

# Christian & Company

MARINE SURVEYORS

## STANDARD SURVEY

Client: Removed for privacy

Date of report: November 4, 2021

Our file #: 21 – 20284web

Current owner: Removed for privacy

This inspection was performed upon the request of the client listed above on November 2, 2021 while the vessel was hauled at Shelter Island Boatyard and afloat in Shelter Island Marina, San Diego, CA and the owners, clients and undersigned surveyor attended.

### Scope of Services

The vessel was examined by surveyor and/or surveyor's agents from all accessible areas of the interior without removal of secured panels, destructive testing or disassembly. The hull bottom laminate, plating and/or planking was examined by percussion sounding and visual inspection only. No moisture content readings were taken, and no destructive testing was performed. The surveyor may have used a moisture meter if/when they deemed it useful or if specifically requested by client. Exterior hardware was visually examined for damage and drive components were tested by sight only. The inspection of engines, generators, machinery and related mechanical systems is not within the scope of this survey. Only a brief cursory inspection of the machinery was conducted, and no opinion of their overall condition was formed. Client shall retain the services of a qualified mechanic, engine surveyor or other expert to inspect such engine, generators, machinery and related mechanical systems. Tankage was inspected from visible surfaces only and no opinion was rendered as to their overall condition. On sailing vessels, the rig was not inspected aloft, nor were sails inspected unless they were visible during a sea trial. Client shall retain the services of a qualified rig surveyor or other expert to inspect sails, rigging and equipment. The electrical system was visually inspected where accessible, and electronic and electrical components powered only with permission of or in the presence of the vessel's owner or agent. No in-depth testing or examination of the electrical system or electric schematic was conducted. Specifications were taken from published sources, measurements if made, should be considered approximate. The recommendations are based on federal and state regulations, industry standards, and/or surveyor's own personal experience. The market value is based on research of available new/used comparable vessels, with consideration of geographic area where the vessel is located and reported sale prices where available. The surveyor will refer to and may reference CFRs, NFPA and ABYC recommendations (and/or other services) as the surveyor deems reasonable but not all regulations and recommendations will be applied nor should this report be relied upon as full compliance with the aforementioned entities. Every vessel inspection is different, and limitations may alter the scope of this survey, some limitations will be implied in the text of the report and some will be explicitly detailed. A Marine Survey Agreement which is reviewed and signed by the client details the terms governing this marine survey.

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## VESSEL DESCRIPTION

Builder:	Bertram	Reg. #:	Removed for privacy
Model/type:	Bertram 28 / flybridge	HIN:	Removed for privacy
Year:	1973	Engines:	Two Pleasurecraft Marine
Length:	30'	Name:	"Inevitable"
Draft:	2' 5"	Hailing port:	Phoenix, AZ
Beam:	11'	Weight:	9,000 lb. (travel lift's scale)
		Displacement:	unknown – 12,000 lb. likely

## HULL & STRUCTURE

Keel & bottom: Molded fiberglass construction, unknown core, lifting strakes, hard chines, black anti-fouling paint

Topsides & transom: Molded fiberglass construction, unknown core, white with blue boot stripe

Decks & superstructure: Molded fiberglass construction, unknown core, white with blue stripes about superstructure

Deck hardware: Set of stern cleats, stainless steel bow rail, set of side cleats, bow cleat and chock, foredeck hatch

Longitudinals/stringers: Fiberglass encased stringers, likely wood core

Athwartships/bulkheads/frames: Plywood bulkheads

Layout/interior components: Flybridge sportfisher, cockpit aft, engines below forward raised cockpit deck with three deck hatch accesses, ladder to port flybridge, flybridge has helm, hinged door on centerline between cockpit and cabin, head to port and dinette to starboard aft in cabin, galley area forward of head, helm to starboard forward, v-berth forward

