Christian & Company
MARINE SURVEYORS

STANDARD SURVEY

Client: Removed for privacy | Date of report: January 25, 2016

Current owner: Removed for privacy | Our file #: 16 – 28690web

This inspection was performed upon the request of the client listed above on January 19 & 20, 2016 while the vessel hauled at Driscoll Boat Works, 2500 Shelter Island Drive, San Diego, California and afloat at Crow's Nest Yacht Sale's dock and the clients, the broker and undersigned surveyor attended.

VESSEL DESCRIPTION

Builder: C & L Marine
Model/type: Sea Ranger 70 (extended) *
Year: 1984
Length: 75'
Draft: 4' 8"
Beam: 19'
* prior survey

Doc. #: Removed for privacy
HIN: None
Engines: Two Detroit Diesel
Name: Removed for privacy
Hailing Port: Road Harbor, BVI
Weight: 95,000 Lb. (travel lift's scale)
Displacement: 114,000 lb. **
** listing specifications

HULL & STRUCTURE

Keel & bottom: Molded fiberglass construction, unknown core, keel, hard chines, modified V-shape, transom extension, blue anti-fouling paint

Topsides & transom: Molded fiberglass construction, unknown core, white with dark blue boot stripe, upper and lower rub rails

Decks & superstructure: Wood supports, molded fiberglass and wood construction, main deck has teak planked surface, flybridge has paint particle nonskid surface

Deck hardware: Upper deck safety rail, pilothouse hard top hatch, swim platform safety rails (staples), set of stern horn cleats on hawse holes, two sets of side horn cleats with hawse holes, port and starboard boarding gate, fiberglass bulwarks with teak cap rail, set of bow bits with hawse holes, foredeck hatch, lower helm wing doors, day head wing door, aft saloon doors

Longitudinals/stringers: Fiberglass encased stringers, unknown core

Athwartships/bulkheads/frames: Plywood bulkheads

Layout/interior components: Flybridge deck access via steps to starboard from lower

helm area or ladder to starboard aft through a deck hatch from aft deck, to port aft on flybridge is boat deck and hot tub to starboard. Forward on flybridge is enclosed pilothouse with cabin to port aft, wet bar to starboard aft, helm on centerline forward and seating to port aft of helm. Main deck has aft deck with table, steps to starboard aft lead down to swim platform, wing doors on both sides forward to covered side decks to foredeck, double hinged doors to starboard between aft deck and saloon. Saloon has sitting area to port aft, dining area to port forward, steps to starboard aft down and aft to master stateroom, galley forward of dining area, day head to starboard of dining area with door to side deck and helm area forward with wing doors on both sides and steps to starboard forward down to passageway. Master stateroom has center island berth aft, ensuite head to port forward and walk in locker forward to starboard of centerline. Forward passageway has cabin forward with starboard side bunk berths, port cabin with large berth below smaller upper berth and ensuite head forward, starboard cabin has twin berths with ensuite head forward and engine room aft.

Bilge: Holding moderate water

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. There are small blisters on the hull bottom and keel. They were not counted, but there are likely less than one hundred and most are less than 1" in diameter. There is a diagonal protrusion on both sides of the keel, approximately 10' forward from the aft end which sounds more solid than the other portions of the keel. The significance of the audible differences is beyond the scope of this survey. There is 9" x 3" area of damage to the bottom of the keel apparently from impact, the damage is into several layers of laminate, and it is approximately in line with the propeller shafts' alleyways. The anti-fouling paint is thin. There is a 2' x 2' rectangular slight protrusion just aft of the keel. The significance of the protrusion is beyond the scope of this survey. The hull sides and transom were visually inspected and randomly sounded. The hull sides and transom are in satisfactory structural and satisfactory – good cosmetic condition. The hull sides have been painted. There are several dings on the bow. There is a 12" vertical crack on the port side at and above the waterline, at the original transom. There are scratches on the starboard hull side forward. There are dents on the lower rub rails on both sides of the hull. There are rub marks on the starboard side of the swim platform. There is rub damage on the port side from the boarding ladder. There are rust stains about the port lights, visible externally. The stains are mostly at the fasteners. The deck and superstructure were visually inspected and randomly sounded. The deck and superstructure are in satisfactory structural and cosmetic condition. The aft flybridge deck flexes underfoot though it percussion tests normally. There are soft areas on the inboard lower edge of the forward flybridge seat, near the bottom of the antenna mast and inboard of the sliding door near the deck. The hardtop is extremely flexible underfoot. The starboard center pilaster sounds "hollow". There has been movement of the foredeck support visible overhead in the anchor locker. The deck beams are mounted on shims, fiberglass at the beams and the shims appear to have been moved slightly. 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 aft deck shade support is loose at its connection at the starboard aft pilaster. The client found a water leak accumulating in the port aft light in the master stateroom. Window tracks are weathered with corrosion by products. The tender is low on air and reportedly has a slow air leak.

