



Kesner Yacht Survey
9 Bear Hill Rd
Newton NH 03859

REPORT OF MARINE SURVEY

CONDITION AND VALUE
of the vessel
"REDEMPTION"
2001 Tartan 4100



PREPARED FOR:
Jack Mahoney
520 Fulling Mill Ln Fairfield CT 06824

CONDUCTED BY:
Allen Kesner
on
September 1st 2021

Kesner Yacht Survey

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Qualifications

This survey is based on my 35 plus years in marine related business. I am a member of the American Boat and Yacht Council. I am also accredited from the American Boat and Yacht Council in marine systems and marine electrical systems. I am a member of the Society of Accredited Marine Surveyors (sa). I am a graduate of the Landing School class in marine surveying.

As part of my commitment to the Society of Accredited Marine Surveyors I regularly attend educational seminars to further my education in marine surveying.

I have 15 years experience as captain of passenger vessels of up to 100 gross tons and 25 years experience as a general manager of a 100 slip marina. During my time at the marina I was involved in vessel repairs from groundings and collisions to engine replacement, fuel tank replacement, deck repair, mast removal and stepping.

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SURVEY SCOPE & GENERAL INFORMATION

SURVEY REQUESTED BY

Client name: Jack Mahoney. **Street address:** 520 Fulling Mill Ln Fairfield CT 06824 **E-mail address:** jackbmahoney@gmail.com.

Attendees Jack Mahoney and Allen Kesner. **Cellular phone:** 203 530 3870. **Residence phone:**

SCOPE OF SURVEY

Type of survey: PRE-SALE CONDITION & VALUE.
Vessel Yr/Make/Model: 2001 Tartan 4100.
Purpose of survey: Assess the overall condition and value of vessel for possible future sale.
Intended use: Pleasure-Atlantic coast line cruising.
Vessel surveyed at: Captains Cove Marina Bridgeport CT.
Survey requested by: This survey was performed at the request of the owner, who was present at the time of the survey.
Inspection date: September 1st 2021.
Inspection time: 7.30 am to 12.30 pm.
Conducted by: Allen Kesner.
How survey conducted: The vessel was surveyed both while afloat & hauled out of the water for bottom inspection.
Weather conditions: Rain, Temperature was 70F.
Sea trial: A sea trial was performed as part of this survey. The results are included in the Sea Trial section.
Electrical systems checked: DC power was used to check DC electrical systems. The ships inverter was used to check some AC systems.
Moisture / Delamination: The Tramex Skipper Plus moisture meter was used for moisture readings referenced in this report. All moisture readings are comparative to surrounding areas with terms of normal or relatively dry, relatively moist or relatively wet. If delamination is present with above normal moisture readings further testing is advised.
Sailboat rigging: All standing rigging was installed and checked only at eye level and below unless otherwise specified.

VESSEL CONDITION & VALUE

Condition rating: **ABOVE AVERAGE CONDITION.**
Estimated fair market value: \$ 198,000.00. The BUC Value Guide Pro 121st edition lists this boat between \$ 190,500.00 and \$ 209,500.00. Sold Boats . com had two recent sales recorded on similar Tartan 4100 vessels and they are as follows; A 2002 model that sold in November 2019 for \$ 170,000.00 and a 2002 model that sold in July 2019 for \$200,000.00. A search of listing shows three Tartan 4100s for sale. A 2001 Tartan 4100 in Ontario Canada for \$ 199,000.00, a 2002 Tartan 4100 in ME for \$ 215,000.00 and a 2006 Tartan 4100 in CT for \$ 269,000.00. Currently the used boat market is very strong and above average boats have sold at or above book values.
Estimated replacement cost: **\$ 747,000.00 Per BUC value guide.**

VESSEL INFORMATION

Vessel Yr/Make/Model: 2001 Tartan 4100.
Vessel name: REDEMPTION.
Hailing port: Black Rock CT.
Hull ID number (HIN):



TCM 41060B001 A true digital photograph of the hull ID number of the referenced vessel is shown here and was found located on the transom.

Manufacturer/Builder: Fairport Yachts Fairport Harbor OH.
Month/Year built: February 2001.
Vessel Type: Fiberglass Auxiliary Sloop.
Source of Specs:
Vessel description:

The Tartan 4100 is a diesel powered auxiliary sloop that is equipped with a large galley, two state rooms and a head with a shower. The vessel could be used for long distance offshore cruising.

U.S.C.G. OFFICIAL DOCUMENTATION

Official Documentation
No:



Documented name: NO 1106234.
Documented name: REDEMPTION.
Documented hailing port: Black Rock CT.
Documented use: Recreational.
Documented Specs: Length: 41.3, Breadth: 13.5, Depth: 5.3, Gross Tons: 14, Net Tons: 13.
Documented restrictions: None.
Documented owner: John B Mahoney.
Documentation current: Expires on July 31st 2022.

SURVEY STANDARDS

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 Titles 33 and 46 of the United States Code of Federal Regulations (CFR's) in effect at the time of the survey inspection. In addition the American Boat and Yacht Council (ABYC) and National Fire Protection Association (NFPA-302) voluntary standards in effect at the time of the survey were used as reference.*

These ABYC and NFPA voluntary standard practices are generally followed by most vessel manufacturers today. 100% adherence is not guaranteed.