Bilge: Clean and dry

**Comments:** The vessel was inspected while hauled and afloat. The hull bottom was visually inspected and randomly sounded. The hull bottom is in satisfactory structural condition. The current owner reports that the bottom paint is 3 – 4 years old, it exhibited satisfactory coverage and no significant marine growth, however, the bottom had been cleaned three days prior to the survey. The antifouling paint was thin on the transom. The hull sides and transom were visually inspected and randomly sounded. The hull sides and transom are in satisfactory structural and cosmetic condition. There are several 3" circular color differences on both hull sides, the cause is beyond the scope of this survey but they may be prior repairs. There is miscellaneous rub rail damage, more significantly forward. There are groups of arching stress cracks on both hull sides forward, more significantly to port, and there were audible differences on both hull sides forward. We inspected the interior of the hull in these areas, longitudinal reinforcements stop before the bow but no secondary bonds are compromised. The deck and

superstructure were visually inspected and randomly sounded. The deck and superstructure are in satisfactory structural and satisfactory – marginal cosmetic condition. There are numerous stress cracks concentrated about the edge of the deck on the transom and both sides. There are numerous small cracks / crazing. The gelcoat is thin in many locations on the deck and superstructure, revealing the darker laminate below. There are numerous holes about the deck and superstructure remaining from where components have been removed. The deck hardware including safety rails, mooring devices and hatches was visually inspected and most hatches and the port lights were opened and closed. Overall the deck hardware is in satisfactory condition. The engine hatches have no means to secure them when lifted. There is tape on the exterior of the hinge for the port windshield vent. Many of the fasteners are missing for the cockpit deck hatch, reportedly a result of the replacement of the fuel tank. There is corrosion on the windshield and window assemblies, primarily where hardware is fastened. The bow rail is loose at several junctions. There is fiberglass damage about the bow / trawling eye. The structural reinforcements including the stringers and bulkheads were visually inspected and randomly sounded. The structural reinforcements appear to be in “as-built” condition. The bilge is clean and dry. There is a waterline in the cabin bilge visible on the plastic water tank. The interior cabin spaces are neat, clean and orderly. The interior of the vessel is in satisfactory cosmetic condition. There are water stains visible on the exterior portion of the head enclosure, visible through the port aft window. The carpet and pad was wet aft in the cabin. This survey is not a mould inspection. The condition of the coring, in the hull, deck, and elsewhere as applicable, is beyond the scope of this inspection.

**Summary: Satisfactory**

**MACHINE SYSTEMS**

Main engines: Two Pleasurecraft Marine model 50-570-05, manufactured 5-17

Engine application: Gasoline, eight cylinders, freshwater cooled, inboard

Serial numbers: S – 770814, P – 770815

Transmissions: Hurth tag to port, illegible, no visible tag to starboard

External/peripherals: Suitable application, satisfactory installation

Engine controls: Push / pull cables, double lever controls, flybridge and lower stations

Exhaust systems: Wet system, flexible hoses, fiberglass mufflers, transom discharges

Propulsion gear/shaft logs: PYI dripless shaft seals, starboard 18R15 and port 18L17 three blade propellers (reportedly Nibral), one bronze strut per side, stainless steel propeller shafts (diameter not measured)

Steering system/rudder ports: Bronze packing glands, hydraulic system, single actuator, tie bar, stainless steel rudders, flybridge and lower helm stations