The deck hatch aft of the master berth is sealed and is no longer functional. We did not access this area below the aft deck carpet. We could not open the port light in the master head. There are water stains below the port lights to starboard in the master head indicative of leaks. The gaskets in the port lights are aged. 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 holding significant water; the origin of the water is beyond the scope of this survey. The interior cabin spaces are neat, clean and orderly. The interior of the vessel is in satisfactory cosmetic condition. There is water damage on the steps to the upper deck from the lower helm area. Loose ballast was found throughout the port side of the vessel and to starboard aft of the aft cabin. There is water damage above the door to the aft deck and above the day head. There is a cracked wood piece above the saloon wet bar. There is an odor to port in the master stateroom. The wood under the master carpet is in rough condition. There are stains on the mirrors in the master head. There is white powder below the cabinets on both sides of the master stateroom. There is damaged veneer below the port cabin's head door threshold. The sideliner inboard in the port cabin is damaged. The door is pushed into a small locker forward in the port cabin and there is no handle to open the door. There are stains below the port light to port in the forward cabin. There is mould and mildew in various locations, including to starboard forward of the forward cabin. There is damage to the locker hatch in the bottom of the aft anchor rode locker compartment. This survey is not a mould inspection. The condition of the coring, in the deck, hull, stringers, and elsewhere as applicable, is beyond the scope of this inspection.

Summary: Satisfactory

MACHINE SYSTEMS

Main engines: Two Detroit Diesel, port model 7082-3300, starboard model 7083-7300 *, 465 h.p. each *

Engine application: Diesel, inboard, 8 cylinders, twin turbocharged, after cooled

Serial Numbers: Port – 8VA435194, Starboard – 8VA435146

Transmissions: Allison, port model MH25L, port serial # 0910059707, starboard model MH25R *, starboard serial # 0910057497 *

External/peripherals: Suitable application, satisfactory installation, two alternators on port engine, bilge pump and PTO on starboard engine

Engine controls: Glendinning electronic controls, servo units with push pull cables in engine room, stations on flybridge deck to starboard, pilothouse and lower helms

Exhaust systems: Wet system, insulated dry risers at engines, flexible hoses, fiberglass tubes, in-line fiberglass mufflers in master stateroom, transom discharges just above the waterline

Propulsion gear/shaft logs: Bronze packing glands, 30 x 29 three blade bronze counter

rotating propellers, two stainless steel struts per shaft, 2.5" diameter stainless steel propeller shafts

Steering system/rudder ports: Hydraulic system, single actuator with tie bar, upper and lower helm stations, bronze packing glands, bronze rudders

Ventilation: Two large and one small engine room blower

Generator: Port 15 KW Onan, model 15.OMDJF-3CR/2268AD, serial # L830688032, Starboard 13.5 KW Onan, model MDKAB-5564314, serial # G020389867

External / peripherals: Suitable application, satisfactory installation, sound boxes

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

Location of through hulls as visible in travel lift slings: Port – transducer aft, zinc plate forward of aft strut, five above chine aft of amidships, one amidships with screen, three transducers forward, grounding plat forward, bow thruster, fin stabilizer forward of amidships, two forward above chine

Starboard – three transducers forward, two forward, four forward above chine, grounding plate forward, fin stabilizer forward of amidships, Capac and paddlewheel transducer forward of amidships, one forward of amidships, one aft of amidships with screen, zinc plate forward of aft strut

