# Christian & Company
MARINE SURVEYORS

## STANDARD SURVEY

Client: Removed for privacy

Date of report: October 5, 2023
Our file #: 21 – 20040web

Current owner: Removed for privacy

This inspection was performed upon the request of the client listed above on 4/12/21 while the vessel was hauled at Driscoll Boatworks, Shelter Island, San Diego, CA. and afloat at Driscoll Marina Slip XXX, San Diego, CA and the client, client's parents, XXX (client's associate), XXX (captain), XXX (deckhand), current owner and undersigned surveyors 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.

## VESSEL DESCRIPTION

| | | | |
|---|---|---|---|
| Builder: | Tarrab Yachts | Reg. #: | Removed for privacy |
| Model/type: | 88 Motor Yacht | HIN: | Removed for privacy |
| Year: | 1998 (model year) | Engines: | Two Caterpillar |
| Length: | 86' 6" | Name: | Removed for privacy |
| Draft: | 4' 8" | Hailing port: | Mesa, AZ |
| Beam: | 19' | Weight: | Travel lift's scale inoperative |
| * listing specifications | | Dry weight | 230,000 lb. * |

## HULL & STRUCTURE

Keel & bottom: Molded fiberglass construction, unknown core, modified v-shape, hard chines, shallow keel, propeller pockets, black anti-fouling paint

Topsides & transom: Molded fiberglass construction, unknown core, white paint, dark blue boot stripe, rub rail at deck level

Decks & superstructure: Molded fiberglass construction, unknown core, teak deck aft, paint particle nonskid surface forward, painted white

Deck hardware: Fiberglass radar arch, island forward on flybridge, set of stern bits with hawesholes, aft deck safety rail, flybridge safety rail, foredeck safety rail, sets of horn cleats and bits with hawesholes forward, integral anchor roller, foredeck hatch, grabrails, pilothouse wing doors, boarding gates

Longitudinals/stringers: Fiberglass encased stringers, unknown core, foam core in port cabin bilge (exposed)

Athwartships/bulkheads/frames: Bulkheads made of unknown material, foam in athwartship aft of bow thruster

Layout/interior components: Flybridge has helm forward, seating and boat deck aft, steps to flybridge to port from aft deck and to port from pilothouse, steps on the centerline from swim platform to aft deck, sliding door forward from aft deck to salon, seating aft in salon, bar to port forward and table to starboard forward, forward from salon is door to pilothouse, galley to starboard aft, day head to port, helm forward with bench seat aft and wing doors, steps to port forward down from pilothouse to cabin landing, aft in landing is owner's cabin with center aft berth, ensuite head to starboard and walk in locker to port aft, cabins on both sides of passageway with twin berths to port and perpendicular bunk berths to starboard, ensuite heads forward in both. Forward is VIP cabin with forward berth and ensuite head to starboard aft, engine room below salon with access to starboard forward on aft deck, steps lead to landing, engine room door forward, crew head to starboard, crew cabin to port with bunk berths and crew lounge aft

Bilge: Holding fluid

**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 four years old, it exhibits satisfactory coverage. There were minor and various audible differences and coatings anomalies including a rough appearance of the bottom paint. The vessel had a portside list per the waterline on the transom. The stabilizers exhibited soft sounds when percussion testing, both sides of the port fin sounded soft and the outboard side of the starboard fin sounded soft. The current owner disclosed that there was a problem with the lamination of the stabilizer fins. Guards for the bow thruster are missing, one rod remains to port and several of the guards' fastener holes remain open. The hull sides and transom were visually inspected and randomly sounded. The hull sides and transom are in satisfactory structural and satisfactory – marginal cosmetic condition. The paint is in bad condition on the transom. There are numerous miscellaneous small areas of damage on the hull sides, including but not limited to: a 4 inch by 6 inch area on the portside amidships below the boot stripe, just below the port hull side engine room vent fitting, on the edge of the portside deck forward of the fuel fill fitting, aft of the port engines primary exhaust discharge, 6 inch rectangular patch 3 feet aft of the port forward haweshole, two gouges, repairs below the sixth from forward port bow rail stanchion and a chip below the anchor. There is fairing compound visible where paint has failed on the hull sides. The deck and superstructure were visually inspected and randomly sounded. The deck and superstructure are in structural and satisfactory – marginal condition. There is paint failure in numerous locations including forward and aft on the flybridge, bubbling paint just aft of the port forward flybridge top support, chipped paint on the starboard side of the foredeck, paint failing on the gunnel foredeck and forward cabin top, paint failing overhead in the cockpit. 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, but exhibits cosmetic damage. Paint is failing on the radar arch, on the aft flybridge deck hatch (stairs), screens are missing from the forward flybridge deck drains, the starboard transom garage did not shut flush and did not function properly, the screens are missing from all aft deck drains, the cushions on the flybridge bar stools are aged, the overhead locker to port in the cockpit would not close and latch, the foredeck sun pad cushions are deteriorated, there are various issues with the black areas on the superstructure, the paint is blistering at pilothouse wing door thresholds, the windshield and side window frames have paint blisters, and we did not see the foredeck hatch from below, it is apparently above the headliner in the VIP cabin. We could not lift a "cover" just forward of the transom door. The sliding door between the aft deck and salon is apparently off its track. Paint is chipped on the starboard side of the forward cabin top at the locker. There is standing water in the port foredeck hatch. The structural reinforcements including the stringers and bulkheads were visually inspected and randomly sounded. The structural reinforcements appear to be in "as-built" condition. Accessible coring in the structural reinforcements was foam. The type of foam is beyond the scope of this survey, it felt soft to the touch. The bilge is holding water and oil. The origin of the fluid is beyond the scope of this survey. There is fluid in several bilge spaces including forward in the engine room and in the passageway. The interior cabin spaces are neat, clean and orderly. The interior of the vessel is in satisfactory cosmetic condition. There are stains in many of the lockers throughout the vessel. There are stains and an odor in the crew cabin locker. There is sun and water damage below the salon windows. There is damage to most of the mirrors throughout the vessel. There is "glue" on a crack in the panel overhead in the galley. The insulation is failing in the engine room. There was fluid on the galley countertop near the coffee maker, its source is unknown. There is water damage of the wood at the steps to the cabins. There are