SURVEY INSPECTION COMMENTS

Comments:

- *All systems and components inspected and described herein apply only at Time of Survey and are considered serviceable and/or functional except as indicated in the survey report and listed in the Recommendations section. Electronic devices and instruments were checked for power up only - not for functionality. Areas not inspected include vessel structure areas which are covered, unexposed or inaccessible such as screwed down or false panels or bulkheads, moldings or any area that was not readily open for visual inspection. If a component is not identified in this report, it was not sighted/inspected or not installed.*
- *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 on the date the survey was conducted. It provides no guarantee and no prediction of the vessel's condition on any later date.*
- *"**Priority I Recommendations**" are related to Safety & Regulatory findings and are printed **RED** in the report.*
- *"**Priority II Recommendations**" are related to Maintenance & Standards findings and are printed **BLUE** in the report.*
- *"**Other Observations & Suggestions**" are items that are relatively minor in nature and are printed **GREEN** in the report.*

Report terms used:

- *FRP: Fibre reinforced plastic-Also known as Fiberglass or Fibreglass. This is the typical construction material for most modern day yachts and small craft.*
- *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, behind screwed down panels, or requirements not to conduct destructive tests).*
- *FUNCTIONAL/OPERABLE: Functions as intended.*
- *POWERS UP: Device was tested for Power Up only, not for full design functionality.*
- *SERVICEABLE: Sufficient for a specific requirement.*
- *EXCELLENT CONDITION: New or like new.*
- *GOOD CONDITION: Shows minimal wear with possible minor cosmetic discrepancies.*
- *FAIR CONDITION: Denotes that system, component or item is functional as is with minor repairs. (MONITOR OFTEN)*
- *POOR CONDITION: Requires repair or replacement of system, component or item to be considered fully usable.*

EXTERIOR HULL & BOTTOM INSPECTION

HULL EXTERIOR-SIDES

Hull type/Construction: Displacement hull, Hand laid and molded fiberglass.

Hull cosmetics:



Hull has been painted. Hull cosmetics are in good condition-minor nicks and scratches which are typical for a vessel of this age. There is a small circular repair area and some minor scratches on the port side hull near the bow that is not well blended to the surrounding area. Recommendation; consult a marine FRP technician concerning repainting the area to better match the hull to improve the appearance of the vessel.

Moisture/Delamination:

All moisture meter readings on hull sides and surrounding thru hull fittings were relatively dry with normal comparative moisture meter readings.

Stem:

Solid, no cracks on external inspection. Moisture readings relatively Dry.

Rub rail:

Rub rail is teak

TRANSOM

Transom type:

Reverse closed transom, with power lift swim platform.

Moisture/Delamination:

All moisture meter readings on transom and surrounding thru hull fittings were relatively dry with normal comparative moisture meter readings. No Delamination discovered when randomly testing with percussion hammer.

Transom cosmetics:



The paint on the transom shows signs of deterioration. Recommendation; repaint the transom to improve the appearance of the vessel.

Swim Platform/Step:



Powered lifting swim platform. Functional.

Swim/Boarding ladder:

Stainless steel folding ladder secured to the swim platform.

Davit system:



Dinghy swing davits system mounted on the transom. Bolts mounting the davit arms to the vessel showed signs of water leaking into the lazaret . Recommendation; remove the davits, clean old sealant from the mounting area, reinstall davit arms using quality marine sealant.

- Outboard motor mount:** Bracket for small outboard mounted on transom railing.
- Transom thru hull fittings:** Molded in deck drains and stainless steel exhaust outlet.

HULL BOTTOM

- Construction material:** Molded fiberglass.
- Bottom paint:** Anti-fouling bottom paint in good condition.
- Stress cracks:** None sighted.
- Moisture/Delamination:** Moisture meter readings not taken since the type of bottom paint used would provide false high moisture readings. Random percussion hammer testing showed no apparent evidence of any delamination on hull bottom.
- Grounding damage:** None noted.
- Transducers:** Transducer for depth is adequately sealed and bonded to the hull.
- Thru Hull fittings:** Mushroom type bronze fittings for all below water line sea cock locations. Well secured to hull bottom.

KEEL

- Keel type:** Beaver tail bulb keel.
- Keel condition:**



Keel is well secured and well faired into hull. No cracks or separation sighted at hull to keel joint.

PROPELLER(S)/SHAFT(S) / STRUT(S)

- Prop(s) description:** Standard bronze fixed three blade prop. Prop is in excellent condition. No visual damage to prop blades.
- Shaft size / material:** Shaft size is 1-1/8" and made of Stainless steel.
- Strut(s):** Single bronze P-Strut. Strut appears to be in line and is well secured to the hull bottom.
- Cutlass (shaft) bearing(s):** Good condition. No play found in cutlass bearing.

RUDDER(S)

Rudder type/condition:



Moisture/Delamination: Fiberglass. Spade. Rudder showed no signs of delamination based on testing with percussion hammer.

Rudder alignment/swing: Full rudder swing to both port and starboard shows equal amount of travel.

ANODES

Shaft: Collar anode on shafts-Serviceable and secure. No deterioration sighted.

INTERIOR HULL & STRUCTURAL INSPECTION

HULL INTERIOR & STRUCTURAL COMPONENTS

Hull to deck joint: No leaks thru any part of hull to deck joint area sighted.

Bilge(s): Clean but with some standing clean water. ----- Keep bilge areas as clean and dry as possible by identifying all sources of bilge water and eliminating the source of water intrusion if possible as soon as it is discovered. Some water will always be in bilge area due to shaft log unless a positive shaft seal is installed then bilge should remain dry.

Keel bolts: Visually sound, no corrosion sighted, no loose bolts. Hammer test does not appear to indicate internal keel bolt corrosion.