Seawater systems: Reinforced hoses, mostly double clamped connections

Bilge pumps: Submersible electric automatic pump forward in engine room, submersible electric / automatic in forward cabin, submersible electric automatic pump in passageway, one pump in master (reported not seen), engine driven pump with manifold

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. The engines have reportedly been rebuilt at different times. The engines were started cold and started normally. The exhaust smoke opacity was higher to starboard than to port upon startup. There are numerous hour meters though the accuracy of the hour meters is beyond the scope of this survey. The engine controls did not function normally. The electronic controls shifted to neutral unexpectedly many times during the sea trial. The broker believes that this is a problem with the battery voltage and the way the DC supply is maintained. The controls malfunctioned during an attempted wide open throttle test that was not performed. The client and broker stated that the engines had turned up to 2200 rpms previously during the sea trial. There is heavy vibration in the aft cabin at higher speeds. The oil filters are dated 19-Mar-2013, on all the engines and generators. The exhaust system is properly arranged and installed. There are stains below the port engine's exhaust tube aft in the engine room. The exhaust hoses for both engines are cracked aft in the master stateroom bilge. There is a "trap" in the exhaust hose to port in the master

stateroom, the starboard side was not accessed in this area. The external flap is missing from the starboard exhaust discharge fitting on the transom. 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. The pedro hoses (flexible shaft seal hoses) exhibit age damage; they are mostly covered with hose clamps. There are water weeps at both propeller shaft seals. The steering system was visually inspected and test operated. The steering system functioned normally. There are stains and a weep at the starboard rudder port. The engine room blowers were energized. The generators were visually inspected, test operated and loaded. The generators functioned normally. There is limited access to the outboard sides of the generators. There are salt crystals by both of the port generator's water pumps. The through hulls were visually inspected and we attempted to manipulate many of the valves. The through hulls appear to be in satisfactory condition but most of the valves were not moved. There is an unused and uncapped through hull to port aft in the engine room. The seawater systems were visually inspected and most components were tested. Overall, the seawater systems are satisfactory. The age and condition of many of the hoses is unknown and questionable. The hoses have been replaced at different times per their appearance. The water maker has never been used. There are oily stains in the bilge by the water maker's through hull, to starboard forward in the engine room. The fin stabilizers were not functioning properly. There are rust stains from the port fin stabilizer (interior of hull). There is an oil leak by the starboard fin stabilizer (interior of hull) and it was barely moving. There is significant rotational play of the stabilizers, without moving the shafts. The autopilot remote at the lower helm station was not properly displayed. Several of the bilge pumps did not function when initially tested. Their switches were found to be in the off position versus the auto position. The owner's representative stated that there is a pump in the aft portion of the vessel, it was not accessed, inspected or tested. There is no proper bridle for the tender. There is a line bridle in use.

Summary: Satisfactory

TANKAGE

Fuel: One aluminum tank on each side forward of engine room, aluminum tank in center bilge forward of engine room, one aluminum tank on each side of engine room, 2,400 gallon total capacity *

Fill & vent: Two deck fill fitting per side amidships, deck fill fitting to starboard forward, flexible hoses with limited accessibility

Feed & return: Copper tubes, blue hoses, Racor filters

Water: One tank per side in engine room (apparently – covered), aft tanks with fill fitting in port transom locker, one deck fill fitting to starboard amidships, 400 gallon capacity *

Holding: Two deck fittings to starboard forward, two plastic tanks in passageway bilge

(one tank labeled “gray water”), fiberglass tank in forward cabin bilge, 150 gallon capacity *

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. The condition and age of the fuel (and water) and hoses and the integrity of the tanks (fuel, water, holding) and hoses is beyond the scope of this survey. The wing tanks in the engine room are reportedly empty. The port main fuel tank is low and the amount of fuel in the center forward / day tank is beyond the scope of this survey. Please consider filling all tanks for a simple, practical test of their integrity. The tank tender unit in the engine room is inoperative. The two fuel tank gauges forward in the engine room are apparently inoperative. The fuel hoses are not labeled per U.S. convention. Two deck fuel fittings to starboard are painted red though the reason is unknown. The owner’s representative stated that he has never cleaned the large fuel filter to port forward in the engine room. The water pressure system functioned normally. The age of the hoses is unknown. There was no water from the spigot to starboard forward on the flybridge external deck. There was no water from the flybridge pilothouse wet bar sink. The saloon wet bar faucet is loose. The master sink drain hose exhibits age damage. The plastic waste tank in the passageway bilge was found half submerged, this was likely gray water. The gray water pump’s float switch is inoperative. The port cabin head overflowed during the survey and the fill valve stuck open. The handles on the sink valves are not homogenous in function. The forward head sink drain has a hose to hose connection and stains below the sink. The hot and cold valves are mislabeled in the forward shower. The broker reports that the starboard forward waste deck pump out fitting is no longer in use.