numerous small cosmetic anomalies including some stains on the carpet, fraying of the carpet near hatches and knicks and cracks in veneered surfaces. A small sole hatch at the base of the steps into the cabin passageway has a loose cleat below it and presents a trip and fall hazard. The headliner in the forward cabin is loose and exhibits what appear to be mold stains. The overhead mirror in the owner's head is cracked at the light fixtures and there is similar damage in the VIP head. The counter in the owner's head is cracked. 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 Caterpillar 3412, 1250 hp @ 2300 rpm, hours per meters port 3623 starboard 3592, engine hours per ECMS - 3861 on both engines (reported by mechanics)

Engine application: Diesel, 12 cylinders, twin turbocharged

Serial numbers: Port 3JK00400, starboard 3JK00403

Transmissions: ZF tags illegible and difficult to reach, see mechanical survey for information

External/peripherals: Suitable application, satisfactory installation, PTO on starboard engine

Engine controls: Hynautic hydraulic system, reservoir to starboard forward in engine room, double lever controls, flybridge and pilothouse stations

Exhaust systems: Wet system, flexible hoses, primary discharges through hull sides aft of amidships, pressure relief discharges through hull sides aft

Propulsion gear/shaft logs: Bronze packing glands, two bronze struts per shaft, five blade counter rotating propellers (41x? illegible), 10 cm diameter stainless steel propeller shafts

Steering system/rudder ports: Hynautic hydraulic system, reservoir to starboard forward in engine room, two actuators, tie bar, bronze packing glands, stainless steel rudders, flybridge and pilothouse station

Ventilation: Two engine room blowers

Generator: Port 55Kw Onan model 358MCGBA, serial no. J940557804, hours per meters port 3268 and starboard 3349, starboard information not recorded (see mechanical survey)

Through hulls & components: Bronze through hulls, bronze ball valves, bonded

Location of through hulls as visible: see chart

Seawater systems: Reinforced hoses, single and double clamped connections

Bilge pumps: Rule 3700 submersible/auto aft of engine room), Rule 2000 submersible/auto aft, two Rule 3700 submersible in cabin passageway

**Comments:** The engines and transmissions were visually inspected and tested during a sea trial. The client had the engines and transmissions inspected by a mechanic, please refer to the mechanical survey report for greater detail as to the condition of the machine systems. The external surfaces and peripheral components of the engines and transmissions appear satisfactory – marginal. There is rust weeping on to both engines' alternators and there is surface corrosion on the front of the port engine. The starboard transmission pressure gauge in the engine room is foggy. The flybridge and pilothouse starboard engine oil pressure gauges were "pegged". The flybridge digital engine instrumentation is sun damaged and illegible. The hour meters on the flybridge tachometers are illegible. There was no key in the flybridge starboard engine key switch and it was not tested. Wide open throttle was 2240 (port) and 2330 (starboard) rpm per the tachometers and top speed was 21 knots. The engines and generators hour meters were recorded at the beginning of the survey but not at the end of the survey as it was abruptly terminated by the current owner. There was a water leak from a blue hose aft of the starboard engine onto an electrical box above the transmission. There is surface corrosion on both engines and on many motor mounts, some is painted over. The engine controls functioned normally. The flybridge emergency engine stop button is inoperative. The exhaust system is properly arranged and installed. There was less water flow out of the port engine's exhaust bypass discharge than there was to starboard. There was a water leak by the starboard engine exhaust aft in the engine room underway, its source was not determined. 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 satisfactory condition. We could not access and inspect the port shaft seal, the crew cabin sole hatch was wedged below a small cabinet of drawers and was not removed. There is water about the starboard propeller shaft seal and the installation of the bilge pump and float switch in this area is questionable and apparently the bilge pump is inoperative. There was run out noted when spinning both propellers with a fixed object adjacent to the blades. The starboard shaft was harder to turn than port. The steering system was visually inspected and test operated. The steering system did not function normally. The rudders are outboard of the propellers. The flybridge steering wheel was not functional. While returning into Mission Bay in moderate to heavy seas a wave caused the vessel to head towards the jetties, the captain was unable to turn out of the wave and eventually had to put the engines in reverse to prevent a collision with the rocks. The thruster is not very powerful. The engine room blowers were energized. The circuit breakers for the blowers can only be energized when the blower switches are off, otherwise it trips and sparks. The generators were visually inspected, test operated and loaded. The generators functioned normally. The port generator's starter made bad noises and there were sparks visible below the generator when it was started. The starboard generator has an extremely rusted hose clamp at a heat exchanger connection. There is corrosion about the starboard generator. The through hulls were visually inspected and a few of the valves were manipulated. There is corrosion on the through hull valves on the