Ventilation: One engine room blower

Generator: None

Through hulls & components: Bronze through hulls, bronze ball valves, not bonded

Location of through hulls as visible: See chart

Seawater systems: Reinforced hoses, mostly double clamped connections

Bilge pumps: Rulemate 2000 aft, Rulemate 1500 forward

**Comments:** The engines and transmissions were visually inspected and tested during a sea trial. This survey is not a mechanical survey, please consult with a qualified technician for greater detail as to the condition of the machine systems. A mechanic was aboard at the beginning of the survey, he read engine hours and they were reported to be 541 to starboard and 539 to port. There is no engine hour meter aboard. There are no functional audible engine alarms. The external surfaces and peripheral components of the engines and transmissions appear good. The current owner report that the engines were installed new in 2017. The flybridge engine instruments are “foggy”. Wide open throttle was 5,100 rpms on all four tachometers. Top speed averaged 28.4 knots. The trim tabs are not functional. The engine controls functioned normally. The exhaust system is properly arranged and installed. The propulsion components including the propellers, propeller shafts, struts and shaft seals were visually inspected. The propellers were percussion tested and spun with a fixed object adjacent to the blades. The propeller shafts were manipulated in the struts and observed while underway. Overall the propulsion components are in marginal condition. The propellers are different sizes, reportedly due to the gear ratio in the transmissions being different. There is corrosion visible on both propellers, more significant to port. The propeller nuts are eroded. The port strut has a different type of fastener with washers at the inboard aft corner. The current owner stated that the strut has had this condition since the family purchased the vessel in 1980. The steering system was visually inspected and test operated. The steering system functioned normally. The engine room blower was energized. The through hulls were visually inspected and the valves were manipulated. The through hulls are in satisfactory condition. The seawater systems were visually inspected and most components were tested. Overall, the seawater systems are satisfactory. The electric bilge pumps were not tested.

**Summary: Satisfactory – Good**

### **TANKAGE**

Fuel: 210 gallon reported capacity in one aluminum tank in cockpit bilge, tank reportedly replaced in 2016

Fill & vent: Deck fill fitting to starboard in cockpit labeled “gas”, fill and vent hoses not seen

Feed: USCG type A1-15 flexible hoses, valves on tank

Water: Deck fill fitting to port amidships labeled “water”, aluminum tank aft in cabin bilge and plastic tank forward, unknown capacity

Holding: Plastic tank to port in engine room, deck fitting to port aft of amidships labeled “waste”, unknown capacity

**Comments:** The fuel system including the tank, fill, vent, and feed lines was visually inspected as installed. The fuel tank was reportedly replaced in 2016 and it appears to have been replaced. The owner reports it was replaced in San Diego, likely by American Marine Tanks and it has a green coating. Where visible the fuel system components are in good condition. The port hull side tank vent fitting is corroded. The condition and age of the fuel (and water) and the integrity of the tanks (fuel, water, holding) and hoses is beyond the scope of this survey. Please consider filling all tanks for a simple, practical test of their integrity. The water pressure system functioned normally. The galley sink spigot valve is reversed from how it is marked (hot and cold). There were no quick disconnect hoses aboard and the freshwater and seawater washdowns were not tested. A hose is disconnected from a through hull to port aft, this reportedly serves the seawater washdown pump. The holding tank vent filter is in the port aft bilge, it is not connected to a hull side fitting. No hose is attached to the shower in the head. Accuracy of tank level gauges is beyond the scope of this survey.

**Summary: Satisfactory**

## ELECTRICAL SYSTEMS

AC system: 30A / 125V shore power inlet to starboard in cockpit, shore power cord 120 volt system

DC system: Powerstride 8A31DTM sealed batteries to starboard and port in engine room (in secure and covered plastic boxes), West Marine part no. 15020274 battery between engines, 12 volt system, three battery switches below step into cabin

Wiring: Multi-strand wires

Circuit protection: AC and DC panels aft in cabin (on dinette seat) include main and branch AC circuit breakers, DC circuit breakers

**Comments:** The electrical system including the shore power cord, shore power inlet, batteries, wiring, circuitry components and circuit protection equipment was visually inspected and most components were tested. Overall the electrical system is in satisfactory condition. The condition and age of the batteries is beyond the scope of this inspection. The current owner reports the batteries are vintage 2017. There is a large DC fuse unsecured forward of the port engine; the current owner reports it serves the inverter. The inverter is in the locker in the head and it is not secure. The inverter was not tested. A GFCI outlet located below the dinette to starboard in the cabin was tripped and would not reset, there was no power to this outlet or the starboard outlet in the forward cabin. We could not get a response when testing the vhf radio on channel 27 or 16. The windlass is inoperative and the plastic case is damaged. The refrigerator is “iced over”.