Summary: Satisfactory

ELECTRICAL SYSTEMS

AC system: Two 50A/125V and one 50A/125/250V shore power inlets on each side of the cabin forward, 110 & 220 volt system, shore power cable

DC system: Two 12 volt 4D wet cell batteries on each side of engine room, secure and covered plastic boxes, two battery switches aft in engine room, eight West Marine model 15020217 8D 12V batteries in center engine room bilge and two 4D 12 volt batteries (forward), 12 volt wet cell battery below pilothouse helm console, two battery switches to port of lower helm, 12 volt system

Wiring: Multi-strand wires

Circuit protection: One main AC circuit breaker aft of each generator, electrical distribution panels to port at lower helm include main AC circuit breakers, branch AC & DC circuit breakers, four AC & one DC ammeters, two AC and one DC voltmeter, four AC source selector switches and a Hz meter

Comments: The electrical system including the shore power cord, shore power inlets, 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. Many wires are original. The vessel exhibits an

evolution of wires and they are not well bundled, organized and secured. The wiring does not comply with A.B.Y.C. recommendations. The condition and age of the batteries is beyond the scope of this inspection. The vessel uses welding cable for battery cable. There are wing nuts on many of the battery terminals. The negative terminal connection on the starboard aft battery in the center engine room bilge is loose. Two aft engine room lights are inoperative. The lower helm deep freezer is not currently functional. The broker reports the cold plate has been repaired but not reinstalled. There are start and stop buttons in the transom locker and to starboard in the locker aft in the master stateroom, they reportedly served the dive compressor which has been removed. An outlet to starboard aft in the saloon has an open ground. An outlet to port in the forward cabin has no power. The dish washer was inoperative. There was no response when the VHF at the lower helm was tested on channel 27. The Capac system is inoperative. There was no FM reception on the master stereo. Five of six lights overhead in the master head are inoperative. The water purifier below the master head counter is not plugged in. There was no power to the fathometer in the master stateroom. Four of six lights on the steps to the master stateroom are inoperative and one lens is broken. The heater is missing its cover in the port cabin. One light is inoperative in the port and starboard cabin heads. One light is out overhead in the starboard cabin and both reading lights are inoperative. Two of the lights on the steps to the passageway are inoperative. The upper reading light in the forward cabin is inoperative. Two lights are inoperative in the forward head. We noted the existence of a G.F.C.I. outlet however we did not test all outlets which are potentially exposed to water (heads, galley, and exterior) to see if they are protected with G.F.C.I. devices. The Xantrex inverter is only used as a battery charger, not as an inverter. The client's representative stated that everything is powered with the inverter. The boat end of the shore power cord has no locking ring. There is no HVAC ducting to the forward cabin. The port and starboard guest cabins' HVAC unit is below the lower helm aft locker. The discharge hose is not secured.

Summary: Satisfactory

SAFETY AND LIFE SAVING

Portable fire extinguishers: One in engine room, two in pilothouse (2002), one in master (1995), one in port cabin (2001), two in forward cabin (1995 & 2002)

Fixed fire system: Two halon 1301 bottles (independent) in engine room, June 2014 sticker dates

Flotation devices: Horseshoe buoy, eight type III and five type I adult PFDs, eight adult type II, two child type III

Horn/distress flares: Flares aboard (expired), air horn

Navigational/anchor lights: Separate sidelights, stern light, all around / anchor light, masthead / steaming light

Anchor & ground tackle: 50 KG Claw, Navy type anchor (size illegible), chain and line rode

Other equipment: Viking 6-person life raft inspection due date 05-Nov-10, ship's bell