Stringers: Hull stiffness provided by FRP grid structure most of which is under teak/FRP sole as well as a heavy grid system in the area of the keel/bilge. No separation, cracks or splitting sighted in keel/bilge areas or when inspecting transducers. Additional stringers support in engine compartment and stringers are well glassed into hull. Complete inspection not possible due to limited access. Appears serviceable where sighted.

Bulkheads: Athwartships reinforcement enhanced by 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.

Inside of transom: Reinforced. Secure-no cracks or separation sighted.

AFT BILGE THRU HULL FITTINGS

Sea valves: Bronze seacock ball valves installed, Sea valves sighted are used for: Head raw water flush intake. Waste holding tank discharge.

Sea valve condition: Sea valves are all functional.

Sea valves piping: Marine rubber covered reinforced hose. Sanitation hose.

ENGINE BILGE THRU HULL FITTINGS

Sea valves: Bronze seacock ball valves installed, Sea valves sighted are used for: Engine raw water intake.

Sea valve condition: Sea valve is functional.

Sea valves piping: Marine rubber covered reinforced hose.

Sea strainers: Internal strainer installed for engine raw water.

GALLEY BILGE THRU HULL FITTINGS

Sea valves:



Bronze seacock ball valves installed for the galley sink drain. Valve was difficult to operate. Recommendation; Exercise all ball valves frequently to ensure proper operation.

Sea valves piping:

Marine rubber covered reinforced hose.

HEAD BILGE THRU HULL FITTINGS

Sea valves:

Bronze seacock ball valves installed for head sink drain. Valve was difficult to operate. Recommendation ; Exercise all ball valves frequently to ensure proper operation.

Sea valves piping:



Marine rubber covered reinforced hose. The head sink drain hose shows age cracks and there is standing fresh water around the base of the thru hull. Recommendation; determine the source of the standing water and make repairs to prevent any water from accumulating in this area. Replace the sink discharge hose with marine grade hose.

FORWARD BILGE THRU HULL FITTINGS

Sea valves:

Bronze seacock ball valves installed for forward sink drain.

Sea valve condition:

Sea valve is functional.

Sea valves piping:

Marine rubber covered reinforced hose.

TOP DECK & SUPERSTRUCTURE

MAIN DECK & FITTINGS

Deck Surface:

Molded, cored fiberglass deck and side deck construction (core not sampled).

Moisture/Delamination:

No moisture meter readings taken due to rain/wet top deck. No Delamination discovered when randomly testing with percussion hammer.

Anchor platform:

Stainless steel with anchor roller. Well secured-no cracks sighted.

Anchor/chain locker:

Yes accessed from top deck with hatch lock. Functional.

Windlass:

Lofrans Project 1000.

Bow pulpit/rail:



Stainless steel bow railing. Some stress cracking of the deck around base of port rear foot pad on the bow railing. Recommendation; have the deck repaired by a marine FRP technician and manufacture new backing pads that better form to the underside shape of the deck and replace the backing pads currently used to attach the bow railing to the deck.

Stanchions/side rail(s):

Stainless steel, well secured.

Lifeline(s):

Double lines vinyl covered in good condition and well secured.

Toe rail(s):

Teak toe rail, well secured.

Deck hatches:

Yes, well secured, seals in good condition.

Scuppers/deck drain(s):

Decks drain directly overboard.

Boarding gate:

Port and starboard sides have boarding gates.

Cleats & fairleads:

Horn cleats are all well secured to deck and side deck and are functional.

Fill Pipes:

All fill pipes on top deck are properly marked as to purpose/use per ABYC recommendations.

Ventilation:



Stainless steel Dorade box ventilation.

Joinery stress:

Some minor gel coat stress cracks sighted on deck which is fairly typical for this age vessel.

Grab rail(s):

Top sides of cabin top, grab rails are teak and well secured.

COCKPIT / AFT DECK

Cockpit area:

Fiberglass non skid.

Cockpit & Helm seating

Padded cockpit vinyl seat cushions available and are in very good condition. No holes or tears sighted.

Sole:

FRP (fiber reinforced plastic) with molded in non skid.

Moisture/Delamination:

No moisture meter readings taken due to rain/wet bridge deck cockpit. No delamination was found when using a phenolic percussion hammer.

Scuppers/deck drain(s):

Yes. Drains are clear, hoses secure. Drains thru transom.

Canvas:

Bimini with stainless steel frame support. New Condition.

Cockpit equipment:

Pedestal mounted teak fold up table.

Cabin entrance:

Teak hatch boards for companionway entrance with lock. Teak in excellent condition.

STANDING RIGGING

MAST(S) & BOOM(S)

Main mast:	Aluminum.
Mast track:	Mast sail track appears serviceable.
Main mast step:	Keel stepped mast. Deck pass thru and mast boot is in good condition.
Mast deck pass thru:	White anodized aluminum- Well secured.
Main spreaders:	Double spreaders are Aluminum blade type.
Masthead fittings:	Anchor light, VHF antenna, Wind speed anemometer, Windex with tacking tabs.
Gooseneck(s):	



Aluminum - Well secured and no signs of abnormal wear.
Extruded aluminum in good condition.
Sparcraft carbon fiber boom vang.

Boom(s):
Boom Vang:
Mizzen mast:



STAYS & SHROUDS

Material & Condition:	Dyform stainless steel performance rigging, Split backstay type. Secure and serviceable. Hydraulic manual pump backstay adjuster. Appears serviceable. No hydraulic leaks sighted.
Ends:	Swaged-Stainless steel, Good condition-No corrosion or bent or damaged swage fittings.
Turnbuckles:	Stainless steel open barrel design.
Chain plates:	



Chain plates appear well secured to deck, and bulkheads for portions that were visible.