**Summary: Satisfactory**

## **SAFETY AND LIFE SAVING**

Portable fire extinguishers: Type B:C size I (2005), non USCG approved unit on flybridge

Fixed fire system: None

Flotation devices: Numerous type II, one type IV cushion

Horn/distress flares: Electric horn, flares (not inspected)

Navigational/anchor lights: Separate side lights, mast head / steaming light, stern light

Anchor & ground tackle: Fortress FX-11 anchor, chain and line rode

Other equipment: ACR Aqua Link personal locator beacon

**Comments:** Safety equipment for firefighting protection appears satisfactory however the extinguishers have not been inspected, tagged and maintained per N.F.P.A. recommendations. Personal flotation devices are suitable for near coastal use. Current distress signal flares are not aboard. The horn is inoperative. There are no CO, smoke or gasoline vapor alarms aboard. We did not see all legally required carriage items, including an oil placard or waste management plan. The navigational lights are properly arranged, installed and functional. There is no all-around / anchor light installed. The ground tackle including the anchor and rode was visually inspected as installed and appears satisfactory. There is no secondary anchor or rode aboard. The vessel has a CNG system including a bottle and a stove burner in the galley cabinet. The system was not tested or inspected. The entire length of the anchor rode was not inspected and should be inspected prior to use.

**Summary: Satisfactory – Marginal**

## **ACCESSORIES**

Swim platform, Kuuma water heater, Xantrex 40A True Charge 2 battery charger, internal sea strainers, vacu-flush head system, bait pump, fresh and seawater washdown fixtures, two cockpit flood lights, canvas covers, bimini top, Ritchie Power damp plugs compass, Clarion stereo remote control, flybridge engine instruments include tachometers, oil, temperature and volts, Simrad NSS9 evo2 multifunction device with plotter / sounder / AIS, Icom IC-M506 vhf, windscreen, Powerwinch 412 windlass, dinette, two transom underwater lights, sliding cabin windows, head includes vacu-flush head and sink, shower fixture, 3000W inverter, Dometic CD-1110 refrigerator, galley sink, Fusion MS-IP700i stereo, garbage placard, CNG tank and “portable” stove, lower helm includes tachometers, oil water and temperature, autopilot compass forward in cabin bilge, Electroguard device (not in use), courtesy lights

## **SUMMARY**

The vessel is a production fiberglass sportfishing vessel equipped with two gasoline engines. The vessel was built in Miami, Florida. The current owners reportedly purchased the vessel in 1980. There was transfer of ownership from a parent to the current owners in 1990. There was significant work reportedly performed in 2016 and 2017 including new engines, fuel tank, rudders, propeller shaft seals, propeller, propeller shafts, refrigerator, batteries, water heater and more. We did not review documentation to verify this work, it is clear that the engines, fuel tank and refrigerator have been replaced. The bottom was reportedly painted 3 – 4 years ago. The current owner disclosed that the windlass is inoperative. The current owner stated that there was a 1” diameter hole punched in the transom by another boat over 20 years ago in Newport Beach, CA. The vessel was inspected while hauled, afloat and underway in San Diego Bay. The vessel is basically structurally and mechanically sound and upon completion of the recommendations should be suited for its intended purpose as a coastal cruising and fishing vessel.

### **Overall Summary: Satisfactory**

Standard form key: We use subsection and overall ratings to summarize conditions found, based upon their appearance. Ratings include: Not examined, Not applicable, Faulty, Marginal, Satisfactory, Good, Excellent.

**VALUES**

<b>ACTUAL CASH VALUE</b>	<b>NEW REPLACEMENT VALUE</b>	<b>INVESTMENT</b>
Removed	Removed	N/A

The actual cash value is the value that our research approximates the selling price of this vessel should be, at the time and place of our inspection. Consideration is given to vessel’s condition, geographic location, published listings and guides, comparable sales and listings, and market conditions. The new replacement value is the cost of this or a similar, new vessel, comparably equipped. The investment is the reported investment including purchase price and significant upgrades. No values include maintenance costs, storage or tax. The most relevant data found while researching the value is included below. We primarily use market value analysis methodology for determination of value.