Comments: Safety equipment for firefighting protection appears satisfactory however the extinguishers have not been inspected, tagged and maintained per N.F.P.A. recommendations. The fixed extinguishers in the engine room are independent and the labels are mostly missing. Personal flotation devices appear suitable for near coastal use. Current distress signal flares are not aboard. A suitable sound signaling device is aboard. The navigational and anchor lights are properly arranged, installed and functional. The stern light required a tap to illuminate and the fixture is holding water. The ground tackle including the anchor and rode was visually inspected as installed and appears satisfactory. The entire length of the anchor rode was not inspected and should be inspected prior to use. The anchor shackle has no retaining wire. There is no secondary means to secure the anchor to the bow. There is an unusual stainless steel tube in an arch shape and a receiver fitting on the foredeck, its purpose is unknown.

Summary: Marginal

LP GAS SYSTEMS

Tanks: Two tanks below flybridge BBQ

Devices: Electric solenoid valve controller / alarm, reducing regulator, galley stove

Comments: The LP gas system including the tanks, tank locker devices and BBQ and galley stove were visually inspected and the stove, BBQ and the electric solenoid valve were tested. The igniter on the BBQ grill was inoperative. The vessel is not equipped with a carbon monoxide alarm. Overall the installation of the LP system is satisfactory. .

Summary: Satisfactory

ACCESSORIES

General equipment: Fuel transfer system, four tank Tank Tender device, water heater to port forward in engine room mostly inaccessible, two fuel level gauges, forward in engine room, Vosper mini fin fin stabilizers, two DC freshwater pumps, Teel 4P836 water pressure accumulator to port aft in engine room, internal sea strainers, Xantrex Prosine Sine Wave Inverter / Charger 3.0, Freedom Marine 30 inverter / charger, Cruise RO water maker, Kuuma 20 gallon water heater with heat exchanger, Pro Marine ProSport 20 + 20 plus battery chargers, air compressor, engine room lights, engine room engine instrumentation includes hour meters, oil pressure and water temperature, Ca. Spas hot tub, tender davit, aft sunshade, Rendova rigid hulled inflatable tender (no identification) equipped with a 50 h.p. Honda four stroke outboard engine (illegible identification tag), tender chocks, LP BBQ grill, enclosed pilothouse with helm, cabin, settee and wet bar, Sony cassette stereo Norcold DE-251E refrigerator, Panasonic TV/VCR, Brisk Air overhead air conditioner (pilothouse), Furuno radar, pilothouse engine instrumentation includes tachometers with hour meters, oil pressure, water temperature and drive oil pressure, pilothouse helm chair, Ritchie electronic compass, ComNav 1001 autopilot, Wagner rudder angle indicator, Horizon wind instrument, Newmar voltmeter, Koden Chromascope CVS-88 bottom scope, West marine VHF580, SEA222 SSB, Raymarine RL80C plus multi-function instrument (radar / plotter), control panel + ATV DPX9m

device, Delta monitor, aft facing camera, boat deck camera, forward facing camera, pilothouse windshield wiper, swim platform with shower, spigot and two lockers, swim platform courtesy lights and floodlights, two TV/telephone inlets, anchor roller, electric windlass, three lower helm windshield wipers, boarding ladder, Marine Air air conditioning with controls in saloon, master stateroom and below lower helm cabinet aft, saloon wet bar, saloon sofa and table, dining table, Sony cassette / stereo, CD changer, Sansui TV, electric heaters, day head includes Vacu-flush head and sink, U-line model U-2075RB-00 refrigerator, galley sink, “marble” counter tops, Kenmore Elite Convection / microwave oven, four burner LP gas stove, Broan trash compactor, Miele G832SC dishwasher, spotlight, removable bow pole (unknown function), Jenn-Air model JCB2389GRS refrigerator / freezer, deep freezer, desk, telephones, Sony SB-V5W video / audio selector, Xantrex inverter controller, Uniden hailer, inclinometer, Horizon depth, CB radio, ComNav 211 autopilot remote, Sony cassette stereo, West Marine VHF850, Raymarine L1250 multi-function plotter / sonar, Danforth compass, Wesmar control for fin stabilizer, rudder angle indicator, dual pyrometers, aft sump collector and pump, Capac model 50030 corrosion monitor, two Tank Watch holding tank alert devices, wash down pump, lower helm engine instrumentation includes tachometers with hour meters, oil pressure, water temperature and drive oil pressure, Marinetics alert system, handheld VHF, JVC CD/stereo, electric heaters, opening port lights, Panasonic TV & VCR (master), master head includes Vacu-flush head, sink and tub / shower, vanity, Horizon depth in master stateroom, waste Y-valves, safe, Whirlpool thin twin clothes washer and dryer, heads in guest cabins include Vacu-flush heads, shower enclosures and sinks