RUNNING RIGGING

FORESAIL FURLING GEAR

Furling type:	Harken, with single furler line. Functional.
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HALYARDS / SHEETS

All halyards:	All halyards sighted are colored yacht braid and in good condition. No frayed or worn lines sighted.
Main sheeting:	Mid boom with flat bar traveler and car on cabin top. Main sheet in good condition. No frayed or severely worn areas as sighted.
Head sail(s) sheets:	Yacht braid, Head sail sheet in good condition. No frayed or severely worn areas as sighted.

WINCHES

COCKPIT:	The following winches were sighted on both sides of the cockpit:
Type / Condition:	Two, Harken size 53 Two speed, self tailing. Winches spin free, appear to be adequately lubed /serviced.
CABIN TOP:	The following winches were sighted on the cabin top:
Type / Condition:	One, Harken, #40 Electric powered, Two speed, self tailing. Winches spin free, appear to be adequately lubed /serviced.
Winch handles:	Sighted aboard and appear serviceable.

OTHER SAIL HANDLING

Traveler:	Harken, Blocks and track appear serviceable and well secured.
Running lines:	All running rigging lines lead back to cockpit area.
Backstay adjuster:	Hydraulic pump - appears serviceable. No hydraulic leaks sighted.
Blocks:	Fully functional and well secured to deck.
Genoa Sailtracks / Cars:	Securely mounted on both side decks.
Rope clutches & cam cleats:	Rope clutches located on both sides of cabin top. Fully functional.
Main Reefing:	Reefing line led back to cockpit.
Sail flaking:	Lazy Jack flaking system.
Battens:	Not removed from pockets.
Canvas cover(s):	Mainsail cover.

SAILS INVENTORY

MAINSAIL(S)

Type of sail(s):	Main is fully battened.
Sail location/Condition:	Sail raised for inspection. Appears in good condition, no holes or split seams sighted and head, tack, clew and grommets intact.

FORESAIL(S)

Type of sail(s):	Roller furling genoa.
Sail location/Condition:	Sail raised for inspection. Appears in good condition, no holes or split seams sighted and head, tack, clew and grommets intact.

HELM & NAVIGATION ELECTRONICS

NAVIGATION ELECTRONICS

Helm station:	Wheel pedestal helm in open cockpit.
Compass(es):	Mounted at pedestal instrument pod:
VHF radio(s):	Mounted at navigation table: President.

Autopilot(s):



Mounted at pedestal instrument pod: Raymarine ST 6000. Powers up.

Depth sounder(s):



Mounted at pedestal instrument pod: Raymarine. Powers up.

Wind Instruments:



Mounted at pedestal instrument pod: Raymarine. Powers up.

Multi-function instrument(s):



Mounted at pedestal instrument pod: Raymarine C 90. with radar. Powers up. Antenna mounted on aluminum pole at transom.

Radar:

OTHER ELECTRONICS AND CONTROLS

Bilge pump switches:

One bilge pump switch-- powers up bilge pump.

Fuel tank monitor:

Yes at Nav station.

Gasoline/Propane Vapor detector:



Xintex model Tested OK.

Rudder position indicator(s):

With auto pilot. Functional.

Windlass control:

Plug in hand held switch in cockpit and deck mounted switches in bow are

Wheel lock: functional for raising and lowering the anchor.
Pedestal mounted wheel lock appears to hold wheel fairly firm in place when lock is secured.

ENGINE INSTRUMENTS AND CONTROLS

Throttle and shift controls: Pedestal mounted single lever for throttle and shift.
Engine alarm/shutdown: Engine Alarm, Alarm tested and found functional.
Engine status: All engine instruments are OEM. (Original Equipment Manufacturer)
Hour meter(s):



1386.2.hrs.

Oil pressure:



OEM.

Tachometer(s):



OEM.

Temperature:



OEM.

Fuel:



OEM.

CABIN INTERIOR APPOINTMENTS

MAIN SALON

Style: Contemporary.
Cabin steps: Teak engine cover cabin entrance steps.
Navigation station: Table with storage under top.
Sole:



Bulkheads/Trim: Teak & holly cabin sole installed and is in good condition.
Headliner: Teak bulkheads with teak trim panels.
Engine access: Molded plastic. Clean and well fastened.
Light fixtures: Inside cabin-Lift companionway steps to access front of engine.
Seating: 12 volt cabin lights throughout the vessel.
Overall interior condition: Full cushions, cloth covered.
Interior is in good condition.

GALLEY

Location: Port side, with Formica type surface counter top, and teak trim.
Sink(s): Twin stainless steel deep well.
Water system: Pressurized hot and cold.
Stove: Force10 three burner, LPG, Burners tested and are functional.
Refrigeration:



Refrigerated compartment serviced by a Adler Barbour air cooled compressor,
Powers up OK.

Microwave oven:



Unit is built in and well secured. Powers up OK and appears functional.

BERTHS / STATEROOMS

Berths: Two.
Master stateroom: In V-berth area.
Guest stateroom: In Aft cabin area.

HEAD(S)

Number/Location: One head on Starboard side.
Toilet(s):



Wilcox Crittenden, Manual flush pump, Appeared functional when tested. No leaks sighted.

Raw water supply: Raw water intake thru bronze seacock.
Sink: Solid surface.
Shower(s): Handheld, pull out shower fixture.
Head lighting: Head lighting is all functional.
Shower sump tank/ pump: Shower drains into bilge area. Sump tank removed to allow access to bilge area.