centerline aft in the engine room. Many of the through hull valves were not tested. A handle is broken off a through hull valve outboard of the port engine. We did not locate many of the through hulls on the interior of the vessel. An external sea strainer on the starboard hull bottom is missing some of its vanes. We did not move the valve for the waste discharge through hull in the port locker in the forward cabin. The through hulls are in marginal condition. The seawater systems were visually inspected and most components were tested. Overall, the seawater systems are satisfactory. Many hose clamps are rusted. There is a plugged hydraulic hose near the thruster, its function is beyond the scope of this survey. The windlass uses the PTO on the starboard engine. There is hydraulic fluid in the steering locker/lazarette. The electric bilge pumps were visually inspected and we attempted to test them with their float switches. The forward bilge pump indicator light cycled repeatedly while underway (on the distribution panel aft of the engine room). The aft bilge pump's float switch hits a component above it and will not lift all the way, it is not properly secured. One of the passageway bilge pumps has a loose float switch, there is oily water around this pump. The electric bilge pumps were energized manually. A hydraulic hose in the lazarette exhibits damage and staining.

**Summary: Satisfactory**

## TANKAGE

Fuel: Apparently fiberglass tanks, 9 tanks per a diagram on the engine room door, capacity is not recorded, most tanks were only partially visible, some tanks were not visible, 2480 gallon capacity *

Fill & vent: Deck fill fittings to port of starboard aft of amidships, labeled "Diesel", fill and vent hoses not inspected

Feed & return: Material of tubes and types of hoses unknown, manifold in engine room

Water: Deck fill fitting to port of amidships, labeled "Waste", two metal tanks under owner's berth, 260 gallon capacity *

Holding: Fiberglass tank in center bilge, unknown capacity, deck fitting to starboard amidships, labeled "waste"

**Comments:** The fuel system including the tanks, fill, vent, feed and return lines was visually inspected as installed. Where visible the fuel system components are in satisfactory condition. A tank diagram suggests there are nine storage fuel tanks. There is an apparent day tank in the forward engine room bilge. Following the survey the mechanic reportedly was told fuel tank(s) were ruptured. There are blue and black fuel hoses near the Racor filters and the black hoses exhibit significant deterioration. The Racor filter bowls are discolored, some are stained and there is apparently debris in the bowls. It was reported that the fuel manifold valves should not be moved as there is bad fuel aboard. The FloScan fuel flow meters aft of the engine room exhibited no reading underway. 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 did not function normally. The vessel had dock water pressure upon arrival and is apparently normally used in this fashion. We requested that the water tank be filled and

that the water pressure pump be energized for the sea trial. We repeatedly ran to low water pressure or no water pressure throughout the vessel. There was no hot water available during our survey. There was a plugged hose in the port forward engine room bilge. There was a waste odor about the holding tank in the engine room. Following the survey the mechanic reported “black water” in the engine room bilge. There is corrosion on the waste discharge pump forward of the tank and a hose is disconnected. There is white sealant about a fitting forward on the holding tank. The cabin passageway sump box was leaking water. Accuracy of tank level gauges is beyond the scope of this survey. The alarm light was flashing on the Tank Sentry device.

**Summary: Satisfactory - Marginal**

## ELECTRICAL SYSTEMS

AC system: 50A/125/250V shore power cords on electric cable caddies to port and starboard on transom, 120 and 240 volt system

DC system: Two Deka 908DFT wet cell 12 volt and two Odyssey Extreme PC 1200 sealed 12 volt batteries on centerline in aft engine room bilge, two Tess) SPS M130FT batteries outboard of port engine, six battery switches aft of engine room, 12 and 24 volt system

Wiring: Apparently mostly original multi-strand wires

Circuit protection: Distribution panel aft of engine room includes main and branch AC circuit breakers, DC branch circuit breakers, AC and DC volt and ammeters, Hz meter circuit breakers in engine room and lazarette, distribution panel to port in pilothouse has AC (120 and 240) and DC branch circuit breakers, AC and DC volt and ammeters, Hz meter