SUMMARY

The vessel is a limited production fiberglass motor vessel equipped with two diesel engines and two diesel generators. The vessel has had at least three owners. The hull was extended by the transom at Baja Naval Boat Yard in Ensenada, Mexico. The exact year is unknown but the broker believes it was approximately 1995. The current owner has reportedly had both engines rebuilt. The current owner purchased the vessel in 2001. The vessel has been for sale for several years and has seen very little usage recently. The vessel was inspected while hauled, afloat and during a brief sea trial. The vessel is basically structurally and mechanically sound. The vessel exhibits many characteristics typical for a vessel of its age; many are not detailed in this report. The vessel is basically structurally sound, but has a many deficiencies. Upon completion of the recommendations the vessel should be suitable for its intended purpose as a near coastal cruising vessel.

Overall Summary: Satisfactory

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. In most instances the data found while researching the value is stored in our file for this survey. We primarily use market value analysis methodology for determination of value.

Standard Form Key: All systems are rated based upon their appearance, ratings include: Not examined, not applicable, Faulty, Marginal, Satisfactory, Good, Excellent.

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. Remove all the water from the bilge including to port in the engine room and in the center forward passageway. Determine if there are any water leaks and eliminate leaks.
2. The flybridge deck flexes underfoot particularly to port aft, determine the significance and address appropriately.
3. Determine the extent of the soft wood noted forward on the upper deck at the inboard lower edge of the seat, near the bottom of the antenna mast and inboard of the sliding door near the deck. Repair as necessary. We did not access the exterior sides and corners of the upper deck enclosure.
4. The hardtop flexes significantly underfoot, address as necessary.
5. Reattach the aft deck shade support to the starboard pilaster.
6. Determine the significance of the hollow sound when percussion testing the starboard center pilaster, eliminate any liability.
7. Service and prove the fin stabilizers properly functional. There were numerous problems including rust stains from the port fin stabilizer, an oil leak from the starboard fin stabilizer, starboard fin stabilizer moving very little while underway and play / loose fins on the shafts.
8. Assure that all ballast is properly secured throughout the vessel, primarily to port and some to starboard aft.
9. Determine the source of the water leak reportedly at the port aft light in the master stateroom. Repair the light and any other damaged components as necessary and eliminate the source of the water.
10. Service the saloon window tracks which exhibit weathering and corrosion as necessary.
11. The tender reportedly has a small air leak and was serviced in the recent past. Eliminate leaks or replace tubes as necessary. The tender was not launched and tested.
12. Repair the damage on the keel located between the propeller shaft alleyways.
13. The deck hatch aft of the aft berth has been sealed and cannot be used as an escape hatch, we encourage returning this hatch to a functional state.
14. Free up the port light in the master head and prove if properly functional as we could not open it.
15. Determine the significance of the movement at the foredeck supports as visible in the anchor rode locker and address appropriately.
16. Repaint the hull bottom with anti-fouling paint.