ELECTRICAL SYSTEMS

D.C. ELECTRICAL SYSTEMS

D.C. Voltage system: 12 Volt system.
Battery Set One:



Two sized 8 D lead acid batteries for the house supply and a single sized group 27 lead acid battery for the engine start. Batteries are well secured in boxes with straps or hold down brackets. Cables are properly color coded and positive terminals are properly covered with boots or box covers.

Battery selector switch: Yes Rotary switch is functional.
Charging system: Engine mounted alternator and a Freedom SW 2012 inverter/ charger.
Distribution panel: Yes located in main salon.

Battery monitor:



Switched analog gauge to test battery condition.

D.C. usage meter(s):

Analog type.

Breaker(s)/fuse(s):

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

D.C. wiring:

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

DC wiring spark prevention:



Rotary battery switch for the inverter supply does not have protection on the terminals. ABYC E 11.5.2.8 states; continuously energized parts, such as positive battery terminals and both ends of all wires connected thereto, shall be physically protected to prevent accidental short circuits. Protection shall cover all energized surfaces. Recommendation; cover battery terminals on the back side of the rotary switch.

DC Electrical ground:

DC electrical system is properly tied into vessels electrical ground system using the engine as a common ground.

A.C. ELECTRICAL SYSTEMS

A.C. Voltage system:

Twin Shore Power: located on Starboard side of cockpit 30 Amp - 120 Volt system.

Shore power cord(s):

No shore power cords were sighted.

Shore power breaker:

No ELCI (Electrical Leakage Circuit Interrupter) is installed for AC Power leaks to ground that would go outside of the boat hull for in water swimmer protection. Since July 31, 2010 ABYC E-11.11 has recommended that an ELCI be properly installed on new vessels. RECOMMENDATION: Recommend an ELCI device be installed for safety and to protect all on board circuits with GFC protection and to comply with current ABYC recommendations. **The shore power inlet is over 10' from the AC power distribution panel and is lacking a separate shore power breaker. RECOMMENDATION: ABYC E-11 currently recommends that any shore power inlet be within 10' of the main shore power disconnect circuit breaker or additional circuit breaker/fuses be provided. Recommend compliance with this recommendation.**

Distribution panel(s):

Stand alone panel in main salon.

Branch breakers:

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

Reverse polarity indicator:

Yes- Not tested. No AC Power to vessel.---- Test for proper polarity after AC Power is provided.

GFCI protection:

GFCI protection is provided for galley and head and other wet locations. Test regularly to be sure functional.

A.C. meter(s):

Analog type.

Other A.C.:



Outlet in Vee berth when tested showed a Hot and Neutral reversed condition. Recommendation; remove the receptacle and ensure that is wired correctly , repair as necessary and reinstall.

INVERTER/CONVERTER

Type: Charger / Inverter.
Manufacturer: Freedom SW 2012.
Location: Under aft bunk.
Input (volts) 12 Volts.
Output 110 volts.

ENGINE COMPARTMENT / PROPULSION SYSTEM

INBOARD ENGINE

No./Type/Cylinders: Inboard Diesel, Three cylinders, Naturally aspirated.
Make / Model:



Serial no(s): Yanmar 4JH3E.
E 22044.
Engine(s) hours: 1385.3.
Hoses and clamps: Good condition-No cracks sighted.
Belts and pulleys: Belts condition are serviceable. No cracks or splits sighted. Pulleys/belts appear to be in line.
Cooling system(s): Fresh water / heat exchanger cooled.
Oil level and condition: Clean & full on dipstick. Check oil levels frequently.
Fuel supply lines: USCG A1 flex.
Fuel filter(s): Engine mounted and a remote mounted Racor filter.
Drip pad(s) available: Pads in place to catch fluid drippings.
Engine mounts and beds: Engine mounts appear to be well secured to the support stringers.
Engine(s) operated: Yes on sea trial. See sea trial section for details.

EXHAUST SYSTEM

Discharge location(s): Transom.
Piping/Clamps: Fiberglass and flex hose, Securely double clamped as required.
Exhaust manifold: No cracks or water tracks sighted. Appears to be in good condition as sighted.
Muffler(s): Waterlift.

TRANSMISSION(S)

Manufacturer/Model: Kanzaki, Mechanical gear box. KBW 20-1.
Serial no(s): 9174.
Gear ratio: 2.62.
Fluid level and condition: ATF fluid was clean and full.
Stuffing box(es): Packless shaft seal system. Bellows and carbon collar is secure and appears functional. *Check after launch for any leaks. This PSS shaft seal should always be totally dry. Check frequently.*

STEERING SYSTEM

STEERING SYSTEM

Type: Whitlock.
Mounting(s): Secure.
Rudder stock(s): Visually sound.
Packing glands:



Appears well sealed- No leaks sighted.

Wheel brake: Wheel brake is available and holds wheel properly when tested.
Emergency tiller: Emergency tiller sighted and appears functional. *NOTE: Be sure to familiarize yourself with the installation and use of the emergency tiller by putting tiller in place while the vessel is underway.*

TANKAGE / PLUMBING

FUEL TANK(S)

No & Location: One tank located below Cockpit storage locker.
Tank type & capacity: Aluminum. The tank capacity is reportedly 50 gallons.
Manufacturer's label(s): Tank manufacturer label was not sighted on fuel tank but appears to meet all USCG requirements.
Fuel supply lines: USCG A1 flex hose from tank to fuel pump.
Diesel return line(s): Engine uses grade USCG Type A1 return line. No cracks, soft spots or splitting sighted. Serviceable.
Shut off valve(s): At filter.
Fill line(s) located: Side deck.
Fill pipe & condition: USCG Type A2 flex hose.
Fuel fill grounded: Fuel fill is properly grounded to fuel tank.
Tank(s) grounded: Yes- tank is properly grounded.
Inspection/cleaning access: Limited.
Tank(s) condition: Visually good (where accessible)

FRESH WATER TANK(S)

No & locations of tanks: Two tanks.
Tank(s) type & capacity: One aluminum tank under bench in salon and a plastic tank located under the

forward Vee berth.
Tank(s) secured: Yes.
Inspection/cleaning access: Good.
Tank(s) condition: Visually good (where accessible)
Accumulator tank(s): Located in lazarette.
Water pump(s): 12 Volt.
Tank Monitor System: Yes, appears functional.
Supply lines: Grey plastic piping for all water connections. No leaks sighted for areas open to inspection.
Filling line(s) located: Side decks clearly marked for water.