**Explanation of value opinion:** The value is based on the soldboats.com reported sale prices and the yachtworld.com listing prices below. The best comparable sale is the 1976 vessel that sold in Santa Barbara for \$20,000. That vessel is not in as good condition as the surveyed vessel based on the information and photos available. The best comparable listing is the 1972 in Maryland, asking \$39,000 which appears comparable based on available information and photos. The higher priced vessels have diesel engines and are not good comps. The surveyed vessel has many upgrades and components in good condition, but it also has significant cosmetic issues. West coast vessels generally have higher values than east coast vessels.

Length ft	Boat	Year	Sold Date	Sold Price	Listed Price	Boat Location
29	Bertram Flybridge 28	1976	5-Aug-21	13,000	13,000	Brick, NJ, USA
28	Bertram 28 Flybridge CRUISER	1972	11-Jun-21	14,500	19,900	Port Clinton, OH, USA
28	Bertram Flybridge Cruiser	1971	3-Jun-21	55,500	60,000	Pasadena, FL, USA
26	Bertram 26 Sport Convertible	1976	14-May-21	37,500	39,000	Somers Point, NJ, USA
26	Bertram MOPPIE	1976	26-Feb-21	19,500	22,000	Gifford, FL, USA
28	Bertram 28 Flybridge CRUISER	1975	5-Nov-20	14,000	18,500	New Smyrna Beach, FL, USA
28	Bertram 28 Sport Fisherman	1975	3-Nov-20	14,000	18,500	New Smyrna Beach, FL, USA
28	Bertram 28 Flybridge CRUISER	1974	27-Oct-20	67,500	78,000	Fajardo, Puerto Rico
28	Bertram 28 Flybridge CRUISER	1976	23-Oct-20	20,000	21,000	Santa Barbara, CA, USA

*Bertram 28 Flybridge CRUISER*

**US\$14,900 \***

28 ft / 1976  
Brick, New Jersey, United States  
Global One Yacht Sales

***Bertram 28 Flybridge CRUISER***

**US\$28,900 \***

28 ft / 1976

East Falmouth, Massachusetts, United States

South Shore Dry Dock Marine, Inc.

***Bertram 28 Flybridge CRUISER***

**US\$39,000 \***

28 ft / 1972

Middle River, Maryland, United States

Boat Yard Yacht Sales

***Bertram 28 Flybridge CRUISER***

**US\$11,750 \***

28 ft / 1974

Fort Lauderdale, Florida, United States

International Yacht Corporation

***Bertram 28 Flybridge CRUISER***

**US\$15,000 \***

28 ft / 1973

Mendon, Massachusetts, United States

**Sale Pending**

Mendon, MA

***Bertram 28 Sport Fisherman***

**US\$24,900 \***

28 ft / 1974

Chestertown, Maryland, United States

Upper Chesapeake Yacht Sales

***Bertram 28 Flybridge CRUISER***

**US\$10,000 \***

28 ft / 1976

Burgess, Virginia, United States

Tiffany Yachts, Inc

## RECOMMENDATIONS

These recommendations are the surveyor's ideas and suggestions for addressing deficiencies with damaged or suspect components or systems found during survey or general improvements. The primary recommendations address safety items, structural issues, operational issues or deficiencies which the surveyor determines are of greater importance or more expense than secondary deficiencies. For instance, items that pose a risk to passenger safety or immediate property damage are listed under primary deficiencies and cosmetic concerns are addressed under secondary deficiencies. Most of the recommendations have been addressed in the comments and usually they are discussed at the time of the inspection.

