchor.



## FINDING A-13 AUXILIARY SAFETY EQUIPMENT

All the Xintrex CO2 detectors and smoke detectors were inoperable.

### RECOMMENDATION

Install Carbon Monoxide detectors in any enclosed accommodation spaces per ABYC A-24 and NFPA 302 recommendations.

# **B: OTHER DEFICIENCIES REQUIRING ATTENTION**

#### FINDING B-1 COCKPIT EQUIPMENT

The aft deck ice maker was not operational.

### RECOMMENDATION

Repair or replace as desired to have operational unit.

### FINDING B-2 BONDING SYSTEM

A disconnected bonding wire was sighted in the aft bilge area.

#### RECOMMENDATION

Reconnect the bonding wire.

# **Findings & Recommendations**



### FINDING B-3 HELM STATION

The vessel radar was not operational and the chart plotter reads no data source.

#### RECOMMENDATION

Investigate radar system further and take action to make operational.



### FINDING B-4 HELM STATION

The VHF radio did not receive weather transmission or Sea Tow automated service.

#### RECOMMENDATION

Investigate further and take action to make operational.

# FINDING B-5 ENGINE(S)

The port underwater exhaust hose fitting shows excessive corrosion and galvanic corrosion. No evidence the fitting is bonded.

## RECOMMENDATION

Recommend replacing port underwater fitting.



# FINDING B-6 OIL CHANGE SYSTEM

The oil change system was not operational when tested.

### RECOMMENDATION

Repair or replace to make operational.

## FINDING B-7 HOLDING TANK(S)-BLACK WATER

Waste tank discharge hose is wasted.

# RECOMMENDATION

Replace wasted discharge hose.



### FINDING B-8 BILGE PUMPS

The forward Atwood bilge pump for the sump tank was not operational.

# RECOMMENDATION

Repair or replace as required to make operational.



# FINDING B-9 GROUND TACKLE & WINDLASS

The windlass was not operational when tested using the helm and the bow controls.

### RECOMMENDATION

Take corrective action to make operational.

# C: SURVEYOR'S NOTES & OBSERVATIONS

### FINDING C-1 HULL, DECK & SUPERSTRUCTURE

Elevated moisture readings were taken at the foredeck and midship deck fittings such as windlass, forward center cleat and fuel fills.

### RECOMMENDATION

Monitor areas and would remove and re-bed fasteners to prevent further water penetration.

## FINDING C-2 STRUCTURAL MEMBERS

Elevated moisture readings were taken at the engine room stringers. No evidence of delamination was noted, elevated reading on not unusual for a vessel in excess of 20 years in service.

#### RECOMMENDATION

Monitor stringers and take action if condition worsens.

### FINDING C-3 HELM STATION

The Ratheon Raypilot was not functional.

### RECOMMENDATION

The system was redundant as there is a Raymarine system that is functional.

### FINDING C-4 ENTERTAINMENT BERTHING & SALON

Condensation and moisture was noted below the forward settee cushion.

#### RECOMMENDATION

Determine the source of the moisture and take corrective action to eliminate.

#### FINDING C-5 GENERATOR

Generator breaker tripped when loaded.

#### RECOMMENDATION

Possible the generator was replaced with a lower KW unit so monitor usage when operating under generator power.

# FINDING C-6 ENGINE(S)

Some motor mounts are badly corroded.

# RECOMMENDATION

Investigate further and take actions to replace if required.



# VALUE

#### **CONDITION & VALUATION**

#### CONCLUSION:

Insofar as could be determined by general examination without making removals to expose concealed parts, the vessel was considered to be in good overall general condition, and it is my considered opinion that upon compliance with the recommendations stated above, it would be in satisfactory condition for the intended use of its designer and builder.

#### VALUATION:

The definition of "Fair Market Value" as used in this report is that as issued by the Machinery & Technical Specialties of the American Society of Appraisers-July 25, 2010.

The" Fair Market Value" "is, "an opinion, expressed in terms of money, at which a property would change hands between a willing buyer and a willing seller, neither under any compulsion to buy or sell, and both having a reasonable knowledge of relevant facts, as of a specific date." Implicit in this definition is the consummation of a sale as of a specified date and of 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 acting in what they consider their own best interest.
- c. A reasonable amount of time is allowed for exposure in the open market.
- d. Payment is made in terms of cash in US 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.

The valuation offered in this report is based on the vessel's apparent condition on the date of the survey and assumes that the vessel's engines and/or other installed equipment not proven during the survey inspection are in fact operational. Discoveries made as a consequence of additional testing/inspection procedures may significantly lower this valuation. Also, there is no warranty given, or implied, of the future useful life of engines or machinery described herein. Valuations are developed by using some or all of the following resources; commercially published used boat price guides(BUC, NADA, Boats & Harbors, Soldboats.com, Yacht World, etc.), commonly accepted Marine depreciation schedules, and consultations with knowledgeable boat brokers not involved with this specific transaction. The "ESTIMATED REPLACEMENT COST" indicates the retail cost of a new vessel of the same make/model with similar equipment offered by the same manufacturer or comparable vessel with the same equipment.

A. Comparable Sales Market Approach:

1. The current NADA provides a value range for the vessel of approx. \$128,500.00

2. The current BUC ValuePro provides a value range for an average condition of approx. \$128,500.00

3. The following were the only verified sales found of the same make, model and year vessel between Jan. 2017-Oct. 2018 found on SoldBoats.

a. Vessel Year: 1997 Location: WA Sold Date: 03/17 Sale Price: \$138,000.00

b. Vessel Year: 1997 Location: MI Sold Date: 05/17 Sale Price: \$170,000.00

c. Vessel Year: 1997 Location: OH Sold Date: 10/17 Sale Price: \$132,000.00

4. Calculations:
a. NADA Average: \$128,500.00
b. BUC Book Average: \$128,500.00
C. Sold Boats Average: \$146,700.00
Average Valuation: \$134,500.00

B. Cost Approach Method:

If the Cost Method of appraisal is considered using the Martin Scale with research indicating the same make and model vessel would now cost \$800,000.00 new, this 21-year-old vessel in 2018 would be worth approximately \$272,000.00. Based upon the Soldboats, BUC and NADA data the Cost Approach Method of appraisal is not considered the most accurate. We will, therefore, rely on the Comparable Sales/Market Approach Method. BUC valuation allows for an adjustment of <10%-20%> for a vessel needing repairs to prepare for sale. Therefore, consideration of the reliability of the data, the extent of the necessary adjustments and condition of the vessel the:

Estimated Fair Market Value is: \$107,600.00 Estimated Replacement Cost is: \$800,000.00 (Per BUC research)

#### SURVEYOR CERTIFICATION

Acting on behalf of Sun Coast Marine Surveying & Consulting, LLC, the undersigned surveyor certifies that to the best of his or her knowledge and belief: I have made a personal inspection of the property that is the subject of this report. The statements of fact in this report are true and correct. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions at the time of inspection and are my personal, impartial and unbiased professional analyses, opinions and conclusions. I have not performed services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment. I have no present or prospective interest in the property that is the subject of this report and no 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 the assignment. My engagement in this assignment was not contingent upon developing or reporting predetermined results. My compensation for completing this assignment was not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client or seller, 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 the report content including the appraisal. No one provided significant appraisal assistance to me.

REPORT SUBMITTED WITHOUT PREJUDICE

Sun Coast Marine Surveying and Consulting LLC

9. Chet Stephens

By:

Senior Surveyor J. Chet Stephens, SAMS-AMS