HOLDING TANK(S) - BLACK WATER

No & Location of tanks: One holding tank located under cabin seating area.
Marine Sanitation Device: Certification Type: MSD U.S.C.G. Type III. (Holding tank). Waste tank is connected to deck waste fitting for pump out.
Tank(s) type & capacity: Plastic with a total capacity of reportedly 20 gallons.
Tank(s) secured: Yes.
Tank(s) condition: Visually good (where accessible)
Inspection/cleaning access: Good.
Lines: Sanitation hose.
Discharge line(s) located: Deck pump out or overboard discharge thru an opened seacock.
Y valve(s) installed: Yes.
Vent(s) location(s): Charcoal filter installed in vent line.
Macerator pump(s): 12V powers up.

WATER HEATER

Tank location: Lazarrett.
Manufacturer/capacity: Tank was built by: Atlantic Marine Products.
How powered: 110V with heat exchanger coil.
Water heater test: Not tested. Water tank was bypassed (not being used)
Pressure relief valve(s): Yes- Drains into bilge area.
Heat exchanger hoses: Heat exchanger hoses appear to be in good condition where sighted. No cracks or leaks sighted.
Outer tank material: Stainless steel.
Tank(s) secured: Yes, Tank is well secured to base.
Inspection/cleaning access: Good.

LPG (PROPANE) TANK(S)

No & location of tanks:



Secured: One tank inside transom dedicated LPG locker with proper ventilation overboard. Tank is properly secured to prevent upset or displacement that could place a strain on fuel distribution or appliance fittings per ABYC A-1 recommendations.
Tank type & OPD: Steel, Tank is properly fitted with the Overflow Protection Device (OPD)
Regulator(s): Yes-Appropriate LPG regulator.
Pressure gauge(s): Pressure gauge is installed and holds pressure when main gas valve is turned off indicating no leaks in the system. NOTE: *Always retest for leaks when removing or*

refilling LPG tank.

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.

Supply lines: Flex LPG type hose. Good condition where could be sighted.

Locker(s) vented: Yes, LPG locker opens to the atmosphere and also has a bottom vent that vents overboard.

Inspection/cleaning access: Good.

Warning label(s): Yes-proper LPG gas warning labels located at tank.

SAFETY EQUIPMENT

U.S.C.G. REQUIRED

Navigation lights: All Navigation running lights were tested and found fully operational.

Life Jackets(PFD's): USCG Type II, Over 5 sighted aboard.

Throwable type PFD's: USCG approved Horseshoe buoy.

Visual Distress Signals: 12 Ga Aerial, Signals are current.

Sound devices: Hand held air horn is available and was fully functional when tested.

USCG placards: Both USCG mandated placards (Oil & Garbage) are properly posted.

FIRE FIGHTING EQUIPMENT- U.S.C.G. Required

Dry Chemical Size I: Three.

BILGE PUMPS

ELECTRIC PUMPS: Two electric pumps.

MANUAL PUMPS: Gusher 10. Appears serviceable.

AUXILIARY SAFETY EQUIPMENT

Smoke detector(s): None sighted. ----- Since 2004, NFPA 302-12.3 has recommended RV tested or more recently marine tested Smoke Detection devices for all vessels 26 ft (8m) or more in length with accommodation spaces intended for sleeping and is installed and maintained according to the manufacturer' s instructions.

Carbon monoxide detectors: Carbon monoxide fume detectors were not sighted but have been recommended since 2001 by both ABYC and NFPA. RECOMMENDATION: Due to the number of carbon monoxide related deaths on boats, this surveyor highly recommends the installation of CO detection devices on all gasoline and diesel powered vessels to comply with ABYC A-24 and NFPA 302 recommendations. Detectors shall be located to monitor the atmosphere in the main cabin and each sleeping area Obtain suitable marine carbon monoxide detectors at a marine chandlery.

LPG/Gasoline detector: Yes Installed and tested OK.

GROUND TACKLE

Primary anchor: Rocna anchor.

AUXILIARY EQUIPMENT

MISCELLANEOUS EQUIPMENT & ACCESSORIES

Dock lines: Multiple assorted length dock lines sighted aboard vessel.

Fenders: Several fenders of various sizes sighted and appear serviceable.

SEA TRIAL RESULTS

SEA TRIAL DETAILS

Date & Time: September 1st 2021.

Vessel operated from/to: Upon the waters of the Atlantic Ocean of the coast of Bridgeport CT.

Attendees: Jack Mahoney and Allen Kesner.
Vessel operated by: Jack Mahoney.
Sea water temperature: 68f.
Ambient air temp: 72f.