**Comments:** The electrical system including the shore power cords, batteries, wiring, circuitry components and circuit protection equipment was visually inspected and most components were tested. Overall the electrical system is in satisfactory – marginal condition. The condition and age of the batteries is beyond the scope of this survey. We could not lift the sole hatches outboard of the starboard engine, there may be batteries in this location as there are outboard of the port engine. The winch in the port garage is inoperative. The starboard garage door was not properly functional and any winch (or other component) in the starboard garage was not tested and this area was not inspected. There are tape labels on the electrical distribution panel in the pilothouse. Many of the exterior light fixtures are tarnished and corroded and the port floodlight above the cockpit is broken. A switch labeled fuel sight tube light aft in the engine room is apparently inoperative and the housing is cracked. A GFCI outlet aft in the engine room has a cracked face plate. There is a small disconnected wire to port of the engine room door, it is disconnected at a butt connector. There are several unusual components aboard the vessel, likely stemming from the Argentinean build, which is unusual for the US market. There is corrosion on and below the engine room blowers. Several of the engine room light bulbs are exposed. There was an audible air leak in the air compressor system in the engine room. There are numerous unlabeled switches and circuit breakers, including aft in the engine room. There are circuit breakers in several bilge locations and there is rust visible on the housing for these circuit breakers. A cover

on a circuit breaker panel in the starboard lazarette is loose. One radar has apparently been abandoned, the array and two monitors remain aboard. The new Raymarine chart plotter in the pilothouse displayed the vessel going over land on the way out of Mission Bay, though the speed appeared to be accurate. The AC and DC ammeters at the panel by the engine room were “bouncing” underway. The flybridge autopilot screen is burnt and it was not tested. The port shore power cord would not extend after it was retracted and the starboard shore power cord would not extend. The starboard shore power cord was not tested. The port shore power cord was extended after arriving at the dock, we did not witness this procedure. One of the transducers is missing its paddle wheel. There were numerous problems with individual outlets, including: the GFCI outlet in the crew head would not trip, the outlet to port on the aft deck had no power, the port GFCI outlet in the galley did not trip, there was no power in the port head outlet, there was no power in the forward head outlet and the outlet on the flybridge wet bar had no power and the box came out of it’s location when we pulled our tester out. The cameras and monitor did not function. We were unable to successfully the HVAC system, the chiller units visually appeared to be in good condition. There was no one aboard who knew how to make the system operate. One light above the crew sink and one light in the crew cabin are inoperative. There was no ice in the galley ice maker or in the ice maker in the galley refrigerator. There was no function of the galley refrigerator door service. Three of the galley stove burners did not get very hot. The port generator shut itself off during the sea trial. The VHF did not have a response when tested on channel 27 and we heard no reception on channel 16 during the sea trial. A light fixture is loose to port overhead in the pilothouse. The fathometer function intermittently one light in the starboard shower is inoperative. There is an unsecure electrical outlet in the port cabin locker. Six flybridge courtesy lights and both arch lights are inoperative. One light on the flybridge soft top is inoperative, one is intermittent and missing a cover. The North Star 952 GPS did not power up. The flybridge vhf reception was choppy. Three portside deck overhead lights and one to starboard are inoperative. The rope light around the foredeck is inoperative in several locations and is not properly secured to starboard.

**Summary: Satisfactory**

## SAFETY AND LIFE SAVING

Portable fire extinguishers: Type B:C size I, two 2012 on flybridge, 2008 on aft deck, two 2016 in aft pilothouse locker, 2012 in pilothouse, 2016 in starboard cabin, 2016 in port cabin, 2016 in forward cabin, type A size II, type B:C size II 2016 in crew area, type B:C size I (CO) 2016 in pilothouse

Fixed fire system: Fireboy MA2-100-FE241 (2016 tag) in engine room

Flotation devices: 28 adult type I PFDs, seven adult type II PFDs, one ring type IV PFD with retrieval line, life ring

Horn/distress flares: Airhorn, canister airhorn, flares expired December 2004

Navigational/anchor lights: Separate side lights, all-around/anchor light, steaming light, stern light

Anchor & ground tackle: Plow type anchor, size and type not recorded, chain rode

Other equipment: Switlik SOLAS MK-II 10 person life raft (service due 09/12) with hydrostatic release (expiration 08/2012), EPIRB (registration expired 2017, no battery date), high water sender, indicator panels in pilothouse

**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. No current distress signal flares are aboard. Suitable sound signaling devices are aboard. Waste and oil placards were seen. No navigation rules were seen. No waste management plan was seen. The navigational and anchor lights are properly arranged, installed and functional. The bottom of the port side light is missing. The ground tackle including the anchor and rode was visually inspected as installed and appears satisfactory. The EPIRB battery is expired we did not see the battery date. The entire length of the anchor rode was not inspected and should be inspected prior to use. The life raft service is due. We heard no noise when the high water alarm senders were raised.