17. Service the engines and generators as necessary, including oil and filter changes as the oil filters dates are 19-Mar-13 on engines and generators.
18. Assure that the flexible hose couplers on the propeller shaft seals (pedro hoses) are suitable for continued use or replace them.
19. Properly plug or cap the unused and uncapped through hull to port aft in the engine room bilge.
20. Determine the significance of the rust stains on and below the port engine's exhaust tube aft in the engine room. Eliminate any weeps or leaks. Remove stains to allow detection of any future weeps or leaks.
21. Upon the next haul out, locate all below waterline or near waterline through hulls, assure all are equipped with functional valves. Free up seized or stiff valves, many were stiff and were not moved.
22. Determine the actual operating hours on both engines and generators. Determine which hour meters are functional and record information so it is readily accessible.
23. Determine the cause and significance of the heavy vibration in the aft cabin at speed and address as necessary.
24. **Determine why the engine throttles returned to neutral repeatedly during the sea trial and address appropriately.**
25. Determine how to use the autopilot from the lower station remote, it was not properly demonstrated.
26. Either replace the exhaust hoses or monitor and replace as necessary. Exhaust hoses exhibit cracks in the bilge space aft of the master stateroom.
27. Replace wing nuts used on battery terminals with steel nuts and lock washers. Comply with A.B.Y.C. (or similar) recommendations.
28. The wiring is generally disorganized and improperly secured. We encourage a general clean up of the wiring by a qualified marine technician and compliance with A.B.Y. C. (or similar) recommendations.
29. Properly secure the battery terminal connection at the negative terminal for the aft engine room bilge battery.
30. Service and prove the two aft engine room lights functional.
31. Return the cold plate to the deep freezer aft of the lower helm station and prove it properly functional.
32. Eliminate the open ground condition of the AC electrical outlet to starboard aft in the saloon.
33. Repair and prove the dishwasher functional or replace the dishwasher as desired.
34. Assure the lower helm VHF is properly functional. We received no response on channel 27.
35. Service and prove the tank tender, fuel level gauges or other means to determine the fuel level functional.
36. The ages of the hoses are unknown; the ages are varied per the appearance of the hoses. Assure all hoses are suitable for continued use including fuel hoses which are not labeled per U.S.C.G. convention. Replace hoses as necessary.
37. Service the head in the port cabin, it overflowed during the survey. Prevent this from re-occurring.
38. Service and prove the fixed fire extinguishers properly installed and functional. They are currently independent and should be dependent so they discharge simultaneously.

39. Service the stern light, remove the water from the fixture, repair or replace as necessary and prove it properly functional.
40. Provide and install a safety retaining wire in the anchor shackle.
41. Provide a suitable means to secure the anchor to the bow other than the windlass.
42. We strongly encourage the installation of a carbon monoxide alarm for detection of fumes in the propane system or machinery / exhaust.
43. Assure all electrical outlets potentially exposed to water are protected with G.F.C.I. devices. These include outlets in the heads, galley or exterior.
44. Determine the significance of the Xantrex inverter functioning only as a battery charger and eliminate any liabilities or repair to realize the benefit of a second inverter. All components are apparently powered by the single inverter.
45. Provide and install a locking ring on the boat end of the shore power cord.
46. Determine why the outlet to port in the forward cabin has no power and address appropriately.
47. Replace the missing external flap on the starboard engine's discharge fitting on the transom. It was reported the engines once suffered damage from water through the exhaust system, modify this system to prevent this problem.
48. Provide a suitable bridle for the tender.
49. Determine the significance of the higher exhaust smoke opacity from the starboard engine upon startup and address appropriately.

SECONDARY

1. Address the rust staining about the port lights, particularly at the fasteners as necessary.
2. Determine the significance of the odor to port in the master stateroom and address appropriately.
3. The wood under the master stateroom carpet is in rough condition, portions are delaminated, portions have water damage and there is a small piece missing to starboard aft. Address if / as necessary.
4. Address the staining on the mirrors in the master head as desired and eliminate any water leaks causing this damage.
5. Determine the significance of the white powder on both sides below the master stateroom drawers. Assure there are no insects / roaches aboard.
6. Service as a result of water staining below the port lights to starboard in the master stateroom. Eliminate any leaks and repair damage as necessary or desired.
7. Address the damaged veneer below the port cabin's head door threshold as desired.
8. Replace the gaskets in all the port lights as they are aged.
9. Repair the damaged sideliner inboard in the port cabin as desired.
10. Provide a handle for the small locker door forward in the port cabin as it is pushed into the locker and was not opened.
11. Service as a result of staining below the port light to port in the forward cabin. Eliminate the apparent weep / leak and repair damage as desired.
12. Service as a result of mould and mildew in various unventilated spaces including to starboard forward of the forward cabin.
13. Repair the damage to the locker hatch in the bottom of the aft section of the anchor rode locker above the line rode as desired.