SEA TRIAL DOCKSIDE OBSERVATIONS

Start Engine Hours: 13853.3.
Engine alarms: Alarms sounded when key was turned on.
Cranking: The engine started without excessive cranking.
Exhaust smoke: The engine exhaust smoke was minimal at dock side.
Cooling water: The cooling water exhaust appeared adequate and normal at dock side.
Instruments: The engine instruments all operated and within normal operating limits at idle. (See "Engine Instrument Readings" below.)
Stuffing Box/Log: The packless shaft seal system remained dry throughout the sea trial for both shafts.
Rudder packing glands: Remained dry.
Water heater test: Not Tested.

UNDERWAY TESTS / OBSERVATIONS

Shift/Throttle levers: The shift/ throttle operated normally/smoothly.
Instruments: The engine instruments all operated and within normal operating limits at various speeds and at maximum throttle during the sea trial. (See "Engine Instrument Readings" below.)
Transmissions: The transmissions operated normally/smoothly in both forward and reverse gears.
Vibrations: There were no excessive vibrations noted at any time during the sea trial run.
Exhaust smoke: The engine exhaust smoke was minimal and appeared normal throughout the sea trial.
Cooling water: The cooling water exhaust appeared adequate and normal during the sea trial. Engine temperature gauge also reflected a normal cooling temperature.
Compass: Compass operated properly and appeared to continually showed correct headings thru out the sea trial.
Rudder angle: The rudder angle indicator appeared to function properly showing the correct angle during all turning maneuvers.
Auto Pilot: Auto pilot was tested and found fully functional including port and starboard dodge tests.
Steering: The steering system operated normally/smoothly from stop to stop in wide sweeping turns.
Backdown: The back down test was satisfactory. Engine mounts secure & No unusual movement of the engine was sighted.
Engine shut down: Engine shut down properly using shut down button at engine panel.
Max Throttle: Manufacturer's recommended max RPM is 3650 - Engine reached 3550 RPM As measured with an ES Model 332 Electronic hand held laser tachometer.
Ending engine hours:



1386.2.

SEA TRIAL ENGINE INSTRUMENT READINGS

RPM: Main= IDLE: 650 CRUISE: 2800 WOT: 3550
WATER TEMP: Main= IDLE: 140 CRUISE: 160 WOT: 160

OIL PRESSURE:



SPEED at WOT: 3.8 kg.
The speed attained at Wide Open Throttle (WOT) is considered within the normal range.

SEA TRIAL ENGINE TEMPERATURE READINGS

Top of Risers: 110.
Exhaust manifold: 165.
Alternator(s): 125.
Water pump: 160.
Engine Temperature comments: An Ames infra red laser thermometer was used to obtain the temperature readings in this section.

CONDITION & VALUE REPORT SUMMARY

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. Possible vessel condition ratings are as follows:

- **EXCELLENT** - Essentially as new or bristol in appearance.
- **ABOVE AVERAGE** - Has had above average care with no obvious defects or limitations.
- **AVERAGE** - Ready for sale but needs some maintenance or repairs, updates or cleaning.
- **BELOW AVERAGE** - Needs significant maintenance, repair or service.

Estimated fair market value was determined by cross referencing data from Soldboats.com, BUC, ABOS, NADA, Powerboat Guide and other brokerage listings or local dealers. Adjustments are then made for condition or equipment as necessary. The fair market value is for the vessel in it's current condition prior to any repairs or maintenance.

Estimated replacement cost was determined using information obtained from BUC, ABOS or local dealer prices using the same or similar make and model with similar equipment options.

- **RATING OF VESSEL CONDITION.....ABOVE AVERAGE CONDITION**
- **ESTIMATED FAIR MARKET VALUE.....\$ 198,000.00.** The BUC Value Guide Pro 121st edition lists this boat between \$ 190,500.00 and \$ 209,500.00. Sold Boats . com had two recent sales recorded on similar Tartan 4100 vessels and they are as follows; A 2002 model that sold in November 2019 for \$ 170,000.00 and a 2002 model that sold in July 2019 for \$200,000.00. A search of listing shows three Tartan 4100s for sale. A 2001 Tartan 4100 in Ontario Canada for \$ 199,000.00, a 2002 Tartan 4100 in ME for \$ 215,000.00 and a 2006 Tartan 4100 in CT for \$ 269,000.00. Currently the used boat market is very strong and above average boats have sold at or above book values
- **ESTIMATED REPLACEMENT COST.....\$ 747,000.00 Per BUC value guide**
- **INTENDED USE OF VESSEL..... Pleasure-Atlantic coast line cruising**
- **SUITABILITY FOR INTENDED SERVICE: Vessel IS considered fit for it's intended use and upon correction of all listed Priority I recommendations.**

NOTE: 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.

CONDITION & VALUE REPORT SUMMARY

CLOSING STATEMENT ;

This report is submitted in confidence for the exclusive use of Jack Mahoney 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

Certification;

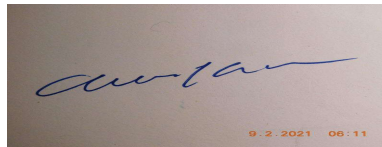
I certify that, to the best of my knowledge and belief:

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 that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated 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 should be considered as an entire document. No single section is meant to be used except as part of the whole.

This report is submitted without prejudice and for the benefit of whom it my concern. This report does not constitute a warranty, either expressed, or implied, nor does it warrant the future condition of the vessel. It is a statement of the condition of the vessel at the time of the survey only.

A True Digital Photo of my Signature



ATTENDING SURVEYOR: Allen Kesner
September 2nd 2021
Society of Accredited Marine Surveyors (sa)

INSPECTION RECOMMENDATIONS SUMMARY

PRIORITY I - SAFETY & REGULATORY RECOMMENDATIONS:

(MAY BE MANDATORY)

The items listed are required by state laws or federal laws and U.S.C.G. regulations or are considered by the attending surveyor to represent unsafe operating conditions. Recommend these items be corrected before next use of vessel.