**Summary: Marginal**

## LP GAS SYSTEMS

Tanks: One tank

Devices: Reducing regulator, portable bbq grill

**Comments:** The LP gas system is a portable bbq grill

**Summary: N/A**

## ACCESSORIES

Two hydraulic garage doors, internal sea strainers, engine room camera, oil placard, two Cruisair TWCV 48C-DDC HVAC chiller units in engine room, engine room engine instrumentation includes hour meters, digital tachometers, oil pressure, fuel pressure, ammeter, engine oil temperature, gear oil pressure and jacket water temperature, C-Charger 5000 series 60 amp battery charger, Matrix water maker, Bradford white water heater, air compressor, engine room generator instrumentation include hour meters, volts, temp and oil pressure, Naiad fin stabilizers, two fuel level gauges, two Floscan fuel flow indicators, trash placard, Sharp Carousel microwave oven, GE Spacemaker clothes washer/dryer, HVAC controls in crew cabin, two in salon, pilothouse, owner's cabin, starboard cabin and forward cabin, telephone system, two underwater lights, boarding ladder, foredeck sun pad, three windshield wipers, foredeck seat locker and two forward cabin top lockers, sacrificial anodes on transom (4 plates), rudders and propeller shafts, aft deck table, sump collector (aft) (apparent internal pump), crew head includes electric head, sink and shower enclosure, two crew TVs, aft deck camera, salon camera, Samsung salon TV, Denon AVR-1083 AV receiver, Samsung Blu-ray, Direct TV box, salon window blinds, salon bar with three stools, Icer-ette icemaker, salon dining/poker table, ship's vacuum, GE galley refrigerator/freezer, GE Potscrubber 780 dishwasher, U-

line galley ice maker, double galley sink, GE profile four burner electric range, GE space maker microwave oven, garbage disposal, pilot house bench seat and pedestal helm chair, Tank Sentry tank monitor, Toshiba monitor, water tank level indicator, Panasonic telephones, Standard Horizon Nova VHF, Furuno FCV-582 color video sounder, Raytheon Ray 430 loud hailer, lower helm engine instrumentation includes visual/light displays (bar graphs) and indicator lights, two Raymarine small multi-function devices, Furuno radar, Silva compass, ACR spotlight, JUC monitor, Sony CAX-M20 stereo, Raymarine hybrid touch multi-function device with plotter/fish finger/radar, Philips TV, Insignia DVD/VCR, super tuner KE-1800QR stereo, starboard cabin head includes electric head, sink and shower enclosure, head fan, sump collector box in cabin passageway, Pioneer KE-1800QR cassette stereo, Philips TV, Denon DVD-1200, port cabin head includes electric head, sink, fan, and shower enclosure, forward head includes electric dead, sink, shower enclosure and fan, Philips TV, Panamax device, Panasonic DMR-ES25 Dvd recorder, electric tender davit, two KVH domes, radar antenna, XM stereo antenna, flybridge wet bar with three stools, flybridge cushions, Weber LP BBQ grill, flybridge courtesy lights, two flybridge dinettes, two flybridge deck storage lockers, Furuno radar, bow thruster, Raymarine Depth, flybridge engine instrumentation includes two tachometers with digital hour meters, two oil pressure gauges, two water temperature gauges, two gear oil pressure gauges, two gear oil temperature gauges and two Caterpillar electronic engine instruments, Clarion CMD5 stereo, flybridge speakers, West Marina VHF 500dsc VHF, Raymarine hybrid touch multi-function device with radar/plotter, Corsair III compass, fresh water pressure inlet, rigid frame flybridge soft top, spotlight, foredeck speakers, boarding ladder, cockpit courtesy lights, Insignia TV, owner's cabin includes berth, Toshiba TV, walk-in closet and head, owner's head includes sink head, and spa bathtub with shower, sharp stereo JVC DVD/VHS, Denon DVD-1200 DCD player, Panamax Max 4300 surge protector, HVAC unit in owner's cabin, Maxwell 3500 hydraulic windlass

## SUMMARY

The vessel is a composite fiberglass motor vessel equipped with two diesel engines and two diesel generators. The vessel was built in Argentina. There is a Det Norske Veritas placard aboard. The current owner reports purchasing the vessel four years ago in Florida. He stated that the engines, transmissions and generators are original. He disclosed that the fin stabilizers have a lamination issue. He stated that a recent marine survey was performed and referred us to that survey for information regarding any other problems with the vessel; we were not provided with a copy of that survey. The current owner stated that he chartered the vessel a few summers ago but has used the vessel very infrequently in the recent past. The vessel was inspected in its slip, underway between its slip in Mission Bay and the boatyard in San Diego Bay and back, and while hauled. The vessel is basically structurally sound. The vessel exhibits extensive deferred maintenance. Upon completion of the recommendations on this survey and the mechanical survey and successful sea trials the vessel should be suitable for its intended purpose as a coastal cruising vessel.