14. Service as a result of water damage on the steps from the lower helm to the upper deck. Eliminate any water leaks causing this damage.
15. Service as a result of the water damage above the doors to the aft deck and above the day head in the saloon. Assure there are no leaks causing this damage. The broker reports these two areas of damage have existed for a long period of time.
16. Repair the cracked wood trim piece above the saloon wet bar as desired.
17. Either repair the blisters on the hull bottom and keel or monitor and repair as necessary.
18. There are diagonal protrusions which sound hard when percussion tested on both sides of the keel 10' forward from the aft end of the keel. The significance is beyond the scope of this inspection. Determine the significance and address if / as necessary.
19. Determine the significance of the 12" vertical crack at the original transom on the port hull side aft, at and above the waterline. Repair and address any underlying cause as necessary.
20. Address the miscellaneous cosmetic deficiencies externally and internally. Not all are listed but they include several bow dings, scratches on the starboard hull side forward, dents on both lower rub rails, rub marks on the starboard side of the swim platform, rub damage from the boarding ladder and crazed hatches.
21. Service the water maker as necessary and prove it properly functional. It has never been used.
22. Determine the significance of oily stains in the bilge to starboard forward in the engine room, by the water maker's through hull. Eliminate the source. Remove stains to allow detection of any future weeps or leaks.
23. Service as a result of salt crystals at the port generator's water pumps.
24. Service as a result of staining and minor water weeps at the starboard rudder port. Remove stains to allow detection of any future weeps or leaks.
25. Service both propeller shaft seals which exhibit excessive water leaks underway.
26. Either replace the welding cable with battery cable approved by A.B.Y.C. or monitor and replace as necessary.
27. Assure there are no liabilities associated with the start and stop switches to starboard aft in the master stateroom and to starboard forward in the transom locker.
28. Assure there are no liabilities associated with the Capac corrosion monitoring system.
29. Provide FM reception to the master stereo as desired.
30. The client stated his intention to replace all entertainment components.
31. Service the numerous inoperative lights including lights overhead in the master head, lights on the steps to the master stateroom (and replace one broken lens), lights in the port and starboard heads, an overhead light and both reading lights in the starboard cabin, lights on the steps to the passageway, the upper reading light in the forward cabin and two lights in the forward head.
32. Replace the missing cover for the heater in the port cabin.
33. Service and prove the fathometer in the master stateroom functional as desired.
34. Plug in and prove the water purifier below the master head counter functional as desired.
35. Service so there is water in the spigot to starboard forward on the exterior upper deck.

36. Service and prove the pilothouse wet bar sink functional, there was no water from the faucet.
37. Properly secure the saloon wet bar faucet fixture.
38. Replace the drain hose for the master head sink as it is damaged.
39. Consider having all sink valves installed in the same manner so they are all homogenous in function.
40. Determine the function of the stainless steel tube and receiver on the foredeck to gain benefit from its existence.
41. Replace the forward head sink drain hose with a single hose. It currently has a hose connection. Clean stains below the sink to allow detection of any problems and address if necessary.
42. Properly label the hot and cold valves in the forward shower.
43. Clean the large fuel filter to port forward in the engine room.
44. Replace or repair the gray water pump's float switch and prove it functional.
45. Service and prove the igniter device on the BBQ grill functional.
46. There is no HVAC into the forward cabin, modify if/as desired.
47. Properly secure the vent hose on the HVAC unit aft of the lower helm as it is not properly secure.
48. Service and prove the spotlight functional, it illuminated and turned side to side but would not turn up and down.
49. Determine the significance of the "trap" in the port engine's exhaust hose, determine if the starboard side has a similar condition and address appropriately.
50. The following components were not tested or inspected and this was discussed with the client: water maker, tender, all entertainment devices, all functions of navigational electronics, all carpets were not lifted, TV / telephone inlet, all shore power inlets were not tested, pyrometers, aft sump pump, CB radio, handheld VHF, spa tub function in the master head, telephone / intercom system.

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. The submitting of this report should not be construed as a warranty or guaranty of the condition of the vessel, nor does it create any liability on the part of Christian & Company or the individual surveyor. 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.

Christian & Company, Marine Surveyors, Inc.

Kells Christian

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

January 25, 2016
Date

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