### PRIMARY

1. Maintain the fire extinguishers per NFPA recommendations. Extinguishers should be inspected and tagged annually and inspected by a qualified technicians or replaced every six years.
2. Assure the vessel has all legally required carriage items including required, current and approved distress signal flares, oil placard, waste management plan and a suitable sound signaling device available at both helm stations.
3. Provide and install a suitable all around / anchor light for deployment as required by federal and international regulations.
4. We strongly encourage installation of carbon monoxide, smoke and gas vapor alarms.
5. Provide a secondary anchor and rode for use in two anchor situations or emergencies.
6. Attach the holding tank vent hose to a hull side vent fitting, it is currently not connected and is lying in the port aft bilge.
7. Reconnect and utilize the seawater washdown system, the hose is currently disconnected from the through hull, or plug the through hull.
8. There are numerous cosmetic deficiencies on the hull, deck and superstructure, include cracks, apparent hull side repairs, rub rail damage and areas of thin gelcoat. These are cosmetic concerns but will be relatively expensive to address. Address as desired.
9. Provide and install suitable support devices to securely fasten the engine hatches when lifted.
10. Properly secure the bow rail, it is loose at several connections.
11. Service and prove the audible engine alarms properly functional, there were no alarms heard.
12. Address the significant corrosion on the propellers and propeller nuts, eliminate any cause of this corrosion. Repair or replace components as necessary.
13. Determine the significance of the different type of fastener at the inboard aft corner of the port propeller shaft strut and address if / as necessary.
14. Properly secure the loose fuse forward of the port engine.
15. Replace the GFCI outlet below the dinette and assure all outlets have proper power.
16. The vhf did not function normally, there was no response on channel 27 or 16, assure the vhf radio is properly functional. Service and prove the trim tabs functional as desired.

17. Service or replace and prove the windlass functional as desired.
18. Properly secure the inverter, it is not secured.
19. Determine the cause of the “iced over” condition in the refrigerator and address appropriately.

### SECONDARY

1. The flybridge engine instruments are “foggy”, address appropriately.
2. There are numerous holes about the deck and superstructure, from where hardware has been removed, fill the holes.
3. There are water stains visible through the port side windows on the wood enclosure for the head, eliminate any water leaks and repair damage as desired or as necessary.
4. There is tape on the exterior of the hinge for the port windshield vent, determine the purpose and address if / as necessary.
5. Reinstall the fasteners which are missing about the cockpit deck hatch, assure the hatch is watertight.
6. Address corrosion about the windshield, primarily at the fasteners, as desired or as necessary.
7. There are groups of arching stress cracks on both hull sides forward, more significantly to port and audible differences in this area. There were no signs of secondary fiberglass bond failure internally. Address these conditions as desired.
8. Address the fiberglass damage around the bow / triling eye.
9. The carpet and pad were wet aft in the cabin, determine the cause, eliminate the cause and address any damage from water or moisture appropriately.
10. Clean the waterline from the aft water tank in the cabin bilge to allow detection from any future water accumulation events.
11. The antifouling paint is thin, properly prepare and repaint the hull bottom.
12. Replace the corroded tank vent fitting on the port hull side.
13. The galley sink spigot works in reverse of how it is marked (hot and cold), address if / as desired.
14. Provide quick disconnect hoses and prove the freshwater and seawater wash downs functional, they were not tested.
15. Attach the hose to the shower in the head and prove it functional as desired.
16. Assure that the CNG system is properly functional if it is to remain aboard and assure it complies with ABYC and NFPA recommendations.
17. The following components were not tested or inspected: CNG system, bilge pumps' functions, fresh and seawater washdowns, bimini top, inverter, all functions of entertainment devices and all functions of navigational electronics (power up and basic functions were tested).

**This survey sets forth the condition of the vessel and components, as specifically stated only, at the time of inspection, and represents the surveyor's honest and unbiased opinion. No part of the vessel was disassembled or removed and no assumptions should be made as to the condition of concealed components. Specifics were obtained from sources available at the time of inspection and are believed correct, but are not guaranteed to be accurate.**

**I/we certify that, to the best of my/our knowledge and belief:**

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**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/our personal, unbiased professional analyses, opinions, and conclusions. I/we have no present or prospective interest in the vessel that is the subject of this report, and I/we have no personal interest or bias with respect to the parties involved. My/our 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/we 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 may 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 survey only. The submitting of this report creates no liability on the part of Christian & Company or the individual surveyor.**

Christian & Company, Marine Surveyors, Inc.



November 4, 2021

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By: Mr. Kells Christian, Surveyor  
S.A.M.S. – A.M.S. # 301

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Date