**Overall Summary: Satisfactory – Marginal**

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

| ACTUAL CASH VALUE | NEW REPLACEMENT VALUE | INVESTMENT |
|---|---|---|
| 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 of the vessel is based on the soldboats.com reported sale prices and the yachtworld.com listing prices below. The most comparable Tarrab is the 1997 77' model that sold in 2018 for $225,000 (pre Covid-19). There are very few close comparable boats and we also reviewed our in-house data base. The values vary widely, primarily based on condition and we attempted to account for this in our value.

| Length ft | Boat | Year | Sold Date | Sold Price | Listed Price | Boat Location |
|---|---|---|---|---|---|---|
| 77 | Tarrab Tarrab Motor Yacht | 1997 | 13-Aug-18 | 225,000 | 289,000 | Fort Lauderdale, FL, USA |
| 75 | Tarrab Motoryacht | 1993 | 7-Aug-18 | 220,000 | 299,000 | Miami, FL, USA |
| 85 | Azimut 85 Ultimate | 1999 | 25-Oct-20 | 525,000 | 725,000 | Miami, FL, USA |
| 87 | Broward Raised Pilot House | 1996 | 8-Dec-20 | 997,000 | 997,000 | Miami, FL, USA |
| 88 | Custom 27 m Luxury Gulet | 2000 | 22-Dec-20 | 478,786 | 502,725 | Bodrum, Turkey |
| 90 | Tecnomarine Motor Yacht 90 | 2000 | 5-Jan-21 | 993,874 | 993,874 | Dubai, United Arab Emirates |
| 90 | Palmer Johnson Pilothouse | 1999 | 8-Jan-21 | 600,000 | 1,199,000 | San Juan, Puerto Rico |
| 87 | Broward Raised Pilot House | 1996 | 10-Mar-21 | 845,000 | 997,000 | Fort Lauderdale, FL, USA |

**Antago Pilothouse Motoryacht**
**US$895,000 ***
92 ft / 1997
Seattle, Washington, United States
Emerald Pacific Yachts of Seattle
Request Info

Notika 90
US$807,952 *
90 ft / 1998
Netherlands
Elburg Yachting BV

Custom Motor Yacht Custom
US$299,000 *
89 ft / 1999
Deltaville, Virginia, United States
Curtis Stokes & Associates

Leopard 27m
US$897,724 *
89 ft / 1999
Italy
Yachting Solutions

Gulf Craft 86
US$611,000 *
86 ft / 2000
Dubai, United Arab Emirates
Royal Yachts

Falcon 86
US$206,755 *
86 ft / 1999
Nice, France
Parton Yachting

Tarquin 86
US$778,028 *
86 ft / 1998
Athens, Greece
Flackton Yachting

Falcon 86
US$778,028 *
86 ft / 1999

Barcelona, Spain
Viudes Yachts

Maiora 26
US$430,908 *
85 ft / 1997
North Adriatic, Italy
Dami Boats

Posillipo Technema 82
US$598,483 *
85 ft / 1999
Split, Croatia
Almissani (Head Office)

Tarquin Trader 85
US$825,906 *
85 ft / 1998
Athens, Greece
Nikos O. Papadakis International Yachts Sales & Charters

Sunseeker Manhattan 84
US$706,210 *
84 ft / 2000
Antibes, France
Memper Yacht International

## 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. Ensure the vessel has all legally required carriage items including approved and current distress signal flares, navigation rules and a waste management plan.
2. Service the port side light which is missing it's bottom.
3. Maintain the EPIRB per the manufacturer's recommendations.
4. Maintain the life raft per the manufacturer's recommendations.
5. Assure the high water alarm is properly functional, we heard no sound when testing it from several sending units.
6. The AC electrical outlet on the flybridge wet bar had no power and came out of it's mount, properly address this condition.
7. The navigational electronics are marginally suitable, modify the navigational electronics or supplement them as necessary to provide at least the minimally required components for the areas of intended use. This should include at least a VHF, plotter and radar at both helms.
8. The autopilot is damaged at the flybridge and inoperative, service as desired.
9. We were unable to successfully test the HVAC system, either prove it properly functional or service as necessary.
10. There were tape labels on the pilothouse electrical distribution panel. Properly and permanently label the panel.
11. Replace the GFCI outlet aft in the engine room, the face plate is cracked.
12. Determine the prior purpose of the small disconnected wire to port aft in the engine room, near the engine room door and reconnect as necessary.
13. Address corrosion on the engine room blowers, service if/as necessary to eliminate the cause of the circuit breaker tripping if the blowers are energized with their switches on.
14. Cover the exposed engine room light bulbs.
15. Properly label all circuit breakers and switches, several are not labeled including switches and circuit breakers aft in the engine room.
16. The new Raymarine chart plotter exhibited the vessel traveling over land on it's way out of Mission Bay, modify the functionality and prove it reliably and accurately functional.
17. Determine why the AC and DC ammeters "bounced" underway and address appropriately.
18. Assure both shore power cable caddies are properly functional. Test and prove the starboard shore power cable, it was not tested.