PRIORITY II - MAINTENANCE & STANDARDS RELATED RECOMMENDATIONS:

(NOT NORMALLY MANDATORY)

These are important maintenance items sighted which in this firm's opinion should be performed. 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.

INTERIOR HULL & STRUCTURAL INSPECTION

HEAD BILGE THRU HULL FITTINGS

Sea valves piping:

Marine rubber covered reinforced hose. The head sink drain hose shows age cracks and there is standing fresh water around the base of the thru hull. Recommendation; determine the source of the standing water and make repairs to prevent any water from accumulating in this area. Replace the sink discharge hose with marine grade hose.

ELECTRICAL SYSTEMS

A.C. ELECTRICAL SYSTEMS

Shore power breaker:

No ELCI (Electrical Leakage Circuit Interrupter) is installed for AC Power leaks to ground that would go outside of the boat hull for in water swimmer protection. Since July 31, 2010 ABYC E-11.11 has recommended that an ELCI be properly installed on new vessels. RECOMMENDATION: Recommend an ELCI device be installed for safety and to protect all on board circuits with GFC protection and to comply with current ABYC recommendations. **The shore power inlet is over 10' from the AC power distribution panel and is lacking a separate shore power breaker. RECOMMENDATION: ABYC E-11 currently recommends that any shore power inlet be within 10' of the main shore power disconnect circuit breaker or additional circuit breaker/fuses be provided. Recommend compliance with this recommendation.**

SAFETY EQUIPMENT

AUXILIARY SAFETY EQUIPMENT

Carbon monoxide detectors:

Carbon monoxide fume detectors were not sighted but have been recommended since 2001 by both ABYC and NFPA. RECOMMENDATION: Due to the number of carbon monoxide related deaths on boats, this surveyor highly recommends the installation of CO detection devices on all gasoline and diesel powered vessels to comply with ABYC A-24 and NFPA 302 recommendations. Detectors shall be located to monitor the atmosphere in the main cabin and each sleeping area Obtain suitable marine carbon monoxide detectors at a marine chandlery.

OTHER OBSERVATIONS:

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.

EXTERIOR HULL & BOTTOM INSPECTION

HULL EXTERIOR-SIDES

Hull cosmetics:

Hull has been painted. Hull cosmetics are in good condition-minor nicks and scratches which are typical for a vessel of this age. There is a small circular repair area and some minor scratches on the port side hull near the bow that is not well blended to the surrounding area. Recommendation; consult a marine FRP technician concerning repainting the area to better match the hull to improve the appearance of the vessel.

TRANSOM

Transom cosmetics:

The paint on the transom shows signs of deterioration. Recommendation; repaint the transom to improve the appearance of the vessel.

Davit system:

Dinghy swing davits system mounted on the transom. Bolts mounting the davit arms to the vessel showed signs of water leaking into the lazaret. Recommendation; remove the davits, clean old sealant from the mounting area, reinstall davit arms using quality marine sealant.

INTERIOR HULL & STRUCTURAL INSPECTION

HULL INTERIOR & STRUCTURAL COMPONENTS

Bilge(s):

Clean but with some standing clean water. ----- Keep bilge areas as clean and dry as possible by identifying all sources of bilge water and eliminating the source of water intrusion if possible as soon as it is discovered. Some water will always be in bilge area due to shaft log unless a positive shaft seal is installed then bilge should remain dry.

GALLEY BILGE THRU HULL FITTINGS

Sea valves:

Bronze seacock ball valves installed for the galley sink drain. Valve was difficult to operate. Recommendation; Exercise all ball valves frequently to ensure proper operation.

HEAD BILGE THRU HULL FITTINGS

Sea valves:

Bronze seacock ball valves installed for head sink drain. Valve was difficult to operate. Recommendation ; Exercise all ball valves frequently to ensure proper operation.

TOP DECK & SUPERSTRUCTURE

MAIN DECK & FITTINGS

Bow pulpit/rail:

Stainless steel bow railing. Some stress cracking of the deck around base of port rear foot pad on the bow railing. Recommendation; have the deck repaired by a marine FRP technician and manufacture new backing pads that better form to the underside shape of the deck and replace the backing pads currently used to attach the bow railing to the deck.

ELECTRICAL SYSTEMS

D.C. ELECTRICAL SYSTEMS

DC wiring spark prevention:

Rotary battery switch for the inverter supply does not have protection on the terminals. ABYC E 11.5.2.8 states; continuously energized parts, such as positive battery terminals and both ends of all wires connected

thereto, shall be physically protected to prevent accidental short circuits. Protection shall cover all energized surfaces. Recommendation; cover battery terminals on the back side of the rotary switch.

A.C. ELECTRICAL SYSTEMS

Reverse polarity indicator:

Yes- Not tested. No AC Power to vessel.---- Test for proper polarity after AC Power is provided.

Other A.C.:

Outlet in Vee berth when tested showed a Hot and Neutral reversed condition. Recommendation; remove the receptacle and ensure that is wired correctly , repair as necessary and reinstall.

SAFETY EQUIPMENT

AUXILIARY SAFETY EQUIPMENT

Smoke detector(s):

None sighted. ----- Since 2004, NFPA 302-12.3 has recommended RV tested or more recently marine tested Smoke Detection devices for all vessels 26 ft (8m) or more in length with accommodation spaces intended for sleeping and is installed and maintained according to the manufacturer' s instructions.