19. Properly secure the loose cover on the circuit breaker panel to starboard in the lazarette.
20. Service the various AC electrical outlets which either had no power or had GFCI outlets which did not trip, not all outlets were tested but problems with outlets were noted in the following locations: crew head, to port on the aft deck, port outlet forward above the galley countertop, in the port head and in the forward head.
21. Neither of the ice makers in the galley function and there was no service in the galley refrigerator door, address as desired.
22. Determine why the port generator shut itself off during the sea trial and address to eliminate this condition.
23. Determine why three of the stove burners in the galley did not get hot (they got warm) and address as desired.
24. Provide a key for the starboard flybridge engine start and prove it properly functional.
25. Repair the flybridge emergency engine stop and prove it functional. Determine if normal engine stop functions are available or supplement the engine controls if/as suggested by the mechanics.
26. There are several circuit breakers in bilges and wet locations including the lazarette, either relocate the circuit breakers or consult with a qualified marine electrician regarding this condition and any other questionable conditions on the vessel and modify appropriately.
27. Properly secure the loose electrical outlet in the locker in the port cabin.
28. Service and prove the starboard garage door properly functional.
29. Lift all the engine room hatches including those outboard of the starboard engine, inspect and address deficiencies.
30. Test and prove the water pressure system properly functional, it should function normally with both dock water pressure and the ship's water pump. If the vessel is to remain on dock water pressure we strongly encourage a pressure regulator and shut off valve installed at the dock faucet and the valve be closed when the vessel is unattended. There was intermittent and no water pressure throughout the vessel during the survey and sea trial.
31. Clean the fuel filter bowls and fuel as necessary. There is reportedly bad fuel in a tank or tanks. There is discoloration and paint on several of the filters' bowls, clean or replace as necessary.
32. Several of the fuel hoses near the Racor fuel filters are deteriorated, replace all fuel hoses or prove they are suitable for continued use.
33. There is a waste odor by the tank in the center engine room bilge, white sealant around a fitting on the tank and an abandoned waste discharge pump. Eliminate the waste odor, determine the significance of the sealant and repair or replace the waste discharge pump and prove it properly functional. Determine why the alarm light flashed on the Tank Sentry and address appropriately.
34. Assure the hot water system is properly functional.
35. Determine the fuel system components which are actually in use and available, address deficiencies in the system particularly for changing valve positions.
36. The flybridge engine instrumentation is damaged and basically inoperative, service or replace as necessary.

37. Service and prove all through hulls and valves properly functional. Carefully inspect all through hulls and valves, test and prove the valves functional and replace any damaged components, including a broken valve handle outboard of the port engine.
38. Address exterior corrosion on the engines and motor mounts, eliminate the cause of the corrosion, properly prepare and paint surfaces to allow detection of any future weeps or leaks.
39. Eliminate the cause of the rust weeping on to both engine's alternators, eliminate the cause and repair any damage. Remove staining to allow detection of any future weeps or leaks.
40. The port generator's starter made a bad noise and sparked, address these conditions appropriately.
41. There were numerous anomalies with the engine instruments including a foggy transmission oil pressure gauge on the starboard engine, starboard engine oil pressure pegged in the pilot house and on the flybridge, address appropriately.
42. Address the heavy corrosion on the starboard generator's heat exchanger, particularly at a hose clamp on the bottom of the heat exchanger.
43. Address a general state of corrosion on the starboard generator, eliminate the source, repair or replace component as necessary, clean and paint to allow the detection of future weeps or leaks.
44. The steering system is not properly functional, service and prove it properly functional, including at the flybridge station.
45. Clean the hydraulic fluid from the steering locker and eliminate the source of the fluid to allow the detection of any future weeps or leaks.
46. During the sea trial, the vessel was caught by a wave and headed toward the jetties, it would not steer out of the wave and the position of the rudders is outboard of the propellers, possibly contributing to the lack of control. Modify if/as possible to provide a more normal steering response and/or educate all operators to this potential condition and modify steering and operation accordingly.
47. Access and inspect the propeller shaft and address any deficiencies. Clean the water from the starboard propeller shaft to allow detection of any significant leaks and address appropriately. Modify the installation of the bilge pump by the propeller shaft so that it is properly functional as desired.
48. Eliminate the water leak by the starboard engine exhaust components aft in the engine room.
49. Eliminate the water leak aft of the starboard engine on to an electrical box above the transmission. Repair damage.
50. Determine why there was less water flow out the port engine's exhaust bypass discharge than there was to starboard and address appropriately.
51. The light for the forward bilge pump on the distribution aft of the engine room illuminated regularly during the trial, determine the significance and address appropriately.
52. Properly secure the lazarette bilge pump's switch which is currently not secure and hits an object above it preventing its function. Prove this pump functional in the automatic mode.
53. There is moderate runout on both propellers when spun with a fixed object, address appropriately.

54. Determine why the starboard propeller shaft was more difficult to turn than the port shaft and address appropriately.
55. The bow thruster was not very powerful, it is a hydraulic thruster and its power may be governed by the rpm of the starboard engine. Modify or address as desired.
56. Properly secure the loose float switch for one of the cabin passageway bilge pumps.
57. Determine the prior function of the plugged hydraulic hose by the bow thruster and address if/as necessary.
58. Replace the numerous rusted clamps throughout the vessel.
59. There is water damage to the wood about the steps to the cabins, determine the cause, eliminate the cause and repair the damage as desired.
60. A cleat is loose below a sole hatch at the base of the steps into the cabins, presenting a personal injury risk, address appropriately.
61. We did not inspect and test the foredeck hatch, apparently located above the headliner in the VIP cabin. Either expose this hatch, provide proper signage or educate anyone who may need to use this hatch as an escape hatch to its location and function and assure it can be reached. Assure it is properly functional.
62. The exterior paint on the hull sides, deck, superstructure and deck hardware has many deficiencies, many are listed under the comments of hull and structure above. While most of these conditions are cosmetic, they will be relatively expensive to address, address the root cause and cosmetic appearance of these conditions as desired.
63. The stabilizer fins exhibited soft sounds when percussion testing them and the current owner reported a known problem with the lamination of the stabilizer fins, address appropriately.
64. The vessel had a portside list per the waterline on the transom determine the cause and address appropriately.
65. There is an odor in the crew cabin locker, determine the cause and address appropriately. This may be mold/mildew.
66. A hydraulic hose in the lazarette exhibits damage and staining, replace this hose, inspect similar hoses and replace as necessary.
67. Following the survey it was reported that there are ruptured fuel tank(s), determine the validity of this assertion and address appropriately.
68. Following the survey it was reported that “black water” accumulated in the engine room bilge, determine the source and address appropriately.

## SECONDARY

1. Provide and install screens missing from various deck drains including on the flybridge and aft deck.
2. Address the transom garage door which is not shutting or functioning properly.
3. Address the aged cushions on the flybridge bar stools.
4. Address the inoperative latch for the overhead locker to port aft deck.
5. Address the cracks about the owner in VIP head including the overhead and countertops.
6. Address the standing water on the port foredeck hatch.

7. Address the deteriorated foredeck sun pad cushions as desired.
8. Clean the galley including the countertop and sole, eliminate the cause of the water on the galley if it is a leak and not a spill. The sea trial was in rough conditions and the mess may have been a result of these conditions.
9. There is staining in many of the lockers throughout the cabins, this is often associated with the flow of air and the carpet acting as filters, determine the cause and address appropriately.
10. There is extensive but minor damage throughout the interior of the vessel including some areas where the carpet is rust stained, fraying of the carpet by a hatch in the passageway, knicks and cracks in the veneer surfaces, loose headliner, headliner stains and possible mold. Address as necessary or as desired.
11. The hull bottom has a rough finish and minor audible differences. The construction methodology is beyond the scope of the survey (cored, not cored, location of coring and coring material are unknown). Monitor and address deficiencies as necessary.
12. There is faring compound visible in areas where the hull side paint has failed, it is unclear if fairing was used in the original construction or of this is an indication of localized repairs, research and address as desired or necessary.
13. The engine room insulation is failing, replace the insulation and clean the debris from the bilge to prevent plugging bilge pumps.
14. Clean the fluid from the bilge including in the engine room, passageway and elsewhere as applicable. There is apparently water and oil. Eliminate the source(s) of the fluid to allow detection of any future weeps or leaks.
15. We could not lift the vertical “door” just forward of transom door, lift and prove it functional. This is apparently used to safely block the transom door during offshore use. There are also pullout steps by the forward boarding gates.
16. The sliding door between the aft deck and the salon was not functioning properly, address and prove it properly functional.
17. There is sun and water damage below the salon windows, eliminate the cause of the water damage, repair as desired or as necessary.
18. There is damage to many of the mirrors throughout the vessel, address as desired.
19. There is “glue” on a crack in the overhead panel in the galley, address appropriately.
20. A sea strainer on the starboard hull bottom is missing vanes, replace as desired or as necessary during the next haul out.
21. There is a plugged hose in the port forward engine room bilge, forward of the engine. Determine its function and address as necessary.
22. The FloScan fuel flow devices show no reading underway, address as desired.
23. The sump box in the cabin passageway is leaking water, eliminate the leak and prove the pump properly functional.
24. Service and prove the port garage winch functional, it did not energize. The starboard garage was not accessed, service any deficiencies or anomalies in the starboard garage.
25. The exterior light fixtures are tarnished and corroded and the port flood light above the aft deck is broken, address these conditions as appropriate.
26. The fuel sight tube light is inoperative and the switch housing is cracked, address as desired.

27. Eliminate the air leak in the compressor system for the horn.
28. Replace the damaged/missing paddlewheel from transducer #13 (per our chart).
29. Service and prove the various inoperative lights including: above the crew sink, in the crew cabin, loose fixture to port overhead in the pilot house, in the starboard shower, six flybridge courtesy lights in both arch lights, lights on the flybridge hard top including one which is intermittent, one is inoperative and one missing its cover, three portside overhead lights and one starboard overhead light, rope light around the foredeck and a light in a foredeck storage locker.
30. The fathometer function intermittently, address and prove it properly functional.
31. The camera system and monitor were inoperative, address and prove them functional as desired.
32. One of the radar arrays and two displays have been abandoned, assure there is no liability associated and remove or address as desired.
33. The anti-fouling paint is reportedly four years old, paint the hull bottom as needed.
34. The following components were not tested or inspected: all functions of entertainment devices (several televisions and stereos were tested), blinds, vacuum, dishwasher, spotlight, we did not get below the port crew seat due to components stored on it, starboard garage, sump pumps, clothes washer/dryer, water maker, all plumbing, pumps, through hulls and vales, phone system, free spool function of the windlass, underwater lights, 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:**

**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.

April 15, 2021

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

Date

April 15, 2021

By: Mr. Kells Manthei, SAMS SA

Date